

An empirical investigation of IT outsourcing versus quasi-outsourcing in France and Germany

Jérôme Barthélemy^{a,*}, Dominique Geyer^b

^aESSEC Business School, Avenue Bernard Hirsch, 95021 Cergy Pontoise Cedex, France

^bAUDENCIA, 44312 Nantes Cedex 3, France

Received 31 October 2002; accepted in revised form 19 February 2004

Available online 7 July 2004

Abstract

An increasingly large number of firms outsource their information technology (IT). Firms that contemplate such outsourcing have two alternatives: (1) a contract with a vendor (i.e., outsourcing) or (2) setting up their own IT subsidiary (i.e., quasi-outsourcing). This study examines some of the determinants of the outsourcing versus quasi-outsourcing decision. Using primary data collected in France and Germany, we show that the decision is strongly influenced by both internal (i.e., asset-specificity, size, and internal organization of IT) and external (i.e., institutional environment) determinants.

© 2003 Elsevier B.V. All rights reserved.

Keywords: MIS management; Outsourcing; France; Germany

1. Introduction

Information technology (IT) outsourcing can be defined as “the transfer of property or decision rights in varying degrees over the IT infrastructure by a user organization to an external organization” [35]. IT outsourcing is not a new phenomenon. *Time sharing* for instance, which involves purchasing computer time, was very popular in the 1960s and 1970s. From the mid-1980s on however, a new type of IT outsourcing was initiated. The main differences between this new outsourcing and more traditional ones are the following. First, outsourcing is no longer restricted to small and medium-sized companies that do not possess their own IT infrastructure. Larger companies

also resort to it. Second, companies outsource an increasingly large range and depth of services. Third, personnel and equipment are frequently transferred to the vendor. Though this type of IT outsourcing started developing in the mid-1980s, it really took off after the very much-heralded contract between Kodak and IBM in 1989. This landmark deal legitimized the practice of IT outsourcing among US *Fortune* 500 firms.

Here we distinguish here between two types of outsourcing: a contract with a vendor (conventional outsourcing) and the organization developing an IT subsidiary (quasi-outsourcing). As client–vendor relationships have “moved to the middle,” a variety of contractual arrangements has emerged [12], ranging from tight contracts to partnerships [19]. Quasi-outsourcing involves creating a subsidiary and transferring all or part of the IT to it. The basic idea is to transform an internal IT department into an associated

* Corresponding author. Tel.: +33-1-34-43-31-98;
fax: +33-1-34-43-30-01.
E-mail address: barthelemy@essec.fr (J. Barthélemy).

entity empowered to behave like an external vendor. It is also a way to free a former internal department from the bureaucratic restraints associated with being a support function of a value chain. However, quasi-outsourced IT departments can only expect to be successful if they can attract a sufficiently large number of external customers. Firms such as USX, Mellon Bank, and Sears had only limited success with their IT subsidiaries [47]. On the other hand, Philips successfully spun off its development and operations IT activities in the 1990s [49].

The paper presents an empirical study that examines the determinants of IT outsourcing versus quasi-outsourcing in France and Germany.

2. Research background

2.1. IT outsourcing

IT outsourcing has received a lot of attention from the managerial literature (e.g., [13,18,30,31]). The existing literature generally revolves around a few key points. The first is whether or not IT should be outsourced. The second is how the relationship with the vendor should be managed. In most cases, the literature draws lessons from highly visible companies that have been successful, such as Continental Bank [24], British Petroleum or Eastman Kodak [37].

The academic literature has also devoted attention to IT outsourcing. The topics studied closely mirror those in the managerial literature. Researchers have studied the impact of various determinants on IT outsourcing decisions. These include the gap between actual and desired IT performance [46], transaction costs, and production costs considerations [1], competing insights from the transaction cost, knowledge-based, agency, and measurement literatures [42] as well as interactions between economic and institutional factors [2]. Regarding the management of outsourced IT activities, recent researchers have focused on the impact of partnerships on outsourcing success [33,34]. The impact of transaction cost considerations on the terms and management of the contract has also been investigated [8]. Despite this large body of literature, the determinants of the IT outsourcing versus quasi-outsourcing decision have not apparently been examined in any published study.

