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OUTSOURCING OR INSOURCING?

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ABSTRACT

Outsourcing is not a new phenomenon. This paper presents evidence for this contention and identifies a growing trend toward a mixed mode of operation, combining both outsourcing and insourcing, where IT services are being integrated into the parent company. This study concentrates on situations where a new enterprise has been formed from an existing data processing department, and where IS services have been moved to this new company, but some of them taken back into the parent company a few years later.

First, reasons for the original outsourcing decisions are identified by semi-structured interviews in six organizations. A model of the determinants of outsourcing has been developed on the basis of these interviews. A follow-up study was conducted six years later in two of the case organizations showing insourcing decisions, whose contingent factors are presented. The main conclusion is that external and internal solutions are both equally relevant alternatives for organizing IT/IS services. There is no general solution to the outsourcing decision itself, but the determinants of the decision process are now well known.

1. BACKGROUND

Outsourcing of IT services has, in recent discussion, become a key question in the field of Information Systems (McFarlan 1992; Klepper 1992; Chaundry, Nam and Rao 1992). Outsourcing is one alternative for arranging IT/IS in organizations, but as such it is not a new phenomenon. In the early 1970s, EDP service companies were founded using the same kind of reasoning as lies behind today's outsourcing decisions. The main objective then was to share computer resources and also, later on, software development costs.

Large user organizations decided to start new enterprises to provide these services and also to sell the services outside. Some of these service companies are now large software houses offering a full range of products, from operating computers to consulting in the field of strategy. They are also potential partners in terms of outsourcing.

In Scandinavia in the mid-1980s, a second wave of service companies appeared, but this time as a result of data processing departments becoming commercial enterprises in their own right. This has not been an isolated phenomenon, but a very widely used means of developing IT/IS operations. Interestingly, however, these developments have taken many different paths. Some of the new service

enterprises have been successful but there have also been mergers, some have ceased trading and, in addition, some "insourcing" has occurred, i.e., taking certain IT/IS services back into the user organizations.

The main objective of this study is to gain a deeper, grounded understanding of the phenomenon of outsourcing. This knowledge can be best obtained from those organizations which have made outsourcing decisions. The research has sought to answer the following questions:

- What are the main reasons for outsourcing?
- What are the main difficulties or obstacles?
- What are the consequences of outsourcing?

This requires a longitudinal study in real life situations and, in this instance, the investigation took place in a number of case companies over several years in the manner described below.

It seems that reasons for outsourcing are very similar in different organizations and that it is possible to find a pattern to them. However, outsourcing is only one alternative for organizing IS services; it is certainly not the best way in all circumstances. With a changing business environment and business strategies, the management of the IS function may also require reorganization. Sometimes it

may even be worthwhile to "insource" data processing again, i.e., to start new internal development of systems.

In many organizations, IS are managed via a combination of different alternatives, with services being bought in and provided from within the organization. There is no right solution for every company, but it is possible to provide some insight into these contingent factors from the experience of others. This paper attempts to provide that insight.

The demands for strong leadership skills, power and business expertise in IS managers have been presented (Applegate, Cash, and Mills 1988; Applegate and Elam 1992). There has also been discussion on the "withering away of IS organization" (Dearden 1987) that illustrated the pressure for change. IS management and professionals are expected to take more responsibility over the fit between business needs and information systems services (Rouse and Hartog 1988a, 1988b; Boynton, Jacobs and Zmud 1992; Jarvenpaa and Ives 1991; Earl 1990; Blanton, Watson and Moody 1992), otherwise users will take over the information resource (Martin 1982; Holloway 1986; Janson 1989). Outsourcing is one alternative, but it requires careful consideration on what to outsource and how (Buck-Lew 1992).

2. RESEARCH SETTING AND METHODS USED

The idea for the research originated from working as a facilitator in a large IS Strategy project in Finland in 1985. The organization of the IS function seemed to be one of the key questions in managing information resources. At that time, there were a number of examples of companies that had founded separate service organizations based on their data processing department, which raised the question of why this had been done and whether or not these initiatives had been successful, leading to this research.

