CLIENT RELATIONSHIP DEVELOPMENT WITH DIFFERENT SECTORS OF APPLICATION SERVICE PROVIDERS: AN EXTENDED RESEARCH MODEL

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Abstract

Application Service Provision (ASP) is a feasible method for remote software delivery to multiple clients. ASP-client relationship is viewed as an important asset to both sides. Moreover, in dynamic ASP markets, significant distinctions exist among emerging sectors of ASPs. They may vary in developing relationship with customers. This paper extends the initial ASP-client relationship development model for pure-play ASP. Based on comparison of three sectors of ASPs: pure-play ASP, vertical service providers and independent software vendor, the ASP-client relationship development for different sectors is further investigated by applying this extended model. This paper gives an insight on the relationship development in ASP industry.

Keywords: Application service providers, relationship development, vertical service providers, independent software vendors

Introduction

Application Service Provision emerged as an important strategy for many small and median companies to gain competitive advantages in e-business by remotely renting software.

In Information Systems (IS) research, ASP is under the discipline of outsourcing. But most researchers focus on the outsourcing decision-making issues from economic, social and strategic perspectives (e.g., Finan et al. 2000, Willcocks and Lacity 1997, Lee 2002). Only few researches, such as Lasher, Ives and Jarvenpaa (1991) and Klepper (1997), study the relationship development process between outsourcing vendors and their customers. Relationship development is also a critical issue in Relationship Marketing research. Many structure models have been developed to explore different factors impacting complex inter-organizational relationship (Morgan and Hunt 1994, Anderson and Narus 1990, Moore 1998). But most of them examine the interaction of these factors at the specific time point in traditional industries, not relationship development in information technology industry.

Yao and Murphy (2002) provide convincing arguments that ASPs differ in significant ways from traditional outsourcing, including target markets, vendor characteristics, functions provided, and contract types. Thus ASPs are more likely to develop the relationship with clients in a different way. As ASP and outsourcing continue to evolve, we can and should draw from prior research on outsourcing while we recognize the emerging differences. Currie and Seltsikas (2002) argue that market segmentation is the survival strategy for ASPs. Currently, key drivers of ASP business model are identified as pure-play ASPs, vertical services providers (VSP), and independent software vendors (ISV) with online hosting services. In this paper, I extended the initial ASP-client relationship development model for pure-play ASPs and further explore the relationship development process for other two emerging and promising sectors: VSP and ISV.
This paper proceeds by briefly reviewing previous literatures. Then I will define ASP business models from an ASP-client side, followed by comparison of three sectors of ASP. The research model of ASP-client relationship development among several sectors is further described.

**Previous Literatures**

In IS literatures, few empirical IS studies have examined relationship development compared to the numerous studies on the outsourcing decision. Lasher, Ives and Jarvenpaa (1991) and Klepper (1997) propose stage models for the development of relationships between outsourcing vendors and customers (Yao and Murphy 2002).

Lasher et al. (1991) present outsourcing as a strategic partnership evolving from large-scale, long-duration projects, which require substantial customization and intensive mutual learning. Five stages for outsourcing vendor-client partnership development are developed, including establishing the purpose, finding a partner, defining the partnership, maintaining the partnership, and institutionalizing the partnership. Klepper (1997) borrowed Dwyer, Schurr, and Oh (1987)’s model to identify four stages for the traditional outsourcing vendor-client relationship development process: awareness, exploration, expansion and commitment by using two cases studies.

Besides, in marketing researches, based on transaction cost theory and social exchange theory, numerous studies examine factors impacting buyer-seller long-term relationship (e.g. Gassenheimer et al. 1998). But few empirical studies have investigated relationship development process, especially the initial development processes.

