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Exploring Outsourcing Decisions using the Resource-based view of the firm

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Abstract: This paper describes and explores how the resource-based view of the firm explains the decision of using an external provider for the provision of information and communication technology (ICT) in organisations. It does so by describing some basic assumptions of the resource-based view. From the resource-based view of the firm two factors are proposed, core competence and capability, and it can be claimed that both of these play an important part in the decision-making process when deciding on using an external provider for the maintenance of organisations ICT. A study of three service providers and one customer related to each of them are used to exemplify this conclusion. The aim of this paper is finding relations between these factors and relate these to a discussion about how organisations build-up and sustain competitive advantage. The paper ends up with a hypothesis that could be used in a survey to explain the decision-making in organisations when deciding on outsourcing ICT. The paper finds out that the resource-based view of the firm explains the decision to a great extent. It also develops the existing knowledge about decision-making on ICT outsourcing earlier received when using for instance transaction cost theory.

Keywords: Core competence, Capability, Outsourcing, Resource-based view, ICT, Decision-making.

1 Introduction

The usage of external providers for provision of information and communication technologies (ICT) receives and has received a great attention during the last year. This is for instance shown in the attention on offshore outsourcing (Robinson & Kalakota, 2004; Lacity & Willcocks, 2001). However, for small and medium-sized enterprises (SMEs) offshore outsourcing is probably not a feasible way. For SMEs the first step is probably to use a more local service provider as the first attempt of using an external service provider for maintenance of ICT. It is also the fact that in SMEs ICT play an increasingly important role (Hussin et al., 2001). At the same time, it can be claimed that ICT not are a core competence in that kind of organisations (Junghagen, 1998). However, ICT is more or less intertwined in these organisations work tasks (Seyal et al., 2000). These organisations also have difficulties in receiving and attracting resources to handle ICT in an efficient way. One way to solve this problem could be to decide on using an external service provider that provides application service provision (ASP) for the software applications needed in the organisation. From that it can be suggested that the decision of using ASP is a desire to increase the organisations ICT capability. It can also be claimed that outsourcing in the form of using ASP is a way of focussing on core competence. The question is then in what way the decision is affected by organisations thinking about ICT as core competence or how they relate it to core competence. A related question to that is how the thinking of ICT outsourcing as a way of improving organisations capability affect the decision. To explore these questions the resource-based view of the firm as described by Barney (1991) is proposed as a feasible way of explaining the decision-making.

The remainder of the paper is organised as follows: the next section introduces the resource-based view of the firm. Section three discusses the factors core competence and capability. Section four presents some findings from a case study of the decision-making process reporting from three service provider organisations and from one customer organisation related to each service provider. Section five discusses the findings relating them to a discussion on competitive advantage. In the final section some conclusions are presented.

2 Describing Outsourcing by the Resource-based view of the firm

The resource-based view of the firm rests on an assumption labelled as the inside-out perspective. The inside-out perspective is described by for instance Prahalad & Hamel & (1992) as a perspective that builds on an assumption that organisations should clarify the availability of internal resources before they seek outside the organisation after resources. This is in line with the basic thinking on the resource-based view of the firm. The resource-based view of the firm (RBV) views organisations as a collection of productive resources. The central assumption in this view is that organisations gain competitive advantage by their internal resources. Resource-based theory can, according to Barney (1991), be seen as a substitute in analysing sources of competitive advantage. It is a substitute from the view that Porter (1985) presents in his five forces model. Porter describes five competitive forces that determine the profitability of organisations and industries: suppliers, potential entrants, buyers, substitutes and industry competitors. The five forces model rests on the assumption that firms have the same possibility to use and control strategically relevant resources.

It also implies that if a resource is developed and becomes heterogeneous, this heterogeneity will be short-lived. The reason for this is that, according to Porter's five forces model, resources are seen as highly mobile (Barney, 1991). According to Porter (1985) an organisation can influence these five forces through its strategy. Referring to Barney, Hedman & Kalling (2002) argue that it is very difficult to transfer, imitate or substitute resources. The reason for this is that resources are not perfectly mobile (Hedman & Kalling, 2002).

An important distinction in resource-based theory is that a resource provides organisations with sustained competitive advantage, and to do so there are different attributes for the resources that have to be fulfilled. According to Hedman & Kalling (2002) there are numerous resource attributes described in the resource-based theory literature that give a firm its competitive advantage. Barney (1991) as well as Cheon et al. (1995) and Hedman & Kalling (2002) identify the following four attributes as relevant: valuable, rare, costly to imitate, and efficiently organised. This is described in the VRIO framework presented by Barney (1994). Barney (1991) distinguishes between three different groups of resources: physical capital resources, human capital resources and organisational capital resources.

