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UNDERSTANDING INFORMATION SYSTEMS OUTSOURCING SUCCESS AND RISKS THROUGH THE LENS OF COGNITIVE BIASES

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Abstract

Because outsourcing of information systems (IS) is now widespread, it is generally assumed to be successful. It is also often assumed that outsourcing risks are easily managed. In this paper we adopt an “evidence based management” approach to first test these assumptions through a qualitative meta-analysis of academic studies into IS outsourcing outcomes. Our research reveals a shortage of reliable and valid evidence for outsourcing’s benefits, and for the level of risk involved. We then use data from a series of focus groups to explain the paradox of widespread adoption of a strategy with limited empirical support. These focus groups were interpreted through the lens of research on a range of cognitive mechanisms and biases that are known to affect decision makers. We conclude that cognitive mechanisms that are likely to affect sourcing decisions include framing biases, cognitive dissonance, attribution error, and the “optimism”, “confirmation”, “disconfirmation” and “overconfidence” biases. Given the shortage of supporting evidence, and the potential for these biases to operate, we argue that researchers need to be more critical in their analysis of reports of the success and risks of IS outsourcing.

Keywords: sourcing, decision making, evidence-based management, focus groups, meta-analysis

1 INTRODUCTION

A major change in information systems practice in the last two decades has been the move to increased reliance on outsourced IT services. As a consequence, a critical strategic IS decision is which services to outsource (and to whom) and which to keep in-house.

In attempting to arrive at a sourcing decision that maximises benefits for the organization, decision-makers are confronted with a barrage of advice. Much of this comes from vendors and outsourcing consultants, who may not be disinterested. In this paper we take an “evidence based” stance by looking at the academic evidence about outsourcing’s success, failure and risks. The call for evidence-based management — seen in Pfeffer and Sutton’s recent (2006) Harvard Business Review article — has its origins in the movement to base medical decisions on best available empirical evidence. Evidence-based medicine encourages medical decision makers to use in their diagnosis and interventions the highest quality scientific evidence they can obtain. The evidence-based movement also encourages corporate decision makers to be critical of the quality of evidence, and to prefer evidence with higher reliability and validity over anecdotal accounts, conventional wisdom, or unverified assumptions.

We began this study by attempting to undertake a statistical meta-analysis of research into outsourcing outcomes. However, it soon became apparent that existing outsourcing studies are overwhelmingly qualitative, and that the available quantitative studies are mostly small and non random. Instead we have undertaken in this paper a qualitative meta-analysis of the existing survey literature. This reveals a general failure to confirm the theorized benefits associated with IT outsourcing, which is at odds with the widespread adoption of outsourcing in the business and government sectors. To explore this paradox, we use the lens of research into cognitive aspects of decision-making to shed light on why we have high adoption in the absence of strong evidence of both the strategy’s benefits and risks.

The paper first presents a model of the strategic sourcing decision, and then reports the qualitative meta-analysis of outcomes research. It describes the discrepancy between the empirical evidence and the still-growing adoption of outsourcing as the “evidence-behaviour paradox”. The paper suggests an explanation for this paradox by highlighting cognitive biases that appear to be operating amongst decision makers, using data obtained from a series of focus groups involving outsourcing purchasers, and vendors.

2 THE STRATEGIC SOURCING DECISION

Strategic decisions have traditionally been presented as having aspects of both risks and returns, and both have been highlighted in the academic outsourcing literature. A range of returns (organizational benefits) are argued to arise from outsourcing, and most can be subsumed into four categories: *financial* (or economic) benefits, *strategic* benefits, *access to skills or technology* that cannot be provided in-house and *speed-to-market benefits* (Lacity and Hirschheim 1993; Grover et al 1996; Lacity and Willcocks 2001; Rouse and Corbitt 2001). According to Lacity and Willcocks (2001) the most frequently sought benefit is cost savings.

