The Relation Between Outsourcing and the Return from Corporate IT Spending: Perceptions From Practitioners

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ABSTRACT
Information technology may be viewed as a strategic asset or as a utility. The view a company holds not only influences the return it expects to receive from information technology investments, but also its decisions regarding outsourcing.

This paper reports research conducted to examine the association between these issues from the viewpoints of experienced executives, managers, and consultants in comparison with those of veteran information technology professionals. The findings show that results expected from outsourcing are changing. Moreover, understanding the areas where managers and IT professionals agree and where they differ provides valuable insights into strategies for gaining adequate returns on IT spending.

1.0 Introduction
Although there is widespread recognition that the manner in which a firm develops and deploys its information technology (IT) resources can influence its business advantage, there is a parallel belief that all or parts of the information technology resource can be outsourced without hindering the firm’s competitiveness. One viewpoint signals a distinct belief that IT is a strategic asset from which the enterprise can obtain business value. The other appears to indicate a belief that IT is a commodity-like utility and that any business value returned from spending on this resource is independent of whether the resource is managed by members of the firm or by outside contractors. At issue is whether the outsourcing of IT, wherein a firm contracts with another to manage, develop, or maintain its IT functions [13] is a productive management strategy.

In order to gain greater insight into these issues, an investigation was conducted to explore the differing views held by managers regarding the outsourcing of information technology in relation to its ability to generate business value for a firm. The study, involving 207 practitioners, compared the insights of experienced managers and consultants with those of IT professionals. The results show differing views regarding the wisdom of outsourcing as a vehicle to increase the value returned from spending for IT. The findings also reveal important views regarding the commonly held belief that outsourcing is a vehicle for reducing overall IT costs.

2.0 Background
It is widely known that a significant and growing number of firms are outsourcing one or more aspects of their information technology (IT) function. An even more substantial number of firms intend to undertake outsourcing, or are seriously investigating the feasibility of doing so [1]. Although the reasons a particular firm chooses outsourcing will vary, reduction in the cost of delivering services is among the most frequently reported objectives [10].

At the same time, senior executives and IT directors alike continue to express keen interest in assessing the value returned from their firms’ ongoing spending on information technology [9]. At issue is whether firms can or should expect to undertake outsourcing without unduly affecting a return on IT spending in the form of increased business value to the enterprise. A favorable return is an indicator of IT’s business value. Increasing the return thus increases IT’s business value.

2.1 Emergence of Outsourcing
The outsourcing of IT has been practiced since the earliest days of computing. However, the practice became highly visible when Eastman Kodak outsourced its IT operations to the IBM Corporation in 1989. Currently more than half of all midsize and large firms in the United States and other major international regions either outsource or plan to do so [16]. The trend toward corporate outsourcing of IT is growing, with revenues generated by
companies offering these services escalating from $4 billion in 1989 to $40 billion in 1996 [14]. The annual rate of growth, some 16% since 1989, is expected to accelerate. Some estimates size the outsourcing revenue stream at over $54 billion by 1998 and project it to exceed $76 billion by the year 2000 [5].

Companies outsource for diverse reasons, including (1) reduction of costs via subletting specific IT functions, (2) refocusing leadership attention on core business functions, (3) overcoming IT-related organizational challenges, and (4) to stimulate higher returns for costly IT training and development [10,13]. Experience has proven that the outcomes are not always consistent with expectations. A growing body of literature is documenting disappointments, painful experiences, and outright failures [5, 9, 19]. Moreover, investigators report that outsourcing is not as favorably viewed as it was only a few years ago [20].

2.2 Strategic Asset vs. Commodity-Based Utility

Two views appear to dominate information technology thinking among both practitioners and scholars. One recognizes IT as a strategic asset. The other holds that IT is a utility that is commodity-like in nature.

2.2.1 Strategic Asset View

An asset has value and should be managed and cared for in order to preserve or grow its value [12]. Moreover, its effective deployment may create additional value. The asset is deemed to be strategic if it influences the positioning of an enterprise, favorable or not, as a result of its use.

The asset view of IT holds that information technology applications are strategic resources that, when properly deployed, return distinct business value [2, 3, 4]. That is, the results the firm enjoys from the spending are substantially greater than the level of spending itself. Improvements in business value occur when IT is deployed to change cost structures or influence the comparative bargaining power of buyers and suppliers. Moreover, IT applications are often deployed to alter the basis of competition in an industry to an extent where most competitors are compelled to imitate them [6] in order to overcome, or “neutralize” the initial advantages. The strategic role of IT has been widely discussed and investigated [7,17], and is the focal point of many illustrations demonstrating how carefully deployed applications have contributed to business advantage.