The core issue in resource-based theory is how to identify and exploit existing resources more effectively in the organisation (Hedman & Kalling, 2002). A conclusion made from this is that if a resource is seen as necessary for the organisation's competitive advantage it should be handled internally. However, as Mata et al. (1995) describe it, whether an organisation gains competitive advantage from a resource depends on how the organisation manages the resource. The conclusion Mata et al. give is that among the attributes of ICT; capital requirements, proprietary technology, technical skills, and managerial ICT skills, it is only the managerial ICT skills that provide sustainability of competitive advantage. Barney (1991) concludes that sources of sustained competitive advantage are and must be focused on the heterogeneity and immobility of resources. This conclusion is made from the assumption that if a resource is evenly distributed across competing organisations and the resource is highly mobile, the resource does not influence sustained competitive advantage.

A resource must be considered valuable for the organisation in order to be called resource in the resource-based view. Valuable in this setting means that the resource enables the organisation to conceive or implement strategies that improve efficiency and effectiveness in the organisation. Barney (1991) expands the description of valuable resources with three further attributes that are necessary for a resource to become a competitive advantage resource. These attributes are rareness, imperfect imitability, and substitutability. According to Cheon et al. (1995) the four criteria mentioned earlier must be fulfilled if a resource should be able to provide sustained competitive advantage. First, the resource must have a value, expressed as being valuable for the organisation. Second, the resource must be rare, which means that it must be unique or rare among the organisation's competitors. Third, the resource must be imperfectly imitable, which means that it is not possible for the competitor to imitate the resource. And finally, the resource must be impossible to substitute, which means that the organisation's competitors cannot substitute the resource with another resource (Cheon et al., 1995). According to Cheon et al. ICT outsourcing can be described from the resource-based perspective as a strategic decision aiming at filling the gap between desired capabilities and actual capabilities. It could also be seen as a desire for the organisation to focus on its core competence. The next section this

discussion will be expanded by defining and relating the two factors core competence and capability to each other.

3 Defining and Relating Core competence and Capability

It can be claimed that the above mentioned factors, core competence and capability are closely related to each other. However, it can also be claimed the opposite. To describe if and how they are related to each other there is a need to define what one mean with these factors. Axelsson & Wynstra define core competence as: *“the most critical and most distinctive resources a company controls and which are the hardest for others to copy when they are in a number of processes connected to the relevant strategic goals which the company pursues”* (Axelsson & Wynstra, 2002, p. 72). This suggests that if ICT is seen as part of the organisation’s core competence it should not be outsourced and if ICT is not seen as part of the organisation’s core competence it should be outsourced. From that the following proposition can be formulated:

- *The organisation’s view of ICT as part or not part of the organisation’s core competence influences the decision. ICT outsourcing is seen as a way for organisations to focus on their core competence.*

The proposition can be compared with a commonly quoted reason for ICT outsourcing claiming that ICT outsourcing provides increased flexibility to cope with changes in technology and in the business environment. Paradoxically the traditional ICT outsourcing agreement is based on long-term contracts that rather tend to inhibit than facilitate change (Shepherd, 1999). Kakabadse & Kakabadse (2002) claim that one key driver for using ASPs is a desire to focus on core competences. Dewire (2001) argues that an organisation should adopt the ASP concept if ICT is not a core competence. Aalders (2001, p. 219) proposes twelve reasons why an organisation should outsource. These can be summarised as follows. ICT outsourcing makes it possible to focus on core competence. It also makes it possible to increase control of the cost and quality of ICT. Besides that it gives the buying organisation access to skilled personnel and ICT competence. This latest statement can be compared with another commonly quoted reason for ICT outsourcing, which is that ICT outsourcing increases flexibility in handling personnel and offers increased competence in ICT in the organisation. This discussion leads over to the next proposition.

- *The decision is impacted by a need to change ICT capability in the organisation. ICT outsourcing is seen as a way of improving ICT capability.*

According to McLellan et al. (1998) unresponsive ICT departments are described in the literature as a reason why organisations outsource their ICT. They claim this is because the organisation’s internal ICT department does not response to organisational needs. The organisation wants a more flexible ICT organisation and sees outsourcing as a way of reaching this. ASP is also reported as a way for SMEs to take advantage of the rapidly changing opportunities in ICT (see e.g. Turban et al., 2001; Currie & Seltsikas, 2000), and it can assist SMEs with ICT skills, especially in the development and software maintenance areas (Kern et al., 2001). Dewire (2001) argues that an organisation should adopt ASP if there is a need for flexible ICT infrastructure, if it needs to scale its ICT infrastructure quickly, if the organisation needs to switch to another environment in the near future, if it needs to deploy

applications rapidly or if the organisation finds it difficult to attract and retain ICT staff.