A variety of risks have also been posited for outsourcing (Gonzalez et al. 2005; Aubert et al. 2005; Gewald and Hinz 2004; Barthelemy 2001; Earl 1996). However, the academic literature is inconsistent in its definition of risk, and often confuses cause (e.g. poor management practices) with effect (undesirable outcomes). Risk is related to uncertain future events, so it is above all about “likelihood”. In this paper we define risk as “as the *potential* for an undesirable outcome”.

Generally the risks of outsourcing can be classified into one of five types: *financial risks* (like the risks of cost blowouts, or failure to obtain expected savings); *performance risks* (where the firm might not

get the services it pays for at the quality level it needs); *strategic resource risks* (the risk of losing organizational knowledge/ key competencies); *lock in risks* (the strategic consequences of having no alternatives to an unsatisfactory vendor) and *operational risks*, which affect the business or reputation of the purchaser (such as risks of IT failure, reduced customer service, or harm to organizational resources, like the privacy/confidentiality of information or intellectual property).

Determining whether the trade-off between risk and return justifies a specific choice is fundamental to the IS sourcing decision. However, this implies an understanding of the sources of risk, and of the likelihood that a particular risk might eventuate. A community of scholars exists whose members believe the benefits of outsourcing generally outweigh the risks, and while this is certainly consistent with the continued growth in IT outsourcing, this optimistic view may be unwarranted (Hirschheim, interviewed in Healey 2002).

An issue that confounds the sourcing decision is that determining returns, even when only financial returns are considered, is neither easy, nor straightforward. It is argued that, because of economies of scale and scope, and because market pressures discourage inefficiencies, outsourcing will lead to cost savings. However, this argument relates only to *production* costs savings. Economic theory (e.g. Williamson 1985) points out that in addition to production costs, *transaction* costs must be considered. These are the costs of dealing with the market, and include the costs of searching for, contracting with, evaluating and controlling the work of the vendor (Ang and Straub 1998). Production cost savings can be counteracted, and even exceeded, by increased transaction costs.

Vendors are keen to identify and promote the reduction in cost savings that purchasers will make, so the production cost savings are likely to be obvious (though possibly overstated). Establishing transaction costs, on the other hand, is much more difficult, as this depends on effective allocation of overheads and on-costs. Without good accounting systems; detailed understanding of accounting standards; and a willingness to search for the transaction costs, these can be quite difficult to identify and accurately size. Ang and Straub (1998) established that decision makers who adopted outsourcing in the US Banking industry tended to downplay the transaction costs involved, concentrating instead on the production costs they believed they would save from outsourcing. Those who considered, but rejected outsourcing, tended to focus on the transaction costs.

The model in Figure 1 can be used to more thoroughly analyse the sourcing decision. This model was derived from a series of studies we have done into IT outsourcing success since 1997, beginning with one author's doctoral studies. These studies included a large outsourcing survey (n=240); a longitudinal case study, 8 individual semi structured interviews, and a series of 13 focus groups, described in more detail below (Rouse 2002). The model can also be used to structure and explore the evidence used to support sourcing prescriptions. The model posits that net benefits (which may be positive or negative) are derived from both production savings and transaction costs, and from those strategic benefits which are impossible to convert into financial terms. Figure 1 also includes the construct of "risk exposure", a notion that is derived from the definition of risk discussed above. The calculation of risk exposure costs, widely used in risk management practice, incorporates the probability of an unwanted event occurring and the severity of potential loss. These are multiplied to produce a financial measure of the level of risk exposure associated with a venture, which can be weighed up against other financial elements.

Figure 1 alerts the reader to the fact that while production costs are generally easier to discern, both transaction costs and risk exposure costs are difficult to determine – requiring skilled investigation and analysis if they are to be accurately established. Establishing the value of non-financial benefits of outsourcing is also difficult.

Our qualitative research has revealed that many of the elements that lead to net benefits in Figure 1 incorporate inherent tradeoffs, which are rarely acknowledged in the literature. For example, when purchasers, to preserve their independence and keep costs down, choose relatively short contracts with a number of different vendors – the "best in breed" or "selective outsourcing" strategy (Gartner 2001) – the transaction costs tend to increase substantially, as do coordination costs and the costs of

reconciling problems between vendors (Rouse 2002). Similarly, many of the strategies designed to reduce risks (such as, for example, requiring certain behaviours on the part of the vendor to safeguard information) add substantially to the vendor's costs, and can be reflected in higher charges, and reduced cost savings.