2.2. IT quasi-outsourcing

The concept to which quasi-outsourcing is the most closely related is that of a spin-off, which can be defined as “a firm that is partially owned by the parent, but independently managed” [25]. There is a stream of research on US spin-offs (e.g., [7,44,54]). Most of this has focused on the analysis of the shareholder wealth effect of spin-offs. For instance, it has been shown that improving focus through spin-offs leads to higher firm value (e.g., [14,15]). Despite their relatedness, the concepts of spin-off and quasi-outsourcing are different as the parent company needs to retain access to the service provided by the quasi-outsourced IT department.

Transaction cost economics (TCE) is a very useful theoretical lens for studying organizational forms like quasi-outsourcing [50,52,53]. TCE suggests that transactions can be organized either through markets or hierarchies. It identifies two costs to be considered in determining whether the governance structure for a transaction is a market or a hierarchy: production or transaction costs. Markets generally lead to smaller production costs, due to economies of scale enjoyed by suppliers. However, markets lead to higher transaction costs arising from negotiating, monitoring, and enforcing contracts (when asset-specificity, uncertainty, and frequency are high). Accordingly, firms opt for outsourcing when production cost advantages override transaction diseconomies in market relationships.

While outsourcing is a change from a hierarchical transaction to a market relationship, quasi-outsourcing is a change from a hierarchical transaction to a *quasi-market* relationship. By choosing quasi-outsourcing, the parent corporation keeps a stronger control over the activity that has been outsourced [4,5]. Contracts are the most prominent safeguards to protect against the hazards of opportunism [21]. However, alternative means have been proposed. They include informal safeguards, such as trust, but also formal safeguards, such as equity ownership [16]. Firms do not necessarily control opportunism through legal contracts but can rely on self-enforcing safeguards. In transaction cost terms, quasi-outsourcing is a hybrid structure of governance that lies between market and hierarchy [51]. It is a way to balance market and organizational transaction costs. While the productivity of internal IT

departments is plagued with low powered incentives, arm's length relationships with IT vendors are plagued with the possibility of opportunistic expropriation [27], which occurs when vendors standardize IT to the extent that it becomes a commodity and the unique needs of a client are no longer met. Hence, the quality of service to the client can be significantly reduced.

3. Research hypotheses

The objective of our study was to explore the impact of internal and external determinants on the IT outsourcing versus quasi-outsourcing decision. The research model and findings are summarized in Fig. 1.

3.1. Impact of IT activity asset-specificity

The standard TCE reasoning is that: as asset-specificity increases, more complex governance structures are required to eliminate or attenuate costly bargaining over profits from specialized assets. In the case of IT, it has been argued that the level of asset-specificity is dependent on the type of activity (“Transaction cost economics posits that the relation-

ships might vary based on the degree to which the production or service is asset-specific... it can be argued that certain IS functions are becoming... standardized” [22]). The IT activities that have become commodities include data centers (highly structured and one of the first to be outsourced), telecommunications networks, and microcomputers (i.e., reflecting the trend toward standardization and standard configurations). On the other hand, IT activities, such as applications development, system design, and systems integration are closely tied to the specific needs of firms. Thus, they remain highly asset-specific.

Consistent with TCE, we contend that outsourcing highly asset-specific IT activities entails larger contractual hazards than outsourcing less asset-specific ones. Maintaining a relationship through equity ownership is a very powerful way to control a vendor. Hence, firms that outsource asset-specific IT activities should be more likely to set up their own subsidiary than to contract with an external vendor.

Hypothesis 1. *For firms that outsource their IT, the likelihood of quasi-outsourcing is higher when IT activities are highly asset-specific.*