First, a decision was made to concentrate on situations where a new enterprise has been formed from an existing data processing department. Then, a preliminary understanding of the subject was obtained via some informal discussions with IS managers, user managers and IS professionals. Based on these discussions and on the review literature (Adams 1972; Gibson and Nolan 1974; Ein-Dor and Segev 1978; Nolan 1979; Martin 1982; Zuboff 1982; McFarlan and McKenney 1983; *EDP Analyzer* 1983; Davis 1984; Butler Cox 1986; Brancheau and Wetherbe 1987; Lederer and Mendelow 1988), a questionnaire was developed concerning the key reasons for outsourcing. Next, an investigation was undertaken to find those firms that had made these changes during the second wave of outsourcing, but that had at least two years experience with the new arrangement.

As a result, six potential cases in Finland were identified. The next step was to contact them and to seek their collaboration in case research. Since all were cooperative, a study was designed and carried out in 1987. The research was based on semi-structured interviews that parallels the earlier questionnaire. The managing director of each outsourced service firm and one manager in the user organization were interviewed. Twelve interviews were therefore carried out and, while this is not a very large number, the interviews were carried out in some depth. All of the interviewees had wide experience in the field and they had been driving forces in the change processes.

Based on the results of the interviews, a model was developed depicting the reasons for and consequences of outsourcing. The model describes opinions as expressed in the early stages of the new firm. After a number of years of operating the new model, it is still unclear whether or not the experiment has been a success. Since 1987, in each case, there have been reorganizations and changes. The situation became very interesting when two of the case companies made a partial "insourcing" decision. As a result of this, a follow-up study was undertaken in 1993 to find opinions regarding the relative success of the original outsourcing decision and the reasons for reverting to internal systems development. This study consisted of interviews with the user companies' IS managers.

The following section reports on the outsourcing phenomenon based on in-depth knowledge of selected organizations as a result of the involvement described above. The research methodology is a combination of case studies and action research (Argyris, Putnam and Smith 1985; Calloway and Ariav 1991; Jonsson 1991). The results are based both on interviews made in case companies and on acting as a facilitator in two outsourcing decisions.

To summarize, multiple methods have been used in this study. The author has been actively involved in one outsourcing project to gain a tentative understanding of the key determinants of outsourcing decisions. Based on this experience and supported by several discussions with IS managers, a questionnaire was developed concerning the main reasons and objectives of outsourcing. This questionnaire has been used to structure interviews with IS management and user management in six case organizations. A model for the determinants of outsourcing has been developed from the questionnaire and the interviews. Finally, two case organizations have been taken into further consideration to find out why they have taken back some of the outsourced services. This study has been conducted by interviewing two key persons in each organization.

Table 1. Research Process Outline Description

	Research Method	Result
1985	Actor in an outsourcing process	Interest in the phenomenon and problematics
1986	Informal discussions with experts in practice and a literature overview	Questionnaire to study the objectives and implementation process of one kind of outsourcing: forming a new enterprise (Appendix)
1987	Semi-structured interviews of IS managers and user managers in six case companies	Empirical evidence for the importance of the different determinants of the process
1987	Drawing conclusions from the above	A model of the objectives, means and results of forming a new enterprise (Figure 1 in section 6)
1988	Observations made of the case companies (news-papers, journals, discussions)	Information about several reorganizations in case companies
1992	Interviews in two of the case companies	Tentative reasons for insourcing previously out-sourced parts of IT/IS services

3. ARGUMENTS FOR OUTSOURCING

In the discussions designed to obtain an understanding of the outsourcing phenomenon, the following arguments were presented. Business managers expressed considerable doubts as to the efficiency and effectiveness of data processing departments. Their opinion was that even small changes took a long time and large projects often lasted for years. At the same time, though, expectations were high due to the promises of easy-to-use, high benefit IT by pundits in journals and at seminars. As a result, there was a wide gap between the vision and reality.