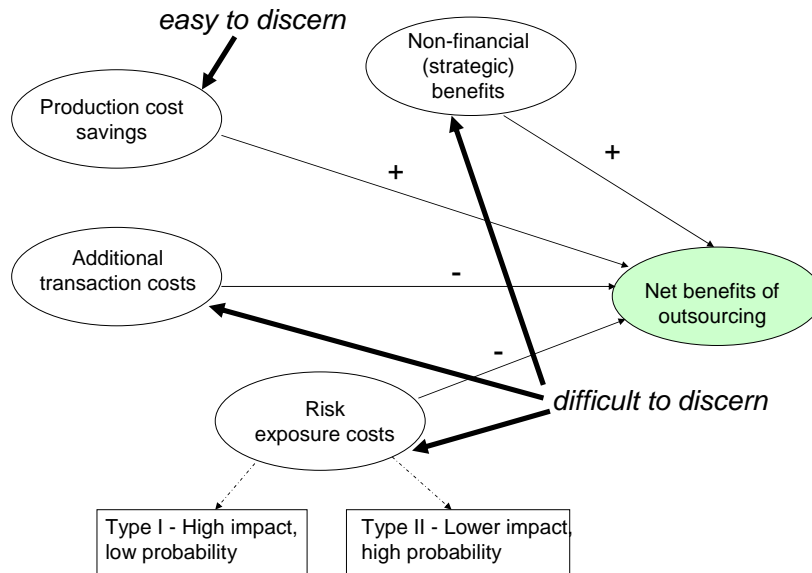


Figure 1: Analytical model for considering the net benefits of the outsourcing decision

Two types of outsourcing risks can result in high levels of risk exposure (highlighted in Figure 1). When risks are envisaged, what often comes to mind are catastrophic risks, that is events that, while unlikely, may result in substantial losses (the failure of the vendor, perhaps, or large-scale theft of customer records and the consequent effects on the purchaser's reputation). We have labelled these *Type I risk exposure*. However *Type II risk exposure* relates to more common events, where the potential loss is less catastrophic, but the likelihood of loss is high. Examples include failure to obtain the cost savings expected (which can result from a large number of causes) or inability to redirect organisational attention to core business. While it is very difficult to establish the risk exposure for Type I risks, because of their rarity; it is not easy to establish the risk exposure for Type II risks. An important reason for paying attention to Type II — lower impact/high probability — risk exposure is that this can invalidate the original financial arguments for outsourcing, and lead, in some cases to expected savings turning into cost *increases*. In the next section we will provide evidence to suggest this happens frequently.

3 THE EVIDENCE-BEHAVIOUR PARADOX

Given continued growth in outsourcing, it would seem almost axiomatic that there is substantial evidence that IT outsourcing's benefits are widely achieved, and that downsides are only rarely encountered. There are also a number of widely-cited normative prescriptions for ensuring successful outsourcing, which would suggest that these prescriptions had been widely tested. However, in the academic literature, there is limited generalisable evidence about the consequences (or outcomes) of outsourcing as a strategy, nor of how successful recommended strategies are in lowering outsourcing risks.