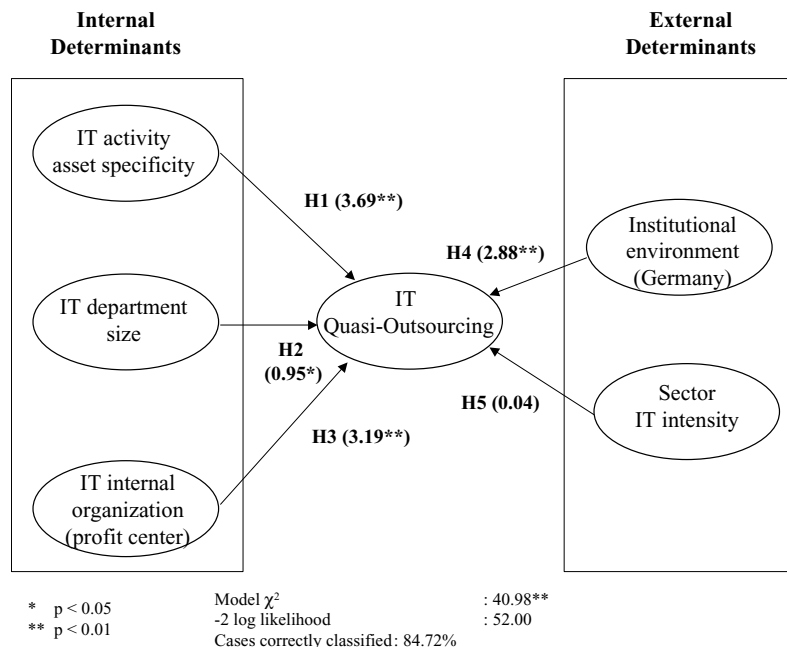


Fig. 1. Research model and findings.

3.2. Impact of IT department size

Cost reduction has been reported to be the most important motivation for IT outsourcing [29]. The theoretical basis of economies of scale is mass production and labor specialization. They reduce costs by allowing the organization and workers to focus on a limited range of tasks.

Vendors generally have a production cost advantage over their clients, because they are able to pool demand and thereby achieve greater economies of scale. However, large vertically integrated firms also enjoy internal economies of scale due to their sheer size. In the case of IT, these internal economies of scale may be as large as the economies of scale enjoyed by specialized vendors [9,28]. This difference has an important impact on the outsourcing versus quasi-outsourcing decision. For small firms, accessing the vendor's economies of scale is necessary. Subsidiaries set up by small firms will not necessarily perform well enough to attract "external" customers and thus enjoy economies of scale. Though outsourcing entails a higher contractual hazard, small firms are more likely to outsource to an outside vendor than set up their own subsidiary. As quasi-outsourcing generally entails fewer contractual hazards, large firms are more likely to set up their own IT subsidiary than outsource to an outside vendor *ceteris paribus*.

Hypothesis 2. *For firms that outsource their IT, the likelihood of quasi-outsourcing is higher when IT departments are large.*

3.3. Impact of IT internal organization

A company is a collection of responsibility centers. Prior to the 1980s, IT was a cost center in most firms. There was no strenuous monitoring of IT and its high specificity of resources allowed budgets to grow without major constraint. Since the 1980s, firms have started turning IT cost centers into profit centers that are essentially small firm sub-units for which the hierarchical authority and behavioral monitoring of internal governance have been reduced. Profit centers are expected to be more efficient than cost centers, because their performance can be directly measured and rewarded [3,10]. As Zenger and Hesterly made clear: "*Disaggregation of a corporation into smaller*

firms or small, autonomous internal units affords access to high-powered incentives" [55].

Profit centers have incentives to reach a level of performance close to that of the best outside vendors. Hence, we propose a temporal cause–effect relationship: that if IT was previously a profit center, then it is more likely to move to a quasi-outsourcing form of governance.

Hypothesis 3. *For firms that outsource their IT, the likelihood of quasi-outsourcing is higher when IT was a profit center than a cost center.*

3.4. Impact of institutional environment

Despite persistent reaffirmation that the organization of firms in different countries is becoming more alike, it has also been argued that distinct patterns persist (see [11]). According to the divergence hypothesis, management practices in a country partially reflect its institutional environment, so that differences across countries exceed variations within countries [20]. Building upon the argument of North [39,40], we argue that institutional differences have an impact on the choice between IT outsourcing and quasi-outsourcing. North defines institutions as the constraints, both formal and informal, that shape human interaction. Formal constraints refer to political and economic rules, and contracts. Informal constraints refer to the norms and value system of a society. Institutions can raise or lower the transaction costs to achieve a given level of cooperation. Hence, they shape the conditions under which factors of production are created, deployed, and coordinated both within and among firms.

Three main factors may help explain why German firms are more likely to resort to IT quasi-outsourcing than their French counterparts: the presence of large industrial groups, the original system of co-management, and the greater power of unions.

