Impact Factors of Business Service Sourcing Control System Design

A Comparative analysis in media and non-media industry in China

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KTH Computer Science and Communication

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Stockholm, Sweden 2011
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Abstract

In advanced economics, service sector accounts for two-third in GDP. Recent academic studies also acknowledge that business activities for service are significantly different from those for physical goods, due to service intangibility, heterogeneity, simultaneity, and perishability characteristics. So does it for service sourcing, in particular. However, little is still known about how service buyers source from their suppliers, which control pattern is used per phase in the sourcing process, and particularly, which factors are linked with the choice of control pattern, especially for the recently booming developed digital media industry. This paper addresses this gap as follows: (1) by examining in detail the buyers’ behavioral evidence in service sourcing process from selected cases to get general understanding regarding the control pattern used in sourcing process per phase; (2) by comparing the value of potential linked factors with the control choice in different sourcing phase to identify actual linked factors (i.e., asset specificities, frequency/size, nature of relationship and risks associated with service) and to develop propositions regarding their impact on the specific choice of control pattern; (3) by doing a comparative analysis between media industry and non-media industry to extract some useful business insights and to generate business intelligence for best practices. This study contributes to theory development on control issue within service sourcing context. It also offers a further possibility for researchers to design a systematic business service sourcing control system for media industry or even for broader industries.

Preface

This thesis is written towards the Joint Master of Science Degree of Media Management at Royal Institute of Technology (KTH) and Stockholm School of Economics in Sweden.

It is based upon studies conducted during May 2010 to June 2011 both in Sweden and China. Also, this thesis is written under an ongoing project which is underway in Sweden with the purposes: 1) to identify how buyers of business services (i.e., services that firms need to acquire in order to perform their own operations or services that firms buy which in turn constitute part of the offering to a customer) control their suppliers, i.e., how service sourcing control systems are designed, and (2) to identify factors that impact on the design of service sourcing control systems, also (3) to compare the differences between media and non-media industries.

Due to the privacy policy, all participating firms and respondents are full anonymity. The publications resulting from this paper will neither contain the names of respondents or firms, nor will all information be disclosed that may lead to the identification of any participating firm or respondent.

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Acknowledgements

“Life is like a box of chocolates, you never know what you gonna get” (cited from movie “Forrest Gump” which is one of my favorite western movies). Thus the only way is to explore by yourself. Writing this thesis is just like one piece of the chocolate in the box. I enjoy the exploring journey and it is proved to be filled with both challenges and rewards. It is a mission impossible to finish this thesis without the help and support of so many nice people around me.

First of all, I would sincerely express my special thanks to my supervisor Professor Björn Axelsson at Stockholm School of Economics, department of marketing and strategy. Thank you for offering me such an opportunity to get involved in this project and giving me many valuable and positive suggestions. I would also gratefully acknowledge the financial support provided by “The Anniversary Fund of the Swedish National Bank” (Riksbankens Jubileumsfond).

I also would like to express my truly and special gratitude to Associate Professor Henrik Agndal at Stockholm School of Economics, department of marketing and strategy. I am even difficult to express how much I appreciate what you have done for me. Thank you so much for putting such a lot of time and efforts in my thesis project, interacting with me during the whole research process in terms of various personal meetings and frequent email communications. You have supported me and helped me to grow both professionally and personally.

Many thanks also to Dr. Ulf Nilsson, Assistant Professor at Sabanci University, Turkey. Thank you for providing many valuable suggestions and assisting me to participate in one interview session at IF (www.if.se). My master program coordinator, Christer Lie, I also want to express my special thanks to you for making my three-year oversea study at Royal Institute of Technology so much easier and more fun.

Very special thanks should direct to Mr. Wang ZhenQiu at Wuhan Mecaplast Co., Ltd and my elder sister Shell Chang. Thanks for you guys to provide so many business contacts helping me to find the suitable respondents. Meanwhile, I also want to say thanks for all the respondents who participating in my research project.

Finally, I would like to thank all my relatives and friends for the support you have given during the time of my writing. Thank you so much!

Xiong Yi
Stockholm, June 2011
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1. Introduction

Now we are entering a service economy. Within the advanced economic society, in order to concentrate on core competencies and reduce the operation cost, firms turn to outsource their supporting functions, such as logistics, maintenances, IT, and administrative procedures increasingly. The huge demand for outsourcing supporting functions which previously performed in-house leads to the generally increasingly importance of services for economy. Globally, growth in the service sector is rising significantly. The service sector currently comprises more than two-thirds of the world economy: 72 percent of the gross domestic product (GDP) in high-income countries, 53 percent in middle-income countries, and 46 percent in low-income countries (WDI Database, 2010). This tendency can also be observed in some high-growth rate emerging markets. Particularly in China, the service sector accounts for roughly 40% in national GDP in 2009 (Annual Report on China’s Service Industry, 2010). However, new control problems are rising up for buying organizations when sourcing business services compared to sourcing physical goods (Agndal & Nilsson, 2010). These problems emerge from different phase of the sourcing process including the difficulties in specifying services due to their intangible and heterogeneous nature, the simultaneousness of production and consumption, buyer/sellers’ high involvement in production and so on. In spite of the growing importance for business services, such control problems are poorly explored in the context of service sourcing. Surpassing Japan, China has become the second largest economy in GDP and service industry is enjoying a significant growth. Particularly in media industry, its output grew 16.3 percent year-on-year to 491 billion yuan ($72 billion) in 2009 despite the global economic downturn, according to a report by the Chinese Academy of Social Sciences. Unfortunately, there have been very few attentions to focus on the academic study in business service sourcing issue in Chinese market media industry. Furthermore, recent studies in business service sourcing literature have concentrated on the purchase of a specific type of service, e.g., advertisement (Lichtenthal and Shani, 2000; West, 1997) or professional services, say consulting services (Mitchell, 1994; Stock and Zinszer 1987). Knowledge from research based a multiple types
of business services is need increasingly. Thus, this paper will address this gap by looking at business service sourcing control system in Chinese market through a comparative analysis in both media and non-media industries. More specifically, we are interested in explore the following questions:

(1), which is the dominant control pattern used in each phase in the service sourcing process? Are there any differences between media and non-media industries?

(2), which factors are linked with the choice of control pattern in the service sourcing process? Differ in media and non-media industries?

The structure of this paper, in the next chapter, develops a research model for exploring the control choice in service sourcing process and its linked factors, by reviewing transaction cost economics (TCE), business interaction model and service characteristics. A multiple-case research method with comparative content analysis is chosen in methodology chapter. The research model is evaluated in the light of empirical evidences, which present in chapter four, from 12 cases studies covering 7 sourced services from 6 firms. In chapter five, an in-depth within and cross-group analysis of the control choice and value for the potential linked factors is provided and then empirical evidence is related to the constituent parts of the theoretical research model, generating the propositions. The paper ends with conclusions and directions for future research.
2. Literature Review and Research Questions

In this chapter, we would like to review the service sourcing literature and in a broader way, the management control related area in service sourcing context. More specifically, two questions will be discussed here: (1) what is a service sourcing control system? And (2) which factors may potentially influence service sourcing control system design? To do so, however, overall description of management control system and several mainstream control patterns will be presented. In addition, we will also take a glance at the business service sourcing process as the fundamental background. Furthermore, three prevailing theories, transaction cost economics theory, business interaction theory (interaction model) and service characteristics (service complexity), in recent service sourcing and management control literature will be reviewed. Based on the examination of recent studies and theories dealing with service sourcing control issues, we will propose a synthesis research model and formulate our research questions in the end.

2.1. Service Sourcing Control System

In general, a service sourcing control system is subsystem within a management control system specially focusing in the context of service sourcing activities. It aims to get cost reduction by avoiding transaction uncertainties, manage buyer-seller relationship and develop a systematic approach for buying business services.

In more practical terms, the elements of a business service control system concerns 3 “Ws” and 1 “H”. They can be expressed in terms of “what” types and extent of data are involved (e.g. data on resource, staff involved, see e.g., Agndal & Nilsson, 2010b; Höffjan & Kruse, 2006), “how” such data are collected (e.g., in terms of formalization; Agndal & Nilsson, 2010b), “who” is involved in carrying out such activities (e.g., which data are collected by the buyer and which are provided by the supplier), and “When” in the buyer-supplier exchange data is collected (Agndal & Nilsson, 2008; Agndal & Nilsson, 2010a)
2.1.1. Different Control Patterns

Scholars propose different kinds of management control system which consists with various control patterns. Such control system may be described as “inter-organizational” management control systems. They are not only designed to monitor the performance of the suppliers, but also can support service development prior to delivery as well as redesign during delivery to increase service efficiency (Agndal & Nilsson, 2010a). Below we will describe three dominant types in general.

*Van der Meer-Kooistra & Vosselman’s (2000) Control Pattern*

From a management control point of view, Van der Meer-Kooistra and Vosselman (2000) suggest three different management control patterns: (1) a market-based pattern based on the threat of replacement through competitive bidding; (2) a bureaucracy-based pattern characterized by structured and formalized procedures; (3) a trust-based pattern built on a culture of adherence of social norms. As the main patterns which will be used in this study, we will elaborate these in the next section.

*Ouchi’s (1979) Control Pattern*

Ouchi (1979) suggested a conceptual framework for the intra-organization control problem which includes three generic control mechanisms: market mechanism, bureaucratic mechanism and clan mechanism. In a pure market model, market mechanism encourages decision-makers to simply use the competitive bidding and permits the competitive process to define a fair price achieving the control goal. It is believed that a market is a very efficient mechanism of control (Arrow, 1974), and the prices can exactly represent the value of a good or service in a frictionless market. The bureaucratic mechanism involves close personal surveillance and complex process of coordination and rules which specify the standard of outcome and quality for a good or service. The clan mechanism is mostly related to the social structure which is based on the mutual trust.

*Dekker (2004) Control Pattern*

Inspired by Ouchi’s (1979) model, Dekker (2004) proposed a classification of control mechanisms in inter-organizational relationships (IORs). His proposition developed the previous criteria, which
includes formal and informal control (see Smith et al., 1995), to a more specific way and enrich this classification in a broader scope. He suggested that formal control could consist of the outcome control mechanism and behavior control mechanism. The former one specifies the outcomes which should be realized by the involving parties and monitor the achievement of these performance targets. While the later one emphasizes the realizing process and specifies how actions should be done and monitor the actual behaviors. However, the informal control is mostly dealing with the social control mechanism which emphasizes the importance of trust. This type of control neither focuses on the final outcome nor the realizing process, but encourages the involving parties to self regulate to manner at each other’s interest to achieve mutual benefits.

In summary, all the above discussed control patterns are ideal types. It’s difficult to use only one of them to examine the management control system in a single transaction. In reality, we can see different elements of all control patterns in business transactions. Moreover, most transactions are controlled by a combination of different control mechanisms with one working at the dominating position (van der Meer-Kooistra and Vosselman 2000). Before exploring the in-depth reasons for such phenomena, we would like to discuss a bit the context of transaction, business service sourcing process at first.

2.1.2. Business Service Sourcing Process

In the extant business service sourcing literature, much attention is given to theme of sourcing process (Nordin and Agndal, 2008; Mahnke, Overby and Van, 2005). Typically, this process is described as a sequence of steps (shown Figure 2.1) which include service specification, supplier selection and evaluation, contracting, service implementation (service delivery) and outcome performance (Van Weele, 2005; Axelsson and Wynstra, 2002; Fitzsimmons, Noh and Thies, 1998).

![Figure 2.1: business service sourcing process](image-url)
In this study, we simplify the process by combining some stages into one to make our research more feasible and reasonable. In line with this idea, we combine the “service specification” and “supplier selection” into tendering phase (so called pre-contracting phase), at the meantime, using “delivering”, which is the post contract phase, to instead “service implementation” and “outcome performance”. Therefore, the newly formulated process is presented in Figure 2.2 below:

![Diagram](Tendering -> Contracting -> Delivering)

*Figure 2.2: adapted business service sourcing process*

It is noted that, researches focused on service sourcing process have paid much attention in the pre-contract phase (tendering phase), e.g., requirements specification and service supplier selection (Feeny et al. 2005; Day and Barksdale, 2003; Stremersch et al., 2001). Tasks in post-contract phase (delivering phase), regarding service implementation, supplier performance measurement, and interaction between buying and supplying parties draw relatively less attention in extant service sourcing literature (Wynstra et al., 2006; Kern and Willcocks, 2000).