Ford (1980) presented a stage relationship model for buyer-seller, including pre-relationship, early, development, long-term and final stage. In each stage, Ford (1980) examined the key subprocesses, such as evaluation, experience/knowledge building, distance between buyers and sellers, commitment… He found that relationships appearing in the early stages are fragile while the relationships in the later stages are more robust. Ring and Van de Ven (1994) also introduced a framework for inter-organizational relationship development. The model consists of four stages: negotiations, commitments, executions and assessments. These four stages are tightly associated with formal legal contract and personal informal agreement. For example, in negotiation stage, organizations will develop joint expectation, perceived risks and trust through formal bargaining and informal sense making. In the executions, the commitment comes into effect through the role interactions indicated by legal contract and personal informal interactions. In evaluation stage, both parties will decide whether they should continue or terminate the relationship by evaluating efficiency and equity.

These IS studies reflect the complexity of institutionalized relationship between traditional outsourcing vendors and clients. Moreover, marketing conceptual researches provide the rich understanding about a buyer-seller partnership or long-term relationship development in traditional industries (Stump 1994). However, Yao and Murphy (2002) find that vague-boundary stages models are not suitable in describing ASP relationship development. In particular, previous outsourcing relationship characterized as a more-or-less strategic partnership may be an inappropriate assumption for ASPs and their clients (Gillan et al. 2000). Marketing researches draw more attention to traditional industries identified by real goods exchange and long existing market rules, which seems not applicable for ASP market identified by virtual and quick-changing services, flexible pricing (Marchand and Jacobsen, 2000).

Furthermore, ASPs differ greatly from traditional outsourcing, as most of them are newly established companies, focusing on small or media customers and delivering services by relatively short and detailed contract (Yao and Murphy, 2002). So, I believe it is necessary to examine ASP-Client relationship development.

In the paper, I investigate the following questions from both ASP and client’s perspectives:

- How do ASPs develop their relationships with clients?
- How does relationship development differ among various ASP players, such as pure-play ASP, VSP and ISV?

**The Concept of Application Service Provision and Three Sectors of ASP**

Here, I take the definition provided by Yao and Murphy (2002):
ASP providers an alternative to companies’ having to buy, install, manage and update software themselves. They do this by hosting and managing applications themselves so that companies can rent the applications they need and them by access via the Internet.

Though emerging not long, ASPs grow very quickly. There are several classification methods. For example, only from application services, ASPs can be classified into telecommunication providers, hardware providers, business solutions providers, and so on. In this paper, coupling several dimensions of product characteristics, client characteristics and vendor characteristics, pure-play ASPs, VSPs and ISVs are identified as the principal players in this dynamic market (Currie and Seltsikas, 2002). In this paper, Pure-play ASPs refers to small or median companies providing standard application online to clients across the industries without significant customization. Vertical service providers are those ASPs offering special applications designed for a specific industry, such as software application for legal firms. Independent software vendors refer to those software companies starting application hosting services. Here, I focus on ISV providing complex enterprises software, as enterprise systems hosting becomes a noticeable trend in ASP market. The differences among three sectors of ASP are present in Table 1.

Table 1. Comparison Among Three Sectors of ASP

<table>
<thead>
<tr>
<th></th>
<th>Pure-play ASP</th>
<th>Vertical Service Provider</th>
<th>Independent Software Vendor</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product functions</strong></td>
<td>Various software applications</td>
<td>Industry-specific software application</td>
<td>Complex end-to-end enterprise management software packages,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>such as ERP, CRM, SCM</td>
</tr>
<tr>
<td><strong>Degree of customization</strong></td>
<td>Standard application for all industries</td>
<td>Industry-specific applications with little change</td>
<td>Pre-designed industry solution</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Small customization for each customer</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>High customization</td>
</tr>
<tr>
<td><strong>Vendor</strong></td>
<td>Small or median firms</td>
<td>Small or median firms</td>
<td>Large &quot;name&quot; firms</td>
</tr>
<tr>
<td></td>
<td>• Local/regional located/not well known</td>
<td>• Industry-known</td>
<td>• National/global located</td>
</tr>
<tr>
<td></td>
<td>• Online service is the main business</td>
<td>• Online service is the main business</td>
<td>• Online service is one part of business</td>
</tr>
<tr>
<td><strong>Target Clients</strong></td>
<td>Small or median organizations</td>
<td>Small or median organization</td>
<td>Small or median organization</td>
</tr>
<tr>
<td></td>
<td>• Without internal IT proficiency</td>
<td>• Lack of profession in specific IT functions</td>
<td>Lack of IT profession in the complex enterprise system</td>
</tr>
<tr>
<td><strong>Resource Ownership</strong></td>
<td>Software and server infrastructure owned by ASP or its vendor partners</td>
<td>Value-added domain-specific solutions owned by VSP</td>
<td>Enterprise management solution package owned by ISV</td>
</tr>
<tr>
<td></td>
<td>• Data owned by clients</td>
<td>• Data owned by clients</td>
<td>• Data owned by clients</td>
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</tbody>
</table>