First, The German economy is characterized by the presence of large industrial groups (i.e., *Konzerns*). Interlocking ownership creates a high degree of interconnectedness between a large number of German firms [41]. This rests primarily on the tight bonds between German banks and manufacturers. On the other hand, the French banking structure is weaker and far more fragmented. French banks work less closely with industrial firms. In Germany, the presence of

Konzerns has a huge impact on the IT outsourcing versus quasi-outsourcing decision. IT departments that have been quasi-outsourced can easily find customers among firms that belong to the same *Konzern*. For these customers, transacting with an IT vendor that belongs to the same *Konzern* is appealing, because it entails lower costs than transacting with an IT vendor that does not. Within them, informal norms constrain the ability and willingness of individual members to engage in opportunistic behavior. These informal norms enable quasi-outsourced German IT departments to attract “external” customers even though they have no real cost or performance advantage. On the other hand, quasi-outsourced IT departments in France cannot rely on such norms to attract external customers. Hence, German firms are more likely to resort to IT quasi-outsourcing than French firms.

Second, the original system of co-management (*Mitbestimmung*) makes the German economy very different from that of other European countries. According to the German law of 1976, a large part of the board of directors is composed of employee representatives. In most sectors, they represent one third of the members of the board of directors. The co-management system has substantial implications on the overall management of firms; one is that the relationship between employer and employees is more cooperative in Germany than in France. For IT employees, being transferred to an outside vendor is often associated with trimmed benefits and lost seniority. On the other hand, quasi-outsourced IT employees are more likely to retain seniority and most benefits. A direct implication is that German firms will be more likely to choose IT quasi-outsourcing.

Third, Germany is characterized by a small number of powerful unions. For instance, the D.G.B. (*Deutsche Gewerkschaftsbund*) has an almost hegemonic position. On the other hand, France has one of the lowest unionization rates among the OECD countries. Though there are a large number of unions in France, none is very powerful. The greater power of German trade unions makes it easier for them to convince firms to choose quasi-outsourcing as this option is less detrimental to the employee.

Hypothesis 4. *For firms that outsource their IT, the likelihood of IT quasi-outsourcing is higher in Germany than in France.*

3.5. Impact of sector IT intensity

Quasi-outsourcing is a way to take advantage of innovative IS to generate new revenues and profit. Due to the emergence of standard platforms, it becomes increasingly easy to resell applications developed in one firm to others in the same industry. When they have their own core competencies, quasi-outsourced IT departments may even grow faster than their parent company. We propose that firms with IT core competencies are more likely to come from IT-intensive sectors, such as the banking/financial service/insurance and high tech than from others [43]. Hence, firms from such IT-intensive sectors should be more likely to set up IT subsidiaries.

Hypothesis 5. *For firms that outsource their IT, the likelihood of quasi-outsourcing is higher in IT-intensive sectors.*

4. Research method

4.1. Survey procedure

A cross-sectional postal survey was developed for collecting primary data from a group of large French and German firms. A draft questionnaire was originally written in French and translated into German by a bilingual author. This questionnaire was pre-tested with five French and seven German senior IT managers, resulting in marginal modifications in the wording of some questions. The questionnaire was then sent to senior IT managers of the 500 largest French firms and the 500 largest German firms.

4.2. Sample

160 questionnaires were filled out by senior IT managers and returned (i.e., 12.2% of the French and 19.8% of the German samples). The overall response rate of 16% is low for two reasons. First, obtaining survey responses from IT executives is always problematic. Second, financial constraints prevented us from sending reminders to non-respondents. However, a 16% response rate is consistent with recently published IT outsourcing studies. As suggested by Armstrong and Overton [6], we compared

Table 1
Distribution of surveyed firms across sectors ($N = 160$)

Sector	French sample		German sample		Both samples	
Energy & extraction	5	8%	13	13%	18	11%
Raw materials and chemicals	9	16%	14	14%	23	15%
Manufacturing industry	13	21%	17	17%	30	19%
Trade/food/catering	14	23%	21	22%	35	22%
Banking/finance/insurance	15	24%	24	25%	39	24%
Others	5	8%	10	10%	15	9%
Total number of firms	61	100%	99	100%	160	100%

early with late respondents to assess non-response bias. No significant differences emerged between early and late respondents.

The breakdown of the sample by country and by industry is summarized in Table 1. Overall, the structure of the French and German samples is very similar. The goal of our study was to investigate the determinants of outsourcing versus quasi-outsourcing. However, the firms that responded did not necessarily outsource all or part of their IT. Empirical studies generally distinguish between firms that outsource their IT and those that do not. As the “IT outsourcing versus no IT outsourcing” dichotomy does not account for the full range of attitudes, we distinguished between four types of attitude towards IT outsourcing: (1) twenty-eight companies (17.5%) of the total sample had not yet considered IT outsourcing; (2) nineteen (11.9%) were examining the question but had not yet finalized their decision; (3) forty-one (25.6%) had made a negative decision regarding IT outsourcing; and (4) seventy-two (45.0%) had actually outsourced their IT. Since we focused on firms that had made a positive IT outsourcing decision, our sample consisted of 72 firms. Though this sample size is small, it is close to that of recently published IT outsourcing studies.