### 2.1.3. Summary of Service Sourcing Control System

In summary, the service sourcing control system, which are developed from original inter-organizational management control system, consists of two main elements: one is the service sourcing process and the other is the control pattern. The former part is dealing with a simplified service sourcing process we put above which includes three phases: tendering, contracting and delivering. The latter part has to do with three particular control patterns, e.g., market-based control, bureaucracy-based control and trust-based control. Different control patterns may dominant different sourcing phases at different conditions (see Fig 2.3). In the following section, we will examine how choice of control pattern brings impact on the service sourcing control system. More specifically, we try to identify the factors which linked to the service sourcing control system design.
2.2. Determinants of Service Sourcing Control System

The main purposes of a service sourcing control system include mitigating transaction uncertainties to achieve cost reduction, managing relationships between transaction parties, and developing a systematic buying approach for business service sourcing differentiating from physical goods purchasing. In order to build up a completed service sourcing control system, firstly, we give our focus on the determinants of service sourcing control system. Before doing so, we will examine three fundamental theories, transaction cost economics, business interaction (interaction model) and service characteristics (service complexity), to get better understanding.

2.2.1. Transaction Cost Economics Theory

The section is mainly dealing with the response to question: which are the most important factors determining the management control pattern in a business relationship (or inter-firm relationship)? More specifically, we would like to explain more details from the transaction cost economics perspective, which is a quite relevant theory in most management control and governance structure literature, how control choice is made. Before doing so, we will discuss in general the basis of transaction cost economics theory and then try to solve the problem proposed above by linking management control system with transaction cost economics theory in context of servicing sourcing.

The basic idea of Transaction Cost Economics (TCE) theory claims that each single transaction is characterized by asset specificity, uncertainty and frequency (volume) of transaction. As a reaction to
neo-classical economic theory, TCE emphasizes that due to transacting parties’ limitation in cognitive ability (‘bounded rational’), it has the inability to take every contingency into consideration (Williamson, 1975, 1985, 1991). This leads an increase for behavioral uncertainties (Noordewier et al., 1990; Rindfleish & Heide, 1997). Therefore additional cost will be raised in order to control such uncertainties.

In reality, decision of sourcing from outside parties requires mutual coordination and may entail dependency (Van der Meer-Kooistra & Vosselman 2000). The involved companies confront the risk of one of the parties behaving opportunistically. Such behavior may, in particular, cause seriously side effects when the involved parties made any specific investments (asset specificity) for their transactional relationship. From the TCE point of view, such specific investment can be only used within the mutual parties’ transactional relationship and will have no or hardly any value outside this relationship. Similarly, the buying firm also faces the risk of the supplier’s lack of competency by performing poorly. Even when the project has been outsourced to the supplying party, the buying party has to keep eyes on the mutual coordination and control most activities in process as well as the cost spending involved. To consider strategically, such as access to raw materials, supply chain, market information etc., or striving for flexibility, or certain know how may also influence the sourcing decision.

TCE theory can bring impact on the choice of control patterns and even determine the design of management control system in context of service sourcing. In this study, we classify controls according to three patterns defined by van der Meer-Kooistra and Vosselman (2000): (1)a market-based pattern, (2)a bureaucracy-based pattern, and (3)a trust-based pattern and try to identify the influence factors by exploring the characteristics of these three patterns from TCE perspective.

2.2.1.1. Market-based control

Among the three control patterns, market-based control is known as the least specific investment-involved one. Due to limited or even no specific investments made in such type pattern
controlled transactional relationship, the competition is fierce in the relation who is controlled by market-based pattern and there are many suppliers in all phases of relation (van der Meer-Kooistra and Vosselman 2000; Ouchi 1979). Therefore, the competitive bidding is the most common control mechanism for selecting the suitable suppliers. The quantity and quality of the outcome and timeless of delivery can be accurately described and measured through a well designed workflow which includes negotiating and writing standard contracts, performing periodic, and routine check. In the long run, transactions controlled by market-based control pattern are repetitive. The uncertainty level is considered as low regarding the future circumstances. Even if there were any changes in the future transaction environment, the buying party still can start over again from the very beginning by the competitive bidding, because there are few loss resulting from the specific investments. In the same vein, due to low asset specificity, both parties can feel free to behave opportunistically to terminate or even joint other transaction without high switching cost (van der Meer-Kooistra and Vosselman 2000).

2.2.1.2. Bureaucratic-based control

It is described as “a system of surveillance, evaluation and direction”. The core essence of this mechanism is the existence of specified norms, standards and rules (van der Meer-Kooistra and Vosselman 2000, 59). There are types of specific investments (asset specificity is medium), which can be protected by these contractual rules, in the transactions. The level of transaction frequency is high. The quantity and quality of the outcome and timeless of delivery can be measured by the specified rules written in the contracts. There are more or less uncertainties in the environment of transaction (the level of uncertainty is medium). The involving parties can predict and avoid some future risks by the detailed written contracts. (van der Meer-Kooistra and Vosselman 2000; Ouchi1979; Dekker 2004). The buying firms are interesting in the competences of supplying firm and in some cases even relied on their competency. Therefore, the transaction which is controlled by bureaucracy-based control pattern is secured by means of suppliers’ competence and contractual agreement. Meanwhile, this type of transaction is heavily based on direct intervention oriented control mechanism. The scope and extent of control structure and processes is determined by the
characteristics of the service to be sourced and the nature of the specific investment to be made in the transaction. For instance, if the specific investments in hardware equipments are essential for the final outcome of the work to be done, much of the attention will be contributed to the functionality and availability of the equipments (van der Meer-Kooistra and Vosselman 2000).

2.2.1.3. Trust-based control

It is characterized by the presence of trust and they reflect some degree of reliance on trust as a mechanism of control (van der Meer-Kooistra and Vosselman 2000; Langfield-Smith and Smith 2003; Donada and Nogatchewsky 2006). The transaction which is controlled by trust-based control pattern is often recognized as high degree of asset specificity and high inter-dependency between the parties. A relatively high level of identifying and verifying cost, which spend on looking for the right suppliers, are incurred in the contact phase. Information regarding the right suppliers usually comes from ties of friendship, from previous contractual relationships or from a reputation of trustworthiness (van der Meer-Kooistra and Vosselman 2000). The fundamental selection criterion is trust. After selecting the suppliers, firms continue to spend effort to develop trust based on proven performance and/or familiarity with the suppliers (Rousseau et al. 1998; McEvily et al. 2003; Lewis and Weiget 1985). Under the trust-based control, contracts are not written in a precisely detailed condition, but on a framework basis, which will be carried out in more detail step by step in the course of intensive interaction with the involved parties. In some case, these intensive interactions even include “joint goal setting, problem solving, decision making and partner development activities” (Dekker 2004). Therefore, the future contingencies are more or less uncertain and not foreseeable. The involving parties often self-regulate to behavior at each other’s interest. The continuity of the contracting relation is of great value due to the high switching cost. Control mechanisms in trust based control pattern will be process oriented with an informal and culture-shaped character.
2.2.1.4. Summary of Identified Factors

TCE theory gives the buying firms an analytical tool to think strategically on cost stemming from choice different control pattern. Table 2.1 summarized the factors which may influence the design of service sourcing control system at theoretical basis.

<table>
<thead>
<tr>
<th>Asset specificity</th>
<th>Uncertainty</th>
<th>Frequency/size</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Type of specific asset</td>
<td>- Switching cost</td>
<td>- Frequency of transaction</td>
</tr>
<tr>
<td>- Degree of specific asset</td>
<td>- Dependencies</td>
<td>- Amount involved</td>
</tr>
<tr>
<td>- Importance to the buyer</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Table 2.1: Characteristics of the contingency factors*

2.2.2. Business Interaction

One of the most important features of business services, which has consistently been emphasized by the service marketing and service management discipline, is that (business) services are produced in interactive processes between buyers and sellers. Researchers in field of industrial marketing and purchasing argue that the quality and productivity of business services are often highly dependent on the human resources involved in the production, delivery and consumption of those services- on both sides of the relationship (Grönroos 2000, p. 210-212; Gummesson, 1998). Additionally, Ellram et al. (2004) comment that because services depend to a large extent on the knowledge, expertise and capabilities of human being (which can fluctuate over time), it is difficult to produce services with consistent characteristics and quality. These give rise to the necessary of understanding the human beings in the transaction and more importantly the interaction process.

The interaction between buyers and sellers in typical business to business environment are often enduring and long term. (Most) interaction processes are functional (effective): the key rationale for interaction between the buyers and sellers is to communicate about, coordinate and adapt the activities and resources firms are allocating to and/or using in the relationship to create and delivery problem solutions (Wendy, 2007). These interactions are depended and determined by several of
influencing variables. A wide range of the factors that affect the content and extent of interaction processes has been formulated in the so-called interaction model (Håkansson, 1982). The main purpose of this model is to give a systematic tool for describing and analyzing the interaction process and relations between firms.

Figure 2.4: Business Interaction Model: a tool for systematically analyzing business transactions and relations. (Håkansson, 1982)

In interaction model, the characteristics of interaction process, which are mostly seen as dependent variables, consist both of short term (individual transaction episodes) aspects and long term aspects. The core part of this model provides two important elements to analyze a typical transaction process between the buyers and sellers: the transaction process and the mutual relationship. Transactions can be seen as a series of exchange processes with a logic sequence of stages and activities. The relationship, though, can be described in terms of the adaptations made by the mutual parties to fulfill the interests of each other, and the type and degree of cooperation that have been deployed. These give a systematical way to investigate and understand different transaction patterns, for instant, which type of information is being exchanged, which type of employees are involved, and their number as well as the competency (Axelsson & Wynstra 2002).
The buyers purchasing strategy, its production technology and the organization structure have an important impact on the mutual interactions between the buyers and sellers. Purchasing strategy can affect the buying firms’ purchasing behavior and the long term development of the supplier relationship (in terms of institutionalization, adaptation etc.). For example, if the purchasing strategy implemented by the buying firm is a transactional one with the aim of controlling the total purchasing cost, both of the direct purchasing cost and transaction related cost, as low as possible to meet its purchasing need at an acceptable level. This will obviously have a corresponding effect on the relationship. The production technology, or say knowledge on the sourcing items, is also vital for the buying firms and can influence both on the sourcing items specifications as well as the collaboration with the suppliers. The organization structure of the parties involved actively affects the relationship between them. Results towards the business relationship vary on the conditions like either facilitating, or hindering, and sometimes even prohibiting.

Other than the interaction process, the interaction model also indicates three other groups of variables affecting the mutual relationship. The first group is dealing with the nature of relationship in the relation and individual transaction. It, in certain sense, can help us to understand or predict how the cooperation between buyers and sellers will take place by what type and degree, for instance, do the buyers and sellers develop a joint organization for the transaction? Or do they joint the process to develop counterpart’s competency? The second group presents more general in relationship history. It is described by the factors such as the length of the relationship and the adaptations which are made to fulfill the interest of each other. The final group concerns the power dependency in terms of the market structure. More specifically, the market structure e.g., the number of alternative suppliers and the number of alternative customers available in the market can directly affect the power distribution beyond the transaction parties.

2.2.2.1. Summary of Identified Factors

To summarize, Table 2.2 conclude three categories of factors, which may influence the design of service sourcing control system. They are relationship history, nature of relationship, and power
dependency.

<table>
<thead>
<tr>
<th>Relationship history</th>
<th>Nature of relationship</th>
<th>Power dependency</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Length of relationship</td>
<td>- Degree of cooperation</td>
<td>- Alternative suppliers</td>
</tr>
<tr>
<td>- Adaptations</td>
<td>- Type of cooperation</td>
<td>- Alternative customers</td>
</tr>
</tbody>
</table>

*Table 2.2: Influencing Factors from Business Interaction Perspective*

The first category consists of two factors, the length of relationships and the prior sourcing experience. The second one concerns the characteristics of the interacted parties, which include the purchasing strategy they implemented in the buying process, their production technology (specific knowledge towards the sourcing items) as well as the culture and structure of the buying organization. In the category of atmosphere, power balance plays an important role. Two other factors, cooperation and closeness also bring impact on the service sourcing control system design. The environment which the business interaction takes place also influences the control problem during service sourcing process. This environment is characterized by factors such as market structure, number of alternative suppliers, and social system.

### 2.2.3. Service Characteristics

Before we start the discussion on sourcing and especially on the procurement of business service, it is essential to get better understanding regarding the basic characteristics of service, in particular, business service which is the main focus of our study objective. In this section, service definition will be discussed at first following by a classification for business service. Then, at the later part we will examine the factors, emerging from service characteristics, influence the control system design.

#### 2.2.3.1. Service defined and classification

There are many attempts to describe the nature of service. Looking back, an old and relatively sophisticated definition by explaining a service as:
A change in the condition of a unit or a person, or of a good belonging to some economic unit, which is brought about as a result of the activity of some other economic unit, with the prior agreement of the former economic unit.