2.2.2 Utility View

An alternative view holds that IT should be managed as a utility that is designed to be useful and reliable, but with little or no attention to its strategic value. The utility view holds that while IT components (e.g., hardware and software) may have asset value in an accounting sense, they have no inherent business value. The functionality delivered from IT is more important than the choice of specific components used to deliver that functionality. Moreover, proponents of this view claim, it is not a strategic asset, but rather a resource that can and should be outsourced.

The utility view is based in part on the argument that IT is a commodity. Such thinking was predominant in the Kodak outsourcing decision. Henry Pfendt, director of information technology at Eastman Kodak then argued that a decision on outsourcing came down to one question: “Do you want to manage commodities?” [15]. Other similar views have compared the IT function to food and laundry services—arguably natural candidates for outsourcing—and to electrical utilities: “It’s like the electric company; you use less, you pay less.” [15].

A second argument used by proponents of the utility view suggests that IT is not an area of core competency [11]. Firms are advised to invest their resources in only core competencies where they can achieve both advantage and gain a return in value, i.e., business value, that is greater than the level of spending. For non-core areas, (i.e., utilities) managers can leverage their company’s resources through outsourcing because:

1. Returns on internal resources can then be maximized by concentrating investments and enterprises on what the enterprise does best.
2. Well-developed core competencies provide formidable barriers against competitors, thus facilitating and protecting market share.
3. The enterprise can utilize the investments and resources as well as the capabilities of external suppliers that would be impossible or undesirable to reproduce internally.
4. In rapidly changing market and technological situations, a firm can decrease risks, shorten cycle times, lower investments, and create better responsiveness to customer needs. [18]

This prescription thus suggests that whenever an activity does not provide both advantage and add to core competence, it should be outsourced.

2.3 Returning Business Value From IT Spending

With respect to business value, the utility view suggests that the return from spending on IT is not sufficient enough to warrant investment in resources in this area compared with other areas of the firm. More pointedly, the business value returned from IT spending, if it is a
utility, is insufficient, at best, and the company is not at a disadvantage in a competitive or strategic sense, if it outsources the function. (The theoretical and empirical aspects of measuring the question of business value have been addressed in detail. A full discussion of the theories of business are beyond the scope of this discussion. Comprehensive summaries can be found in [2, 3, 4, 7, 17]).

2.4 Perception Drives Outsourcing Decisions

Even though arguments favoring both the strategic asset view and the utility view can be firmly made, it is evident that outsourcing is likely to continue, with both proponents and opponents. Perception appears to be as much a driver as the preceding rational arguments.

Thus a commonly held view suggests that decisions on outsourcing are largely a matter of CIO competency. In describing what he terms “the outsourcing curse”, Eager, himself a CIO, expresses a widely held view that respectable CIOs do not allow their IT organizations to be outsourced. In his view, representative and widely held by many in the field, outsourcing is an indication of mismanagement by the CIO, or at the very least an expression of opinions held about the CIO’s competence. Hence, in many companies, the key to decisions on outsourcing of IT is managing the perceptions that senior managers and executives hold about information technology. By investigating the nature of these perceptions and the extent to which they are held by highly experienced IT professionals and seasoned managers, it may be possible to better understand why opposing views of IT are so strongly ingrained. In so doing, we may also gain new insights into the factors that practitioners deem to be contributors to business value and those that detract from favorable returns on IT spending.

3.0 Research Program

Understanding the distinction in practice between the strategic asset and utility view of information technology is an integral part of an ongoing research project addressing the following question: What forces contribute to or detract from the actual and perceived creation of business value resulting from a company’s continued spending for information technology. The results reported in this section address the perceptions of practitioners with respect to the impact of outsourcing on the cost of using information technology and the weight placed on strategic and operational factors.

Three questions underlie this investigation:

1. What factors do practitioners associate with increasing the value returned from spending for information technology?
2. Do practitioners perceive that outsourcing improves the value returned from IT spending
3. Do practitioners perceive that outsourcing reduces costs?

Questions 1 and 2 are aimed as providing insight into arguments supporting either the strategic asset or utility views of IT. Question 3 captures perceptions on the cost advantages of outsourcing IT.

3.1 Item Validation

In order to conduct this investigation, a set of evaluation items related to the value returned from IT spending was first assembled from the field. A three-step validation process was used to test and refine the items [20]. A group of 14 senior CIOs was convened to explore the issue of how to determine the return on corporate spending for information technology. As part of the day-long session, an exercise was conducted in which the group collectively assembled a set of factors that were frequently identified as having an impact on the business value generated by information technology. The group reduced the number of items to 37 after removing duplicates and eliminating those the group agreed applied only in unique, company-specific settings.

Subsequent to the session, using 21 senior managers participating in an executive education program reviewed the items. Two items were removed after the managers collectively agreed they were not meaningful. Hence the final set consisted of 35 items.

