

**“Can’t Buy Me Love” (But I Know Where You Can Rent It): The Emerging
Organizational Community Around Web-based Application Service Providers**

by

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Abstract: Using only their own resources, small and medium sized firms (SMEs) traditionally faced major problems in competing with one another and with larger firms. Keeping up with new technologies required investments of time and resources that many firms simply could not afford. However, within the past few years, a technological innovation has emerged that has the potential for leveling the playing field. Using the Web, application service providers (ASPs) now make it possible for SMEs to access state-of-the art software for customer relationship management, enterprise resource planning, accounting, human resource management, and other business functions. The potential for boundaryless firms has become a reality.

We call the resulting complex of firms and industries oriented to the new ASP technology an organizational community because it has all the characteristics identified by Aldrich (1999: 298-330). For entrepreneurship researchers, this new community is significant for three reasons. First, several new industries have emerged because of the pioneering efforts of a few entrepreneurial ventures, such as the application hosting and service integrator populations. Second, the ready availability of effective routines and competencies for a wide variety of business functions via the Web will allow entrepreneurs starting new ventures to concentrate on the specific value proposition their businesses bring to the market, rather than nonessential activities. Third, ASPs promise to make existing firms much stronger competitors for new ventures, as they make business innovations available that were once beyond the reach of established SMEs.

Using only their own resources, small and medium sized firms (SMEs) traditionally faced major problems in competing with one another and with larger firms. Keeping up with new technologies required investments of time and resources that many firms simply could not afford. However, within the past few years, a technological innovation has emerged that has the potential for leveling the playing field. Using the Web, application service providers (ASPs) now make it possible for SMEs to access state-of-the art software for customer relationship management, enterprise resource planning, accounting, human resource management, and other business functions. The potential for boundaryless firms has become a reality.

We call the resulting complex of firms and industries oriented to the new ASP technology an organizational community, with all the characteristics identified by Aldrich (1999: 310): “An *organizational community* is a set of coevolving organizational populations joined by ties of commensalism and symbiosis through their orientation to a common technology, normative order, or legal-regulatory regime. It is defined for a particular historical period.” *Commensalism* refers to competition and cooperation between similar units, whereas *symbiosis* refers to mutual interdependence between dissimilar units.

For entrepreneurship researchers, this new community is significant for three reasons. First, several new industries have emerged within the community because of the pioneering efforts of a few entrepreneurial ventures, such as the application hosting and service integrator populations. Second, the ready availability of effective routines and competencies for a wide variety of business functions via the Web will allow entrepreneurs starting new ventures to concentrate on the specific value proposition their

businesses bring to the market. The availability of many “off the shelf” solutions frees them to focus more attention on their core business idea. Third, ASPs promise to make existing firms much stronger competitors for new ventures, as they make available business innovations that were once beyond the reach of established SMEs.

In this paper, we describe the emerging community and its development, using the evolutionary framework originally proposed by Hunt and Aldrich (1998) in their analysis of the commercial community of the World Wide Web. We focus on technological innovation, entrepreneurship, and problems of legitimacy for the new community. Because the industry is not widely known, we first explain what ASPs are and how SMEs can use them. In our discussion of the three forces behind community evolution, we use the accounting industry as our main example, as it presents several interesting issues of legitimacy and learning problems. We then present arguments for the theoretical importance of the new community.

What is the ASP Organizational Community?

ASP’s and similar Internet based outsourcing firms are a novel combination of the traditional outsourcing of business functions and the use of Internet technology. An ASP manages and delivers software applications to many different firms from data centers across a wide area network (ASP Industry Consortium, January 5, 2000). Most ASPs are commercial firms, but some are non-profit or government organizations supporting end users. These firms provide network space, software, and the processing of given business functions for clients.

A client firm pays a subscription fee to lease an application from the ASP. The clients have around the clock access to their information through the Internet, and use the

application on the ASP's server in the same way they would if it were on their own desktop PC or company LAN. An ASP provides the time and cost savings of outsourcing, plus the convenience of Internet access to updated records at any time and from any place. For example, BuildNet, a software firm based in Durham, North Carolina, makes products for construction firms that allow them to manage building projects. Recently, BuildNet created an application that will link contractors to suppliers, using BuildNet as an application hosting service that will allow contractors to manage their supply chain online. "When a contractor orders a load of cement, where and when the load is scheduled to arrive -- and how many workers will be needed to handle the job -- will be factored into the contractor's scheduling software" (Rani, 2000: D1).