Table 1: Quantitative Studies into IT Outsourcing Outcomes 1994 - 2006

<i>Study</i>	<i>n (that outsourced)</i>	<i>Success measure used as DV</i>	<i>Findings</i>
Kim and Chung (2003)	207	Satisfaction and Perceived Benefits	Did not report proportion successful
Rouse and Corbitt (2003)	234	Cost savings, Economies of Scale, Technical, Strategic benefits, Satisfaction	Strategic, technical, and economies of scale benefits obtained by a minority. 7% reported substantial cost savings, only 43% reported any savings at all. Vendor service quality and access to skills obtained by majority. Overall around 37% of respondents responded as unequivocally satisfied. 22% reported costs increased.
Lacity and Willcocks (2001)	38 (US) and 63 (UK), the latter a convenience sample	Cost savings	53% of respondents reported some cost savings, but of those reporting savings, less than a third (31%) reported "significant" cost savings. (Sample response of < 4% suggests data substantially skewed)
Aubert et al. (1999)	70	Cost savings	49% of respondents reported cost increased
Lee and Kim (1999)	74 paired i'views (purposive sample)	Economic, Technical, Strategic benefits	Did not report proportion successful
Lacity and Willcocks (1998)	33 case studies (not statistically representative)	Production cost savings	73% of all outsourcers (total and selective) reported achieving expected cost savings, with an average saving of 23.8%*. 85% of selective outsourcers achieved expected savings.
Lacity, Willcocks and Feeny (1997)	41 case studies (not statistically representative)	Production cost savings	Some cost savings were achieved in 23 (56%) of cases, with savings being 'mixed' in 5 instances (12%), and savings not achieved in 13 cases (31%). Savings could not be determined in 8 further cases.
Saunders, Gebelt and Hu (1997)	34 case studies (not statistically representative)	Cost savings, and Satisfaction	44% (15) would or could not give savings. 38% (i.e. 13) reported average savings of 15.4% (ranging between 0 and 40%); 15% (5) reported no savings, and 3% (1 org'n) reported gaining \$16million by walking away from its outsourcing contract
Grover et al (1996)	188	Satisfaction, Economic, Technical, Strategic benefits	Did not report proportion successful
Collins and Millen (1995)	41 (convenience sample)	Cost savings	64% of respondents assessed the impact of outsourcing on IS costs as positive or very positive, while 10% assessed it as negative. A further 8% assessed it as very negative.
Karpathiou and Tanner (1995)	156	Cost savings	15% reported significant cost savings. 33% of respondents achieved no or minimal cost savings; a further 16% reported greater costs.
Willcocks and Fitzgerald (1994)	76 (convenience sample)	Cost savings	One third could not estimate savings; 47% of the 55 who were able to give cost impacts were experiencing costs between 5 and 20% lower than estimated in-house costs, 30% reported neither savings nor higher costs; 18% were experiencing higher costs.

* Based on Rouse's (2002) reanalysis of Lacity & Willcocks' data.

In part this is because the bulk of outsourcing research has been qualitative and exploratory – with large numbers of individual cases studies producing “theoretical generalisability” (i.e. the raising of propositions) but no way of knowing which of the very large number of findings might generalise, and where.

The very richness of case studies can mean there is no consensus on success or the consequences of prescriptions. What is recommended based on one case study often seems to cause problems in another. There is also a bias with case studies towards reporting positive outcomes (Barthelemy 2003) – failures to obtain expected benefits (or compromised resources) are rarely reported as firms are reluctant to give permission to publicize them.

EVIDENCE ABOUT OUTSOURCING OUTCOMES

Table 1 outlines a summary of key surveys of IT outsourcing outcomes (either cost or other outcomes) undertaken in the last twelve years. Table data was obtained from a search in Proquest and Business Source Premier of all scholarly surveys of IT outsourcing conducted since 1994, augmented by the studies reported in Rouse’s survey (2002). While a total of 36 survey-based studies were identified in this search, most were concerned with reasons for outsourcing, or perceptions of the difficulties/risks (or success factors) associated with outsourcing. We found only 12 from this pool of 36 evaluated existing outsourcing arrangements, those shown in Table 1.

Table 1 reveals that, overall; there is a lack of strong empirical evidence about the benefits of outsourcing. Success has been operationalised in a number of different ways, and few reliable variables exist. Those variables that have published reliabilities tap only opinions. For this reasons it is not yet possible to subject research to statistical meta analysis. None of the surveys in Table 1 reporting cost outcomes explicitly asked purchasers to report both production savings and transaction costs. So the evidence we do have (such as it is) of outsourcing savings is based largely on opinions about the level of production cost savings.