In addition, managers found it very difficult to evaluate the productivity of their DP professionals and were somewhat suspicious of them. They wanted more control over IT/IS issues, but did not know how to achieve it. In principle, the need for links between business and IS was understood and accepted, but the differences in thinking and difficulties in communication were evident. In reality, therefore, this linkage did not work very well.

Managers and users also thought that data processing services were very expensive, at least in those organizations that used internal charging mechanisms. The users saw the costs of data processing very clearly, but had difficulties in evaluating the benefits. They found it very hard to understand why new investment was made so frequently in information systems or computers, especially given the claims made regarding the lower costs and increased power of IT. Despite this, data processing departments continued to make new investment proposals and arguments that threatened the collapse of whole systems were the invest-

ment not to go ahead. Most of the projects seemed to be necessary, based on the priorities set in the DP department, and this led to even more confusion as to what was really happening.

There were also problems related to the DP staff themselves. Systems designers and programmers are often logically thinking, mathematically oriented, introverted, and difficult to approach. They are enthusiastic about their own solutions to technical problems, their innovations and the experience they have gained by doing things. They have a tendency to come up with their own unique solutions, which others might not share. This presents another problem from the users' perspective, given their wish to have simple, operational solutions. Because of these problems, there seemed to be many reasons to look for new organizational forms for data processing and outsourcing was seen as one relevant alternative. The key point was the market mechanism between users and suppliers. Internal charging seemed to be artificial, and the market concept did not really work, but with a service company surely it would be different?

As a synthesis of the discussions and the author's own experience as actor in an outsourcing process, the following list of determinants was inferred. In 1986, frameworks or theory on outsourcing were scarce and the list was therefore rather tentative:

Personnel:	Better professional motivation
	Less turnover
	Greater customer orientation
	Improved efficiency

Finance: Better cost control
Increased understanding of costs
Cost reduction
Less fixed costs
More careful investment planning
Greater responsibility at the point of production

Organization: Smaller order backlog
Better user support
Faster decision making
Greater cumulative experience

The next question facing senior executives in setting up a new enterprise related to how to achieve the objectives listed above. Using the same procedure as described above, the following means were identified:

Personnel: Greater personal responsibility given to DP professionals
Flexible salary programs
Career alternatives
Education programs
Flexible working hours

Finance: Profit responsibility
Charging mechanisms
Price-lists for services
Improved financial and accounting systems
Alternative operational forms

Organization: Decentralized decision making
State-of-the-art working methods
Product-like services
Outside sales
Marketing function

The questionnaire was designed to contain approximately sixty questions relating to the reasons for and means and consequences of outsourcing. The appendix presents some examples of the types of questions used. The next step was to test if these factors really were relevant in practice.

4. TESTING THE ARGUMENTS

As indicated above, this study concentrates on cases where a new firm had been established from an existing data processing department to provide IT services. Six new firms were identified as having operated for more than two years and the following test was based on them. They are described in Table 2.

As mentioned earlier at least two persons were interviewed in each case: the managing director of the DP firm and one user manager. The interviews were semi-structured and quite detailed, each lasting two to three hours. The interviewees were asked to evaluate the reasons, means and consequences of outsourcing as described above, using a Likert-like scale from 1 to 5 (see the appendix).

Table 3 provides the mean evaluations of both IT managers and user managers in relation to the factors identified above. As the number of interviewees was relatively small, the results give an overall picture of the situation in the case organizations, but they are not statistically representative and therefore no statistical tests have been done.

The interviews confirmed that almost all of the listed factors had some importance as an objective in the outsourcing process, that there were only a small number of other factors that had not been previously identified, and that these were not, in comparison, potentially important.

The most important factors were identified as:

- motivation of IT professionals
- customer orientation of IT professionals
- cumulative experience through the market mechanism in IT services
- efficiency of IT professionals
- investment planning in IT

Three of the above related to personnel (motivation, customer orientation, efficiency), one to finance, and one to organization factors. It may be that financial aspects were less emphasized as it was expected that the market mechanism would take care of all such problems.