Though these sectors vary in many aspects, they share the common characteristics of ASP. Most customers are small and median companies. Clients will only need PCs to access those online applications. Especially they all deliver service by contact with monthly payment (Yao and Murphy, 2002). So contract duration can be regarded as a good benchmark for stable and profitable relationship.

**Basic ASP-Client Relationship Development Model**

Yao and Murphy (2002) have proposed a basic model for customer-relationship development based on contract duration. However, some factors are not suitable for ASP-client relationship development. For example, communications and conflict solutions are not the outcomes of short-term corporation, but the processes occurring during these corporations. So in this paper, I further extend this model by redeveloping moderators and clarifying relationship between the factors and various stages, as shown in figure 1.
Five Stages

This model still has five stages: Pre-contract experience, Transition from pre-contract experience to short-term contract, Short-term contract, Transition from short-term contract to long-term contract, Long-term contract. But it differs from the previous one in two stages: Short-term Contract, Long-term Contract and associated moderators impacting the transitions.

Pre-contract experience stage will directly affect moderators in the first transition, including credibility, capability, asymmetry and match between clients’ expectation and ASPs’ capability.

In this model, the Short-term Contract stage, less than one year, allows both vendors and clients to learn more about each other (Snir and Hitt 2000). The positive experience will produce clients’ trusts and dependence on ASP, which in turn create more chances to move into long-term cooperation. This stage is characterized by intensive communications and conflict resolutions.

Communications and conflict resolutions, as the processes impacting the experience-driven moderators, actually occur during the short-time or long-time corporation stages. Frequent and timely communications, and effective functional conflicts can clarify misunderstanding and adjust expectations. Their influences on the transition are shown by enhancing trusts, creating mutual dependence and boosting commitment to the relationship.

They will continue to work in Long-term Contract stage, which is about 2 or 3 years. Interestingly, they may further affect ASPs’ credibility in the first stage.

Factors Impacting Relationship Development

In this section, I will further examine factors that are expected to moderate the transition between contract states. Here, I will only explain those newly added factors and give some propositions.

Indirect Moderators: Credibility, Asymmetry and Expectations-Capability Match

I propose that four significant forces influence both transitions: credibility, capability, asymmetry and match between the client’s expectation and the vendor’s capabilities. Yao and Murphy (2002) have elaborated discussed the significant impact of credibility,
capability and match between the clients’ expectation and the vendor’s capability. Here, newly added factor, asymmetry, is not only the cause for customers to jump into this relationship, but also the force shaping the relationship (Keep et al. 1998).

**Asymmetry**

Asymmetry here refers to both information asymmetry and power asymmetry. Information asymmetry means the imbalance in getting and accumulating knowledge on business or products (Keep et al. 1998). Power asymmetry is the extent to which one party can control or persuade the other organization (Oliver 1990). While asymmetry results in the dependence of one party on the other (Oliver 1990), it also motivates the relationship establishment (Keep et al, 1998), to share information and create mutual profitability.

In ASP industry, ASPs clients, especially the clients of pure-play ASP, lack IT knowledge, even not clear about their own needs. Moreover, clients are not clear about ASP business model and the way to measure ASP’s performance. So asymmetry will cause the clients to count on ASPs’ standard contract in the beginning.

\[ P1a: \text{ASP vendors and clients know less about client requirements prior to short-term contract.} \]

\[ P1b: \text{The more asymmetry between ASP and its clients, the more likely clients is to initiate contract relationship} \]

**Experience-Driven Moderators**

During service delivery processes, while credibility, capability, asymmetry and expectations-capability match continue to be important, whether or not the relationship moves to the next stage depends to a great extent on the joint delivery and experience of application serving.