ASP's have blossomed since 1995, as Internet technology has made the existence of these firms possible. The market for business-to-business transactions on the Web is growing at a much faster rate than business-to-consumer transactions, reflecting the many advantages that e-commerce offers. ASPs offer a different outsourcing option for business functions that have been historically chosen for outsourcing, such as enterprise resource planning (ERP), customer relationship management (CRM), supply chain management (SCM), e-commerce, data storage, human resource management (HRM), and financial accounting. ASPs may purchase software applications from independent software vendors (ISVs), or lease it or partner with them.

The ASP community includes a wide variety of populations, as shown in Figure 1, in addition to ASPs and ISVs: computer software and hardware companies, network service providers, internet service providers (ISPs), consulting firms, service integrators, marketing firms, and an industry consortium. Many of the ASPs and ISVs are new

ventures, having been founded in the years since the commercialization of the first Web browser back in 1994 (Hunt and Aldrich, 1998). In contrast, many of the hardware companies are more established firms, such as IBM and Cisco Systems. In a subsequent section, we will examine more closely the interdependence of these populations.

Figure 1 About Here

Figure 1. The Emerging Community of Populations Organized Around the Application Service Provider Industry

Outside Participants	Government & Regulatory Agencies	General Web-based Consortia and Standard-setting bodies
Overseers	ASP Industry Consortium	
Commercial Users	Large firms	Small & medium sized firms
Usage Promoters	Service integrators	Consulting firms
	Marketing & information sites (e.g. AspIsland)	
Infrastructure	Telecommunications/internet backbone providers (e.g. Qwest)	Application technical support & consulting firms
Core technology	Independent Software Vendors	Application Service Providers

The Accounting Industry

ASPs are just beginning to emerge in the accounting industry. Most are independent startups, new units of established business services software firms, or joint ventures with non-accounting firms. Most of the big five accounting firms have become heavily involved in ASP activities, but only Arthur Anderson appears to have a business unit dedicated to online accounting. We provide a short recent history of the accounting industry, and then return to specific examples from the industry as we describe the evolution of the ASP community over the past several years.

The decade of the 90's was a period of change for the accounting industry. Increasing competition for clients pushed the industry into a phase of consolidation, restructuring and diversification, as the core business of the industry (e.g. audit and assurance services) became less of a competitive factor (Koza and Lewin, 1999). The industry is highly stratified, and the Big Five firms (Arthur Anderson, PricewaterhouseCoopers, Ernst & Young, Deloitte & Touche, and KPMG) audit 24 of the top 25 largest public companies in the world. On the global level, the top 8 U.S. accounting firms (e.g. the Big Five and three Second Tier firms) increased worldwide net revenue by almost 20 percent from 1997 to 1998 (PAR, 1999). Furthermore, the "commodification" of audits has almost eliminated quality differences across firms, thus pushing accounting firms to reduce audit fees. To decrease their dependence on audit and assurance services, accounting firms have diversified into other business areas, such as corporate finance and consulting (Koza and Lewin, 1999).

The largest firms in the industry earn a disproportionate share of the revenue and are increasingly concentrating on consulting services, rather than more traditional services. In 1998, the Big Five generated over 90% of the net revenue of the Top 25 largest U.S. public accounting firms. Even the industry trend toward the consulting business appears to be primarily guided by the industry's largest firms. Consulting services generates over 45% of the net revenue of the Big Five, whereas only 32% of the net revenue of the Mid Tier firms (20 firms ranking immediately below the Big Five) is generated by consulting services. A review of the remaining 75 firms in the top 100, also reveals a decrease in revenue and an emphasis on more traditional services (e.g. audit and

tax) relative to the 25 largest firms (Public Accounting Report, 1999). Smaller firms are even more dependent on audit, tax, and traditional “bookkeeping” services.

The sizable client base of the largest accounting firms enables them to generate substantial net revenue, which allows them to offer competitive fees to attract clients from smaller accounting firms that cannot compete on price. The competitiveness of the industry trickles down through the ranks as smaller accounting firms are forced to target even smaller clients (Koza and Lewin, 1999). Consequently, even though the Big Five may not be in direct competition with many of the smaller firms in the industry, the actions of these five firms have a strong influence on the entire accounting industry.