4.3. Variables

The dependent variable *quasi-outsourcing* was a dummy variable coded “1” for quasi-outsourcing and “0” for outsourcing. All independent variables were measured as of the time the IT outsourcing decision was made. *IT activity asset-specificity* was a dummy variable coded “1” for asset-specific IT activities and “0” for non asset-specific IT activities. Consistent

with Grover, Cheon, and Teng, we distinguished asset-specific IT activities (i.e., entire IT activity, applications development, systems design, and systems integration) from non asset-specific IT activities (i.e., data centers, telecommunications networks, and micro-computers). Though this type of measure is less common than perceptual ones, it may be more reliable than asking managers to remember how specific IT was at the time the decision was made. *IT department size* was measured on a 5-point-Likert scale (i.e., less than 20 people, between 20 and 99, between 100 and 499, between 500 and 999, and over 1000). *IT internal organization* was a dummy variable coded “1” for profit center and “0” for cost center. *Institutional environment* was a dummy variable coded “1” for Germany and “0” for France. *IT-intensive sector* was a dummy variable coded “1” for banking, financial services, insurance and aerospace sectors and “0” for other sectors.

As the dependent and independent variables were measured with the same questionnaires, the risk was that common methods could skew the results (i.e., respondents may give self-justifying answers). In order to overcome these methodological limitations of self-report measures, we used rough but objective measures for all variables.

5. Analysis and results

We tested our hypotheses using a binomial logistic regression model. For firms that outsourced all or part of their IT, the model estimated the influences of the independent variables on the likelihood of quasi-outsourcing. The logistic regression model took the following form

Table 2
Means, standard deviations, and correlations among variables ($N = 72$)

	Mean	S.D.	1	2	3	4	5	6
1. Quasi-outsourcing	0.35	0.48	1.00	0.29*	0.20	0.40**	0.30*	0.02
2. Asset-specific IT activity	0.69	0.46		1.00	−0.16	0.03	−0.30*	0.03
3. IT department size	2.44	1.02			1.00	0.12	−0.01	0.05
4. IT internal organization	0.61	0.49				1.00	0.10	−0.05
5. Institutional environment	0.60	0.49					1.00	−0.10
6. IT-intensive sector	0.29	0.46						1.00

* $P < 0.05$.

** $P < 0.01$.

Probability of choosing quasi-outsourcing = $1/\{1 + \exp^{[-Y]}\}$ where $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_p X_p$.

In this equation, X_1, X_2, \dots, X_p were the explanatory variables, $\beta_1, \beta_2, \dots, \beta_p$ were the corresponding coefficients and β_0 was the intercept term. The parameters were estimated using maximum likelihood, employing the logistic regression procedure of the SPSS statistical package.

Table 2 reports the means, standard deviations, and correlations among the variables. The correlations showed strong bivariate association between IT quasi-outsourcing and all independent variables except the IT-intensive sector. The maximum variance inflation factor (VIF) was only 1.26, which is well below the accepted rule of thumb value of 10 indicating multicollinearity problems [38].

Table 3 contains the results of the logistic regression.

The overall efficacy of the model was assessed using the likelihood ratio χ^2 , which is twice the

difference in log likelihoods for the current model and the intercept-only model. The model was statistically significant ($\chi^2 = 40.98$ $P < 0.01$), which suggests that the variables discriminated well between IT outsourcing and quasi-outsourcing. The correct classification rate was 84.72%, which suggests a good predictive ability.

All but one of our hypotheses were supported. For the internal determinants of IT outsourcing versus quasi-outsourcing decisions, we found support of all three hypotheses. Hypothesis 1 was supported. Firms that outsourced specific IT activities were more likely to set up a subsidiary ($\beta = 3.69$; $P < 0.01$). The size of the IT department was also positively related to quasi-outsourcing ($\beta = 0.95$; $P < 0.05$). As expected, IT departments that were profit centers before outsourcing took place were more likely to be quasi-outsourced ($\beta = 3.19$; $P < 0.01$). Thus, Hypotheses 2 and 3 were supported.