(Hill 1977, p. 318)

So far, the one of the most prevailing descriptions is the following one:

A service is a process consisting of a series of more or less intangible *activities* that normally, but not necessarily always, take place in *interactions* between the customer and service employees and/or physical resources or goods and/or systems of service provider, which are provided as *solutions* to customers *problems*.

(Grönroos 2000, p.46; Axelsson 2002. p9)

In terms of business service, Grönroos (1979) points out certain aspects of so-called business services (services produced by one company and been bought by the other one for commercial purpose). He expresses this as below:

Business services are performed by qualified personnel, are often advisory and/or problem solving, and are also an *assignment* given to the seller by the buyer.

(Grönroos 1979)

In this study, we choose to deploy Grönroos’ (1979) definition for further discussion.

Regarding the service types, there are also many methods to classify in terms of service provider or internal characteristics (Axelsson and Wynstra, 2002). In our understanding, we can divide the services into two main categories, those used by the individual customers (a B2c context) and those used by business firms and public administration (a B2B context). Business services in this study refer to the latter category. Even within the category of business service, there are several of types for business services. Here we decide to use Axelsson and Wynstra proposed classification which adapted from OECD (2000; 1999b) in our study.

- **Facility services**: cleaning, catering, security, real estate maintenance.
- **Financial services**: banking, finance, salary administration, insurance.
- **Information and communication technology services**: hardware implementation, customization and maintenance, telecommunication services, software development and implementation.

- **Business organization services**: management consultancy, environmental consultancy, risk management, public relations, accounting and auditing, legal services.

- **Research and development and technical services**: technical maintenance, repairs and assistance, development, engineering.

- **Transportation and distribution services**: warehousing, value-added logistics, transportation.

- **Human resource development services**: training, recruitment.

- **Marketing services**: sales, reselling, advertisements, agents, franchising etc.

So far, we have discussed service defined and service classification to be used in our study. In the next section, we would like to review some key factors from service characteristics potentially influencing the control system design.

### 2.2.3.2. Service Characteristics Influencing the Control System Design

Some service literatures tend to address certain differences between industrial goods and service due to their fundamental heterogeneity in nature. Adapted from Normann’s (1992) contribution, Axelsson and Wynstra (2002) summarize an overview presented in Table 2.3.

<table>
<thead>
<tr>
<th>Goods</th>
<th>Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>▲ Tangible</td>
<td>▲ Intangible</td>
</tr>
<tr>
<td>▲ Can be demonstrated before the purchase</td>
<td>▲ More difficult to demonstrate (not available)</td>
</tr>
<tr>
<td>▲ Can be stored</td>
<td>▲ Cannot be stored</td>
</tr>
<tr>
<td>▲ Production occurs before consumption</td>
<td>▲ Production and consumption simultaneously</td>
</tr>
<tr>
<td>▲ Seller produces</td>
<td>▲ Buyer/customer takes part in production</td>
</tr>
<tr>
<td>▲ Production, sales, consumption on different location</td>
<td>▲ Production, consumption and (often) sales on the same location</td>
</tr>
<tr>
<td>▲ Can be transported</td>
<td>▲ Cannot not be transported (but the producer and the customer can move)</td>
</tr>
</tbody>
</table>

*Table 2.3: Heterogeneity between goods and services. (Adapted from: Normann, 1992, p. 31)*

Services distinguishing from industrial goods are mainly based on four characteristics. Services are
intangible, heterogeneous, simultaneous and perishable (Grönroos, 2000; Lovelock, 2001; Zeithaml and Bitner, 1996), and these four characteristics provide certain implications for how services should be marketed and managed, even sourced from the buyers’ perspective, comparing with industrial goods. For instance, the intangibility means that services cannot be physically seen, touched, and even stored in shelf. The intangibility of services makes it difficult for the industrial buyers to examine the quality of service in advance, or even after their purchase. This brings a relatively higher level of risk and uncertainties for the buyers when sourcing a service than an industrial good. To mitigate these risks and uncertainties, buying parties will deploy certain kinds of management control mechanisms, for instance, through a competitive bidding in the market, writing a very detailed contract, or even relying on the trust. Anyway, the choice of control pattern depends on the involved parties’ current situation and other factors, such as, sourcing capability, supplier expertise reliance, mutual business relationship, and suppliers’ reputation in the market and so on. Heterogeneity indicates that the outcome of the services depends on the performance of individuals on the side of both service providers and buyers (Fisk et al., 2000; Mitchell, 1994), and on the extensive interaction between the involved parties. These business interactions could have different kinds and affect the design of sourcing control patterns in different ways which we have made extensive discussion before. Simultaneity refers to the fact that the production and consumption of the service are in the same time period not as the industrial goods which take place in a sequence. The simultaneity of services makes it more complex than industrial goods that measurement of service quality take places not only after implementation but also in the period of specification and contracting. Finally, perishability indicates that the service only exists in the ongoing process of its production and cannot be stored physically for later use.

Axelsson and Wynstra (2002) claimed the complexity of the service (simple/complex) affects the customer’s buying behavior and the interplay between the customer and the suppliers. Thus it may also influence the design of service sourcing control system. In line with this, in service sourcing context, we argue that complexity refers to three elements, e.g., complexity in service activities, complexity in service specification, and risks associated with service. More specifically, the
complexity in service activities relates to the number of activities involved in the service, and whether the sequence of those activities matter. The service with many activities is considered more complex than service with few activities because the increasing number of activities in service will ask for a sophisticated method to handle and manage. At the same time, the sequence of the activities within service also brings more complexity for service itself comparing to those service which does not matter in sequence. Complexity in service specification relates to how difficult it is to produce these with high quality repeatedly, and difficulties in specifying the service before purchase etc. Ellram et al. (2004) state that because services depend to a large extent on the knowledge, expertise and capabilities of human being (which can fluctuate over time), it is difficult to produce services with consistent characteristics and quality. Additionally buyer’s experience with sourcing the service also affects the complexity in service specification. For instance, buyers with prior experience sourcing the service which they are tended to source again and with remarkable knowledge specific to the service will make it relatively easier to specify what they want in service specification. Risks associated with service relates to two sub-aspects: the closeness to core business and consequences for other activities in the firm. Sourced service which is close to buying firm’s core business or even part of its core competency will bring significant risks if it delivered failed. The service which will result in negative consequence for other activities in the firm is also considered more risky.

In all, the complexity of services influences the possibilities of managing the sourcing process and measuring the outcome of service in traditional way in which usually works fine when sourcing physical goods. Additionally, this complexity brings more uncertainties for the buyers parties. Mitigation of such uncertainties will ask for a suitable control mechanism and extensive interaction between service suppliers and buyers which we have made extensive discussion in section 2.2.2.

2.2.3.3. Summary of Identified Factors

To sum up, from the service complexity point of view, we conclude the factors, such as service activities, service specification, and risks associated with service may possibly influence the service sourcing control system design.
2.2.4. Summarized Impact Factors towards Service Sourcing System Design

Table 2.4 summarizes the main factors we identified from the three fundamental theories discussed above which may possibly influence the design of service sourcing control system. It suggests how service sourcing control system will be possible influenced and from which aspect. TCE is the most relevant theory for many of the management control related literature. Business interaction model provides a systematic tool to analyze buyer-seller relationships. The characteristics of service itself, or more specifically the complexity of service makes it different comparing with sourcing physical goods.

The next section, we will propose our synthesis research model based the factors we’ve identified so far.

<table>
<thead>
<tr>
<th>Transaction Cost Economics</th>
<th>Asset specificities</th>
<th>Uncertainties</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Degree of asset specificities</td>
<td>- Switching cost</td>
</tr>
<tr>
<td></td>
<td>Type of asset specificities</td>
<td>- Dependencies</td>
</tr>
<tr>
<td>Frequency/size</td>
<td>Frequency of transaction</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Amount involved</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Business Interaction</th>
<th>Relationship history</th>
<th>Nature of relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Length of relationships</td>
<td>- Degree of cooperation</td>
</tr>
<tr>
<td></td>
<td>Adaptations to relationship</td>
<td>- Type of cooperation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Power dependency</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Alternative suppliers</td>
</tr>
<tr>
<td></td>
<td>Alternative customers</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Service Characteristics</th>
<th>Service activities</th>
<th>Service specification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of activities</td>
<td>- Degree of difficulty</td>
</tr>
<tr>
<td></td>
<td>Sequence</td>
<td>- Buyer’s experience with</td>
</tr>
<tr>
<td>Risks associated with service</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Closeness to core business</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Consequences for other activities in the firm</td>
<td></td>
</tr>
</tbody>
</table>

*Table 2.4: Summarized factors to impact on service sourcing control system*
2.3. Synthesis Research Model and Research Questions

In this section, we propose the research questions at first, and formulate our synthesis research model based on the theories discussed before.

2.3.1. Research Questions

So far in our understanding, the studies in business service sourcing literature have concentrated on the purchase of a specific kind of service, such as advertisement (Lichtenthal and Shani, 2000; West, 1997) or professional services, say consulting services (Mitchell, 1994; Stock and Zinszer, 1987). Additionally, the large number in types of business services makes it difficult to provide managerially useful generalizations for purchasing managers when buying business services. This calls for the need for researches across multiple business services. Stenberg and Virolainen (2000) claim that the characteristics that are common for various services help purchasing managers to get better understanding regarding the service to be purchased in relation to the purchase process and to the buying organizations and its relationships with the suppliers. Furthermore, Smeltzer and Ogden (2002) call for research dealing with the variety in business services from a buyer’s perspective: investigating how buying companies deal with this variety enables the accumulation of knowledge across the wide variety of services that organizations buy. In the market, we can also observe the increasingly need for firms to outsource their supporting functions in order to concentrate on the core competencies. Unfortunately, there are few academic findings and managerial suggestions available for the buying firms to control the buying process and maintain their relationships with the suppliers properly. This paper aims to address this gap by examining the full stages of buying process across different business services and various potential factors influencing the control system. More specifically:

1. Which is the dominant control pattern used in each phase of the service sourcing process?
2. Which factors are linked to the choice of control pattern in service sourcing process?
3. Are there any differences between media and non-media group in sourcing process?
2.3.2. Synthesis Research Model

In order to solve these research questions put above, we formulate a conceptual research model to analyze and examine in a systematically way presenting in Figure 2.5 below:

![Synthesis Research Model](image-url)

*Figure 2.5: Synthesis Research Model: a tool for systematically analyzing factors influencing on design of management control system during service sourcing process.*

The synthesis research model address a conceptual thinking from three core academic theories basis in the field of management control and service sourcing literature when identifying the factors influencing on the design of management control system during the process of service sourcing.
process. As a framework of prediction, this research model consists of the several potential factors extracting from these three theoretical perspectives we discussed before. These theories include transaction cost economics theory, business interaction theory and the nature (characteristics) of service itself. We believe that there are several reasons to combine these three theories into our synthesis research model. First of all, one of the main reasons for firms buying from outside instead of producing in-house is their strategic consideration on the cost reduction in total cost of ownership (TCO). This TCO comes not only from the direct purchasing cost but also from the transaction related cost such as cost on searching for qualified suppliers, writing detailed contracts, and evaluating the outcomes. In line with this idea, transaction cost economics theory (TCE) is a suitable tool for analyzing the transaction related cost and identifying the factors influencing the sourcing management control system in a systematically way. Second, service sourcing activity, as any other kind of business interaction, is characterized and conditioned by the transaction process, and the involved parties’ mutual relationship. Getting better understanding of each element in this particular business interaction is extremely useful and important to identify the factors influence on the design of management control system during service sourcing process. Finally, Wittreich (1966) stated the tried and true rules for buying goods do not work when applied to the buying of (professional) services. The characteristics of business service itself also play an important role conditioning the sourcing process.

In the later chapter, we will apply the proposed synthesis research model in the context of our multiple cases study and try to answer the research questions we put ahead.
3. Research Method and Empirical Design

This chapter is concerned with the methodological aspects of conducting research for this paper.

Research is an ongoing process to investigate and identify the new knowledge through systematical and methodical work. To do so, a methodological way of working is required aiming to find answers to the research problem and research questions. In the scientific research area, there are mainly two choice of research approach available, e.g., the qualitative and the quantitative research approach. In general, qualitative research provides a deeper understanding of the phenomenon under careful investigation, and the problem can be understood within its context, thus furnishing a holistic view. Quantitative methods are often applied within natural science, and the aim is usually explanatory—to explain causal relationships, to permit generalization, and to predict the future tendency. Specifically to this study, the qualitative research designs are considered appropriate. We are using a multiple-case study design, which is one of the qualitative research methods, in our study.