4 Findings from the case study

This section presents three organisations that act as application service providers (ASPs). In the section these service providers are labelled according to the categorisation of ASPs by Currie and Seltsikas (2000, 2001a, 2001b). The presentation is based on semi-structured, open-ended interviews. There were three overall questions in the interviews with the service providers. What do they deliver? How do they get hold of a potential customer? Why would an SME adopt or not adopt ASP? In the following the organisations are presented and the question why an SME should adopt ASP is discussed.

The first organisation described is a service provider that is classified as a horizontal ASP (HASP). The HASP was at the time of the first interview a consulting firm located in Denmark, Norway and Sweden. It was conducted two interviews with two different sales managers at the HASP. This company was the result of mergers of three different companies: an Internet service provider (ISP), an IT consultant, and an ASP firm. There are two different directions of services in the organisation, consultancy and hosting. The service of interest to this study is the hosting. This consists of 80 to 90 different software applications and is described as operational solutions consisting of two parts. The first part is a standard assortment of applications described as a base block that all customers need. The base block consists of Microsoft products such as Outlook, Explorer, Office, Project, and WinZip. The base block is needed for the organisation to facilitate increasing volumes and making a profit. The second part is customer specific applications that a customer either already has or wants to have. Customer specific solutions could, for example, be payroll/billing, e-commerce and ERP applications. According to the sales managers there are six reasons to adopt ASP. First, companies do not need to have competence in ICT in their organisation. Second, they are interested in having accessibility 24 hours seven days a week all around the year. Internally they have problems with this accessibility time. Third, the helpdesk function is emphasised and needed. Fourth, they need and want to have control of the costs of ICTs. The ASP concept means that the customer knows how much ICTs cost per user every month. Fifth, they want to have full control of ICT investments. Sixth, they need to increase security, which means that the customers have problems with, for instance, spams and viruses. They also need to increase internal security with, for instance, backups of data.

Cost is the reason emphasised most by the interviewees. This concerns both the ability to cut costs and the ability to increase cost control. The HASP sales managers describe customers' cost control and awareness of how much ICT costs as inadequate. Another reason for using ASP is being spared problems with upgrades of software. This reason is connected with the possibility to implement new versions of software at once irrespective of whether the users are located at different places. The benefit of this is that all employees work with the same version.

The second organisation described is a service provider acting as a vertical ASP (VASP). It was conducted two interviews with a sales manager at the VASP. It is classified as a vertical ASP because it offers applications aiming at a specific segment when it comes both to applications and to customers. The VASP is a subsidiary of a major consulting firm located in Sweden. The consulting firm has several different

departments, each focused on a specific market. At the moment¹ the VASP is divided into three different stand-alone sections. Two of these sections have one data centre each and one of the sections has two data centres. The section and the respective data centre are focused on a specific customer segment and specific applications. The different sections have the following main directions:

- Hosting applications that are used for real estate administration.
- Hosting applications focusing on the healthcare sector and administration of personnel in that sector.
- Hosting applications for manufacturing including applications with a focus on e-commerce and web-sites in manufacturing organisations.

The VASP offers three alternatives when it comes to support and maintenance of software applications:

- Outsourcing. The department provides customers with a platform for their systems. The VASP also supports and manages those systems and consequently takes full responsibility for the customers' entire ICT. The VASP owns the systems and the equipment and customers pay a monthly fee for using them.
- Hosting. The difference between hosting and outsourcing is that in the hosting case the customer owns the systems. The VASP department provides a customer with storage space and processor power. For this service the customer pays a monthly fee.
- Service provider. In this area there are two different offers which the VASP calls ASP: pure ASP and customer specific ASP. A pure ASP is a part of the VASP's portfolio. If a customer wants an application not in the portfolio this will be a customer specific ASP. The VASP will make such an offer only if the department is allowed to do some tests beforehand and is allowed to manage the application on a dedicated server. For this service a customer must pay for the use of the whole server even if only a smaller part of the server is used.

The difference between these three alternatives is somewhat vague. The services delivered in all the cases are different types of support and management of software applications. These applications are website hosting, payroll/billing, e-mail, e-commerce and ERP-systems. The VASP limits its offers to in-house developed systems and systems in which it has enough competencies. Enough competencies means that the department does not have to depend on an external partner to manage the systems. The sales manager at the VASP states that there is a great difference between customers as regards how the decision of using an ASP is made. However, he claims that there are basically two situations that induce the customer to start thinking of using ASP. These are the organisation's business strategy and a desire to decrease its ICT costs. According to the VASP there are three main reasons for SMEs to adopt ASP. First, the organisation's overall strategy, implying that it should not handle anything that is not directly connected with its core business. According to the

¹ January 2003.

interviewee such an organisation is only interested in having ICT that works and is not interested in taking care of the maintenance of the ICT. Consequently the use of ASP would often fit such organisations. The second reason is the organisation's desire to have control of its ICT costs. The third reason is the organisation's lack of possibilities to handle necessary service and support on its own.