Finally, doctoral and graduate students reviewed the 35-item list. These results confirmed the descriptive usefulness of each item that had been established earlier by the executives. The items became the basis for a questionnaire used in this investigation.

3.2 Data Collection

A sample of 207 highly experienced managers, business consultants, and IT professionals participated in this investigation (3 participants were later dropped from the results). The sample represented all ranks: The management group (n=145) included CEOs, managing directors, line managers, project managers, and consultants. The IT professionals group (n=59) included CIOs, IT directors, and IT project managers and developers.

At the end of one of several identical half-day industry workshops exploring IT trends, participants completed a 35-item questionnaire consisting of validated statements encapsulating the strategic and operational issues discussed above. All questions were of the same two-part format. A statement pertaining to the value
returned from IT spending and a brief explanation were presented as follows:

"Outsourcing IT is cheaper than insourcing."

IT spending can be reduced by outsourcing all or parts of the IT function to an appropriate third party.

Individuals were asked to indicate whether the subject of the statement constitutes a force that contributes to, detracts from, or has no effect on the business value of IT. In addition, they were asked to indicate their agreement with the accuracy of the statement using a 7-point Likert scale.

4.0 Findings

The association between the return of value from IT spending and the impact of outsourcing is examined from 3 perspectives.

4.1 Influence On The Business Value of IT

A correlation analysis was performed to determine the extent to which participants view outsourcing as a means of improving the value a company obtains from spending on information technology. A favorable correlation coefficient is interpreted to indicate that the respondents positively associated outsourcing and an increase in value returned; a negative correlation suggests an unfavorable perception of outsourcing benefits with respect to business value.

The results show that managers and IT professionals view the impact of outsourcing on the return of business value from IT spending differently (Table 1, line 1). Managers indicate that outsourcing mildly contributes to or improves the value returned from IT spending. In contrast, IT professionals conclude that it detracts from the value of the firm’s IT. The difference between these groups is marginally significant (t=1.85; p-value=0.06).

<table>
<thead>
<tr>
<th>Table 1</th>
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<tr>
<td><strong>Assessment of Outsourcing</strong></td>
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<tr>
<td>Outsourcing IT contributes to improved business value from IT spending</td>
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<tr>
<td>Outsourcing is cheaper than insourcing (1-7 Likert Scale)</td>
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4.2 Outsourcing and the Value of Reduced IT Spending

A correlation analysis was also performed to understand how participants associate activities that increase the return from IT spending with the use of outsourcing to reduce spending levels (Table 2). Both strategic and operational variables were examined.

Although managers and IT professionals view the strategic factors associated with business value in virtually identical ways, there is no statistically significant association between those views and the likelihood that outsourcing will reduce IT spending levels. Simply stated, the participants are not predisposed to pursue outsourcing as a means of reducing spending when the issues are strategic in nature.

In contrast, the viewpoints of managers and IT professionals with respect to operational issues vary significantly. Manager assessments of outsourcing are negatively correlated with four factors: changing IT demands, the constant demand for IT applications, hidden IT costs, and the belief that IT managers are not effective business managers. In other words, managers do not associate these factors with the use of outsourcing to reduce IT spending. However, they do associate the limited business scope they perceive in IT managers and the fact that IT spending continues to occur with the choice of outsourcing as a means of reducing IT spending levels.

Table 2 shows how different the correlates are for IT professionals. They associate outsourcing with cost savings when IT spending totals are perceived as too high, when IT is feared, and when good benchmarks are unavailable. Significant correlates were also found when systems suffer from poor reliability, when the easy-to-do applications are already automated, and when there is a lack of fit between IT managers and users.

4.3 Outsourcing and Cost Reduction

Participants were asked about their view of cost savings without regard for any business value issue. They expressed disagreement with conventional assertions: Both groups indicated they do not believe outsourcing reduces the cost of information technology. Rather, the predis-position of both groups is to expect outsourcing to generally be more expensive than insourcing. There is no significant difference between the manager and IT professional groups.

5.0 Discussion

The decision to outsource is not a simple one, and quite often is highly controversial. The research and
practitioner literatures indicate that cost saving has been, and to large extent still is, a major driving force behind this decision (albeit not as much as in the past) [16]. The findings from this study imply a somewhat different story.

Neither the participating managers nor the IT professionals believe outsourcing per se will actually lead to a reduction of information technology costs. Rather, the projected possible cost saving is associated with a variety of other business issues.