There are several key reasons for choosing a multiple-case study design in this study. Firstly, the selected cases allowed building in-depth understanding and generating findings highly relevant to managerial implications at the same time (Voss et al. 2002). Secondly, case studies were appropriate for building theory (Eisenhardt and Graebner, 2007) on service sourcing control system, e.g., developing propositions. More specifically, they are well suited to exploratory (how choice of control pattern is influenced) research elements (Yin, 2003). Thirdly, for research which does not require behavioral interventions from researchers, the case studies method is considered much more appropriated (Yin, 1994). Finally, a multiple-case design enabled cross-case comparisons and identification of linked factors beyond the specifics of individual cases (Eisenhardt and Graebner, 2007).
3.1. Case selection

In a qualitative research, the purpose of sampling is often to gain access and relevant evidence about the phenomenon. Access reflects a practical concern, and relevant reflects a validity concern. Convenience is the argument most often used in favor of sampling, according to Potter (1996).

As earlier stated, this study follows a multiple-case study design. More specifically, we would like to do a comparison analysis between two case groups. One is a media background case group, and the other is a non-media background case group. The case selection criteria is theoretically justified. We are intended to investigate this phenomenon in Chinese market, thus selection cases come from China exclusively but cover four different cities in this market geographically. To diversify the base of sourced services and to generate more universal findings, we chose 7 types of services from 6 different firms. 6 cases are from 3 media background firms, and other 6 cases are from 3 non-media background firms. Also, based the research model (Fig. 2.5), only cases covering all sourcing process phases were selected. Moreover, it was also ensured that service implementation had been ongoing (the total time period including tendering should be at least 1 year).

Table 3.1 summarizes the brief information to the selected cases. The respondents’ titles are also shown above. The cases come from a wide range of industries covering automobile manufacturing, chemical material, jewelry making which belong to the non-media background group, and information/communication technology (internet based telecommunication, and online games developing), chip designing (exclusively for electronic game devices and smart phones) which belong to the media background group. The services sourced by selected cases are of increasing complexity in business service market, and often highly interactive tasks.
Data collection

The empirical data in this study were collected through semi-structured interviews (see Appendix for interview guide). Before starting the formal interview, the pre-contact was made. Respondents normally got the interview guide one week in advance and had the opportunity to discuss with interviewer for those unclear questions. The entire interviews were recorded (under the permission of interviewees) and transcribed immediately after the interview to maximize the data accuracy. The final transcript of each interview was sent to the interviewee for verification check. A total of 12 interviews (see Table 3.1), with an average duration of 40 minutes, were conducted exclusively with the service buying firms. Additional respondents are approached for providing the supplementary answers to some specific questions. For instance, case No. 009 from G-game when they were
sourcing the online game operation service, the project manager did not get involved in the contract negotiation phase, thus the CEO who joined this phase supplied some extra information. All the interviews were conducted between December 2010 and February 2011 in Wuhan, Shanghai, Xiamen and Shenzhen China.

3.3. Data analysis

Interview transcripts were analyzed using content analysis, where qualitative analyses are combined with some quantitative measures, such as taking answer frequencies (the number of cases which had one specific level of certain factors) as indicator for relative importance of certain items.

Both within-case and cross-case comparison analysis were conducted to identify the unique properties of cases and pinpoint theoretically important similarities and differences (Eisenhardt and Graehner, 2007). Following Miles and Huberman (1994), within-case tables (i.e., Table 5.3) and cross-case charts (i.e., Figure 5.1) were constructed to aid analysis and serve as illustrations of the theoretical discussion. Within-case analysis provided an in-depth understanding of values for each potential linked factors and choice of control pattern per process phase. The research model served as a basis for empirical analysis at case level. Cross-case comparisons helped to identify the linked factors and develop theory through research propositions.

3.4. Evaluation

To ensure the quality in research, four case evaluation criteria (Miles & Huberman, 1994) and a set of associated techniques were deployed here.

3.4.1. Credibility

It refers to the degree to which findings correctly map the phenomenon in question. Various techniques were deployed to tackle this: (1) select respondent who has been involved in or has
significant knowledge of all phase in the souring process for the particular service which would be talked; (2) select additional informants who were involved in specific phases which the initial respondent did not join; (3) send back the written case manuscripts to prime contacts for feedback and accuracy checks (Voss et al., 2002); (4) obtain feedback from peer researcher on case analysis and tentative conclusions acquired at regular intervals (Onwuegbuzie and Leech, 2007).

3.4.2. Objectivity

It refers to the extent to which the findings are free from unacknowledged researcher biases. It was addressed through the following: (1) maintain a rich database with raw data by recording the interview process and transcribing in written files immediately after the interview to maximize the data accuracy; (2) representing data by visual format, e.g., graphical chart, table etc, to make it easier to interpret (Miles and Huberman, 1994),

3.4.3. Reliability

It refers to the degree to which the study is consistent, stable over time and across researchers and methods. It was addressed as follows: (1) explicating the case selection criteria (Dubois and Araujo, 2007); (2) developing and using a standard interview guide (Appendix A) for data collection across cases (Yin, 2003).

3.4.4. Transferability

It is concerned with the conclusion validity in other contexts. This question cannot be answer until the case findings are tested on a larger scale. Because the developed propositions are not tested in this study, we cannot make claim to wide generalizability. However, certain techniques were used to enable findings transfer to other context: (1) use specific theoretical criteria to select cases achieving analytical generalization within the context of the business service sourcing process.
4. The Case Studies

The empirical data from the case studies will be presented in this chapter. We have introduced 6 firms previously that are selected for this study. In this chapter, we will present the data by describing each case in table. The presentation of empirical data for each case study will be organized as follows:

<table>
<thead>
<tr>
<th>Buyer characteristics</th>
<th>Uncertainties</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Industry</td>
<td>✓ Switching cost</td>
</tr>
<tr>
<td>✓ Size</td>
<td>✓ Dependencies</td>
</tr>
<tr>
<td>Supplier characteristics</td>
<td>✓ Important to the buyer</td>
</tr>
<tr>
<td>✓ Industry</td>
<td>✓ Frequency/size</td>
</tr>
<tr>
<td>✓ Size</td>
<td>✓ Frequency of transaction</td>
</tr>
<tr>
<td>Service description</td>
<td>✓ Amount involved</td>
</tr>
<tr>
<td>✓ Brief description</td>
<td>✓ Relationship history</td>
</tr>
<tr>
<td>Control during ITT phase</td>
<td>✓ Length</td>
</tr>
<tr>
<td>✓ Which data are requested</td>
<td>✓ Adaptations</td>
</tr>
<tr>
<td>✓ Extent of data requested</td>
<td>✓ Nature of relationship</td>
</tr>
<tr>
<td>Control during contracting phase</td>
<td>✓ Degree of cooperation</td>
</tr>
<tr>
<td>✓ How is service specified in contract (input, output etc)</td>
<td>✓ Type of cooperation</td>
</tr>
<tr>
<td>✓ Are fines connected to poor quality or non-delivery?</td>
<td>✓ Power dependency</td>
</tr>
<tr>
<td>Control during delivery phase</td>
<td>✓ Alternative suppliers</td>
</tr>
<tr>
<td>✓ Which data are requested</td>
<td>✓ Alternative customers</td>
</tr>
<tr>
<td>✓ Extent of data requested(when, how often, etc)</td>
<td>✓ Service activities</td>
</tr>
<tr>
<td>✓ Control system design (electronic, personal meetings etc)</td>
<td>✓ Number</td>
</tr>
<tr>
<td>✓ KPIs</td>
<td>✓ Sequence (does sequence matter)</td>
</tr>
<tr>
<td>Specificities</td>
<td>✓ Service specification</td>
</tr>
<tr>
<td>✓ Type</td>
<td>✓ Degree of difficulty</td>
</tr>
<tr>
<td>✓ Degree</td>
<td>✓ Buyer’s experience with sourcing the service</td>
</tr>
<tr>
<td></td>
<td>✓ Risks associated with service</td>
</tr>
<tr>
<td></td>
<td>✓ Closeness to core business processes</td>
</tr>
<tr>
<td></td>
<td>✓ Consequences for other activities in firm</td>
</tr>
</tbody>
</table>

**Table 4.1: Structure of the case presentation**

Basically, there are mainly five dimensions to be presented in the data table. They are overall information about the *buyer/supplier and sourced service, control during sourcing process, transaction cost economics theory, business interaction model, service characteristics*. For each
dimension, three rows will be used to describe it in details. For instant, *buyer/supplier and sourced service* includes buyer characteristics, supplier characteristics and general service description; *control during sourcing process* consists of control during three sourcing phases of ITT (tendering), contracting and delivering. As we discussed before, asset specificities, uncertainties and frequencies/size are the central elements of transaction cost economics theory; the core concept of business interaction model is dealing with three main determinants of relationship history, atmosphere, and environment; the last dimension is service characteristics which comprises service activities, service specification and risks associated with service. However, there are also further sub-aspects to elaborate each “row” in more specifically. Details regarding the sub-aspects can be found in Table 4.1 presenting above.

Accurate case descriptions are presented in Appendix B in accordance with the sequence shown in Table 3.1
To give an overview understanding towards the buyers and suppliers background information, we summarize these presenting in Figure 4.1:

![Figure 4.1: brief introduction to buyers and suppliers background information](image)

In total 12 interviews were made from 6 buying firms. Their size varies from $0.77 million at lowest to $13,966 million at highest in terms of annual turnover in 2010. The average size concentrates between $10 and $100 million and there are 7 cases whose buying firms belong to this category. Buying firms with turnover exceeds $100 million are rare, thus we observe only two cases in this study. Moreover, the buying firms come from a wide range of industries covering automobile manufacturing, chemical raw material, internet-based telecomm, online game, chip designing, and jewelry branding & making. Most of them are top players within their industry in China or even a global leader.

Half of the information regarding suppliers’ size is not accessible. So far as we know, 4 out of 12 cases source services from suppliers whose annual turnover is less than $10 million. Two exceeds $100 million and only one belongs to their interval. Comparing with buying firms industry, the suppliers also come from a wide scale covering 6 categories (details presenting in Fig. 4.1). The volume of service contract also varies case by case, up to one million dollars and down to only thousands. Two third of the service contracts are less than 100 thousand in annual base.
5. Analysis of Empirical Data

This chapter is dealing with the analysis of empirical data. In section 5.1, the overall control pattern used from different cases will be presented aiming to answer research question one. In section 5.2 to 5.4, further discussion will be guided by the research model (Figure 2.5) as response to research question two.

5.1. Control Pattern Distribution

Based on the data tables presented in Appendix B, firstly, we would like to summarize the different control patterns used in each case within each sourcing phase (tendering phase, contracting phase and delivering phase). Before doing so, definitions of different control pattern are given in practice level presenting in Table 5.1. This table is inspired by Van der Meer-Kooistra & Vosselman's (2000) model regarding the management control patterns of inter-firm relationship (see Van der Meer-Kooistra & Vosselman 2000, p60, table 1) and integrated our own observations from the case descriptions in the chapter four. In this way, characteristics of different control patterns are described in a more practical way.

<table>
<thead>
<tr>
<th>Control Pattern</th>
<th>Market based pattern</th>
<th>Bureaucracy based pattern</th>
<th>Trust based pattern</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tendering phase</td>
<td>-Competitive bidding</td>
<td>-Pre-selection of potential suppliers</td>
<td>-Supplier selected on the basis of trust, stemming from friendship, former contractual relationship, recommendation or reputation in the market</td>
</tr>
<tr>
<td></td>
<td>-No specific investments</td>
<td>-Restricted bidding</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Decision-making based on specific criteria</td>
<td></td>
</tr>
<tr>
<td>Contracting phase</td>
<td></td>
<td>-Detailed and substantive contract written</td>
<td>-No detailed contract terms but a framework</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Penalty clause and certain restrictions are specified</td>
<td>-Loose links between payment and activities/output</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Payment based on realized activities or output</td>
<td>-Lump sum payment in some cases</td>
</tr>
<tr>
<td>Delivering phase</td>
<td>-Few control mechanisms required</td>
<td>-Frequent supervision, performance measurement and evaluation(buyer observation)</td>
<td>-Joint planning or budgeting</td>
</tr>
<tr>
<td></td>
<td>-More than one supplier provide THIS service to the buyer</td>
<td>-Implementation of KPIs</td>
<td>-No KPIs measurement</td>
</tr>
<tr>
<td></td>
<td>-Competition within the current suppliers disciplined and stimulated performance</td>
<td>-Extensive interactions(personal meeting, electronically) to guarantee the well information flow</td>
<td>-Joint</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Bear of failure</td>
<td>development/enhancement of mutual competence and good will</td>
</tr>
</tbody>
</table>

*Table 5.1: definitions of control patterns in empirical data*
In tendering phase, there are mainly three way of supplier selection: competitive bidding in an open market, restricted bidding based on the pre-selection criteria and recommendation/referral from network based on the trust. Each of them represents the characteristics of market based pattern, bureaucracy based pattern and trust based pattern.