The third organisation described is a service provider categorised as an Enterprise ASP. This presentation builds on an interview with the president of the EASP. The EASP is a subsidiary of a global company operating in the ERP market. The ERP company develops and markets its own ERP system. It sells, licenses, implements and supports the ERP system. This company launched a new department in 1998 which marketed itself as a service provider doing business as an ASP. However, it was not until 2000 that it actually started operating. The reason for starting this business was to become a more interesting partner for customers. The ERP company also wanted to receive part of the money that its customers spend on system support and maintenance. When the business started it was with the intention to be a service provider offering all systems required by the customers. There are two reasons why this has not come true. One was the bankruptcy of the partner which the EASP planned to use for the offering of software applications that are not directly connected to the ERP system. The other reason was that the EASP understood that its customers did not request that kind of service provision. Currently the department only offers its own ERP system and two systems related to the ERP system. These are an EDI system and a system for managing printouts. This means that if a customer wants to rent, for instance, an office suite the EASP encourages the customer to use another service provider. The interviewee does not see any reason why they should try to compete with hosting software applications that are not part of their core competence. Three different alternatives for support and maintenance of software applications are offered:

- **Hosting.** A proactive supervision and management of a customer's ERP system. The customer is connected to the company's data centre. The equipment is normally owned by the provider, which guarantees an accessibility of 99.9 per cent or 99.5 per cent, based on customer choice. The customer has bought the licence for the ERP system.
- **Remote Control.** The same thing as hosting, but the difference is that a customer owns all equipment and that this is located at the customer's place. The EASP does the same proactive supervision and management as in the hosting case. The difference is that it is done remotely.
- **RentIT.** According to the interviewee this is the closest to the ASP concept the company gets. In this case a customer wants and is offered everything around the ERP system and the customer pays a monthly fee for this. In this offer the fee includes licence fee, hardware, user training, maintenance, supervision and management of the ERP system. The customer has access to the ERP system through a network communication. However, that is not included in the fee. The customer is guaranteed the same accessibility as in the hosting case.

The main reason put forward by the interviewee for adopting the ASP concept is cost control and there is also the possibility to spread the investment over a longer period.

In addition to the interviewees done with service providers interviewees were made with customers related to the service providers were conducted. This section describes three SMEs that are clients of the three service providers, two manufacturing companies and one travel agency. The presentation is based on semi-structured, open-ended interviews conducted at the companies. There were two overall questions in the interviews: What services are delivered from the ASPs? Why did they adopt this solution for their ICTs? In the following the organisations are presented and these questions are discussed.

The manufacturing company Alpha produces and sells equipment for laboratories. It has 47 employees, of which 30 work in production. This company has cooperated with the HASP since 1999. Previously it used the same provider for part of its ICTs. The provider at the time acted as a service bureau, so the choice to become an ASP customer was never really brought to the fore. Instead there was a choice at the end of the 90s, when the company discussed if it should revert to handling its ICT internally. It decided not to do so. It was satisfied with the services from the service bureau, and it would cost the company too much to re-build its own ICT competence. It would also have difficulties attracting skilled employees. As a manufacturing organisation, the company, in the words of its CEO, is very dependent on ICT. In his view it needs to use the latest technologies to be at the forefront and to stay competitive; ASP, the CEO adds, is a good way to achieve this. The main reason for adopting the ASP concept was convenience, according to the interviewee. He expressed this in the following way, *"We wanted to have the possibility to have an external partner to handle our ICT and not have all those troubles ourselves"*. A reason that is related to convenience and is also emphasised by the interviewee is the possibility to have access to the organisation's systems from various locations. It was also stated that the ease of dealing with upgrades of the ICT was a reason for choosing the ASP concept.

The travel agency is a small firm selling and arranging sports and concert trips since 1997. Today the firm cooperates with the VASP and has done so since 2000. The travel agency has five employees and is located at one geographical place. Advertising and customer relations are handled mainly through the company's website. This means that it is very dependent on ICT for its business. When the travel agency started its business it managed its ICT by itself. When then Internet started to make an impact the agency decided to develop a website. They did so by using an Internet service provider who developed and has managed this website ever since. A couple of years later the website is now a very large part of the business, and the travel agency depends very much on it. Later on the company discovered that its operations required more ICT, for instance to be able to store information about customers and their travels. For that purpose they invested in a system labelled TOIs, which stands for tour operator information system. The travel agency made the decision to use another service provider for the support of this system. The system is located at the VASP's data centre and the travel agency has access to it by a network connection. The reason why this system was not located at the same provider as the website was that the provider of the website did not provide this kind of system. The travel agency had at that time the intention of moving the website to the VASP, but this has not been done because of the cost of switching providers. In addition to TOIs the travel agency also uses and rents Microsoft Office. The main reasons for adopting ASP are, according to the managing director of the travel agency, the focus on core competence and security concerns. *"We should concentrate on our core business and*

ICT is not our core business, and we need and must trust that our ICT works all the time, that's why we adopted the ASP concept," the interviewee said.

