Managing Information Technology with Outsourcing: An Assessment of Employee Perceptions

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Abstract

Outsourcing is the contracting out of all or part of a company's information systems functions to outside parties. This research provides preliminary findings on the perceptions of IS (Information Systems) professionals on outsourcing. The findings of this study indicate that in order to effectively deal with the human aspects of outsourcing, management must understand what perceptions exist within the employee ranks and develop a plan which addresses employee needs and perceptions. Such a management action plan is presented in this paper.

Introduction

In general business terms, outsourcing can be used to reference other contracting out arrangements not associated with information systems, however, in the context of this paper, the term will refer to information systems functions. Due (1992) defines outsourcing as "the transfer of a part or all of an organization's existing data processing hardware, software, communications network, and systems personnel to a third party."

Information systems functions have been contracted out for as long as data processing has been a business function. Contract programmers have been used to allow flexibility in systems development staffing and CPU processing cycles have been bought and sold for many years. However, only in the last few years has the term 'outsourcing' become a common word in the information technology (IT) vocabulary. The recent proliferation of outsourcing has resulted in a heightened awareness of the practice among business management, information systems professionals, academics, and the industry media.

The image associated with companies that outsource information systems functions has changed greatly in the last few years. The practice has gained acceptance, particularly among Fortune 500 companies. A landmark event occurred in the industry when Kodak outsourced most of its information systems work in 1989. Previously, the perception was that only companies which could not manage in-house operations resorted to outsourcing. Now outsourcing is viewed as a "strategic partnering" and is not limited to small operations (Radding, 1990).

This research presents preliminary find-
ings of a survey on outsourcing. These results summarize the perceptions of IS professionals on the topic of outsourcing.

The Benefits of Outsourcing Information Technology

Outsourcing is the manifestation of many problems that are currently perceived with the information systems function. Senior company executives feel the return on IS expenditures is lacking. They also believe that IS, in general, does not meet the needs of the business and that promised gains in productivity used to justify IS expenditures never materialize (Benko, 1993). In searching for ways to address these business problems, executives find the benefits associated with outsourcing to be very appealing. In addition to the cost savings that are frequently cited as a primary benefit, outsourcing can help a company realize strategic improvements as well.

One of the basic premises of outsourcing is that the vendor can provide the same services to the client at a lower cost and still make a profit for itself. Large [1991] states that an organization specializing in information technology can gain efficiencies in two major ways. First, the economies of scale associated with running large operations cuts down on the per unit cost associated with computing. Second, the knowledge base of experience and expertise in the company results in a more efficient and effective organization.

The cost savings realized with outsourcing can be significant. Due (1992) believes the cost savings potential is so significant that almost all organizations, both public and private, will evaluate outsourcing as an opportunity for savings. Friedberg and Yarberry (1991) state that most large data centers have an inefficiency level anywhere from 10 to 30% which could be eliminated with the proper attention. If client companies could eliminate the inefficiencies on their own, part of the reason for outsourcing would be unnecessary. Where companies in the outsourcing business can capitalize on that inefficiency with economies of scale and a more efficiently run operation, non-IT companies do not always have the financial or technical wherewithal to overcome these weaknesses. In addition, as Haavind (1991) points out, fees the client company pays the vendor for services become business expenses, which can be claimed for tax purposes as they are spent, rather than depreciating the cost of information technology investments over several years.

In running its own data center, the client company may find that a small addition to the amount of CPU or disk storage requirements may trigger a large capital outlay for a new CPU or bank of storage. When buying the service from the vendor, only the amount of CPU or disk storage consumed is paid (Bargeron, 1993). In an outsourcing arrangement, the client pays only for the services used (Sinensky & Wasch, 1992). In this way, the client's computing bill can vary with the level of business and resulting need for computing resources. If the client's computing needs are tied to the volume of business, this presents a more favorable cost pattern for the client's financial planning. When dollars are actually going out the door to another company, the client's employees are likely to pay more attention to the necessity of the system work they are requesting. When the work is being done in-house, the concept of "wooden nickels" usually prevails and requests for new systems or enhancements are not so closely scrutinized (Kirkpatrick, 1991).

Attracting and retaining talented information systems professionals can be a challenging and time-consuming process. Gupta & Gupta (1992) say the economic losses tied to human resources are significant, but are rarely publicized by companies.

Aside from the cost savings, there are many benefits associated with outsourcing which are strategic in nature. These benefits contribute to gaining a competitive edge within the client's industry.