Our focus group research (Rouse 2002) indicates that “reported” savings are rarely *confirmed* savings, even when only production costs are asked for, rather they are the savings *projected* at the time the vendor was chosen, on the basis of the vendor’s bid. Such projections represent a “best case” which almost never occurs in real life. This suggests that the cost savings reported in Table 1 are overstated, rather than understated.

Table 1 reveals that a paradox exists: although outsourcing is being taken up in large numbers, the empirical evidence-base for substantial benefits from the strategy is not strong, and there have been virtually no confirmatory studies to test prescriptions. Some large studies that did gather data on respondent evaluations did not publish details about proportions of evaluations that were positive, negative or neutral.

The study with the most positive results in Table 1 is a consolidation of cases studied by Lacity and Willcocks (1998). Like reports of individual outsourcing success, this group of cases are not statistically representative, and cannot indicate the likelihood of achieving the same levels of success in the wider community. Despite this, in our focus groups many decision makers argued that this study (or others quoting it) “proved” that outsourcing was largely successful, particularly if firms used recommended practices like short contracts and selective outsourcing.

EVIDENCE ABOUT OUTSOURCING RISKS

Systematic evidence on the likelihood of undesired outcomes from outsourcing is similarly scarce – most of the risk-related research (e.g. Aubert et al. 2005; Barthelemy 2001; Earl 1996) is speculative or theoretical. Gonzalez et al (2005) reported on a survey (n = 357) about those IT outsourcing risks

which respondents were most concerned about, but respondents were not asked how often these risks were actually encountered. Interestingly, one of the key risks Gonzales et al said their respondents were concerned about was lack of clarity about costs and benefits. Rouse and Corbitt (2003), reporting on a survey of 198 respondents, explored the likelihood of common risks (those we have labelled Type II). They focussed on the proportion of respondents who failed to report widely-anticipated benefits. Those benefits obtained by fewer than 50% of their respondents included the following (figures in brackets represent the proportion who failed to obtain these benefits): Strategic benefits (75%); Technology benefits (73%); Economies of scale (68%); and Satisfaction/ Overall value for money (64%).

Rouse and Corbitt's figures suggest outsourcing is a relatively high risk venture, even when only common (rather than catastrophic) risks are considered. It is noteworthy that outsourcing consultants have now taken up the "outsourcing is risky" theme, suggesting in the trade literature (eg CIO's Outsourcing Research Centre, 2006); that only about 30% – 60% of outsourcing is "successful". The limited empirical evidence that is available suggests that outsourcing of complex IT-based activities (including IT and business process outsourcing) is certainly *not* a low-risk endeavour.

4 UNDERSTANDING THE EVIDENCE-BEHAVIOR PARADOX

How can we explain the widespread and continuing growth in IT outsourcing in the face of, at best, equivocal evidence about its benefits and risks? Mainstream opinion about outsourcing is highly influenced by vendors and outsourcing consultants, who have a stake in "talking up" the strategy. So one possible explanation is that as a result of trade sources, decision makers have received an erroneous view of the extent to which benefits are widely obtained from outsourcing, and of the level of the risks involved. They may also be poorly informed about the power of recommended strategies to reduce levels of risk, given that this has rarely been tested. However, since our studies of IT outsourcing began in the late 1990s, we have conducted two large surveys, and 13 focus groups with decision makers in vendor and purchaser organizations, and this has led us to consider additional explanations.

4.1 Focus group methodology

Between three and 12 informants were involved in each of 13 focus groups, with a total of 51 informants. We also conducted an additional 8 individual interviews. Purchaser informants came from both the public and private sectors, and included outsourcing managers, IT Directors, division and firm directors, and outsourcing specialists hired to work for firms. Vendor informants included senior executives who ran the IT outsourcing function or held senior account management roles. One vendor informant had experience of offshore outsourcing in both a first world and third world setting.