The manufacturing company Beta is a global company that delivers equipment to the pulp industry. It has been in business since 1899 and has 98 employees. It operates globally with its own offices in the Nordic countries and representatives beyond. The services that the company receives from the EASP today include, beside the support and management of the ERP system, a web-hosting service. Before they started to rent the ERP system they used the same system, but they performed all the support and services themselves. This worked very well and they had very few problems with the system. Despite this they decided to rent the ERP system from the EASP. There were, according to the IT manager of the Beta company, mainly two reasons for doing so. First, the company's system began to be inflexible. They discovered that they would have to change servers every second year if the system were to run smoothly. They had at this time worked with the system for a little more than two years. Second, it was hard to maintain enough knowledge of upgrades of the ERP system in the company.

In the study the service providers report cost control, overall strategy and a way of financing as the main reasons for adoption. The main reasons that the interviewed service providers reported are shown in Table 4-1. One reason that they mention but do not state as a main reason is flexibility. Flexibility is described as the background to the cost reason. The service providers claim that the customer wants to have increased flexibility. By this they mean that the customer wants to have the possibility to use a software application for a specific time without being forced to have capital tied up. Flexibility of ASP is described by the service provider as a possibility to pay for the actual use of the applications. This means that, in addition, the ICT costs are changed into variable costs and the fee is adjustable, varying with the numbers of users. However, the ASPs have had problems with the implementation of this flexibility because of difficulties with how to charge the fee. Another view of flexibility is, according to the service providers, that a project organisation can earn from using ASP. A project organisation benefits from not having to make investments in ICT resources, and when the project ends they have no capital tied up and no unnecessary resources. The customers of the service providers do not emphasise the same reasons as the ASPs. The benefits of ASP as seen by the interviewed ASP customers are presented in Table 4-1, which shows the main reasons reported for adopting ASP. All providers emphasise cost control as one of the main factors for adopting ASP. This finding concurs with the reason Udo (2000) provides which he labels a predictable ICT budget. The customers on the other hand do not emphasise cost control as a main factor. The customers instead emphasise reasons related to core competence. However, one customer states that ease of upgrading of applications is a benefit of ASP.

Table 4-1 Reported reasons for adoption of ASP.

	ASPs' reported reasons for adoption	ASP customers' reported reasons for adoption
The HASP company	Cost control	Convenience Ease of upgrading
The VASP company	The overall strategy Cost control	Focusing on core competence Increased security
The EASP company	Cost control A way of financing	Resource constraints Hard to be knowledgeable

The findings in Table 4-1 can be compared with the conclusion by Gorla et al. (2002): ICT outsourcing is mainly influenced by market structure and ICT outsourcing costs. This study does not support their conclusion. The main findings instead demonstrate that costs are not a determining factor in the decision of adopting ASP. The primary reasons given by the ASPs are: first, customers choose to adopt ASP because they will know what costs they have to pay for ICT each month; second, customers adopt ASP concept because they cannot themselves obtain the same ICT at the same cost. This is quite contrary to the reasons reported by the customers. SMEs in this study emphasise costs, but when it comes to the final decision, costs are not the primary reason. The interviewed SMEs give the following reasons: difficulties with obtaining and handling resources, a lack of internal resources, ICT is not their core competence, and a wish to increase security. The customers of course say that they would like to have their ICT as inexpensive as possible. However, this is not reported as the key reason for adopting ASP.

To deepen the data received from the interviews a questionnaire was submitted to the HASP's customers. The questionnaire was developed in cooperation with the HASP. Besides the above reported interviews, the study by Susarla et al. (2003) about ASP satisfaction and the questionnaire in that study acted as input to the developed questionnaire. The reported reasons in Table 4-1 from the interviewed SMEs can be compared with data from the questionnaire. Findings from the questionnaire about what reasons impact the decision to adopt ASP are shown in Table 4-2 and Table 4-3.

In the questionnaire two questions dealt with reasons why SMEs adopt ASP. The first question was formulated as follows: what reasons made your organisation adopt ASP? The respondents were supposed to rank the proposed reasons in order of importance with 3 as the highest score. Table 4-2 shows how many organisations rated a reason as the most important, the second most important and the third most important.