The experience during the short-term contract including communications and conflict solutions will give both parties a good chance to know each other. Three factors from the experience of application serving are expected to influence the transition from short-term to long-term contract stage: trust, relationship commitment and dependence. Trust and dependence are mutually impacted, both increasing the possibility for the parties to move into long-term stage (Yao and Murphy, 2002). Here, I will emphasize relationship commitment, an added factor in the model.

**Relationship Commitment**

Relationship commitment is the strong desire to maintain the relationship that is perceived to be valuable by great efforts (Morgan and Hunt 1994, Moorman et al. 1992), which is the key for long-term relationship. In the context of ASP, effective communication and conflict resolutions in short-term contract help to build their commitment to the stable relationship (Lee and Kim, 1999; Andersen and Narus, 1990). A feedback loop also exists between commitment and trust (Hart and Saunders, 1998).

So, I propose:

\[ P2a: \text{Relationship commitment is positively associated with communications and functional conflict.} \]

\[ P2b: \text{Relationship commitment will positively influence the transition to long-term contract.} \]

This extended basic ASP-client relationship development model is especially suitable for pure-play ASPs. All these moderators work together and make their relationship move from the short-term to the long-term.

**Relationship Development Model for VSP**

Compared with pure-play ASP, VSP has specific domain knowledge, which is regarded as a strong competitive advantage in ASP market. It changes the strength of moderators in the relationship development.
Pre-Contract Experience

Focusing on a specific industry, VSPs have relatively more chances to get customer’s attention. Their target customers are also more converged in a small scope.

Transition to Short-term Contract

Industry-familiarity enables VSP to integrate all the “best of breed” products and supply the domain-focused functionality to clients (Samuels 2001). Their capabilities to meet the customers’ needs can be recognized through the listed functions in contracts. For example, Statability’s simple-to-read and content-rich reports can significantly save time for chain hotel managers to get necessary data for regulations (Statability 2001). Besides, VSPs’ high reputation partly comes from CEO’s personal reputation and long-years’ experience in the industry, which will add weights on clients’ decision for outsourcing. For instance, Statability’s founders have worked in hotel for over 20 years and established a good social network. Partnership with famous vendors, such as Sun, Oracle… will also increase their credibility. Moreover, as most VSPs have better understanding about clients’ core business, their capability is easier to be matched with client’s expectation (CherryTree&Co 2001). A good fit between capability and expectation will give client more confidence to initiate short-term contract with ASPs.

Short-Term Contract

Due to the domain knowledge, VSPs are easy to communicate with clients in their own business words and find effective solutions without wasting time in business background introduction. In this stage, VSPs can know more about clients’ business, while clients are well aware of their capability to reevaluate the match.

Transition to Long-Term Contract

As VSPs deliver different value-added applications in order to keep competitive advantages, switch cost is relatively high. The resulting dependence will motivate clients to move into long-term contract (Ganesan 1994). When signing a long contract, clients might ask for more customized functions, which will increase their dependence on VSPs. Based on the trusts and relationship commitment developed during the short-time contract, VSPs will like to make more efforts to design more suitable applications for long-term clients. Statability will sign long-contract (more than 2 years) with clients asking for more customized services. It will motivate both sides to go further for long-term relationship.

Long-Term Contract

Long-term contract is also only two or three years, as the clients still prefer a certain extent of flexibility. In long-term contract, mutual communications and conflict solution keep on enhancing their trust and relationship commitment.