Although the sample was too small to be able to draw statistical significance from the results, we can see some differences in the answers of IT and user managers. The main difference was in the evaluation of the profitability of IT projects. IT managers regarded this as the single most important reason for outsourcing, but to the user managers it did not seem to be particularly important. IT managers may have seen difficulties in evaluation more clearly than user managers and therefore they expected a new company to provide a solution to the measurement problems.

The other major difference was that IT managers wanted to have a clear opportunity for outside sales and thus expanding their business. Conversely, user managers may have seen this in more negative terms, fearing the loss of their bargaining power.

Table 2. Case Organizations

Case A	Paper Mill and Saw Mill Company. Data Processing firm was founded in 1984 with 50% ownership. In 1987, it had 130 employees and a turnover of \$15 m. The firm offered all services from computer operation to consulting.
Case B	Retail-wholesale chain. Data Processing firm founded in 1985, 100% ownership. In 1987, it had 150 employees and a turnover of \$8 m. The main services were mainframe operation and maintenance of the existing software.
Case C	A conglomerate of shipyard, metal industry and paper mills. In 1985 the company moved its DP operations to a software house, which was founded in 1981, forming a partnership with them.
Case D	Construction company. Data Processing firm founded in 1984, 50% ownership. In 1987, it had around 100 employees and a turnover of \$10 m. Its services included mainframe operations, software development and maintenance and software package sales.
Case E	Telephone operator for a large city. Data processing company started in 1986, 50% ownership, with 20 professionals, and a turnover of \$8 m. The principal services were mainframe operations and systems development.
Case F	A jointly owned software house for banks and insurance companies, founded in 1985, 74 people and a turnover of \$4 m. Software development and maintenance for banks and insurance companies.

Table 3. The Main Reasons for Outsourcing

	IT	Users
Personnel		
Motivation	3.5	4.7
Turnover	1.8	2.3
Customer Orientation	4.0	4.2
Efficiency	3.6	4.2
Finance		
Cost control	2.2	2.8
Understanding costs	2.3	2.9
Cost reduction	1.4	2.2
Cost structures	2.6	2.2
Investment planning	4.0	1.8
Responsibility	3.2	3.2
Organization		
Order backlog	3.2	2.4
User support	2.8	3.2
Decision making	2.6	2.8
Outside sales	4.2	2.6
Cumulative experience	4.3	3.6

User managers expected more from increased motivation and efficiency than IT managers. From their point of view, better motivation was the single most important reason to start the outsourcing process.

5. OPEN QUESTION ANALYSIS

Next, some comments will be presented on the results of the open discussions with the interviewees, which provide a deeper insight as to the reasons for and success of outsourcing. The objective was to find similarities and also originalities in the opinions.

The interviewees regarded all of the factors presented in the questionnaire as important goals in their own organizations, but their importance depended on contingent factors. It seems that in the mid-1980s there was a widely held belief in increasing the market orientation of services, including IT. Managers found it difficult to control IT. Outsourcing those services provided some relief for business managers and at the same time they really believed this to be a solution to many of their IT problems.

The CEO of Case B described the situation as follows:

Information is power. Even the information that might not be needed is collected. This makes IT/IS projects much larger and more complex than they would otherwise be. Outsourcing makes the users think more about what they really need.

Outsourcing was seen as one solution to the problem of unnecessary over-demand on services and large backlogs. It was expected to result in a better balance between user needs and development resources. Internal charging mechanisms did not fully meet this objective, but now all the projects would be based on written agreement, which made the situation clearer than before.

In many cases, one important objective in outsourcing was to make sure that technological knowledge was sufficiently high. Some user managers were suspicious as to the level of professionalism in their own organization. As one manager said:

Our main objective was to increase the level of skills in the IT function. The outsourcing process draws the professionals out of the everyday routine of maintaining existing systems and helps them to concentrate more on new development. In a service company, they will

have to study and use new tools and even adopt new thinking. This may require some changes in personnel.