Table 4-2 What reason impacted the decision of adopting ASP most.

Reasons	Total score	Number of organisations ranking reasons		
		Rank 1	Rank 2	Rank 3
Improved accessibility	14	3	1	3
Improved ICT systems	14	2	3	2
The organisation's overall strategy	13	4		1
Better support	11		4	3
Decreased ICT costs	8	2	1	
Access to better knowledge of ICT	7	1	1	2
Lack of ICT-skilled personnel	5	1	1	
Predictable ICT costs	3		1	1
Other reasons (no need for investment in ICT, security aspects)	3		1	1
Difficulties to employ ICT-skilled personnel	0			

The reasons that got the highest score are improved accessibility and improved ICT systems. Improved accessibility is also something that the interviewed customers emphasise as a reason for adopting ASP. To improve the result a second question was asked. This question broadly asked about the same thing, but did so from another angle. The question was formulated as follows: which of the following reasons motivated the decision to adopt ASP? There were ten different reasons presented and the respondent was asked to state the importance of the reasons on a 7-point scale. A seven implied that it was very important and a one that it was not important at all. The result from this question is shown in Table 4-3. However, it is important to remember that the findings in Table 4-2 as well as in Table 4-3 build on answers from SMEs that are organisations using ASP. This implies that the answers could have been affected by perceived results from using ASP.

Also in the answer to the second question about reasons, improved accessibility received the highest score. The overall strategy for the organisation was rated fourth in this question (Table 4-3). One finding is that the difficulties in having and attracting ICT-skilled employees get so low scores. Lack of ICT-skilled personnel shows a high standard deviation which is a result from two customer organisations rate this reason a 7 and three customer organisations rate it a 1. The question is if this can be related to what applications they use or the ICT dependency of the firm. When examining what applications they use and rent there is no pattern between a certain rate and applications used. Neither is there a pattern between ICT dependency and the rate of lack of ICT-skilled personnel. This is interesting, since the ASPs describe this as one of the benefits and a reason for adopting ASP. The literature often suggests the possibility to have increased access to personnel as a reason for adopting ASP (Kern et al., 2001; Udo, 1995, Dewire, 2001). One of the organisations studied, the

manufacturing company Beta, gave this as a reason for its adoption of ASP. The ASPs claim that an organisation that adopts ASP hardly needs to have any employee dealing with ICT-related tasks. However, the ASPs also emphasise that customers need to have some employees with knowledge of and interest in ICT. The interviewed ASPs claim that customers have to handle some strategic work related to ICT, and there is a need for the ASPs to have someone with whom to discuss strategic questions about ICT.

Table 4-3 To what degree does a reason impact the decision to adopt ASP?

Reasons	Mean score	Min	Max	Stdev
Improved accessibility	6.4	6	7	0.51
Better support	5.9	4	7	1.12
Improved ICT systems	5.6	2	7	1.66
The organisation's overall strategy	5.4	4	7	1.12
Access to better knowledge of ICT	5.2	2	7	1.77
Predictable ICT costs	4.9	3	7	1.19
Decreased ICT costs	4.8	2	7	1.76
Lack of ICT-skilled personnel	3.5	1	7	2.20
Difficulties to employ ICT-skilled personnel	2.8	1	7	1.90
Ability to increase the employees' ICT knowledge	2.5	1	5	1.39

The customers on the other hand claim that lack of personnel or lack of knowledge of ICT among employees are not reasons for adopting ASP. Neither do they see the fact that they do not need to have employees working with ICT as the main benefit of ASP. Instead they express that despite the fact that they are an ASP customer they need to have some expensive additional consultancy help at an increased cost.

5 Discussion

The main finding from the questionnaire and the interviews with ASP customers is that accessibility plays a very important role when deciding on using ASP. This is not in line with what the ASPs give as a main reason. Instead they talk much about costs and cost control. However, they indicate accessibility when they point out cost level as the main reason. The reason for this is that if the customers need and want increased accessibility they could do this by themselves but it would cost money. So the reason why SMEs are not able to provide themselves with the accessibility required could be said to be the issue of cost. It can be concluded that there are several benefits reported of ASP. From this discussion it can be concluded that the benefit which, according to the ASPs, influences the decision most is the possibility to decrease and have control of ICT costs. The ASP customers, on the other hand, argue that increased accessibility to their ICT is what influences the decision most.