I give the following propositions about VSPs’ special relationship development:

\[ P3a: \text{High industry-specific expertise will increase VSPs’ credibility.} \]
\[ P3b: \text{The more expertise VSPs have, the better match between VSPs’ capability and Clients’ expectation will be reached.} \]
\[ P3c: \text{The more expertise VSPs have, the more efficient communications and conflict solutions are during short-term contract.} \]
\[ P3e: \text{The expertise of VSPs will increase client’s dependence and likelihood for clients moving into long-term contract.} \]

Relationship Development Model of ISV

The characteristics of ISVs, such as the complexity of application and ownership of expensive software package, cause its path of client relationship development unique in some aspects. Recently, in order to acquire the market of small and media companies,
SAP, Oracle, DES have tried ASP business model as the complement to their regular business. In this section, I will investigate their differences from the other sectors.

**Pre-Contract Experience**

In this stage, ISVs’ experience is more like traditional outsourcing vendors. Before entering into ASP market, these famous software firms have already held large market shares through long years’ businesses, such as selling software licenses, training and consulting. These experiences help them attract customer in ASP market.

**Transition to Short-Term Contract**

Just as mentioned above, ISVs take the dominant advantages over other ASP competitor by their big name in the industry. Their well-known credibility definitely increases clients’ confidence to initiate the relationship. To ASP customers, SAP’s numerous success implementation stories are reliable evidences for its capability. Holding the resources for software development, ISVs have strong capability in technology, especially for continuing updates. ISVs’ authority in high-end software markets undoubtedly results in significant asymmetry between them and clients, which will increase clients’ dependence on ISVs even from pre-contact experiences stage. Relying on ISVs’ capability and credibility, clients will build strong initial trust on ISVs (Blois 1999). Thus ISVs will take the responsibility to design short-term contact design and lead the clients in negotiation to reach the agreements.

**Short-Term Contract**

In a short-term contract, clients will rent one or two principal modules for a trial. Generally, ISVs will provide pre-implemented standard solutions for specific industry. Through this experience, the clients will know more not only about software systems, but also about ISVs’ online delivery capability.

**Transition to Long-Term Contract**

Based on communications and conflict resolution in short-term contract, clients might build trusts on ISV’s capability, which further make them committed to this relationship. Adaptation of complex management system is associated with intensive training and business process reengineering, which increases clients’ switch costs and dependence on ISVs. Generally, these enterprise systems reach optimal performance by highly customization. More customization required by some clients will enhance clients’ dependence on ISVs and intensify asymmetry between ISVs and their clients (Klepper 1997). However, dependence and high asymmetry require reliable long-term relationship to reduce the risk, which motivate clients to move to a long-term contract.

**Long-Term Contract**

In long-term contract, the clients will ask for more customized modules. ISVs and clients will work closely to solve the conflicts in the customization. Considering the complexity and customization of these applications, ISVs’ long-term contract will be relatively longer (three or more years) in order to trade off between flexibility and costs.

Generally, ISV-client relationship development presents a certain different features. So I argue:

- **P4a:** The high credibility of ISVs significantly increases the likelihood of initiating a short-term contract with clients.
- **P4b:** ISVs’ dominant capability in industry increases the likelihood of initiating a short-term contract with clients.
- **P4c:** ISVs’ high asymmetry over clients increases the likelihood of initiating a short-term contract with clients.
- **P4d:** Clients’ strong dependence on ISVs increases the likelihood of relationship moving into long-term contract.
Conclusion

In ASP market, a good ASP-client relationship is a critical asset for both parties to make win-win strategy. An extended contract-based stage model here provides a platform for studying and managing ASP-client relationship development processes. As two newly emerging sectors: VSP and ISV, present unique features in offered services and capabilities, I further examine their customer development, by emphasizing those distinctions.

The main contribution of this paper is to extend the initial ASP-client relationship development model by scrutinizing the moderators and their relationship with different stages from both client and ASP perspectives. Another contribution is to give more insight on relationship development of two other sectors: VSP and ISV, the next generation ASPs, which will help practitioners to enhance the advantages and alleviate those disadvantages.

The study is still in development stage. In this dynamic market, we need keep on looking at emerging differences to know more about relationship management. Further empirical studies is suggested to tract those stages and the transitions, and test the validity of relationship development model for different sectors of ASPs.

References