The contract written in detailed or not is the determinant differentiating one control pattern from others in contracting phase. Bureaucracy based pattern always comes with a very detailed and substantive written contract and clear penalty clause for uncertainties/ contingencies. Market based pattern and trust based usually have no detail written contracts. Control mechanism for trust based is driven from the mutual trust and belief of self regulation to meet each other’s interest.

Definition of control patterns in delivering phase is more or less difficult to define due to several determinants. The frequency of performance check, degree of information flow and mutual development and enhancement determinate different control patterns in delivering phase.

Table 5.2 summarized the control patterns implemented in each case during each sourcing phase using the definition we discussed above.

<table>
<thead>
<tr>
<th>Groups</th>
<th>Case Number</th>
<th>Tendering phase</th>
<th>Contracting phase</th>
<th>Delivering phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-media background group</td>
<td>001</td>
<td>△</td>
<td>△</td>
<td>△</td>
</tr>
<tr>
<td></td>
<td>002</td>
<td>△</td>
<td>△</td>
<td>◆(low)</td>
</tr>
<tr>
<td></td>
<td>003</td>
<td>△</td>
<td>△</td>
<td>△</td>
</tr>
<tr>
<td></td>
<td>004</td>
<td>△</td>
<td>△</td>
<td>△</td>
</tr>
<tr>
<td></td>
<td>005</td>
<td>△</td>
<td>△</td>
<td>△</td>
</tr>
<tr>
<td></td>
<td>006</td>
<td>△</td>
<td>△</td>
<td>△</td>
</tr>
<tr>
<td>Media background group</td>
<td>007</td>
<td>◆(high)</td>
<td>△</td>
<td>◆(high)</td>
</tr>
<tr>
<td></td>
<td>008</td>
<td>△</td>
<td>△</td>
<td>△</td>
</tr>
<tr>
<td></td>
<td>009</td>
<td>◆(high)</td>
<td>◆(high)</td>
<td>◆(high)</td>
</tr>
<tr>
<td></td>
<td>010</td>
<td>△</td>
<td>■</td>
<td>◆(low)</td>
</tr>
<tr>
<td></td>
<td>011</td>
<td>■</td>
<td>△</td>
<td>△</td>
</tr>
<tr>
<td></td>
<td>012</td>
<td>△</td>
<td>△</td>
<td>△</td>
</tr>
</tbody>
</table>

Table 5.2: Control pattern distribution within all case samples.
Note: Market based pattern=■, Bureaucracy based pattern=△, Trust based pattern=◆

Bureaucracy based control pattern is observed as the dominant one regardless in tendering, contracting or delivering phase. In tendering phase, 2 out of 12 case firms chooses trust based control
pattern, while market based control pattern is only presented in one case; In contracting phase, trust based control pattern falls to only account for 1 out of 12 within all cases, and we also observe only one case using market based control pattern in this phase; In delivering phase, more trust based control pattern presents there comparing with the number of trust based control pattern used in other two phases. There are 4 trust based control pattern there accounting for 1/3 of all the cases. Interestingly, we see no case using market based control pattern in delivering phase. We will discuss these findings in later part by our research model.

From horizontal observation, we can find 8 case firms using a stabilized control pattern during the whole sourcing process (using an identical control pattern in three phases, but specific control pattern used differs case by case). More specifically, for those using identical control patterns during the whole sourcing process, we can observe that 7 out of 8 cases are using bureaucracy based control pattern within three phases of a whole sourcing process, while the left one is using trust based control pattern then. Variation of control pattern among different sourcing process is out of our research focus, we would not go further in detail in this paper.

In short, we summarize the findings that:

F1:  Bureaucracy based control pattern is the dominant one in every phase of the sourcing process.
F2:  Trust based control pattern accounts for 1/12 to 1/3 in each phase of the sourcing process
F3:  Quite few market based control pattern used in tendering and contracting phase, and even none in delivering phase.
F4: Control pattern used in the whole sourcing process is likely to be stable relatively, especially for bureaucracy based pattern.

In following sections, we will look at the factors that explain these patterns.
5.2. Explanatory Variables from TCE

The three central elements of transaction cost economics theory, e.g. asset specificities, uncertainty and transaction frequency/size can be used to explain the choice of control patterns during service sourcing process and also may influence the service sourcing control system design. In this section, we are going to examine and discuss the inter-relationship between variables of transaction cost economics theory and control choice during different sourcing phases with comparison of media and non-media groups.

Table 5.3 presented the overview of control choice in different sourcing phases and the extent/level of three transaction cost economics variables which include asset specificities, uncertainty and transaction frequency/size. According to the data we get from interviews with respondents at buying firms, three levels are used to determine the extent/level of these three variables in qualitative. More specifically, few specific investments to the transaction refer to the low level of asset specificities, and transaction with some specific investments refers to the medium level of asset specificities. The high level of asset specificities means a large quantity specific investment made to the transaction; for the variable of uncertainties, based on the previously introduced three sub-aspects, which are switching cost, dependency and importance to the buyer, in the beginning of empirical data chapter, we are intended to give the low level uncertainties to the one who has none or only one sub-aspect positively influences the uncertainties level, and medium uncertainties refers to the one who has two sub-aspects positively influence the uncertainties level, and the one who has all three sub-aspects positively influence the uncertainties level is assigned to the high level of uncertainties. The level of transaction frequency/size is also classified into three categories low, medium and high. For those transaction whose volume of contract is below $10 000, the frequency/size level is low. Medium level refers to the volume of contract is between $10 000 and $100 000, and the one whose contract is above $100 000 belongs to high level of frequency/size.
<table>
<thead>
<tr>
<th>Case</th>
<th>Dominant control pattern</th>
<th>TCE variables</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tendering</td>
<td>Contracting</td>
</tr>
<tr>
<td>001</td>
<td>△</td>
<td>△</td>
</tr>
<tr>
<td>002</td>
<td>△</td>
<td>△</td>
</tr>
<tr>
<td>003</td>
<td>△</td>
<td>△</td>
</tr>
<tr>
<td>004</td>
<td>△</td>
<td>△</td>
</tr>
<tr>
<td>005</td>
<td>△</td>
<td>△</td>
</tr>
<tr>
<td>006</td>
<td>△</td>
<td>△</td>
</tr>
<tr>
<td>007</td>
<td>◆</td>
<td>△</td>
</tr>
<tr>
<td>008</td>
<td>△</td>
<td>△</td>
</tr>
<tr>
<td>009</td>
<td>◆</td>
<td>◆</td>
</tr>
<tr>
<td>010</td>
<td>△</td>
<td>■</td>
</tr>
<tr>
<td>011</td>
<td>■</td>
<td>△</td>
</tr>
<tr>
<td>012</td>
<td>△</td>
<td>△</td>
</tr>
</tbody>
</table>

Table 5.3: TCE variables with control distribution.  
Note: Market based pattern=■; Bureaucracy based pattern=△; Trust based pattern=◆
To analyze the data presenting in Table 5.3 above, we are intended to do the cross-case analysis with three steps, comparing control patterns distribution with asset specificities variable, comparing control patterns distribution with uncertainties variable and comparing control patterns distribution with frequency/size variable. Finally, we will compare the results between media and non-media groups to see if there is any difference with them.

5.2.1. Asset specificities

<table>
<thead>
<tr>
<th>Groups</th>
<th>Case</th>
<th>Dominant control pattern</th>
<th>Variable</th>
</tr>
</thead>
<tbody>
<tr>
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<td>005</td>
<td>△</td>
<td>△</td>
</tr>
<tr>
<td></td>
<td>001</td>
<td>△</td>
<td>△</td>
</tr>
<tr>
<td></td>
<td>002</td>
<td>△</td>
<td>◆</td>
</tr>
<tr>
<td></td>
<td>003</td>
<td>△</td>
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<tr>
<td></td>
<td>004</td>
<td>△</td>
<td>△</td>
</tr>
<tr>
<td></td>
<td>006</td>
<td>△</td>
<td>△</td>
</tr>
<tr>
<td>Media background group</td>
<td>009</td>
<td>◆</td>
<td>◆</td>
</tr>
<tr>
<td></td>
<td>010</td>
<td>△</td>
<td>■</td>
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<td>011</td>
<td>△</td>
<td>△</td>
</tr>
<tr>
<td></td>
<td>012</td>
<td>△</td>
<td>△</td>
</tr>
<tr>
<td></td>
<td>007</td>
<td>◆</td>
<td>△</td>
</tr>
<tr>
<td></td>
<td>008</td>
<td>△</td>
<td>△</td>
</tr>
</tbody>
</table>

Table 5.4: Cross-case comparison between control patterns distribution and asset specificities variable
Note: Market based pattern=■; Bureaucracy based pattern=△; Trust based pattern=◆

Figure 5.1a: Cross-case comparison between control patterns distribution and asset specification variable in non-media group.
Both Table 5.4 and Figure 5.1a show the cross-case comparison between control patterns distribution and asset specificities variable in non-media group. The findings suggest that asset specificity is linked to choice of bureaucracy based control pattern during service sourcing process. The level of asset specificities in our cases concentrates to medium. In another saying, the buying firm mostly some investments specific to the collaboration with their suppliers when they source the services. We can see rare case with extensive specific investments pointing to the transaction with their suppliers.

We will look more closely at some of the cases to allow us to elaborate. In order to implement the ERP successfully, M-car (case 001) made some investments specific to the collaboration with their supplier in terms of the brand new serves and control room installing, staff’s computer skills training, and a joint project team launching. To protect those specific investments and get the largest value from those investment, M-car used a highly bureaucracy based control pattern in contracting phase. They required to specify the resource which should be consumed in the contract, and the final outcome of the service as well as rules regarding how to use their specific investments properly. Similarly, when sourcing the service other than ERP, M-car still manner in this way. For the service of logistics (case 004), M-car also made some investments on the joint team and on some hardware equipments which could support the successful implementation of logistics service. Also with the aim of guarantee the proper usage of their specific investments, they chose the bureaucracy based control pattern to specify the rule of conduct in detail and the penalty regulation which shall apply for the opportunistic behavior.

If this finding is only support by case samples from M-car, we may argue that the fundamental reasons may result from certain nature of M-car sourcing habit. Other positive samples, which can also support our findings from case firms other than M-car, make us believe that this finding is universal in our cases. For instance, when also sourcing ERP service, the C-Jewelry (case 002) also used a bureaucracy based control pattern in contracting phase with the aim to secure their specific investment by certain detailed contract rules.

In short, in non-media case-group we conclude that:

*P1: For those cases in non-media group that the buyers put some investments specific to the collaboration with their suppliers upon the service sourcing activities, the buyers are more likely to use bureaucracy based control pattern in contracting phase.*
Let’s move one forward step to look at the correlation between control patterns and asset specificities in media group.

**Figure 5.1b:** *Cross-case comparison between control patterns distribution and asset specification variable in media group.*

Both Table 5.4 and Figure 5.1b show the cross-case comparison between control patterns distribution and asset specificities variable in media group. It’s hardly to observer any clear correlation between asset specificity and control patterns in media group. The level of asset specificities in media group seems to be low. Therefore, the media background firms seldom put some investments specific to the collaboration with their suppliers when they source the services. Again, we can hardly see any cases in this group with extensive specific investments pointing to the transaction with their suppliers.

Based on the cross comparison between non-media and media group with the variable of asset specificities, we sum up the findings below:

- When sourcing services from external suppliers, non-media background firms prefer to put some investments (medium level) specific to the collaboration to the transaction. On the contrary, the media background firms seldom to do so.
- Non-media background firms are more likely to use bureaucracy based control pattern in contracting phase when they put some investments specific to the transactions, but we can rare see any clear tendency in media group.
5.2.2. Frequency/size

<table>
<thead>
<tr>
<th>Groups</th>
<th>Case</th>
<th>Dominant control pattern</th>
<th>Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Tendering</td>
<td>Contracting</td>
</tr>
<tr>
<td>Non-media</td>
<td>004</td>
<td>△</td>
<td>△</td>
</tr>
<tr>
<td>background group</td>
<td>003</td>
<td>△</td>
<td>△</td>
</tr>
<tr>
<td></td>
<td>006</td>
<td>△</td>
<td>△</td>
</tr>
<tr>
<td></td>
<td>001</td>
<td>△</td>
<td>△</td>
</tr>
<tr>
<td></td>
<td>002</td>
<td>△</td>
<td>△</td>
</tr>
<tr>
<td></td>
<td>005</td>
<td>△</td>
<td>△</td>
</tr>
<tr>
<td>media background group</td>
<td>009</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>007</td>
<td>●</td>
<td>△</td>
</tr>
<tr>
<td></td>
<td>012</td>
<td>△</td>
<td>△</td>
</tr>
<tr>
<td></td>
<td>008</td>
<td>△</td>
<td>△</td>
</tr>
<tr>
<td></td>
<td>010</td>
<td>△</td>
<td>■</td>
</tr>
<tr>
<td></td>
<td>011</td>
<td>■</td>
<td>△</td>
</tr>
</tbody>
</table>

Table 5.5: Cross-case comparison between control patterns distribution and service frequency variable
Note: Market based pattern=■; Bureaucracy based pattern=△; Trust based pattern=●

![Figure 5.2a](image.png)

Figure 5.2a: Cross-case comparison between control patterns distribution and service frequency variable in non media group.