The thousands of small and medium sized accounting firms in the industry that focus on the clients ignored the larger firms thus have a strong incentive to pursue innovations that might help them reach new markets. According to the American Institute of Certified Public Accountants, there are over 330,000 accountants in the United States today (AICPA, 2000). According to the 1992 Census of Business, for SIC code 872 (accounting, auditing, and bookkeeping services) the number of establishments with a payroll was reported as 79,097. These firms had a total of 520,603 employees on the payroll and \$34,037,898,000 in total receipts. Most, however, do not have the technical competence to build an ASP. Accordingly, they need to find partners in an IT-intensive industry. For example, NetLedger was started in 1999 by a former VP at Oracle as an ASP selling online accounting services to small businesses, and it has a key affiliation with Oracle’s Business Online division.

How has the New Community Emerged?

Our explanatory framework uses the three components from Hunt and Aldrich (1998). First, we focus on one type of catalyst for new populations: technological innovations. Second, we examine the force animating organizational emergence – entrepreneurs. Third, we argue that the emerging community depends on supra-organizational legitimating forces, such as consortia and other forms of collective action.

Technological innovation

Technological innovation is a major catalyst for the creation of a new organizational community to the extent that it prompts the creation of new organizational forms. Single key events rarely generate new organizational populations. Instead, from an evolutionary view, technological innovation is typically a cumulative series of inter-related acts of variation, selection, and retention, eventually culminating in commercial applications (Van de Ven and Garud, 1991). For the World Wide Web, the introduction of Mosaic software in 1993 was the major technological innovation that facilitated its emergence as a commercial community, but there were many previous events that set the stage for Mosaic to become a catalytic event (Hafner and Lyon, 1996). Many firms (e.g., Digital Equipment Corporation, MCI Telecommunications) were seeking ways in the 1980s and early 1990s to exploit the technology of the Internet for commercial gain.

By the late 1990s, the basic technological innovations supporting electronic commerce were in place. Early innovation efforts in e-commerce focused on the consumer market, but as the potential of the business-to-business market was realized, technology-based firms began concentrating on innovations to increase bandwidth and the reliability of networks. Many of the founding members of the ASP Industry Consortium are hardware and database software firms that have invested heavily in a

business-to-business strategy, such as Cisco Systems, Compaq Computer Corporation, IBM, and Sun Microsystems.

Technological innovation has been described as *either* competence-enhancing *or* competence-destroying (Tushman and Anderson, 1986). However, a third possibility exists. Technological breakthroughs might go beyond current organizational knowledge but still allow established populations to participate in a new community. Rather than a dichotomy between competence-destroying and competence-enhancing innovations, Hunt and Aldrich (1998) proposed a third category of innovations: *competence-extending*.

Competence-extending innovations permit existing firms to pursue new opportunities that allow them to stretch their existing competencies into complementary ventures. Unlike competence enhancing opportunities, these new ventures are not a straightforward extension of their current routines and competencies and therefore cannot be pursued with minimal effort. At the same time, however, these opportunities are not direct threats to their existing business pursuits and competencies. Instead, they are potential opportunities for expanding their domains by pursuing new markets through the exploitation of new competencies. This possibility was first apparent in the existing firms that took advantage of the commercial opportunities on the Web, and is now taking place in the ASP organizational community.

As the commercial community of the Web evolved in the mid-1990s, many existing firms became involved in an effort to establish new commercial niches for themselves. One of the most dramatic examples was Microsoft's decision to change its strategic direction from PC-based software to an almost-exclusive focus on Web-based

technology. Microsoft made the decision after witnessing the phenomenal success of Netscape. AT&T also made a major strategic decision to become an Internet service provider (ISP), and was followed by almost all of the regional phone companies.

Although these decisions involved the creation of new business units, they were logical extensions of their existing capabilities. These pursuits were not simply an enhancement of existing competencies, but rather were entirely new ways that these firms capitalized on their existing routines and competencies, as well as their existing resources, to enter a new commercial niche. As we note in the following section, ASPs are a competence-enhancing and competence-extending innovation for a subset of firms and populations, but a potentially competence-destroying innovation for the great majority of accounting firms in the United States.