All discussions took place under "Chatham House Rules" where participants are free to use the information received, but cannot reveal the identity or affiliation of participants. Informants were encouraged to talk frankly about their expectations and experiences, and about the benefits, difficulties, and risks they had encountered. Participants did not permit these discussions to be recorded; however detailed notes were taken and transcribed immediately after the focus groups. A number of informants agreed to participate in three subsequent focus groups conducted to explore the findings from the first survey we undertook on outsourcing practices and outcomes in public and private sector firms (published in Rouse 2002). The focus groups thus allowed us to undertake a form of "group-feedback analysis" (Heller 1969) with informants. As the first of these focus groups took place in 1997, we have been able to monitor public reports (and sometimes private reports) of member firms' experiences of IT outsourcing contracts, so these focus groups also form the basis of a longitudinal study that has now spanned almost ten years. We have also been able to observe how impressions change at different parts of the sourcing lifecycle.

During these focus groups, we saw evidence of framing biases in operation, as well as cognitive dissonance, attribution error, and the “optimism”, “confirmation” “disconfirmation”, and “overconfidence” cognitive biases. Explanation for these biases, and examples we observed are discussed below:

4.2 The role of framing

There is substantial evidence to show that the way information is presented (its “framing”) can have significant effects on decisions, and this helps explain some of the seemingly irrational choices made in relation to outsourcing. Tversky and Kahneman demonstrated systematic differences in decision choices when the same problem was presented in different ways. They found that when choices are framed in terms of potential losses, behaviour is influenced more than when the decision is presented in terms of possible gains (Tversky & Kahneman 1981) as decision makers are more likely to choose to avoid losses. We saw framing in operation in the way vendor informants and those strongly committed to outsourcing reported the likely benefits of the strategy, and particularly their beliefs that it could save purchasers substantial costs (e.g. 20% or more of the contract). To choose *not* to outsource was framed in terms of losing an important and beneficial opportunity, and failing to use “best practice”. It was also painted as “negative” and obstructionist to question the benefits of outsourcing, especially in government agencies (as at that time, Australian State and Federal governments were keen to embrace outsourcing).

4.3 Cognitive dissonance

Another explanation for apparently non-rational outsourcing choices is the psychological phenomena known as “cognitive dissonance”. Human beings find it psychologically distressing to hold incongruent or dissonant thoughts at the same time. The distress is so marked that humans will “restructure” their understanding of the world so as to remove this dissonance. This phenomenon has been demonstrated repeatedly in laboratory and field settings (Harmon-Jones and Mills 1998).

In the context of sourcing decisions, where outsourcing managers (in both vendor and purchaser organizations) have been told repeatedly that well-managed outsourcing is low risk and leads to substantial savings, any data that suggests that their own outsourcing experiences are unsuccessful can be dissonant with their self concept as good managers. Even when confronted with evidence to the contrary, managers who chose to outsource are likely to restructure their understanding, and come to believe that their organization obtained substantial benefits from the strategy. A particularly telling example of this form of “restructuring” was found in discussions with informants who repeated the trade press arguments that outsourcing isn’t really about savings money, despite originally stating that they were outsourcing because it was more efficient. Proponents argued that instead purchasers are really benefiting from other benefits such as “partnership”, technical benefits or being able to concentrate on their core business. Rouse and Corbitt’s research (2003) suggests that the latter benefits are just as difficult to obtain as cost savings – only around 27% (technical benefits) and 39% (core business) of respondents to their survey reported obtaining these. However, to make this claim helps overcome the dissonance between a belief that outsourcing leads to substantial savings, and the lack of widespread evidence of this.

Another example of cognitive dissonance which we saw repeatedly in our focus groups, occurred when decision makers, presented with evidence about the unlikelihood of substantial cost savings, argued that the surveys from which this observation has been made were probably unrepresentative. While this may be true, these decision makers were happy to accept the evidence *for* cost savings obtained under largely similar circumstances.

4.4 Attribution error

Psychologists have established that individuals tend to attribute behaviours in others to dispositional or personality-based factors, but to perceive their own behaviours in terms of situational effects. In other words, in relation to ourselves, we tend to attribute our successes to personal strengths, and failures to external circumstance. When we observe others, we tend to attribute successes to external circumstance; failures to personal weaknesses. This phenomenon is known as “attribution error” or “correspondence bias” (Gilbert & Malone 1995). In our focus groups we observed a similar phenomenon among both purchasers and vendors. Those who were proponents of outsourcing appeared to believe that firms which did not experience outsourcing success were guided by “poor managers”. Whereas if they experienced problems in their own outsourcing arrangements, informants attributed the problem to a poor vendor or purchaser (i.e. the “other” party). We saw this in focus group members’ accounts of “others’ failings”, particularly in the way they described firms as supposedly not trying hard enough to establish a good relationship with their vendor.