Another important factor was securing future resources in systems development:

Business strategies and plans are changing and systems need to support new operating models. Developing new systems requires both resources and knowledge. The present situation may look good, but demands are increasing. The IT service company can much better secure the quantity and quality of resources.

Profitability was also an important objective. The business managers were convinced that by outsourcing the use of IT, resources would be much more efficient and controllable.

The main means of increasing service levels and profitability in all of the new IT/IS companies were:

- more personal responsibility
- flexible salary structures
- more product-like services, with price lists
- education of personnel in marketing and customer service

It was evident from the interviews that it takes around two years for operations to be stabilized. There were a number of transition problems:

- some turnover in personnel
- some deterioration in relationships with established users
- in some instances, customer organizations learn faster to negotiate new projects than did the IT professionals in the new company
- in the early stages, there were both nominal and real increases in costs
- the new service companies found increased competition in the market
- decision making was faster in the newly-formed IT companies, but still slow in user organizations

Overall, in 1987, it seemed that user managements were satisfied with the outsourcing solution after a couple of years of operation. Many of the original objectives had been achieved, albeit slowly. Since 1987, however, there have been many reorganizations in these companies and outsourcing did not prove to be the solution to meet their changing IT needs. As a result, two organizations were studied more closely in 1993 to find out the reasons for the

changes. Going further into these experiences, a conceptual model of outsourcing will now be presented.

6. A CONCEPTUAL MODEL OF OUTSOURCING

Outsourcing decisions have been based on expectations that many of the problems and difficulties in IT/IS management may be solved by externalizing those services, i.e., by creating markets for them. Based on the experience of the six case companies, a model has been created for the most important objectives of outsourcing, and the means that outsourcing offers to meet these objectives (Figure 1, Reponen 1988).

After the change, it is expected that in the IT/IS organization personnel motivation will be higher, costs under better control, and organizational skills good. But there are also some obstacles to the outsourcing process, such as:

- unintended turnover in personnel
- increased costs because of new marketing and accounting departments
- links to users may suffer because they are now trading with an outside company
- new personnel may be needed because of outside sales and new products

The rationale behind outsourcing is that it offers better control than other organizational forms over the use of IT/IS resources. Since the control mechanism is the market itself, very little bureaucracy is involved therein.

The conceptual model for outsourcing is an overall framework for making and implementing outsourcing decisions. It states three areas of objectives: personnel, finance and organization. Each of these areas is important and should be considered during an outsourcing decision process. The model also describes the means for meeting the objectives set. Outsourcing IT/IS services is a change process that takes several years to stabilize, at least in the case of starting a new enterprise. The management problem is to make this change happen.

7. IS OUTSOURCING A FINAL SOLUTION

As mentioned above there has been some reorganization since 1987 in each of the six cases. We shall now concentrate on two of them, cases B and D, to identify the changes.

7.1 Case B: A Wholesale-Retail Chain

In case B, outsourcing met the demands of users very well for several years. The outsourced company had specialized in operating the mainframe computer and in maintaining the existing software. In the beginning, there was enthusiasm for the new solution, but this began to turn to conflict over time. The users soon learned to negotiate for IT services and their thinking became more open to other outside purchases.

However, during 1988, a new IS strategy was developed for the whole chain. The development in the business environment required a new operating model. The traditional wholesale business met difficulties because of increased potential to create direct links between producers and customers. There was a need to adapt to this new situation.

Consequently, the company changed its business strategy in order to meet these new demands. In the IS strategy it was decided that a new generation of software would be needed for the new operating model. A decision was also made to decentralize data processing in a coordinated way.

The outsourced IT company had its main skills in operating mainframe computers and associated application software. They found it difficult to accept the new strategy and did not adapt themselves very well to the new situation. They remained almost totally in the part of the business that was diminishing. Their mode of thinking seemed to be quite different to that of the people they had been serving.