This finding adds additional meaning to the McFarlan and Nolan analysis [16] of when to outsource. McFarlan and Nolan suggest that the benefits of outsourcing should be considered within the context of a strategic grid [17]. Firms in the “support” and “factory” quadrants should pursue outsourcing. However, those in the “turnaround” and “factory” quadrants should avoid outsourcing because of the significance of losing control and flexibility over the vendor and the nature of their activities. Applications in the first two quadrants deal with new IT applications that have relatively low strategic importance, while new applications in the latter two quadrants have high strategic importance. Yet this study shows that it was not the strategic issues that personnel associated with cost savings, but rather a variety of operational factors. Thus in addition to the strategic importance of differentiation suggested by McFarlan and Nolan, addition dimensions of the business value associated with IT must be considered. Among the factors that appear important, as illustrated in this study, are the relationship between managers and IT professionals in an organization, hidden costs, IT acceptance, and the complexity of applications.

These findings also reveals another aspect of this complex and important topic, namely the distinct difference in the assessment of outsourcing’s attractiveness. The IT professionals in this study do not view outsourcing favorably. The managers do. Moreover, the IT group views the cost saving benefit from outsourcing with very different issues than the management group. In retrospect the differences are not surprising. If outsourcing fails, for any reason, rebuilding an internal IT function is very difficult [16]. Moreover, the responsibility will typically fall to the CIO, project managers, and developers comprising the IT function.

Furthermore, when companies outsource the resulting cost savings may accrue from several sources, many of which deal with the say software operations are managed [16]. Needless to say, the IT personnel are likely to view outsourcing with less enthusiasm because the view of the firm’s information technology function and operations, and also the surrounding culture, will change. It is generally thought that members of the IT function are much more likely to realize the nature and significance of these difference than those who are outside of the function.

An interesting implication growing out of the results of this investigation suggests that service companies who specialize in outsourcing, and likewise managers promoting its use, should address each group very differently. Even the initial approach must differ so as to increase the apparent favorable attitude of managers while conforming the unfavorable inclination of IT staff members. However, the marketing plans may not need to differ, as the benefits associated with cost savings through outsourcing do not overlap between these two groups.

### Table 2
Correlation Coefficients of Business Value Factors with Cost Saving by Outsourcing

<table>
<thead>
<tr>
<th>Strategic Factors (representative)</th>
<th>Non-IT Personnel</th>
<th>IT Personnel</th>
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<tbody>
<tr>
<td>IT influences survival</td>
<td>-.0491</td>
<td>-.0735</td>
</tr>
<tr>
<td>IT is a competitive necessity</td>
<td>-.0567</td>
<td>-.2183</td>
</tr>
<tr>
<td>IT infrastructure spending is critical</td>
<td>-12.79</td>
<td>-.1829</td>
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<tr>
<th>Operational Factors</th>
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<tbody>
<tr>
<td>IT demands change constantly</td>
<td>- .2279**</td>
<td>.1169</td>
</tr>
<tr>
<td>IT decisions have hidden costs</td>
<td>- .2927**</td>
<td>.0763</td>
</tr>
<tr>
<td>IS managers are not business managers</td>
<td>- .2927**</td>
<td>.0763</td>
</tr>
<tr>
<td>IT applications are in continual demand</td>
<td>-.1967*</td>
<td>-.0243</td>
</tr>
<tr>
<td>IT benchmarks are not generally available</td>
<td>.0810</td>
<td>.3488**</td>
</tr>
<tr>
<td>Executive management does not use IT</td>
<td>.0058</td>
<td>.4651**</td>
</tr>
<tr>
<td>IT is feared</td>
<td>.0376</td>
<td>.4991**</td>
</tr>
<tr>
<td>IT costs are dropping</td>
<td>-.0243</td>
<td>.3247*</td>
</tr>
<tr>
<td>IT is not well-liked by non-IT members of the enterprise</td>
<td>-.0269</td>
<td>.5452**</td>
</tr>
<tr>
<td>IT systems suffer from poor reliability</td>
<td>.0153</td>
<td>.3514*</td>
</tr>
<tr>
<td>IT spending totals are too high</td>
<td>.1493</td>
<td>.4508**</td>
</tr>
<tr>
<td>Easy-to-do applications are automated</td>
<td>-.1831*</td>
<td>.4950**</td>
</tr>
</tbody>
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(* significant at α=.05; ** significant at α=.01)
6.0 Summary
As these results show, the manner in which outsourcing of IT functions is viewed appears to be changing. Participants do not favor outsourcing to reduce cost. Moreover, the different outlooks by managers and IT professionals suggests new areas for study. The correlation analysis suggests that new insights may be gained from exploring the factors associated with the delivery of business value from both outsourcing and for all spending on IT.

7.0 References
15. Lacity, Mary and Rudy Hirschheim, “The Information Systems Outsourcing Bandwagon,” Sloan Management Review. 34.1 (Fall 1993) pg. 73.