Regarding the external determinants of IT outsourcing decisions, we found support for one of the two hypotheses. Hypothesis 4 stated that IT quasi-outsourcing was more frequent in Germany than in France, because of differences in the institutional environment. As shown in Table 3, this hypothesis was supported ($\beta = 2.88$; $P < 0.01$). On the other hand, firms from IT-intensive sectors did not resort to quasi-outsourcing more frequently than firms from other sectors ($\beta = 0.04$; $P > 0.10$). Thus, Hypothesis 5 was not supported.

6. Discussion

Our study indicated that internal determinants have a huge impact on the IT outsourcing versus quasi-out-

Table 3
Results of the logistic regression

Variables	
Asset-specific IT activity	3.69** (1.04)
IT department size	0.95* (0.39)
IT internal organization	3.19** (1.04)
Institutional environment	2.88** (0.87)
IT-intensive sector	0.04 (0.76)
Intercept	−10.02** (2.47)
N	72
Model χ^2	40.98** with 5 d.f.
−2 log likelihood	52.00
Cases correctly classified	84.72%

Logistic regression coefficients are reported. Standard errors are in parentheses.

* $P < 0.05$.

** $P < 0.01$.

sourcing decision. The finding that quasi-outsourcing is more frequent than outsourcing for highly asset-specific IT activities is consistent with TCE. It confirms that firms use quasi-outsourcing to curb the contractual hazard. The positive link between IT department size and quasi-outsourcing suggests that firms with large IT departments do not outsource to access the economies of scale enjoyed by vendors. As quasi-outsourcing entails fewer contractual hazards, they are more likely to set up their own subsidiary than transfer their IT to an outside vendor. Hence, they can benefit from the high-powered incentives of a market relationship while simultaneously economizing on transaction costs [26]. Another important finding is that IT departments organized as profit centers are more likely to be quasi-outsourced than IT departments organized as cost centers. This stems from the fact that profit centers are more likely than cost centers to have the core competencies required to attract external customers.

A major finding was that internal and external determinants play complementary roles in explaining IT outsourcing versus quasi-outsourcing decisions. We found strong support for the hypothesis that IT quasi-outsourcing was more frequent in Germany than in France. Hence, the apparently universal character of IT outsourcing practices should not disguise the fact that national environments may influence them. The comparison is particularly interesting because of the important differences in management practices between the two countries (e.g., [32,45,48]). While the impact of institutional differences on governance structures has been frequently studied in the case of Japan and the United-States (e.g., [17,23]), there is far less work comparing French and German institutional environments (but see [36]). A casual reading of the French press (e.g., *Le Monde Informatique*, 01-*Informatique*) and German press (e.g., *Computerwoche*) suggests that German firms are more reluctant to resort to IT quasi-outsourcing than their French counterparts. Finally, we found no support for the hypothesis that firm in IT-intensive industries were more likely to set up their own IT subsidiaries.

7. Conclusion

The aim of this study was to provide a new view on IT outsourcing research. First, we introduced quasi-

outsourcing as an alternative to complete in-house and complete outsourcing. To our knowledge, no previous research had ever focused on this. Second, we assessed the impact of various determinants on the IT outsourcing versus quasi-outsourcing decision. Our results confirmed that both internal and external factors had an impact on the actual decision.

Despite some meaningful implications, the work had several limitations. First, we focused on the outsourcing versus quasi-outsourcing alternative. While our data cannot extend to them, it would be interesting to simultaneously analyze the decision to insource, outsource or quasi-outsource. Second, our sample size was limited because only 45% of French and German firms responding actually outsourced all or part of their IT. Third, our research is cross-sectional and it is impossible to determine whether firms are increasing, decreasing, or keeping their current outsourcing level.

Acknowledgements

The authors wish to acknowledge the helpful comments provided by three anonymous referees of the 2002 Academy of Management Conference (Organizational Communication and Information Systems Division) where an earlier version of this manuscript was nominated for the Carolyn Dexter Award.