Both Table 5.5 and Figure 5.2a show the cross-case comparison between control patterns distribution and frequency/size variable. The volume of the contract in this case group varies case by case, low to thousands U.S. dollar and high to millions U.S. dollar. Based on the early assigned three categories for variable of frequency/size (volume of contract), we can see that the value of this variable shows normal distribution in our cases.
In tendering phase, volume of the contract for M-car (case 001) is $30,640 which stands at the medium level comparing with the rest cases, and the control pattern used in this phase is bureaucracy based one. Other cases, for instance, silicon dioxide manufacture (case 005), and C-jewelry (case 002) also present the same tendency.

Similarly in the contracting phase, for those whose volume of contract is between $10,000 to $10,000 (medium level of frequency/size), they were using a bureaucracy based control pattern in this phase. M-car (case 001), silicon dioxide manufacture (case 005), and C-jewelry (case 002) can support this findings as evidences.

To summarize, in non-media group we conclude that:

\[ P2a: \text{For those cases which the volume of contract at medium level ($10,000$ to $100,000$), the buyer are more likely to use a bureaucracy based control pattern particularly in tendering phase although also to a lesser extent in other phases} \]

\[ P2b: \text{For those cases which the volume of contract at medium level ($10,000$ to $100,000$), the buyer are more likely to use a bureaucracy based control pattern particularly in contracting phase although also to a lesser extent in other phases} \]
Next, we would move forward to examine the correlation between control patterns and variable of service frequency.

![Figure 5.2b: Cross-case comparison between control patterns distribution and service frequency variable in media group.](image)

Both Table 5.5 and Figure 5.2b show the cross-case comparison between control patterns distribution and frequency/size variable in media group. The volume of the contract in this case group also differ case by case, low to thousands U.S. dollar and high to millions U.S. dollar. Half of the cases, the contract volume concentrate between $10 000 to $100 000 which is in the medium level.

In both tendering and delivering phase, we can observe a common finding that for those cases whose volume of contract is medium level (between $10 000 to $100 000), they are using a bureaucracy based control pattern. For instance, we can easily find case 007 and case 009 to support us.

Based on the cross-comparison in those two groups with variable of service frequency, we summarize the findings below:

- When sourcing service from the external suppliers, the contract volume for both two groups has the similar distribution pattern, span from low to high and concentrating in the medium level.
- In non-media group for those cases whose contract volume at medium level, the buyers are more likely to implement a bureaucracy based control pattern in tendering or contracting phase, while in the media group, they prefer to use this pattern in tendering or delivering phase.
5.3. Explanatory Variables from Business Interaction Model

Business interaction model can help us to understand and/or to predict how the collaboration of the relationship between customer and supplier will or can take place (Axelsson & Wynstra 2002), and some elements of business interaction model, e.g. relationship history, nature of relationship and power dependency, may possibly related to the choice of control pattern during service souring process and even bring impact on the service sourcing control system design. In this section, we are intended to examine and discuss the inter-relationship between variables of business interaction model and control choice during different sourcing process.

Table 5.6 presented the overview of control choice in different sourcing phases and the extent/level of three business interaction model variables. Low, medium and high are still used to describe the degree of relationship history variable in qualitative. More specifically, relationship history refers to the strength of relationship. In Figure 5.3, we are using a 2*2 matrix to describe the level of relationship history (strength). The high level refers to the situation when the transaction relationship is long and some adaptations in it. On the contrary, the low level refers to the short transaction relationship with very few or even no adaptation. Another variable, power dependency is assigned with four categories (see Fig 5.4). D1 refers to the situation when buyers highly depend on suppliers and D2 means suppliers dependent on buying firms. D3 refers to relatively balanced power dependence. For the nature of relationship, we are using two categories to describe this variable, e.g. arm length oriented and relationship oriented.

![Figure 5.3: Matrix of relationship history](image)

![Figure 5.4: Matrix of power dependency](image)
<table>
<thead>
<tr>
<th>Case</th>
<th>Dominant control pattern</th>
<th>Relationship history</th>
<th>Nature of relationship</th>
<th>Power dependency</th>
</tr>
</thead>
<tbody>
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<td>001</td>
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<td>High</td>
<td>Relationship oriented</td>
<td>D1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Deep cooperation</td>
<td>10+ alternative suppliers</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Joint procedure</td>
<td>Supplier has many customers</td>
</tr>
<tr>
<td>002</td>
<td>△</td>
<td>High</td>
<td>Relationship oriented</td>
<td>D1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Deep cooperation</td>
<td>Only 3 alternative suppliers</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Involvement/joint meeting</td>
<td>Supplier has many customers</td>
</tr>
<tr>
<td>003</td>
<td>△</td>
<td>High</td>
<td>Relationship oriented</td>
<td>D1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Medium cooperation</td>
<td>10+ alternative suppliers</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Joint planning</td>
<td>Supplier has many customers</td>
</tr>
<tr>
<td>004</td>
<td>△</td>
<td>High</td>
<td>Relationship oriented</td>
<td>D3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Deep cooperation</td>
<td>Only 4 alternative suppliers</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Joint procedure/rules</td>
<td>Supplier has 10+ customers</td>
</tr>
<tr>
<td>005</td>
<td>△</td>
<td>Medium</td>
<td>Arm length oriented</td>
<td>D3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Medium cooperation</td>
<td>100+ alternative suppliers</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Only joint meeting</td>
<td>Supplier has many customers</td>
</tr>
<tr>
<td>006</td>
<td>△</td>
<td>Medium</td>
<td>Relationship oriented</td>
<td>D3</td>
</tr>
<tr>
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<td></td>
<td>Slightly deep cooperation</td>
<td>15+ alternative suppliers</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Joint working team</td>
<td>Supplier has 10+ customers</td>
</tr>
<tr>
<td>007</td>
<td>◆</td>
<td>Medium</td>
<td>Relationship oriented</td>
<td>D2</td>
</tr>
<tr>
<td></td>
<td>△</td>
<td></td>
<td>Deep cooperation</td>
<td>Many alternative suppliers</td>
</tr>
<tr>
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<td></td>
<td>Highly involved in project</td>
<td>Supplier has limited customers</td>
</tr>
<tr>
<td>008</td>
<td>△</td>
<td>Medium</td>
<td>Relationship oriented</td>
<td>D3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Deep cooperation</td>
<td>1000+ alternative suppliers</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Joint planning</td>
<td>Supplier has many customers</td>
</tr>
<tr>
<td>009</td>
<td>◆</td>
<td>High</td>
<td>Relationship oriented</td>
<td>D3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Deep cooperation</td>
<td>10+ alternative suppliers</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Jointly working</td>
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</tr>
<tr>
<td>010</td>
<td>△</td>
<td>Medium</td>
<td>Arm length oriented</td>
<td>D1</td>
</tr>
<tr>
<td></td>
<td>■</td>
<td></td>
<td>Shallow cooperation</td>
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<td></td>
<td>Nominal joint work team</td>
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</tr>
<tr>
<td>011</td>
<td>△</td>
<td>High</td>
<td>Relationship oriented</td>
<td>D3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Deep cooperation</td>
<td>15+ alternative suppliers</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Joint procedure and rules</td>
<td>Supplier has 10+ customers</td>
</tr>
<tr>
<td>012</td>
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<td>Medium</td>
<td>Relationship oriented</td>
<td>D3</td>
</tr>
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<td></td>
<td></td>
<td>Deep cooperation</td>
<td>1000+ alternative suppliers</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Joint working team</td>
<td>Supplier has many customers</td>
</tr>
</tbody>
</table>

Table 5.6: Business interaction model with control distribution. Note: Market based pattern=■; Bureaucracy based pattern=△; Trust based pattern=◆
Table 5.7 presents the value of business interaction model variable (relationship history, nature of relationship and power dependency) emerging from the cases. We are going to do the cross-case analysis with three steps, comparing control patterns distribution with relationship history variable, nature of relationship variable and power dependency variable. Again, we also will compare the results between media and non-media groups to see if there is any difference with them.

5.3.1. Nature of relationship

<table>
<thead>
<tr>
<th>Group</th>
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<th>Variable</th>
</tr>
</thead>
<tbody>
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<td>contracting</td>
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<td>Non-media background group</td>
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<td>△</td>
</tr>
<tr>
<td></td>
<td>001</td>
<td>△</td>
<td>△</td>
</tr>
<tr>
<td></td>
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<td>△</td>
</tr>
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<td>△</td>
</tr>
<tr>
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<td>△</td>
</tr>
<tr>
<td></td>
<td>002</td>
<td>△</td>
<td>△</td>
</tr>
<tr>
<td>Media background group</td>
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<td>△</td>
<td>■</td>
</tr>
<tr>
<td></td>
<td>011</td>
<td>■</td>
<td>△</td>
</tr>
<tr>
<td></td>
<td>008</td>
<td>△</td>
<td>△</td>
</tr>
<tr>
<td></td>
<td>012</td>
<td>△</td>
<td>△</td>
</tr>
<tr>
<td></td>
<td>009</td>
<td>◆</td>
<td>◆</td>
</tr>
<tr>
<td></td>
<td>007</td>
<td>◆</td>
<td>△</td>
</tr>
</tbody>
</table>

Table 5.7: Cross-case comparison between control patterns distribution and nature of relationship variable
Note: Market based pattern= ■; Bureaucracy based pattern= △; Trust based pattern= ◆

Figure 5.5a: Cross-case comparison between control patterns distribution and nature of relationship variable in non media group.
Both Table 5.7 and Figure 5.5a show the cross-case comparison between control patterns distribution and nature of relationship variable in non media group. Nearly all the cases are using a relationship oriented approach to cooperate with their suppliers. More specifically, usually they have a deep cooperation with suppliers in terms of joint development procedure, joint planning regarding the sourced service and joint evaluation meeting to track the project progress or to measure suppliers’ performance.

In tendering and contracting phases, findings suggest that the nature of relationship is linked to the choice of control pattern in those phases. For M-car (case 001), the sourcing of ERP service is a relatively long and ongoing process, especially for the delivering phase. To track the project progress and measure the supplier’s performance, M-car arranged the weekly meeting involving the whole project team from two parties by reviewing achievements and negotiating the following plan. The control mechanism is a typical bureaucracy based control pattern. It is the same when silicon dioxide manufacture (case 006) sourced the ERP service. The cooperation between two parties is relatively on a deep base and there are some join meeting to monitor the ongoing process of supplier’s offering. The buyer even required to report the progress in written format and documented. Obviously, the buyer was using a bureaucracy based control pattern in this phase. For the sourced services other than ERP, we can also observe the same tendency. Evidences from other cases, e.g. M-car (case 003 and 004), and C-jewelry (case 002) also support our findings.

For all, in non-media group we conclude that:

\[ P3a: \text{For those cases which developed a deep cooperation in term of jointly planning, evaluation meeting and procedure with their suppliers, the buyer are more likely to use a bureaucracy based control pattern in delivering phase.} \]
Next, we would switch to look at the correlation between control pattern and nature of relationship in media group.

![Cross-case comparison between control patterns distribution and nature of relationship variable in media group.](image)

**Figure 5.5b:** Cross-case comparison between control patterns distribution and nature of relationship variable in media group.

Both Table 5.7 and Figure 5.5b show the cross-case comparison between control patterns distribution and nature of relationship variable in media group. Similarly with the pattern in non-media group, 5 of out 6 cases are using a relationship oriented approach to cooperate with their suppliers. It implies that the buyers in media group often develop a relative deep cooperation with their suppliers when sourcing services outside.

In contracting and delivering phases, findings suggest that the nature of relationship is linked to the choice of control pattern in those phases. For instance, game art is outsourced by G-game (case 012) when they could not meet the increasing growth of the incoming projects. To control the final output which should be exactly what they want, G-game chose a highly bureaucracy based control pattern in delivering phase to monitor every step of this service, and they even gave detailed working instruction to the supplier, meanwhile, T-semiconductor (case 007) mannered in the same way when they sourced a supplementary R&D service. They got involved in the delivering phase in terms of providing technical consulting, joint planning and reviewing progress. Bureaucracy based control is easily observed in this phase.
For all, in media group we can conclude that:

- In both non-media and media group, an overwhelming number of cases are developing a deep cooperation with their suppliers in terms of joint development procedure, joint planning regarding the sourced service and joint evaluation meeting to track the project progress or to measure suppliers’ performance.