A new IS strategy was accepted in the autumn of 1989. It led to a move from mainframe applications toward more distributed ones. The IT company's market decreased and a new role was designed for it. It was asked to specialize in developing and maintaining the information network needed for new operations. They started doing this work and even built some EDI applications.

In 1991, there was a merger with another wholesale chain, resulting in a major rationalization of material flows and leading to a 40% reduction in demand for services from the IT company. At the same time, the parent company started thinking about alternative means of obtaining IT services. The following were considered:

- adapting the IT company to the new situation
- starting joint ventures with other partners
- selling the IT company to a software house

OUTSOURCING

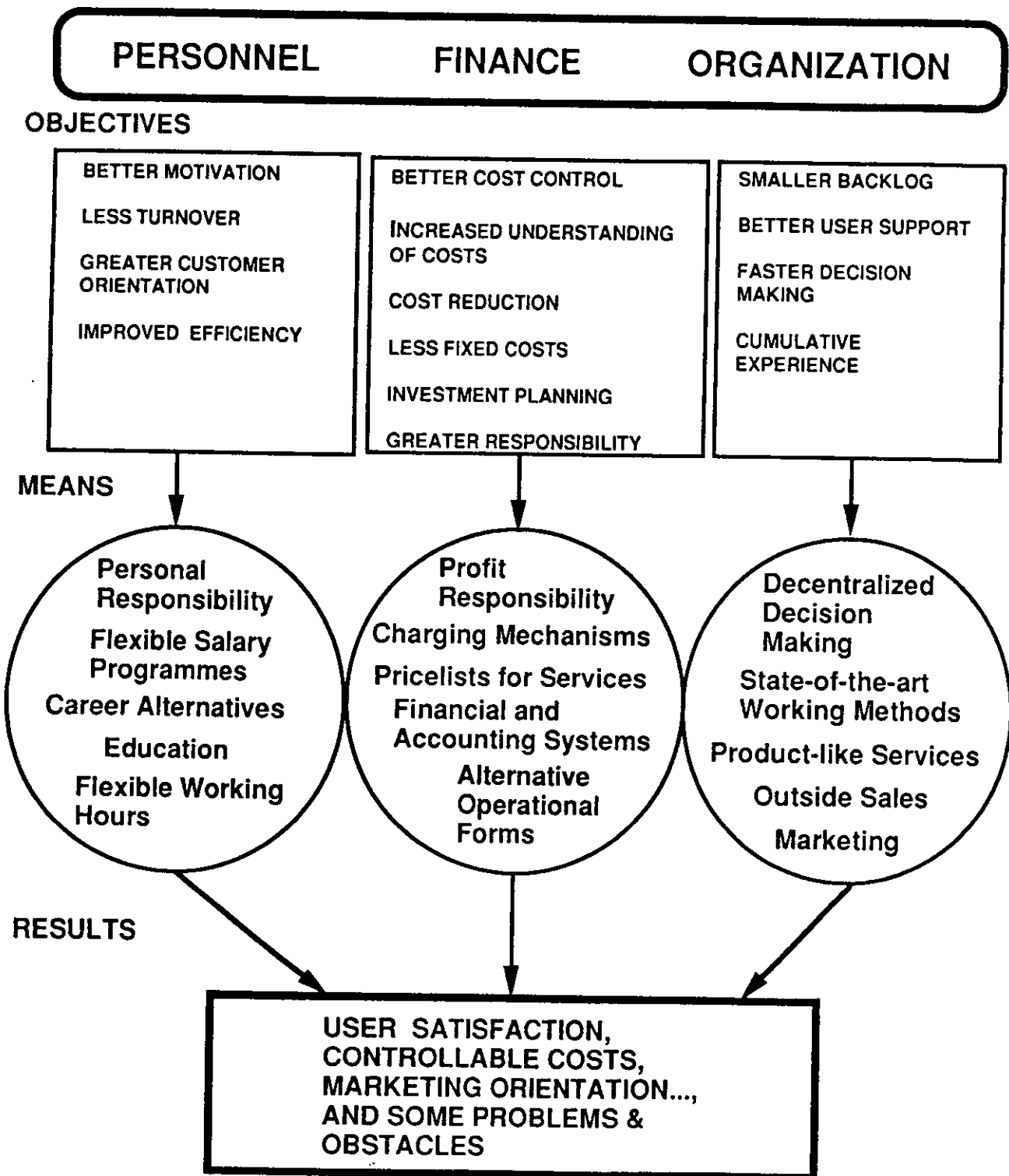


Figure 1. Conceptual Model for Outsourcing (Reponen 1988)