References

- [1] S. Ang, L. Cummings, Strategic response to institutional influences on information systems outsourcing, *Organization Science* 8, 1997, pp. 235–255.
- [2] S. Ang, D. Straub, Production and transaction economies and IT outsourcing: a study of the US banking industry, *MIS Quarterly* 22, 1998, pp. 535–548.
- [3] G. Akerlof, The market for lemons: quality uncertainty and the market mechanism, *Quarterly Journal of Economics* 84, 1970, pp. 488–500.
- [4] M. Aoki, Towards an economic model of the Japanese firm, *Journal of Economic Literature* 28, 1990, pp. 1–27.
- [5] M. Aoki, *Information, Incentives and Bargaining in the Japanese Economy*, Cambridge University Press, Cambridge, 1988.
- [6] J. Armstrong, T. Overton, Estimating non-response bias in mail surveys, *Journal of Marketing Research* 14, 1977, pp. 396–402.

- [7] D. Aron, Using the capital market as a monitor: corporate spinoffs in an agency framework, *Rand Journal of Economics*, Winter, 22 1991, 505–518.
- [8] B. Aubert, S. Rivard, M. Patry, A transaction cost approach to outsourcing behavior: some empirical evidence, *Information and Management* 30, 1996, pp. 51–64.
- [9] T. Barron, Some new results in testing for economies of scale in computing, *Decision Support Systems* 8, 1992, pp. 405–429.
- [10] Y. Barzel, Measurement cost and the organization of markets, *Journal of Law & Economics* 25, 1982, pp. 27–48.
- [11] S. Berger, R. Dore. *National Diversity and Global Capitalism*, Ithaca, Cornell University Press, NY, 1996.
- [12] E. Clemons, S. Reddi, M. Row, The impact of IT on the organization of economic activity: the “move to the middle” hypothesis, *Journal of Management Information Systems* 10, 1993, pp. 9–35.
- [13] J. Cross, IT Outsourcing: British Petroleum’s Competitive Approach, *Harvard Business Review*, May–June, 1995, pp. 94–102.
- [14] L. Daley, V. Mehrotra, Corporate focus and value creation evidence from spinoffs, *Journal of Financial Economics* 45 (2), 1997, pp. 257–282.
- [15] H. Desai, P. Jain, Firm performance and focus: long-run stock market performance following spinoffs, *Journal of Financial Economics* 54 (1), 1999, pp. 75–102.
- [16] J. Dyer, Effective interfirm collaboration: how firms minimize transaction costs and maximize transaction value, *Strategic Management Journal* 18 (7), 1997, pp. 535–556.
- [17] J. Dyer, Does governance matter? Keiretsu alliances and asset specificity as sources of Japanese competitive advantage, *Organization Science* 7, 1996, pp. 649–666.
- [18] M. Earl, The risks of outsourcing IT, *Sloan Management Review*, Spring, 1996, pp. 26–32.
- [19] G. Fitzgerald, L. Willcocks, Contracts and Partnership in the Outsourcing of IT, in: *Proceedings of the International Conference on Information Systems*, Vancouver, BC, pp. 99–109.
- [20] S. Ghoshal, C. Bartlett, The multinational corporation as an inter-organizational network, *Academy of Management Review* 15 (4), 1990, pp. 603–625.
- [21] J. Halvey, B. Melby, *Information Technology outsourcing: process, strategies and contracts*, John Wiley & Sons, New York, 1996.
- [22] V. Grover, M. Cheon, J. Teng, The effect of service quality and partnership on the outsourcing of information systems functions, *Journal of Management Information Systems* 12 (4), 1996, pp. 89–116.
- [23] C. Hill, National institutional structures, transaction cost economizing and competitive advantage: the case of Japan, *Organization Science* 6, 1995, pp. 119–131.
- [24] R. Huber, How Continental Bank outsourced its crown jewels, *Harvard Business Review*, January–February, 1993, pp. 121–129.
- [25] K. Ito, Japanese spin-offs: unexplored survival strategies, *Strategic Management Journal* 16, 1995, pp. 431–446.
- [26] W. King, Y. Malhotra, Developing a framework for analyzing IS sourcing, *Information & Management* 37, 2000, pp. 323–334.
- [27] B. Klein, R. Crawford, A. Alchian, Vertical integration, appropriable rents and the competitive contracting process, *Journal of Law and Economics* XXI (2), 1978, pp. 297–326.
- [28] M. Lacity, R. Hirschheim, *Information systems outsourcing*, John Wiley and Sons, Chichester, 1993.
- [29] M. Lacity, L. Willcocks, An empirical investigation of information technology sourcing practices: lessons from experience, *MIS Quarterly*, September, 1998, pp. 363–408.
- [30] M. Lacity, L. Willcocks, D. Feeny IT outsourcing: maximize flexibility and control, *Harvard Business Review*, May–June, 1995, pp. 84–93.
- [31] M. Lacity, L. Willcocks, D. Feeny, The value of selective IT outsourcing, *Sloan Management Review*, Spring, 1996, pp. 13–25.
- [32] P. Lawrence, *Managers and management in West Germany*, Croom Helm, London, 1980.
- [33] J. Lee, The impact of knowledge sharing, organizational capability and partnership quality on IS outsourcing success, *Information & Management* 38, 2001, pp. 323–335.
- [34] J. Lee, Y. Kim, Effect of partnership quality on IS outsourcing: conceptual framework and empirical validation, *Journal of Management Information Systems* 15 (4), 1999, pp. 29–52.
- [35] L. Loh, N. Venkatraman, Diffusion of information technology outsourcing: influence sources and the Kodak effect, *Information Systems Research* 3 (4), 1992, pp. 334–358.
- [36] M. Maurice, F. Sellier, J.-J. Silvestre, *Politique d’éducation et organisation industrielle en France et en Allemagne. Essai d’analyse sociétale*, Presses Universitaires de France, Paris, 1982.
- [37] W. McFarlan, R. Nolan, How to manage an IT outsourcing alliance, *Sloan Management Review*, Winter, 1995, pp. 9–22.
- [38] J. Neter, W. Wasserman, M. Kutner, *Applied Linear Statistical Models*, second ed., Homewood, IL, Irwin, 1985.
- [39] D. North, *Structure and Change in Economic History*, W.W. Norton & Co, New York, 1981.
- [40] D. North, *Institutions, Institutional Change and Economic Performance*, Cambridge University Press, Cambridge, 1990.
- [41] H. Pohl, On the history of organizations and management in large German enterprises since the 19th century, in: B. Supple (Ed.), *The Rise of Big Business*, Edward Elgar, Aldershot, 1992.
- [42] L. Poppo, T. Zenger, Testing alternative theories of the firm: transaction cost, knowledge-based and measurement explanations for make-or-buy in information services, *Strategic Management Journal* 19, 1998, pp. 853–877.
- [43] M. Porter, V. Millar, How information gives you competitive advantage, *Harvard Business Review*, July–August, 1985, pp. 149–160.
- [44] K. Schipper, A. Smith, Effects of recontracting on shareholder wealth: the case of voluntary spinoffs, *Journal of Financial Economics* 12, 1983, pp. 437–468.
- [45] A. Sorge, *Management in France*, in: D. Hickson (Ed.), *Management in Western Europe: Society, Culture and*