Entrepreneurship

In some cases, pioneering entrepreneurs in new organizational communities emerge from larger organizations that lack the resources, capacity, or interest to exploit the new technology. In other cases, however, pioneers may simply be foresighted individuals who recognize the benefits that can be obtained by founding a start up. Over time, as the technology and the start up endeavors gain legitimacy, more players, including existing firms, become involved in the existing populations and may even increase community diversity by creating new ones.

The ASP community is following a different pattern of development than the early commercial community organized around the Web. The populations making up the Web community were opened up by pioneering entrepreneurial firms moving quickly and rather haphazardly, rather than established firms that were seeking to diversify.

Similarly, in the nascent radio broadcasting industry in the early 1920s, radio manufacturers, retail stores, educational institutions, and amateurs created hundreds of stations and most failed within a few years (Leblebici, *et al.*, 1991). In the Web Internet service provider (ISP) population, for example, established firms were dwarfed in numbers by the thousands of local ISPs that were founded in the mid 1990s. New firms took advantage of the slowness with which large firms, such as regional telephone companies, responded to the new technology. Between 1996 and 1997, in fact, more than 1000 new ISPs were founded and the ISP population at the end of 1997 numbered over 5000 (Yoshitake, 1997). Similarly, young entrepreneurs fresh out of college founded most of the Web consulting and design firms; some were fleeing established advertising and marketing firms.

By contrast, ASP firms offering accounting software over the Web are a diverse mix of startups, joint ventures, and new business units of established firms. For the 25 accounting ASPs we discovered in a search of the Web, we found a startup date for 13 firms. Of those 13, 10 had been started in 1998 or 1999, reflecting the newness of the population. Of these 10, 6 were independent startups and the others were joint ventures or divisions of established firms. Of the 12 without clear starting dates, at least half appeared to be independent startups. Information posted on their web sites often noted that the founders had previous experience in the accounting profession or were certified accounts. Altogether, about half of the accounting ASPs, then, were independent startups.

Most of the non-independent startups were competence-extending moves by firms already in the software business, rather than traditional accounting firms. For example,

IBM partnered with Great Plains, Saleslogix, and Ultimate Software to offer accounting, HRM, and sales management over the Web. Madison Technology Group created a new ASP unit to offer accounting services. Peachtree Software, an established Atlanta firm, moved into the ASP online accounting market by teaming up with the Web-based firm, work.com. Most of the Big Five accounting firms have some sort of ASP presence, but we only found one new business unit explicitly created to serve the ASP market with accounting services. Arthur Anderson partnered with JD Edwards, using JD Edwards software (rather than a package developed within Anderson) to create Arthur Anderson Process Solutions.

Clearly, new ventures are being formed to serve the ASP market for accounting services. However, perhaps because writing accounting requires specialized knowledge, the rate of independent startups is far lower than we would have expected, given the potential market and the number of accounting firms in the United States. It is also quite low, compared to other Web-based populations.

The core technology of the ASP community does not appear to be competence-destroying with regard to the largest firms in the industry, because the Big Five accounting firms have quickly moved into the ASP market. However, they have been slow to make their presence felt, and many information-technology and computer software firms have extended their competencies into the accounting ASP market. They have done so by partnering with or acquiring an ISV that writes accounting software.

ASPs in general, and accounting ASPs in particular, obviously do have competence-destroying potential for many firms. For example, the core function of an ASP is outsourcing of a business function, which is an established competence for many

business services firms. In this respect, the innovation might be competence-enhancing or competence-extending because many of the routines and practices traditional outsourcing firms can be used for ASP's. However, ASP's are using Internet technology to provide outsourcing services, which may render obsolete many of the routines and practices associated with traditional outsourcing. In particular, the salience of Internet and computer technology may prove to be a formidable change for the people-intensive nature of traditional outsourcing.

Proposition 1: Online accounting ASP's represent a competence-extending opportunity for major accounting firms.

For traditional SMEs in the accounting industry, without the financial resources of the Big Five, or the alliance prospects of the largest middle-tier firms, accounting ASPs are a major threat. Certified public accounting (CPA) firms play an important role in certifying the financial soundness of corporations (Han, 1994). In the United States, the CPA industry is highly concentrated as a result of corporations choosing their CPA firm by imitating firms that they consider their peers and competitors. The very largest firms chose the biggest and most prestigious CPA firms, and middle-sized firms copy their choices. The smaller accounting firms are thus left with the smallest corporations as clients. Mimetic isomorphism has thus produced a highly stratified two-tier system of accounting firms.