One statement presented by the interviewed ASP customers as well as by the interviewed ASPs is that an organisation decides on using ASP because it wants to

focus on its core competence. Relating to the definition by Axelsson & Wynstra (2002) it can be claimed that if an SME does not have enough skills in ICT it should outsource its ICT. The reasons that the SMEs give for adopting ASP (Table 4-1) can be grouped together under the label core competence. Despite the fact that only one of the SMEs directly expresses it, all customers indirectly refer to core competence when they describe why they adopted ASP. The reported reasons convenience, ease of upgrading, increased security, resource constraints and hard to be knowledgeable, are reasons that all indicate that ICT is not part of the customer's core competence; they indicate that the organisation does not have enough knowledge to manage its ICT so that it becomes critical and distinctive and hard for others to copy. However, this can be related to Mata et al. (1995), who argue that whether an organisation gains competitive advantage from ICT depends on how the organisation manages the resource. The conclusion drawn by Mata et al. is that among the attributes of ICT it is only the managerial ICT skills that provide sustainability of the competitive advantage. Barney (1991) concludes that sources of sustained competitive advantage are and must be focused on the heterogeneity and immobility of resources. This conclusion is drawn from the assumption that if a resource is evenly distributed across competing organisations and the resource is highly mobile, the resource does not influence sustained competitive advantage. If ICT is seen as a resource of which the organisation has enough knowledge and which it can handle in an efficient and effective way, it should not be outsourced. However, whether the organisation's ICT is handled internally or externally does not alone give the organisation competitive advantage. This indicates that even if ICT is seen as part of the organisation's core competence it can be outsourced and provide competitive advantage if it is managed and used in a professional way. According to Gorla et al. (2002) external provision is chosen because the enterprise wants to focus on its core business. Lee (2001) states that the motivations for using an external partner for ICT are strategic, economic and technological benefits. In the interviews with the ASPs the customers' intention to focus on core competence was expressed as an important reason for adoption of ASP. It can be concluded that judging what is core competence and what not is core competence is a difficult task. It can be claimed that stating that ICT not is the organisations core competence is an easy thing. More difficult is to state what the organisations core competence is, and especially to state how ICT influence and impact the organisations core competence.

In section 3 it was stated that the decision is impacted by a need to change ICT capability in the organisation. It can be stated that ASP is seen as a way of improving ICT capability. Capability can be increased through integration of different software applications. A need for integration of different systems could therefore be seen as a reason for using the ASP concept. However, integration of systems is not seen as something the ASPs are good at according to their customers. Instead the interviewed ASP customers mention the problem of integration as a result of adopting ASP. The description given by the manufacturing company Beta and the travel agency highlighted this problem. The conclusion is that the customers, when not using one and the same provider for their applications, have more problems with integration of their applications. Better possibility to integrate different applications is not put forward as a reason for adopting ASP by ASP customers interviewed. Neither is it something that the ASP customers of the horizontal ASP rate high in the questionnaire. This indicates that ASP is not adopted in order to increase an organisation's ICT capability by integration of different software applications. This

conclusion can be connected with the ongoing discussion about web-services and in that way act as a direction for how service providers should act in the future.

The question is if SMEs choose to adopt ASP because they want and need to have better ICT and better support. The ASPs state that the customers choose them because they need to have access to better applications and better support. In the study of reasons it was asked if better ICT and better support impacted the decision. The results are shown in Tables 4-2 and 4-3. It can be concluded that these two reasons got high scores.

The reason for adopting ASP that ASP customers declare as having the highest influence for the decision is accessibility as shown in Tables 4-2 and 4-3. An increase in accessibility can be related to two characteristics of organisations that the service providers claim make ASP fit. First, the organisation needs to have accessibility to its ICT all around the clock. Second, the organisation's business is conducted in a project manner, which means that they need to have access to certain kinds of applications during the time of the project. The accessibility reason reflects the view the ASP customers have of ASP. They claim that ASP should deliver the applications they need whenever they need them without the customer having to bother about how the applications work. They just want their ICT to work when they need it. This statement describes very well what accessibility is about and how the need to increase the organisation's ICT capability influences the decision on using the ASP concept.

6 Conclusions

It can be concluded that there is a strong relation between the two factors, core competence and ICT capability, in the decision of deciding on using ASP. As the CEO of the manufacturing company Alpha expresses it, they are very dependent on ICT. They need to use the latest technologies to be at the forefront and to stay competitive. However, he also states that ICT not is its core competence but it is important how the management of the ICT are made and that ICT supports the organisation in its business. This is in line with Mata et als (1995) discussion of ICT and competitive advantage, which state that it is not the ICT in itself that creates competitive advantage instead it is a question of how ICT are used in the organisation. This discussion and the study so far are concluded in the following hypothesis:

<i>Organisations that outsource their ICT see outsourcing as a way of improving their ICT capability and in that way focus on the organisations core competence. ICT capability is then seen as an important part of the organisations core competence.</i>

The contribution that the resource-based view supports one with when studying the decision-making process in an outsourcing decision can be explained in the following way. By using the resource-based view of the firm a more strategic point of view on the decision is suggested. This means that a deep understanding of the decision-making is possible to get. It emphasise the relation between capability and core competence. However, it can be stated that clarify and decide on what an organisations' core competence is, is a difficult task.