- In non-media group, correlation between control pattern used and nature of relationship can be observed in tendering and contracting phase. While in the media group, this correlation can be found in contracting and delivering phase.
5.4. Explanatory Variables from Service Characteristics

Characteristics of business service, e.g. service activities, service specification and the risks associated with service may be relevant with the choice of control patterns during service sourcing process and also influence the service sourcing control system design. In this section, we are going to explain and discuss the inter-relationship between variable of service characteristics and control choice during different sourcing phases.

Table 5.8 presents the overview of control choice in different sourcing phases and the level of three service characteristics variables which include service activities, service specification and the risks associated with service. In line with other variables we described before, three levels are used to determine the degree of these three variables in qualitative. More specifically, service activities refer to complexity of this service, e.g. how many activities in this service? And do these activities matter in sequence? In Figure 5.6, we are using a 2*2 matrix to determine the level of

![Figure 5.6: Matrix of service activities](image)

![Figure 5.7: Matrix of service specification](image)

![Figure 5.8: Matrix of risks with service](image)

Service activities complexity. The high level gives to the situation when there are many activities in this service and activities matter in sequence. On the contrary, the low level refers to the situation when there are few activities in this service and activities do not matter in sequence. Another variable, service specification refers to the difficulty to specify the service. The last variable of service characteristics, risks associated with service means the closeness to buyer’s core business and consequence to other activities during sourcing process. We are using the same idea to determine the level of service specification and risks associated with service presenting in Figure 5.7 and Figure 5.8.
<table>
<thead>
<tr>
<th>Case</th>
<th>Dominant control pattern</th>
<th>Service activities (complexity)</th>
<th>Service specification (difficulty)</th>
<th>Risks associated with service</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tendering</td>
<td>Contracting</td>
<td>Delivering</td>
<td>Many activities (9)</td>
</tr>
<tr>
<td>001</td>
<td>△</td>
<td>△</td>
<td>△</td>
<td>High</td>
</tr>
<tr>
<td>002</td>
<td>△</td>
<td>△</td>
<td>◆</td>
<td>High</td>
</tr>
<tr>
<td>003</td>
<td>△</td>
<td>△</td>
<td>△</td>
<td>High</td>
</tr>
<tr>
<td>004</td>
<td>△</td>
<td>△</td>
<td>△</td>
<td>High</td>
</tr>
<tr>
<td>005</td>
<td>△</td>
<td>△</td>
<td>△</td>
<td>Low</td>
</tr>
<tr>
<td>006</td>
<td>△</td>
<td>△</td>
<td>△</td>
<td>High</td>
</tr>
<tr>
<td>007</td>
<td>◆</td>
<td>△</td>
<td>◆</td>
<td>High</td>
</tr>
<tr>
<td>008</td>
<td>△</td>
<td>△</td>
<td>◆</td>
<td>High</td>
</tr>
<tr>
<td>009</td>
<td>◆</td>
<td>◆</td>
<td>◆</td>
<td>High</td>
</tr>
<tr>
<td>010</td>
<td>△</td>
<td>■</td>
<td>◆</td>
<td>High</td>
</tr>
<tr>
<td>011</td>
<td>■</td>
<td>△</td>
<td>△</td>
<td>High</td>
</tr>
<tr>
<td>012</td>
<td>△</td>
<td>△</td>
<td>△</td>
<td>High</td>
</tr>
</tbody>
</table>

Table 5.8: Service characteristics variables with control distribution. Note: Market based pattern=■; Bureaucracy based pattern=△; Trust based pattern=◆
To analyze the data presenting in Table 5.8 above, we are intended to do the cross-case analysis with three steps, comparing control patterns distribution with service activities variable, service specification variable and service characteristics variables. Finally, we still would compare the final result with non-media and media groups.

### 5.4.1. Risks associated with service

<table>
<thead>
<tr>
<th>groups</th>
<th>case</th>
<th>Dominant control pattern</th>
<th>Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Tendering</td>
<td>Contracting</td>
</tr>
<tr>
<td>Non media background</td>
<td></td>
<td>△</td>
<td>△</td>
</tr>
<tr>
<td>group</td>
<td>001</td>
<td>△</td>
<td>△</td>
</tr>
<tr>
<td></td>
<td>003</td>
<td>△</td>
<td>△</td>
</tr>
<tr>
<td></td>
<td>004</td>
<td>△</td>
<td>△</td>
</tr>
<tr>
<td></td>
<td>006</td>
<td>△</td>
<td>△</td>
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<tr>
<td></td>
<td>002</td>
<td>△</td>
<td>△</td>
</tr>
<tr>
<td></td>
<td>005</td>
<td>△</td>
<td>△</td>
</tr>
<tr>
<td>Media background group</td>
<td>012</td>
<td>△</td>
<td>△</td>
</tr>
<tr>
<td></td>
<td>009</td>
<td>◆</td>
<td>◆</td>
</tr>
<tr>
<td></td>
<td>007</td>
<td>◆</td>
<td>△</td>
</tr>
<tr>
<td></td>
<td>011</td>
<td>■</td>
<td>△</td>
</tr>
<tr>
<td></td>
<td>010</td>
<td>△</td>
<td>■</td>
</tr>
<tr>
<td></td>
<td>008</td>
<td>△</td>
<td>△</td>
</tr>
</tbody>
</table>

Table 5.9: Cross-case comparison between control patterns distribution and risks associated with service variable

Note: Market based pattern= ■; Bureaucracy based pattern= △; Trust based pattern= ◆

Figure 5.9a: Cross-case comparison between control patterns distribution and service risks variable in non-media group
Both Table 5.9 and Figure 5.9a show the cross-case comparison between control patterns distribution and risks associated with service variable. In non-media group, most buyers perceived the risks associated with the services are relatively high. The services they sourced from suppliers either are close to core business or bring significantly negative consequences if failed delivery.

Emerging from the cases, it is suggested that the variable of risks associated with service is linked to the choice of control. In tendering, when sourcing the ERP service (case 001), buyer requested service specification and execution plan from the supplier aiming to make sure the service is exactly what they want and will deliver properly under a scheduled timetable and qualified manpower. They cannot dare to run risks because the ERP would control the whole process of their operation and result in significant negative consequence if delivered fail. This way of control obviously can be considered as the bureaucracy based control. Other cases which sourced the same service (ERP) can also support our findings, e.g. dioxide manufacture (case 006) and C-jewelry (case 002).

In contracting phase, the logistics service (case 004) source by M-car is highly close to its core business offering, or even can be considered as part of its products. Late or failed delivery would result in heavily financial penalty and reduce the goodwill and reputation for its customers. To protect from supplier’s opportunistic behavior and to mitigate the future contingencies/risks, M-car used the bureaucracy based control in terms of signing a detailed contract with its supplier. Evidence from other cases, e.g. case 001, 002, 003, 006 also can support our findings.

To summarize, in our case we conclude that:

P4a: For those cases which sourced service is close to buying firm’s core business and led to negative consequence to other activities in the buying firm if failed delivery, they are more likely to implement a bureaucracy based control pattern in tendering phase.

P4b: For those cases which sourced service is close to buying firm’s core business and led to negative consequence to other activities in the buying firm if failed delivery, they are more likely to implement a bureaucracy based control pattern in contracting phase.
Let’s move forward to look at the inter-relationship between control patterns distribution and risks associated with service variable in media group.

![Figure 5.9b: Cross-case comparison between control patterns distribution and service risks variable in media group](image)

Both Table 5.9 and Figure 5.9b show the cross-case comparison between control patterns distribution and risks associated with service variable in media group. In this group, half the buyers perceived the risks associated with the services are relatively high. One third buying firms even perceived that the services they bought have relatively low risks either connecting to their core business or bringing significantly negative effects if failed delivery.

When we look at the correlation between the control patterns distribution and risks associated with service variable, it’s hardly to observer any clear correlation between them in media group. For all, we summarize the findings from the comparison analysis below:

- We see positive correlation in non-media group that when the risks are relatively high, buying firms in this group are more likely to use a bureaucracy based control pattern in tendering or contracting phase, but this can be hardly observe in media group cases.
- Nearly all buying firms (5 out of 6) in non-media group perceived that services they bought have relatively high risks, while only half in media group think so.
6. Discussion

In line with our expectations, the research model which is formulated by three theories of transaction cost economics, business interaction model, and service characteristics can explain the choice of control pattern within service sourcing control system in overall, although some elements of certain single theory seem less relevant for explaining.

6.1. Verification of Research Model

Findings suggest that two core elements, asset specificities and frequency/size, from transaction cost economics theory are linked with the choice of control pattern during service sourcing process in non-media group. Investments which specifically made to the collaboration between buyers and suppliers for service sourcing activities require regular coordination to avoid the risk of behaving opportunistically. Thus there are increasing needs for buying firms to adopt a suitable control pattern to mitigate such opportunistic risks and to secure the specific investments in good condition. Frequency/size of a transaction reflects on importance to the buying firms. Normally, it is believed that transaction with large volume is more important for a buying firm comparing with transactions with small volume. Therefore, a large volume transaction will stimulate buying firms’ motivation to acquire a “right” control pattern as failure from a large volume transaction will lead to serious negative consequences which it’s hard to bear for a buying firm. In our research, we also note that uncertainty which is also one central element from transaction cost economics does not bring too many impacts on the choice of control pattern during service sourcing process for both groups. In other words, the mitigation of transaction uncertainty does not rely on the deployment of certain control pattern in the context of service sourcing process.

From business interaction model perspective, our findings imply that variable of nature of relationship is relevant with the choice of control pattern during service sourcing process in both group. This variable concerns the cooperation between the involving parties in terms of the degree of cooperation and types of the cooperation. Control pattern which provides more opportunities in buyer-supplier cooperation will receive more attention. Lovelock (1983) has addressed that customers can become more productive ‘inputs’ into the service delivery process, by means of
actions such as timing-changes, co-production and third-party involvement. Other two variables, relationship history and power dependency, from business interaction model seem less relevant with the control choice in service sourcing process.

Only one variable, risks associate with the service, from service characteristics perspective is relevant with the choice of control pattern during service sourcing process. The buying firms emphasize more on the risk aspect than other characteristics, such as service activities (number of the activities in the service and sequence of these activities) and service specification (the difficulty of specification and prior experience and knowledge for specification). It implies that control pattern which could best mitigate the risks driving from service itself will be the first priority choice for the buying firms.

6.2. Comparative Findings

Chapter five made a throughout analysis from transaction cost economics (TCE) to service characteristics theory based on the research model we proposed in chapter two. Here, we summarize the comparative findings from the cross-group analysis in both media and non-media group below:

<table>
<thead>
<tr>
<th>Control Pattern</th>
<th>Transaction Cost Economics</th>
<th>Business interaction model</th>
<th>Service Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Media Group</td>
<td>- Half bureaucracy based control patterns can be observed in each phase, the rest are diversified in different</td>
<td>- asset specificities does not link with control choice</td>
<td>- deep cooperation with service suppliers</td>
</tr>
<tr>
<td></td>
<td>- not prefer to put investments specific to transactions</td>
<td>- transaction frequency links with control choice</td>
<td>- nature of relationship links with control choice</td>
</tr>
<tr>
<td>Non Media Group</td>
<td>- Almost all the control patterns in this group are bureaucracy based control ones</td>
<td>- asset specificities links with control choice</td>
<td>- deep cooperation with service suppliers</td>
</tr>
<tr>
<td></td>
<td>- prefer to put some investments specific to transactions</td>
<td>- transaction frequency links with control choice</td>
<td>- nature of relationship links with control choice</td>
</tr>
</tbody>
</table>
From the comparative findings table above, we can observe that control patterns in both two groups differ significantly. In non-media group which all the firms come from the traditional manufacturing industry, they used to choose the highly bureaucracy based control pattern in the entire sourcing phases. In our study, only C-Jewelry (case 002) is using a trust-based control pattern in delivery phase and the rest are all bureaucracy based control one. On the contrary, in media group which firms come from hi-tech oriented media industry, they are willing to use different control patterns in the sourcing activities.