- Organization in Twelve Nations, Walter de Gruyter, Berlin, 1993, pp. 65–87.
- [46] J. Teng, M.J. Cheon, V. Grover, Decisions to outsource systems functions: testing a strategy-theoretic discrepancy model, *Decision Science* 26, 1995, pp. 75–103.
 - [47] N. Venkatraman, Beyond outsourcing: managing IT resources as a value center, *Sloan Management Review*, Spring, 1997, pp. 51–64.
 - [48] M. Warner, A. Campbell, German management, in: D. Hickson (Ed.), *Management in Western Europe: Society, Culture and Organization in Twelve Nations*, Walter de Gruyter, Berlin, 1993, pp. 89–108.
 - [49] L. Willcocks, C.J. Choi, Co-operative partnership and “total” IT outsourcing: from contractual obligation to strategic alliance, *European Management Journal* 13, 1995, pp. 67–78.
 - [50] O. Williamson, *The Mechanisms of Governance*, Oxford University Press, Oxford, 1996.
 - [51] O. Williamson, Comparative economic organization: the analysis of discrete structural alternatives, *Administrative Science Quarterly* 36, 1991, pp. 269–296.
 - [52] O. Williamson, *The Economic Institutions of Capitalism*, Free Press, New York, 1985.
 - [53] O. Williamson, *Market and Hierarchies: Analysis and Antitrust Implications*, Free Press, New York, 1975.
 - [54] C. Woo, G. Willard, U. Daellenbach, Spinoff performance: a case of overstated expectations? *Strategic Management Journal* 13 (6), 1992, pp. 433–447.
 - [55] T. Zenger, W. Hesterly, The disaggregation of corporations: selective intervention, high-powered incentives and molecular units, *Organization Science* 8, 1997, pp. 209–222.