An information system's role in the organization can be viewed in two ways. In one role, information systems simply automate manual processes saving time and money. By making back-office operations more efficient, information
systems allow manual tasks to be accomplished with fewer resources. Another view of information systems looks at them from the competitive advantage provided to the user. Systems which allow a company to offer its customers a better service or product, than it could have otherwise, would be considered strategic in nature.

By gaining access to an information service provider that can supply higher quality systems, particularly those with strategic significance, an outsourcing client can position itself to achieve a competitive advantage in its industry. By making new technologies more accessible and putting them to use in applications which enhance to the client's business, the outsourcing vendor can make itself a valuable business partner to its customer.

Another major benefit of outsourcing is that it frees the client's senior IS management from worrying about problems associated with technology. They can spend their time on true business problems making them business managers rather than technology managers (Huff, 1991).

By outsourcing information systems functions, companies can lower the inherent risk found with spending large amounts of money on technology. Outsourcing can reduce the risk in two ways. First, the risk of investing in the wrong hardware and having no recourse to recover the money is reduced. A large outsourcer should provide the client company access to all technologies and not just those the client could afford to use when it was on its own. Thus, the correct technology can be selected for each specific application rather than a forced fit between existing technology and new applications. Second, the risk of system development overruns is assumed by the vendor rather than the client. Also, if the system does not work as promised, the vendor, not the client, should incur any additional costs for system rework (Barger, 1993).

Additionally, the IS staff is now dealing with a bonafide customer rather than an internal customer. If the customer is not in-house, the impetus to resolve problems and provide satisfactory service is greater. When dealing with an outside vendor, poor performance is usually met with more effective action than that taken on an internal IS group where under-performance is usually more difficult to resolve (Benko, 1993). Ironically, many companies do not contract out systems development work for fear of a loss of control. However, Buck-Lew (1992) believes that more control is achieved through the use of an outside party.

Employee Perceptions on Outsourcing

Most of the current literature reviewed thus far on the topic of outsourcing deals with the business considerations of it. The business issues covered in the literature include: outsourcing rationale, saving costs, selecting the right vendor, negotiating contracts, avoiding mistakes and identifying of good candidates for outsourcing. Very few articles deal with the human aspects of outsourcing from the client's point of view, that of the vendor or view of the information system professional.

One of the largest costs and complications of running one's own information systems department is that of hiring and retaining a staff of qualified information systems professionals. Because a major portion of the information systems budget is the professionals' salaries, whenever cost reductions are planned, some of the reductions are usually achieved by lowering the payroll. This direct link between outsourcing and employee numbers is the major reason that it is such a sensitive topic within the information technology community.

Chief Information Officers or other executives involved in the outsourcing decision will naturally be torn between what is best for the organization and what is best for the information systems professionals. When IS staff is outsourced, it is often survival of the fittest. Regardless of how much is done for the people, it is inevitable that some employees will be negatively impacted (Kiely, 1992).

It is natural for in-house information systems departments, including the IS management, to resist outsourcing. Not only do they give up con-
control of the function to an outside entity, but their jobs are also at risk. This results in two implications for executives. First, the top management of organizations may never be made aware of the potential benefits of outsourcing because the IS group does not raise the issue. Second, if outsourcing is implemented, the resistance of the employees must be overcome because their cooperation is essential for a successful transition (Large, 1991).

As Moad (1991) points out, outsourcing vendors' reputations are not the best with information systems professionals; many IS executives see these firms as a threat to their security. Frequently, outsourcing vendors will go over IS management's head directly to the corporate executives. This method is often used by vendors because they realize that IS management is generally not receptive to what the vendor has to offer. Employees who are in the lower ranks of the organization are also uncomfortable with the idea of "being taken over" and "becoming a pawn" in a business transaction.

It is important for managers to understand what people's perceptions are with regard to outsourcing so they can effectively deal with the problems that arise as the evaluation or transition progresses. Information systems professionals are affected from the time the first rumor appears until long after outsourcing has taken place. Employers certainly do not want to needlessly upset their employees particularly if outsourcing is never implemented. Companies that do choose to outsource should carefully consider their treatment as well as the vendor's treatment of the professionals involved. The client companies should want to minimize any bitter feelings for many of these same employees will be the primary providers of information technology services to the client after the outsourcing.

As with any rumor that deals with one's job security and well-being, the potential for an outsourcing deal will probably affect the productivity of the information systems group. This lag in productivity will last as long as unsubstantiated rumors abound and will probably not get back to normal levels until some answers come forth from a credible source.