After considering these alternatives, a decision was made in late 1991 to outsource the IT company for a second time. This outsourcing decision meant selling the company to a large software house with the intention to gradually withdraw from mainframe services. An agreement was entered into for annual purchases of mainframe services from the software house, but on a decreasing scale.

The mainframe solution was replaced by a network of minicomputers and work-stations; interestingly, network management was also to be outsourced. The objectives were twofold: to run down the mainframe but to buy network services competitively.

The present IS structure is such that the planning of systems and operating minicomputers is internal, but mainframe operations and network management have been outsourced. Outsourcing has been working well, service is as good as before, and more controllable.

This offers evidence for the fact that outsourcing and insourcing are equally relevant ways of organizing IT services. The contingent factors are decisive to choosing the solution in each specific case. In this case, they were new IS strategy, IT company's inability to adapt itself to the new situation, and higher than expected costs of IT services.

7.2 Case D: Construction Company

Since outsourcing in 1984, there have been several stages of further development. The main reason for outsourcing was to improve the level of IT services. The users thought that the skills of their IT function were lagging behind and that it was not ready for modern systems development. Outsourcing, with a 50% partnership, seemed to be a very promising solution. Expectations were very high at the beginning.

The DP department had around 50 staff, but one of the targets for the new firm was rapid growth. In 1987, the staffing level had grown to almost 100 and outside sales had been achieved, but not at the required level. The new company did not have any clear business idea and there was a conflict of interests between serving the parent company and increasing outside sales. There were some financial problems with the intended growth that resulted in rationalization of the operations and a decrease in personnel.

However, during this period new competencies had been achieved, but within a narrow sector. The core personnel had good contacts with the parent company and their

services were well received. The problem for the parent company was to utilize this good service but to avoid the problems arising from too much effort going into outside services. Their solution was to reintegrate the expertise they needed and to outsource the other services provided by their IT company.

In 1990, a new operating model was created. The construction company insourced network services, and some of the financial services from the IT company, and they sold the other parts to a large software house. By this arrangement, they released themselves from the software business and its problems. The process of selling was not easy, but the final solution was satisfactory.

The new internal unit faced its first real challenge in 1992. The construction company was party to a major merger with another company that had completely different systems, architecture and philosophy. A comparison was made between the two IT organizations concerning technology, cost efficiency, skills and services. The results were favorable to the case company's unit, with the result that it was given responsibility for the integration of the two systems.

After this successful implementation, the credibility of the unit was restored and they are now no longer under attack. The present way of thinking is that systems engineering, project management, training, user support, and application software are handled internally, while programming and computer operation services can be obtained externally.

This is another example of both outsourcing and insourcing IT services over time. The contingent factors this time have been the failure of the IT/IS company to meet expectations regarding outside sales, higher than expected costs of IT services and a desire to utilize the core skills of the IT service company internally.

7.3 Reasons for Insourcing

These two case studies serve as an example of insourcing some of the previously outsourced services. The empirical evidence from these two examples shows that the following determinants might be considered obstacles to outsourcing:

- higher than expected costs of external IT/IS services
- IT service company's inability to adapt itself to new and changing situations
- desire to use the core IT skills internally
- new IS strategy and its implications for new software development

Loh and Venkatraman (1992) have found a positive correlation between IT cost structure and the degree of IT outsourcing. In this study, a relation has also been found: outsourcing first was done partly because of high IT costs, but later on increasing service prices had resulted in the reorganization of outsourced services. Lacity and Hirschheim (1993) have adopted two alternative theories for their outsourcing research: Williamson's transaction cost theory and Pfeffer's political model. According to Williamson, outsourcing decisions are trade-off decisions between production costs and coordination costs, the former being low and the latter high in outsourcing. Pfeffer's political model states that objective cost figures are virtually impossible to predict; instead, power and political tactics play an important role. The above conclusions lend some evidence to both theories: cost elements are important in decision making, but final decisions seem to be a game of power, where other determinants are also important.