In this system, the smallest firms have been protected from direct competition from the largest firms because their clients could not afford the most prestigious accounting firms. The average accounting and bookkeeping firm has less than 7 employees and less than half a million dollars in receipts. Accounting ASPs threaten to

remove the protection against competition from larger firms that they have enjoyed. Soon, the several million corporations with less than one million dollars in receipts will have access to state of the art accounting over the web. Will the smaller accounting firms' emphasis on personal service be enough to offset the lure of the new technology?

Of course, accounting ASP's must deal with the competition from traditional accounting/bookkeeping firms. As ASPs attempt to establish themselves as an outsourcing alternative, the traditional firms that provide outsourcing services are not going to share the market peacefully with the newcomers. ASPs are targeting their services toward smaller, high-tech companies, which may avert competition with larger accounting and human resource firms. However, ASP's are still in direct competition with the small to medium accounting/bookkeeping service firms that tend to focus on smaller, high-risk businesses. Those employing the old way of doing business hardly ever peacefully concede to doing things the new way (Foster, 1986). Therefore, as a technological innovation, accounting ASP's are susceptible to competition from two different realms because they must compete against other emerging ASP's and they must compete against the traditional way of providing accounting services (Anderson and Tushman, 1990).

Proposition 2: Online accounting ASP's will be the most detrimental to small or medium sized accounting service firms whose business focuses on providing bookkeeping and tax services for smaller clients.

Legitimacy

Legitimacy is the perception of an entity, or its activity, as just and suitable (Suchman, 1995) which is a substantial problem for new firms like ASP's because they

are participating in novel activities. The accounting and payroll services provided by ASP's have been traditionally accepted as appropriate business functions to outsource. However, ASP's are offering these accounting and payroll services using the Internet, which is a novel endeavor. First, as an Internet-based venture, ASP's inherit the legitimacy issues surrounding the interface of the Web and business activities (Hunt and Aldrich, 1998). Second, the novelty of this approach also generates legitimacy issues because established organizations are unsure of the ramifications of the new activity. Such uncertainty could threaten the survival of the emerging ASPs if it leads potential clients to hold back from using them.

The two types of legitimacy that are a concern for ASP's are cognitive and sociopolitical legitimacy. Cognitive legitimacy relates to the acceptance of a new activity such that the existence of activity is assumed to be a presumed part of the environment. Sociopolitical legitimacy refers to the acceptance of a new activity as ethical and appropriate (Aldrich, 1999: 229-230). As a vehicle for the provision of client services the Internet creates both cognitive and sociopolitical legitimacy issues for ASP's. Using the Internet for the provision of outsourcing creates cognitive legitimacy issues because the novelty of this approach prevents this activity from being a taken for granted aspect of the business environment. Furthermore, sociopolitical legitimacy issues arise because the novelty of the activity implies that laws, norms, and standards have not been established to govern the activity or the parties involved.

Many ASPs have followed a strategy of forming alliances with respected and well-established firms to foster their legitimacy. In particular, ASP's have been following the lead of other Web-based firms that have turned to well-respected third

parties to provide certification for their Internet-based information and security functions. The favorite choices of these Web-based companies have been the Big-Five public accounting firms that have long-standing and well-established reputations. In short, the Web-based firms are attempting to gain legitimacy by association. This tactic has been shown to be effective empirically by Podolny (1994), who demonstrated that the status of the third-party underwriting firms had a strong influence on the perception quality in the uncertain world of junk bonds.

Proposition 3: Newly founded ASP firms will attempt to associate with a well-respected third-party, such as a Big Five public accounting firm, to gain legitimacy.

Proposition 4: The success of ASP and related Internet based outsourcing firms will spur a growth in Internet technology specialty areas within Big Five accounting as the firms attempt to capitalize on the legitimacy and security issues surrounding Internet based business activity.

Proposition 5: Legitimacy issues will be less pressing for those ASP firms that grow out of established organizations.