This decreased productivity is due to a low morale which is certain to follow if employees feel their job security is in jeopardy. When an employee learns that outsourcing is being considered, they naturally question the loyalty of the employer resulting in a drop in morale. IS professionals may view the consideration of outsourcing as an underestimation of their abilities or a lack of confidence. This can be demoralizing to a staff and contribute to a mass exodus of talent before the outsourcing decision has even been made (Gupta & Gupta, 1992).

Richard Due's (1992) interviews with employees in the process of outsourcing identified numerous concerns with regard to the personnel. The most significant problem he identified was that outsourcing had a negative effect on morale which translated into low productivity. When the outsourcing was in the works, but information was not being released, he found that rumors of layoffs, benefit losses, and transfers abounded. The employees felt they were no longer wanted by their company; some, particularly the standouts, began to explore the job market.

Gaining efficiencies in a people intensive business function like information technology generally results in workforce reductions when an outsourcing takes place. Some employers believe that an IT professional's price to performance ratio peaks somewhere between the ages of 25 and 30 years old. After that increasing salaries make the cost to contribution ratio less than that of a younger professional with a smaller salary. Savings are gained by the outsourcing vendor when these senior and more highly paid employees leave. Some employers see outsourcing as a way to move the less productive, more expensive older employees out of the ranks (Due, 1992).

Workforce reductions are an issue for the client as well as the outsourcing vendor. The client may take responsibility for terminating the employees and providing appropriate benefits or the vendor may get all the workers and have to deal
with the resulting reorganization on its own. In any case, when changes such as these arise, difficult situations develop. While the unpleasant task of downsizing an organization can be taken care of quickly, the employees who remain after the terminations can be negatively impacted for some time after seeing their co-workers go.

Transitioned employees who survive the reorganization may remain insecure about how long the vendor will keep them around or what their career potential is with the new company. They may also feel somewhat unsure about their skills. In many cases, information systems employees that work for a non-IT company may have been performing the same function for many years; and therefore, have only one specialty or technical skill which could quickly become obsolete.

The amount of training the client's employees received may have been limited and their technical skills may be outdated as a result of new technologies utilized by the vendor. The prospect of going to work for a company that is made up primarily of information technology professionals can be intimidating. Transitioned professionals may fear that their skills will not match up to those the company already has available from its existing pool of experts.

Other employees have different reactions to the outsourcing. Many find the new work environment to be stimulating and challenging. The opportunity to work for a company that specializes in one's line of expertise presents possibilities that may not have developed working for a company that only did data processing to support its own needs. Exposure to new technologies, the ability to work in different industries without changing employers, and added responsibilities can all result in a more fulfilling work experience for some.

Opportunities for learning new technologies, advancing in a company whose main business is information technology, and the challenge of serving a genuine customer were all things which were received positively in Due's (1992) discussions with outsourced employees. For those that have been looking for a change, but did not have the wherewithal to act on their own, a layoff or transition is the impetus they needed to move on. Senior employees may view the outsourcing as an opportunity for early retirement or golden handshakes.

Career paths for both technical and managerial personnel are greatly enhanced with a move into a company where everything is geared around information technology. In a company focusing on another business, career paths for IS professionals are usually limited to those opportunities which become available in the IS department. Huber (1993) believes that employees who go from an IS group in a non-technical company to an outsourcer broaden their career paths significantly. He feels that in many cases in-house IS is nothing more than a glorified mail room that is critical for the operation of the business but not a strategic contributor to the competitiveness of the business. With an outsourcer, employees have a chance to work for a real technology company.

One management consultant feels that outsourcing is growing because companies want to avoid the burden of any department whose employees can't legitimately aspire to be CEO of a company. In non-IT companies, this is usually the case with IS employees; in information technology companies, this is certainly not true (Williamson, 1991).

Research Methodology

A survey was developed to gather data on employee perceptions about outsourcing. The survey was mailed to 1000 information systems professionals throughout the United States. The professionals surveyed were all members of the Association for Systems Management (ASM) and were randomly selected from the membership roles. Of the 1000 surveys sent out, 146 surveys were returned which could be used in full, or in part, in the survey. This 14.6% return rate was consistent with the expectation of returns when the research project was undertaken. Descriptive information on the job function and functional area of these IS professionals is presented below.
the IS professional is in the minds of management when considering outsourcing. The results of this question indicate that a majority either disagreed or strongly disagreed that the professionals were a key factor in the minds of management. With the majority of employees believing that their welfare is not a key factor in the management decision, it would be naive to think that trying to convince them otherwise would be of any value.