8. CONCLUSIONS

This study has empirically examined one set of outsourcing decisions, i.e., those related to forming an enterprise from a DP department. At first, the main determinants of outsourcing were sought from the empirical world. According to the study personnel, finance and organization factors all play an important part in outsourcing decisions. From this basis, a model has been constructed to describe the whole process: objectives, means and results. The model might also be applicable to other forms of outsourcing.

The original objective was to establish reasons for externalizing IT/IS services, which tended in the early phases of the research to emphasize the positive aspects of outsourcing. It later became evident that outsourcing decisions are a trade-off between many contingent factors, some favoring outsourcing and others insourcing. The determinants of the model designed are, however, valid for the consideration of both solutions. The organization decisions should be examined as two-way dynamic processes, where external and internal solutions are both possible and their priorities vary by time, as has been seen in the two case studies above.

The conventional guideline is that all new and strategically important tasks should be performed internally. Those IT services that are closely linked to creating or maintaining the core competence of the organization should be internal, but the nature of tasks will change over time and strategic factors may be different in each case. For example, networking is one of the main trends of today but there are examples of the successful outsourcing of IT network management. There is no general answer as to whether to

outsource or not in a specific case, but there are frameworks and models to analyze the situation.

Organizations should consider a combination of different alternatives along the spectrum of total outsourcing or insourcing. Organizational decisions should be made consciously and they should be based on the company's IS strategy. Careful consideration is needed, because major changes in organizations take around two years to stabilize.

The next objective in this research is further development of the model presented in Figure 1 to cover both outsourcing and insourcing decisions. This will be done by studying development in the six cases described above.

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APPENDIX

THE STRUCTURE OF THE QUESTIONNAIRE

QUESTIONNAIRE: FORMING AN IT/IS ENTERPRISE FROM DP DEPARTMENT

Name:

Position:

Organization:

Turnover:

Personnel:

I. OBJECTIVES FOR OUTSOURCING

How important have the following objectives been in establishing a new enterprise?

Scale: 1 = not important
2 = of little importance
3 = important
4 = very important
5 = extremely important

1. Personnel

- 1.1 Improving the working motivation of DP professionals
- 1.2 Decreasing the turnover of DP professionals
- 1.3 Increasing the customer orientation of DP professionals
- 1.4 Developing salary policies
 - 1.4.1 Performance-based salaries
 - 1.4.2 Other benefits
 - 1.4.3 Above average salaries
 - 1.4.4 Salary raises
- 1.5 Improving the efficiency of DP professionals
- 1.6 Other objectives: List

2. Financial objectives

Questions about pricing policy, cost structures, profitability, and personal responsibility

3. Other objectives

Questions about order backlog, decision-making, user support, and external sales

II. PRODUCTS AND SERVICES OF THE NEW ENTERPRISE

Questions about products and services, product development, focus of business, market surveys, competitive position and customers

III. THE IMPLEMENTATION PROCESS OF THE NEW ENTERPRISE CONCEPT

Questions about the initiative for outsourcing, prior organization, changes in personnel, salary structures, length of the implementation period, problems in implementation, and relationships to parent companies

IV. USER SATISFACTION

Questions about serviceability, application development, user support, links to business

V. OPEN QUESTIONS

For example:

Have the objectives been met?

Was the DP department a profit center before the change?

Which kind of charging mechanism did it use?

Which kind of motivation means have been used?

What is the new organization of IS services like? Why is it organized in that way?