As more organizations become involved in emerging populations, some individuals from the participating organizations may perceive a need for self-regulation within the community, to minimize the deleterious effects of competition and promote mutual benefit. Typically, the largest organizations within an industry take the lead in championing collective action (Aldrich and Fiol, 1994). Interested firms then recruit others as they seek collective action to promote community standards, explore research and development opportunities, and publicize the needs of their members.

The ASP Industry Consortium was founded in May 1999, by 25 of the largest firms in the industry, such as AT&T, Cisco Systems, Citrix Systems, Ernst & Young LLP, Interpath Communications, IBM, Onyx Software, Sharp Electronics, and Wyse Technology. The consortium has a two-tiered membership structure, with Executive members paying \$15,000 and associate members paying \$5,000. It includes computer software and hardware firms, network service providers, ISPs, ASPs, and other firms from the various categories shown in Figure 1. As of now, there is neither a separate division within the consortium for accounting ASPs, nor a separate association for them.

As was the case with the various consortia and trade associations formed when the commercial community of the Web first emerged, the consortium's goal is to increase the legitimacy of the ASP industry by "sponsoring research, fostering standards, and articulating the measurable benefits of this evolving delivery model" (ASP Industry Consortium, 1999). As with all trade associations in the United States, which operate under strict anti-trust scrutiny, membership is open to any organization with an interest in the consortium's goals. The consortium's two-tiered structure, however, ensures that the largest firms play a dominant role in setting its policies.

We believe the formation of the consortium is significant for two reasons. First, the consortium was formed very rapidly and then grew to encompass most of the major players in the industry over the six months after it was founded. We take this as a sign that businesses have become quite sophisticated about the importance of achieving cognitive and sociopolitical legitimacy for a new industry. Second, the prestigious membership of the consortium is likely to speed up the rate at which business-to-business transactions using ASPs take place. The consortium is sponsoring research on "best

practices,” as well as setting standards, and such strategies are typically a sign of convergence on a dominant design.

Why is the New ASP Community of Theoretical Interest?

The growth of the ASP community raises issues for at least three theoretical perspectives in entrepreneurship research: resource- and knowledge-based views of the firm, institutional theory, and transaction cost economics.

Resource-based view

First, resource- and knowledge-based theories of the firm emphasize the distinctive competencies held by firms that give them competitive advantages (Barney, 1986; Foss, 1999). Such theories emphasize the difficulty of developing and sustaining a unique set of competencies because of the resource constraints facing most firms. With only limited resources, managers must make difficult tradeoffs between pursuing core competencies and staying current with developments in other aspects of business operations.

Outsourcing is a possible solution, but raises issues of transaction costs and loss of control over critical operations.

ASPs give firms access to effective routines and competencies from a distance, while allowing them to maintain control. From the viewpoint of a firm’s employees, the applications run as if they were house internally. ASPs can reduce firms’ needs for investing internal resources in hosting their own software applications. They no longer need to create a costly infrastructure or develop expensive programs from internal resources. They can also buy just the consulting services they need to learn how to benefit from the software they rent, eliminating the need to build an expensive in-house staff.

Proposition 6: SMEs using the services of ASPs will gain a competitive advantage over firms that do not use ASPs.

ASPs may well raise the level of competitive intensity in populations by reducing the competence gap between large firms, with their own information technology (IT) staffs, and SMEs, which can now contract for applications that were formerly unattainable. Indeed, Roddy (1999) noted that two broad market segments were developing. One segment consists of SMEs that seek relatively simple applications with templates that can be configured for them with a minimum of customization. The other segment consists of large firms that want more complex applications and greater customization, requiring professional services for “design, training, implementation, systems integration, and ongoing operations management” (Roddy, 1999). The marketing strategy of many ASPs currently seems aimed more at SMEs than at large firms, probably because there are so many SMEs that do not have their own in-house IT staff for creating information-intensive management tools.

Proposition 7: ASPs will raise the level of competitive intensity in populations where they are widely adopted.