**Difficulty of Client to Keep Up with IT Changes**

A Majority of the respondents felt that it was difficult for companies to keep up with the latest developments. One of the justifications of outsourcing is that companies which do not specialize in information technology can no longer keep up with the rate of change in the industry, and should, therefore, let a specialist assume the role of service provider.

**Perceptions of Opportunities Available with Outsourcing Vendor**

These perceptions are presented as a) career opportunities with IT (outsourcing vendor) companies, b) compensation with IT companies, c) job security with IT companies, and d) job satisfaction with IT companies.  

*Career Opportunities in IT Companies is Better*

These questions were designed to determine the respondent's perceptions of what they felt it would be like to work for an information technology company versus a non-IT company. The questions dealt with career opportunities, compensation, job security and job satisfaction.

Only a minority of respondents disagreed that career opportunities are better in an IT company than they are with a non-IT company. Again, only a minority disagreed that compensation was better in the IT companies. While many did not have negative perceptions about opportunities and compensation within IT companies, a large percent of respondents disagreed that job security was better in the IT company. Job satisfaction perceptions were not heavily weighted to any particular feeling.

**Perceptions on Management Communicating the Outsourcing Decision**

*Communications Preference*
Table 4

Communications preference

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Answer</td>
<td>9</td>
</tr>
<tr>
<td>Chief Executive</td>
<td>47</td>
</tr>
<tr>
<td>IS Executive</td>
<td>30</td>
</tr>
<tr>
<td>Dept Head</td>
<td>21</td>
</tr>
<tr>
<td>Immediate Supervisor</td>
<td>33</td>
</tr>
<tr>
<td>Human Resources</td>
<td>3</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>146</td>
</tr>
</tbody>
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This question on communications asked the respondents from whom they felt most comfortable receiving communications from in matters having a substantial impact on their career. While the reputation of the individuals selected to deliver communications will have a significant impact on how the messages are received, it is important to note the positions that the respondents felt most comfortable receiving those communications from.

Management Withholding Outsourcing Information

This question was designed to determine whether or not the respondents felt it was appropriate for management to withhold information on a potential outsourcing deal until a final agreement was reached with the vendor. A majority (67%) answered no to this question, while a smaller percent (37%) agreed that it was appropriate.

Managerial Implications of Results

The preliminary results on the general perceptions on outsourcing indicate a high level of awareness (95%) on outsourcing among employees. Outsourcing is also viewed as an appropriate business decision (74%) as client companies find it difficult to keep up with information technology changes (74%). Thirty-four percent of the respondents felt that they would be affected by outsourcing in the next 24 months. It is thus clear that outsourcing is indeed a popular alternative and client organizations could be facing the realities of managing outsourcing.

The most significant problem Due (1992) identified was that it had a negative effect on morale which translated into low productivity. When the outsourcing was in the works, but information was not being released, he found that rumors of layoffs, benefit losses, and transfers abounded. The employees felt they were no longer wanted by their company. Some, particularly the standouts, began to explore the job market.

The cause for the low morale and productivity associated with outsourcing is clear from the fact that 81% of the respondents had neutral or negative feelings about outsourcing. In addition, low morale is definitely possible when 78% of the respondents disagreed that welfare of employees was considered in the outsourcing decision.

This low morale and productivity can cause problems for client management and organizations during the process of outsourcing from client to vendor. The results on perceptions of career opportunities with the vendor and the perceptions on management communication suggest ways to increase the low productivity level of employees during the outsourcing. Figure 1 presents the management action plan recommended from the preliminary findings of this research.

Generally speaking, when technology related change is introduced, the productivity level of individuals affected it drop significantly. After a certain adjustment time period, it is assumed that this drop in productivity level will begin to increase and inevitably exceed the original level present before the change was introduced. This is shown as the productivity P1 curve in Figure 1. Certainly, management can focus on several factors and devise programs that would reduce the level of drop in productivity during the adjustment period as well as shorten the transition. This study clearly confirms Due's (1992) findings that the absence of managerial actions during outsourcing results in a drop in productivity. Factors that can have a decisive impact on the productivity level of employees affected by outsourcing include (1) effective com-
munication and (2) employee participation.