4.5 Other cognitive biases

Research over the last thirty years has identified a number of other consistent biases in human decision making. It is argued that these biases have developed as mechanisms to allow humans to simplify complexity. While they have advantages when speed is important and decision makers must operate with incomplete information, biases often lead to suboptimal (poor) decisions (Bazerman 2006). This was apparent in relation to outsourcing decisions discussed by our informants, because biases we observed in operation included the following:

The *optimism bias* (Kahneman and Lovello 2003), which occurs regularly in project planning where it is the tendency of decision makers to underestimate the costs and durations of complex activities, while overestimating the likelihood of benefits. In a recent Harvard Business Review debate, Flyvbjerg (2003) suggested that deliberate misrepresentation of costs and benefits by proponents or vendors occurs as a means to ensure that a project is adopted. Kahneman and Lovello (2003) suggest that the *optimism bias* is a simpler and more pervasive explanation. We certainly saw this bias in operation amongst the strong proponents of outsourcing, and in several cases the longer term outcome of their outsourcing confirmed this optimism had affected their analyses (their expected savings proved later to be quite overoptimistic, and they had not planned adequately for vendor opportunism). Hirschheim (in Healey 2002) has also observed that there is a lot of wishful thinking amongst outsourcing decision-makers.

The *overconfidence bias* operates in conjunction with the optimism bias. It describes the tendency for people to be overly confident of their ability to estimate (Gilovich et al. 2002). This bias can serve to magnify the operation of the optimism bias. We observed what appeared to us to be unwarranted optimism and unrealistic estimates of benefits (and of risk probabilities) among some focus group informants, but it also appeared that most informants were to a greater or lesser extent overconfident about the reliability of their own estimates.

The *confirmation bias* (Nickerson 1998) is the tendency of decision makers to seek out, and to pay attention to information that supports existing perceptions or beliefs, while ignoring or rejecting disconfirmatory data. Mainstream thought on outsourcing, and in particular on selective outsourcing, is that it leads to substantial benefits (Lacity and Willcocks 1998) and even when we pointed informants to conflicting evidence we and other researchers had obtained (e.g. Rouse and Corbitt 2003; Lee et al. 2004) we found many were not receptive to an alternative view, preferring instead to rely on the “war stories” reported by academic authors and the trade press.

The *confirmation bias* describes a situation where decision makers avoid or ignore new information that counters their existing attitudes or beliefs; on the other hand, the closely-related *disconfirmation bias*, describes the tendency for humans to carefully scrutinize information that contradicts their prior

bias, while tending to accept less critically any information that is congruent with their prior beliefs. We saw this when informants who were strong proponents of outsourcing seemed to not really be interested in entertaining the idea that it had substantial risks and often did not lead to large savings.

This behaviour could also be interpreted through the lens of cognitive dissonance discussed above.

These biases are consistent with Ang and Straub's (1998) findings (described above), and by implication, surveys of outsourcing outcomes that come largely from informants who chose to use external vendors may have overlooked important transaction costs.

5 CONCLUSIONS AND IMPLICATIONS

The preceding discussion is not intended to suggest that all positive outcomes attributed to outsourcing are erroneous, or that outsourcing will usually end in failure. Rather it suggests that outsourcing is a complex undertaking, and that determining the outcomes calls upon detailed and skilled analysis. Much of our knowledge of the effects of outsourcing is based not on empirical data but on theory, or on *projected* benefits announced when arrangements are entered into, and not independently verified.