7 Reference

- Aalders, R. (2001) *The IT Outsourcing Guide*. John Wiley & Sons Ltd, Baffins Lane, Chichester.
- Axelsson, B. & Wynstra, F. (2002) *Buying Business Services*. Chichester: John Wiley & Sons Ltd.
- Barney, J. (1991) Firm Resources and Sustained Competitive Advantage. *Journal of Management*. Vol. 17 (1), pp 99 – 120.
- Barney, J. (1994) Bringing managers back in. In Barney, J., Spender, J.C. & Reve, T. (eds). *Does management matter?*. Lund: Lund University Press.
- Cheon, M. J., Grover, V. & Teng, J. T. C. (1995) Theoretical perspectives on the outsourcing of information systems. *Journal of Information Technology*, 10, pp 209 - 219.
- Currie, W. L. & Seltsikas, P. (2000) “Evaluating the application service provider (ASP) business model”, Executive Publication Series CSIS2000/004, Center for Strategic Information Systems, Department of Information Systems & Computing, Brunel University, Uxbridge, UK.
- Dewire, D. T. (2001) ASPs: Applications for Rent. In the proceedings of the Seventh Americas Conference on Information Systems, pp 2275 – 2281.
- Gorla, N., Chan, E. & Oswald, P. (2002) Determinations of IS Outsourcing Decision: Development of an Integrated Model and Test. In the proceedings of the Eighth American Conference on Informations Systems. pp 2274 – 2285.
- Hedman, J. & Kalling, T. (2002) *IT and Business Models, Concepts and Theories*. Liber Ekonomi, Malmö.
- Hussin, H., King, M. & Cragg, P. (2002) IT alignment in small firms. *European Journal of Information Systems*. Vol 11, pp 108 – 127.
- Junghagen, S. (1998) Strategiska förhållningssätt till informationsteknik i små företag. Umeå: Umeå Universitets tryckeri.
- Kakabadse, A. & Kakabadse, N. (2002) Application Service Providers (ASPs): New Impetus for Transformational Change. *Knowledge and Process Management*. Vol 9, No. 4 pp 205 - 218.
- Kern, T., Lacity, M. C., Willcocks. L., Zuiderwijk, R. & Teunissen, W. (2001) *ASP Market Space Report 2001. Mastering the Customers Expectations*, GMG report.
- Lacity, M. & Willcocks, L. (2001) *Global Information Technology Outsourcing: In Search of Business Advantage*, John Wiley & Sons, Chichester.
- Mata, F. J., Fuerst, W. L. & Barney, J. B. (1995) Information Technology and Sustained Competitive Advantage: A Resource-Based Analysis. *MIS Quarterly*, December, pp 487 - 505.
- McLellan, K., Marcolin, B. L. & Baemish, P. W. (1998) Financial and strategic motivations behind IS outsourcing, in Willcocks, L.P & Lacity, M.C.

- (eds.) *Strategic Sourcing of Information Systems*, John Wiley & Sons, Chichester, pp 207 - 248.
- Porter, M. E. (1985) *Competitive Advantage: Creating and Sustaining Superior Performance*. New York: Free Press.
- Robinson, M. & Kalakota, R. (2004) Offshore Outsourcing Business Models, ROI and Best Practices.
- Prahalad, C.K., & Hamel, G. (1990) The Core Competence of the Corporation. *Harvard Business Review*, May-June 1990, pp 79 – 91.
- Seyal, A. H., Rahim, M. M. & Rahman, M. N. (2000) An Empirical Investigation of Use of Information Technology among Small and Medium Business Organizations: A Bruneian Scenario. *Electronic Journal on Information Systems in Developing Countries*, *EJISDC* 2(7), pp 1 - 16.
- Shepherd, A. (1999) Outsourcing IT in a Changing World. *European Management Journal*, vol.17, no. 1, pp 64 - 80.
- Susarla, A., Barua, A. & Whinston, A.B. (2003) “Understanding the service component of application service provision: an empirical analysis of satisfaction with ASP services”. *MIS Quarterly*, Vol 27, No.1, pp 91 - 123.
- Turban, E. McLean, E. & Wetherbe, J. (2001) *Information technology for management Making Connections for Strategic Advantage*, second edition. John Wiley & Sons Ltd, Chichester.
- Lee, J-N. (2001) The impact of knowledge sharing, organizational capability and partnership quality on IS outsourcing success, *Information & Management*, Vol 38, pp 323 - 335.