ASPs may also raise the level of competitive intensity in populations by reducing the boundary between competence-destroying, competence-enhancing (Tushman and Anderson, 1986), and competence-extending innovation (Hunt and Aldrich, 1998). Currently, established firms -- especially SMEs -- are at a disadvantage when major innovations occur in their population, as their routines and competencies are often bundled in such a way as to make adaptation difficult (Hannan and Freeman, 1989). Adopting innovations requires reorganization, an often costly and difficult process

(Aldrich, 1999: 163-195). However, when innovations occur in the business practices covered by ASPs, client firms gain immediate access to the latest developments. In fields such as customer relationship management, supply chain management, and human resource management, client firms can rely on their ASP (and ISV) to keep up to date for them. Competence-enhancing and competence-extending innovations may thus diffuse much quickly through organizational populations than before.

Proposition 8: ASPs will reduce the competence gap between established and new organizations in populations where they are widely adopted.

Institutional theory

The institutional approach focuses on the objectified and taken-for-granted nature of organizations and organizational environments, as perceived by participants. It emphasizes the value-laden character of institutions and the way in which organizational actions are legitimated when cloaked in an institutionally acceptable rhetoric (Scott, 1995). From the viewpoint of institutional theory, organizations change their structures to conform to an institutionalized pattern supported by powerful legitimating forces outside their boundaries (DiMaggio and Powell, 1983). One outcome of successful imitation is enhanced organizational stability, and perhaps also a higher level of efficiency (Tolbert, 1988). Success comes from imitating others, not from an organization's own technical achievements.

Proposition 9: As the adoption of ASP use becomes widespread in a population, its subsequent adoption will become decoupled from an adopting firm's characteristics.

ASPs, from this perspective, are potentially a very powerful homogenizing force in organizational populations. To the extent that firms cease creating their own routines and

competencies to handle such things as customer relations, human resource management, financial accounting, and so forth, variation across organizations will be reduced. As the services offered by ASPs become perceived as not only legitimate but also as “best practices” -- which is what the ASP Industry Consortium claims in its promotional materials -- firms will have a strong incentive to lease the same software as other firms in their population.

Institutional theorists have treated variation across organizations primarily as external in origin, generated as organizations are forced to respond to, adapt to, or imitate the ebb and flow of normative and regulatory currents in their environments. They posit that variation arises from organizations responding to events at higher levels of analysis, such as the national or international level. Although only a few years old, the ASP population is already global in scope. In our research on ASPs in the accounting industry, we found ASPs based in Taiwan, Australia, Cyprus, England, Sweden, and Singapore. They advertised their services as being available on a global basis, increasing the likelihood of convergence on a similar set of fundamental business processes.

Proposition 10: The widespread use of ASPs in an industry will lead to increasing homogeneity of the population’s routines and competencies.

Transaction Cost Economics

The transaction cost economizing approach, or TCE, focuses on how managers decide to solve the dilemma of choosing between markets and hierarchies in organizing economic activity. TCE treats transactions as its basic unit of analysis and focuses on the specific selection pressures driving organizational change in competitive environments (Williamson, 1994). Organizational arrangements governing any particular exchange

depend on the cost effectiveness of those arrangements, compared with alternatives.

Given “human nature as we know it” (Williamson, 1981), the ultimate explanation for the structuring of transactions is the constraining effect of external conditions on social actors.

Owners and managers of organizations face, at the extreme, two choices about how to structure their activities. Should they purchase the goods or services they need on the open market, or should they bring the production of such necessities inside their organization? They can obtain what they need by engaging in transactions with other independent actors in the market, or they can internalize the production of the needed resource, thus subjecting it to their own hierarchical control. ASPs’ relations with SMEs would seem difficult to classify: technically, using an ASP for financial accounting software could be classified as outsourcing, thus constituting a market-like relation. However, although the software resides on an application-hosting server that could be hundreds of miles away, control over the process still rests within the client firm’s boundaries.

TCE theorists recognize that organizations actually comprise a mix of market- and hierarchy-based activities, noting the existence of intermediate forms between markets and hierarchies, such as professional societies and hierarchical contracts (Bradach and Eccles, 1989; Powell, 1990). ASPs raise interesting questions about the governance of such hybrid relations. TCE posits that, given bounded rationality and opportunism, transactions with other actors are almost always problematic and potentially quite costly. Williamson (1981) hypothesized that three dimensions to transactions are particularly important to the type of relationship established: the frequency of the

transaction, uncertainty surrounding the transaction, and the level of *transaction-specific investments*.