In recommending an evidence-based approach that considers both risks and returns, we do not advocate avoiding sourcing options that could incur a high level of risk – since returns and risks are generally correlated. Rather, we suggest that decision makers adopt a risk management strategy that draws from best available evidence. This approach will allow purchasers go into outsourcing arrangements with their eyes open, knowing what kinds of things could go wrong, and where possible, the likelihood of their occurrence.

We have used the limitations to existing empirical evidence, and the potential influence of cognitive biases to shed light on the forces that might lead decision makers to arrive at choices that are riskier than they realize, and so do not deliver the benefits expected of them. This is not a novel observation: in the early 90s Lacity and Hirschheim (1993) highlighted the often political and non-rational reasons for outsourcing decisions. However, in light of our observations on the roles of biases and cognitive limitations in outsourcing decisions, it makes sense for information systems researchers to be more critical of outsourcing research, particularly where the benefits of the strategy, or of recommended practices are assumed, rather than demonstrated, to be widespread. If decision makers are to make informed strategic sourcing decisions, it is important that their understandings of the likelihood of benefits and of risks be aligned with the best evidence. At present, that “best evidence” is scarce and rarely based on systematic data gathering and analysis. What is typically available reflects individual interpretation of particular cases.

Informants' reports are often based on their initial judgements (not informed by detailed analysis of firm's accounting records). These judgements have been shaped by vendor and consultant communications about the benefits that outsourcing can theoretically bring, so are likely to be more optimistic than those based on detailed and critical analysis of the benefits obtained from the strategy.

The wide adoption of IT outsourcing suggests that the strategy provides benefits to many organizations in certain circumstances. However, it is important to recognize that having entered into an outsourcing strategy it can sometimes be difficult to reverse the decision (Rouse & Corbitt 2006). Several of our focus group informants told us in private forums of strong dissatisfaction within their firms, but when these firms later renewed their existing contracts (because, they told us, there were no other choices) the press reports described the arrangements in glowing terms. Researchers should therefore not assume that widespread adoption of the strategy is a resounding endorsement. In the same way that smokers might wish to give up smoking but be unable to do so because of addiction, outsourcing purchasers can still be quite dissatisfied with their outsourcing arrangements, but unable to bring services back in-house. If purchasers do not have any IT capabilities to start with (or particular capabilities, such as software development) outsourcing may be their *only* option.

Given this, instead of assuming that the benefits of outsourcing are commonplace, it would be appropriate if future research tested these empirically. Along with tests of the efficacy of the large number of prescriptions in the literature about how to best manage outsourcing, it would also assist researchers if those reporting regression or structural equation models also told us what proportion of the outcome evaluations were positive, neutral, and negative. Moreover, it is important that future research differentiates between (i) *IT outsourcing where there are no other choices* (for example in a start-up firm with no prior IT capability, or in the case of once-off development of a system where the purchaser has no development capability) from (ii) *outsourcing of ongoing services as an alternative to in-house delivery*. In the former case, since there is no other choice, outsourcing makes sense, whether or not it is high risk and has few benefits, but in the latter case, the arguments for outsourcing depend on a thorough cost/benefit analysis of both options.

The history of IT outsourcing has seen the strategy adapt and morph into newer variants. At present decision makers are being encouraged to outsource not just their IT services, but also whole business processes (business process outsourcing, or BPO). BPO introduces a higher level of risk, and the evidence of the success of BPO arrangements at this stage is even less convincing than that for IT outsourcing. Purchasers are also being encouraged to outsource both IT and BPO services to developing countries, largely on the assumption that labour arbitrage will lead to substantially higher cost savings that warrant the additional risks. As with other forms of outsourcing there is virtually no empirical data to confirm this. An offshore outsourcing strategy increases both transaction costs and risk costs (both hard to discern), and these may well outweigh the labour arbitrage-based production cost savings over the life of the contract. Because of these moves into riskier forms of outsourcing, we believe it is even more important that decision makers be encouraged to consider ALL elements of the model presented in Figure 1 in their sourcing deliberations, recognizing their susceptibility to cognitive biases and a barrage of positively-skewed information, coming in part from players who stand to benefit substantially from increased use of outsourcing.

6 REFERENCES

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