Effective Communication

Management can develop an effective communication channel with employees of the organization regarding their outsourcing decisions and programs. Communicating directly with employees can eliminate rumors about the outsourcing and thus provide a certain degree of certainty and stability to them. But there must be a balance between confidentiality and openness. If outsourcing is only being investigated, not necessarily pursued, there is no sense getting employees upset if nothing has really been done to move forward. Even if it has been decided that outsourcing is going to be undertaken, the amount of information that is communicated to employees must be weighed carefully. Early departure of key employees resulting from partial information or misinformation could be disastrous for business. By providing effective communication programs, organizations can improve employee morale connected with the outsourcing decision (Due 1992) as well as improve the productivity during the adjustment period as shown in Figure 1 as productivity curve P2.

Employee Participation

Employee participation in various decisions regarding outsourcing options can be very helpful in facilitating the outsourcing programs. The existing literature and the findings of this study clearly demonstrate that IS professionals consider outsourcing as a plot by management to reduce their position and the services provided by them. Management can impact their perceptions toward outsourcing decisions and assist them to understand the positive aspects of it.

Undoubtedly, outsourcing might eliminate several jobs and could create fundamental changes within an IS department. By introducing employ-
ees to various aspects of outsourcing, new programs can be developed for those employees who will be directly affected by the process. The authors believe that employee participation as a part of management actions in outsourcing decisions starting from the initial program development can have a positive impact on productivity, as shown in Figure 1.

 Outsourcing Stages

Introducing outsourcing programs in an organization involves several stages: (1) Investigation, (2) Planning, (3) Implementation, and (4) Transition and Post-Implementation. Management must maintain different levels of emphasis during these stages in regard to effective communication and employee participation that can have a direct impact on the workers' acceptance of outsourcing decisions and their productivity. Figure 2 illustrates a model that depicts these four stages of outsourcing development and management actions.

As the model illustrates, different emphasis should be given to the two management actions of communications and employee participation. During the exploratory phase, management should provide whatever information to its employees to avoid rumors and any misperceptions regarding outsourcing decisions and keep employee participation at a low level. Throughout the planning phase, it is very important that management maintain a very effective channel of communications with IS employees since by now the decision for outsourcing has been made. Employee participation during this phase is very crucial to the success of the outsourcing decision. As the model indicates, management communications and employee participation should be also kept at high level during the implementation phase. Finally, during the transitional phase, it is important that IS employees take part in various programs to facilitate the adjustment process, and management must also keep an effective communications system in place supporting adaptation to the outsourcing environment.

Conclusion

This research presented the perceptions of IS professionals on outsourcing, how it affects them, and career and communications issues as related to outsourcing. As most research on outsourcing view it only as a business decision, our study focuses on the perceptions of IS professionals concerning related personnel issues. Preliminary findings are reported as a result of a survey of IS professionals.
Almost all of the respondents indicated that they had heard the term "outsourcing" and knew what it meant. A majority of the respondents had neutral or negative feelings about outsourcing. This indicates to the indifferent and negative views of client IS employees on the process. Respondents were equally (in percentage terms) positioned on whether they would be affected by outsourcing. The popularity of outsourcing is evident from the fact that 34% felt that they would be affected.

A majority of the respondents agreed or strongly agreed that outsourcing could be an appropriate business decision, and a majority either disagreed or strongly disagreed that the IS professionals were a key factor in the minds of management when making the outsourcing decision. One of the justifications of outsourcing is that companies which do not specialize in information technology can no longer keep up with the rate of change in the industry, and should therefore let a specialist assume the role of service provider. A majority of the respondents felt that it was difficult for companies to keep up with the latest developments.

Compensation and career opportunities were perceived to be better in IT companies while respondents saw no difference between IT and non-IT companies with respect to job satisfaction. A majority of respondents did not find it appropriate for management to withhold outsourcing decision information. The respondents also had clear preferences for the person in the organization who should communicate the outsourcing decision to them.

To effectively deal with the human aspects of outsourcing, management must understand what perceptions exist within the employee ranks and develop a plan which addresses these needs and beliefs, even if they are without basis. Such a management action plan is outlined in the managerial implications section. It is in the best interest of all parties to treat the affected IS professionals in a fair manner. A smooth outsourcing evaluation and transition period is not possible without their cooperation. Productivity losses and low morale associated with employee anxieties not only hurt the current business, but could also prevent the outsourcing arrangement from being successful. Other repercussions of an improperly handled changeover include potential lawsuits and the loss of key talent.

Suggestions for Future Research

This research can be extended to study and compare successful and unsuccessful outsourcing in terms of their impact on people and organizations. As outsourcing is becoming popular, it is also important to study what organizations are seriously considering outsourcing and how organizations are managing outsourcing. It is also important to conduct an in-depth examination of the benefits and shortcomings of information systems outsourcing."

References