ASPs involve a higher level of transaction-specific investments than just purchasing software and installing it on a firm's server. Indeed, the level of potential dependence created in such relations would seem to be quite high. Have ASP's and client firms worked out a new form of governance for their relations? The entire ASP organizational community depicted in Figure 1 represents an incredibly complex interorganizational network, apparently requiring a very high level of cooperative behavior for its operations.

Granovetter (1985) strongly criticized TCE, arguing that it draws on an *over-socialized* conception when it assumes that individuals will voluntarily refrain from completely ruthless behavior. Do actors only follow the rules in playing competitive games if they have thoroughly internalized the norms of "civilized" behavior? Nilakant and Rao (1994) agreed with Granovetter that agency theory and the other new institutional economics models probably overstate the role of individually-oriented economic incentives in organizations and understate the importance of social exchange: reciprocity, cooperation, and trust.

Williamson (1994: 97), responding to criticisms that TCE neglects trust, noted that "trust" has many functional substitutes, as credible commitments can be reached through the use of bonds, hostages, disclosure rules, agreements on how disputes will be resolved, and so forth. "Albeit vitally important to economic organization, such substitutes should not be confused with (real) trust." Although this concession opened the door to a possible compromise with Granovetter's approach, Williamson went on to

argue that “calculated risk” and “calculated trust” occupy distinct places in social and economic life. “Calculated trust” – of the real kind – is found in people’s personal lives, and “calculative risk” is found in their commercial lives. In contrast, Jones *et al.* (1997: 922) detected a point of common ground between Granovetter and Williamson, because both emphasize that frequency and reciprocity of contacts create conditions for informal control – building on trust – within relations.

Proposition 11: Interorganizational relations created by ASP-client dealings will raise the level of trust between the two firms.

The new level of interdependence created by ASPs between organizations in different populations poses interesting questions for entrepreneurship theory. First, for startups, to what extent are founders creating dangerous transaction specific investments when they forego developing their own competencies around basic business functions to instead concentrate on their perceived core competency? Second, will the level of interdependence between ASPs and client SMEs lock out new competitors? When SMEs purchased their own software, or conducted operations without the benefit of IT-intensive procedures, they will still likely markets for new products and services. However, as they build long-term relations with ASPs, that situation may change.

Conclusions

Our purpose in this paper was twofold. First, we discussed the emergence of a new organizational community organized around a new business form, accounting ASP’s, within an evolutionary framework. Adopting an evolutionary approach can enrich our understanding of organizational change by providing a unifying theoretical

framework. Second, we derived eleven propositions, based in three perspectives, using ASPs and the ASP accounting industry as a potential research site.

Based on our review, we believe the growth of the ASP community provides an opportunity for entrepreneurship researchers to study some fundamental questions in resource- and knowledge-based views of the firm, institutional theory, and transaction cost economics. Researchers have the opportunity to study the affects of the Internet as the changes are taking place, thus avoiding the bias of studying a phenomenon retrospectively. Historical analyses can uncover a wealth of information, but this approach often involves only a study of survivors. This bias develops because many organizations do not survive long enough to be included in the investigation. The contemporary nature of Internet growth affords researchers an opportunity to avoid this bias by studying the organizations that are present during the nascent stages of the innovation. In particular, these circumstances give organizational researchers access to the valuable knowledge that is present in the stories of the trailblazers that did not survive.

In describing the emerging community surrounding ASP's, we focused particularly on understanding the forces and obstacles affecting firms offering accounting services. As accounting ASPs attempt to establish themselves, the interaction between their strategies and environmental selection forces will ultimately determine their fate. Even if this new population survives, accounting ASP's will continue to face the challenges typically confronting new business ventures. In particular, founders of accounting ASP's must confront the challenges of building and acquiring organizational

knowledge while combating and deflecting the legitimacy issues surrounding an Internet-based venture.

Given the expanding role of the Internet in business, organizational researchers have the opportunity to investigate various emerging businesses and organizational changes in the nascent stages of development. This paper only focused on only one area in which Internet-based firms are emerging. However, accounting ASP's just one type of ASP, and even within the accounting area, different ASP's offer a variety of services including bookkeeping, payroll, and tax services. The abundance of emerging Internet-based firms constitutes a rich pool of subjects for future case study research. As the story of Internet-based service firms unfolds, empirical research should address the factors contributing to the rise and fall of various Internet service providers.

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