There are several reasons to explain this tendency. Firstly, firms in media group are relatively young companies with the oldest is only ten years old (case 007). They are creative and open-minded for new things and are willing to implement organizational change for achieving cost reduction. However, in non-media group, most firms have operated more than 20s and some even than 30s years old. They used to do as “usual” to secure a smooth daily operation. Also, the bureaucratic corporate culture may result in the choice of bureaucracy control patterns. Secondly, firms in media group are all public shared companies listed in the local or oversea markets. The pressure of continuous creation value for the shareholders motivates them to make changes all the time to achieve the best practices, in sometimes even to take risks. Finally, the services which bought by the media group firms are much more complex than those bought by non-media group firms and have less routine producers to follow which are ideal for bureaucracy based control pattern.
7. Conclusions and recommendations

This study examines the control pattern used by firms when sourcing business service and seeks to understand which factors are linked to the choice of control pattern throughout the service sourcing process, from initial tendering phase to the final delivery phase. To do so, we built up a research model driven by three theories, the transaction cost economics (TCE) theory, business interaction model and service characteristics. Nine potential factors are identified from the theories and are included in our research model. We collected 12 cases by taking interviews with respondents from seven firms across China and compared their control choice in different sourcing phase with the value of factors we identified from the interviews.

7.1. Theoretical contribution

The case studies suggest firms tend to use bureaucracy based control pattern throughout the whole sourcing process. There is very few pure market based control pattern can be observed in our case studies. Trust based control pattern has drawn some attentions but still does not interest to most firms based on our observation. This study proposes three categories of factors that may be linked to the choice of control pattern during service sourcing process in the former research model (see research model in section 2.3.2), including transaction cost economics perspective factors, business interaction model perspective factors and service characteristics perspective factors and examines the actual inter-relationship by empirical data generated from interviews. It also develops some propositions that address in detail how these factors link with choice of control pattern during different phase of service sourcing process (see chapter 5).

This study makes two key contributions to service sourcing literature and especially for the service sourcing control system design.

(1) This study contributes to extant service sourcing literature by generating propositions on various kinds of business services. More specifically, it adds to Lichtenthal, Shani (2000) and West (1997) argument that, the studies in business service sourcing literature have concentrated on the purchase of a specific kind of service, such as advertisement or professional services, e.g. consulting services (Mitchell, 1994; Stock and Zinszer, 1987), by introducing business services
other than advertisement or professional services, for instance, IT service (ERP, case 3, 9 and 16), logistics service (case 6, 7), maintenance service (case 8), R&D supplementary service (case 5 and 15) and so on (see Table X).

(2) This study contributes towards theory development on service sourcing control system design by identifying factors linked to the choice of control pattern in different sourcing phase. The extent studies focusing on control issue are either in the context of strategic alliance (Dekker 2004) or the context of inter-firm transactional relationships illustrating by service cases (Van der Meer-Kooistra & Vosselman 2000). Our study is dealing with control issue in a pure service sourcing context emphasizing the importance of sourcing activity, one of the inter-firm business activities, especially for the business service sourcing. This study is a part of research which focuses on the design of service sourcing control system. We directly contribute to that larger scope research by pointing out some factors (asset specificities, frequency, nature of relationship, risks associated with service) linked to the choice of control pattern. These factors should take into consideration when researchers design a systematic servicing sourcing control system.

7.2. Limitations and future research

This study has some limitations that we should point out here. First of all, all the propositions are based on the exploratory observation in their nature and hence do not allow statistically relevant statements. However, having included interviews from a relatively large number of professionals from a variety of industries as well as different corporate backgrounds is supposed to allow well-founded conclusions about factors relevant to the choice of control pattern during service sourcing process. Nevertheless, future empirical research can attribute to the results presented here through testing hypotheses developed from this study. Second, the identified relevant factors to the choice of control pattern during service sourcing process are only explored through the research model we proposed before (see section 2.3.2), hence there may be factors other than those we included in the research model also relevant to the choice of control pattern. Future research could generate more factors in a greater scope of theory basis, e.g. core competence theory (Porter, 1998), Activities-Resources-Actors model (Håkansson, 1987). Third, the identified factors are only relevant to the control choice, therefore the future research could go further in exploring the fundamental
reasons for the choice of control pattern drawing a richer and more complex picture of determinants to service sourcing control pattern choice. Finally, future research also can explore the de(stabilization) of control choice during the whole service sourcing process.
References


Journal of Business Research, 15, 1-16.


WDI (World Development Indicators) Database. World Bank.


Appendix A: Interview Guide

The overall purpose of the project is to study control of service suppliers. More specifically, the project aims to identify factors that impact on the design of such control systems.

The respondent should:

- chose a specific service sourced from an external supplier (i.e., the service contract is the unit of analysis)
- chose a service that has been delivered for some time, an “ongoing” service delivery (the total time period including tendering should be at least 1 year)
- chose a service where the respondent has been involved in or has significant knowledge of all stages in the sourcing process (tendering, contracting and delivery stages including on-going control)

Inform the respondent that:

- we will not ask for the name of the supplier in questions
- we will never reveal the name of the respondent of the respondent’s company

1. Service Characteristics

1.1 Ask the respondent for a brief description of THIS service
1.2 Does the contract for THIS service represent a one-time or repeat purchase?
1.3 Is the contract renewed continuously?
1.4 For how long has THIS service been sourced from THIS supplier?
1.5 Are there price re-negotiations during or between contracts? Are price increases tied to an index?
1.6 What is the volume of THIS service (in financial terms and length of contract)?
1.7 Number of simultaneous suppliers of THIS service
1.8 Is THIS service standardized, partly adapted to the buyer’s needs or developed entirely for the buyer?
1.9 To what extent and in what ways is the buyer involved in adaptations/development of THIS service?
1.10 How difficult is it to achieve optimal quality levels of THIS service?
1.11 Why does the firm source THIS service rather than perform it in-house?

2. The Relationship with the Supplier

2.1 Are other services bought from THIS supplier?
2.2 For how long have services been bought from THIS supplier?
2.3 How many alternative suppliers of THIS service are the on the market?
2.4 What is the approximate share of the supplier’s turnover represented by THIS service bought by the respondent’s firm?
2.5 What would be the consequences for the supplier if the contract is terminated or not renewed?
2.6 Is the buyer able to exert great pressure on the supplier to lower the price? (I.e., what is the distribution of power in the relationship?)

3. Characteristics of the Transaction

3.1 Has the buyer done any investments that are specific to the collaboration with THIS supplier that could not be used in collaboration with OTHER suppliers? (e.g., investments in systems, business processes, staff, etc.)
3.2 Have the buyer and supplier developed a joint organization for the service (e.g., procedures, rules, systems)?
3.3 Has the buyer been involved in developing THIS supplier’s competence (has THIS supplier learnt anything from the buyer?)
3.4 What would be the consequences for the buyer if THIS service was not delivered, if deliveries were incorrect, or if quality was poor?
3.5 What would be the main difficulties when trying to switch to a NEW supplier?
3.6 Does the buyer continuously engage in search for NEW suppliers (i.e., also during contract periods)?
3.7 Is THIS supplier likely to act contrary to the interests of the buyer? If so, how (are there examples of this)?

4. RFX/ITT (invitation to tender)
4.1 Different types of data can be requested in connection with the ITT; ask the respondent to comment on the relevance of each type and what it means in the context of THIS service:
   (a) technical specifications
   (b) how and by who the service should be performed
   (c) costs, cost structures, profit margin (detailed breakdowns or general structures?)
   (d) sub-contractors (their roles and costs)
   (e) quality certification and standards
   (f) environmental policies and certification
   (g) general financial data (annual reports etc.)
   (h) plans regarding future investments (e.g., competence development)

5. The contract
5.1 Does the contract for THIS service specify which resources should be consumed? If so, which are these?
5.2 Does the contract for THIS service specify HOW the service should be performed? If so, which processes are specified and at what level of detail?
5.3 Does the contract for THIS service specify the outcome of the service? If so, which outcomes are specified (e.g., deliveries on time, quality levels)?
5.4 Does the contract for THIS service specify what value the service should provide the buyer (e.g., if the service should improve the buyer’s performance, efficiency, results, etc.)?
5.5 Does the contract for THIS service contain penalty clause such as fines/withheld payment? If so, when (e.g., for late deliveries, poor quality, etc.)?
5.6 Are there restrictions in the contract regarding how data collected by the BUYER from THIS supplier may be used outside the relationship (e.g., in contacts with OTHER suppliers)?

6. Control during the delivery phase
6.1 Different types of data can be requested during the delivery phase; ask the respondent to comment on the relevance of each type and what it means in the context of THIS service:
   (a) technical specifications
   (b) how and by who the service should be performed
   (c) costs, cost structures, profit margin (detailed breakdowns or general structures?)
   (d) sub-contractors (their roles and costs)
   (e) quality certification and standards
(f) environmental policies and certification
(g) general financial data (annual reports etc.)
(h) plans regarding future investments (e.g., competence development)

6.2 Which key performance indicators (KPI) are used during delivery to measure THIS supplier’s performance?
6.3 Is THIS supplier’s performance primarily directly OBSERVERED by the buyer or REPORTED to the buyer by the SUPPLIER (or a combination)?
6.6 Do the buyer and supplier jointly plan and make budgets for THIS service?
6.7 Are there JOINT meetings (between buyer and supplier) to evaluate THIS supplier’s performance? If so, what form do these meetings take and how often are they held?
6.8 What types of feedback does THIS supplier receive (what form, how often)?
6.9 Are there formalized reporting systems (e.g., electronic systems)?

7. Other purposes of data collection from the supplier

Ask the respondent to comment on the importance of the following purposes for collecting data from the supplier in the case of THIS service:

- To learn about price levels on the supply market
- To learn how THIS service is typically performed
- To reduce the buyer’s own costs
- To make sure that the buyer pays a fair price
- To make different suppliers’ offers comparable (in the case of complex services different suppliers may have very different ideas about service content, e.g.)
- To determine the price
- To support long-term improvements for THIS supplier
- To support development of THIS service

8. Incentives for the supplier to share data

The buyer may provide the seller with different incentives to share data. Ask the respondent to comment on the importance of the following incentives for THIS service:

8.1 Basic requirement to be selected as supplier
8.2 Extended or larger contracts
8.3 Other incentives?

9. Implementation of data sharing procedures

9.1 When/If you requested sensitive data from THIS supplier, what was the supplier’s response?
9.2 Is there any information that you would like to obtain from THIS supplier that the supplier does not want to share?
9.3 If you have used THIS supplier in the past, has the supplier become increasingly more or less reluctant to share sensitive information?
## Appendix B: Case descriptions

<table>
<thead>
<tr>
<th>Case 001</th>
<th>Case 002</th>
</tr>
</thead>
</table>
| **Buyer Characteristics** | - Automobile part manufacturer  
- Turnover of $30.65 million in 2010 |
| **Supplier Characteristics** | - A leading corporate management software solution provider in China  
- Turnover of $220.1 million in 2010  
- An enterprise resource planning (ERP) solution provider exclusively for jewelry industry  
- Turnover is not available |
| **Service description** | - Implementing ERP (enterprise resource planning) system with five modules including finance, supply chain, planning, cost, and production.  
- The service is to design and implement an ERP system in buyer’s side |
| **Control during ITT phase** | - Technical specification, how and by who the service should be performed are requested during this phase  
- Execution plan is the most important data buyer required before signing the contract; absence of this data will result in terminating of negotiation; service technical specification is served as the relatively less important determinant, but is still required |
| **Control during contracting phase** | - Technical specification, how and by who the service should be performed are requested during this phase  
- Execution plan is the most important data buyer required before signing the contract; absence of this data will result in terminating of negotiation; service technical specification is served as the relatively less important determinant, but is still required  
- Through out and output service specification, both the detailed execution process and final outcomes are requested  
- Buyer reserves the right not to pay if poor quality or non-delivery |
| **Control during delivery phase** | - The service is to design and implement an ERP system in buyer’s side  
- Only the execution plan (how and by who) is required in this phase  
- Buyer concerned most about the process of implementation, they required to track every milestones of this project  
- Very intensive personal meetings, once a week, written report documented for each meeting. Buyer review supplier’s performance once a week internally. The final outcome should be approved by the buyer, the supplier and the end users (the associated departments)  
- No KPIs to measure supplier’s performance |
| **Specificities** | - Investing on some installation of hardware, e.g. the servers and training for staff  
- The volume of investment is less than $7660 |
| **Uncertainties** | - High switching cost to other alternatives |

*Specificities - Investing on some installation of hardware, e.g. the servers and training for staff  
The volume of investment is less than $7660  
Uncertainties - High switching cost to other alternatives due to...*
<p>| -Resource and cost consideration to source this service outside; dependent highly on this service | replacement of current system |
| -Opportunism check from the buyer | -Consideration of cost reduction and guarantee of successful implementation are the key motivations to source outside |
| | -A combination of buyer’s opportunism check and supplier’s self reporting |
| <strong>Frequency/size</strong> | <strong>Frequency/size</strong> |
| -One time purchase with possibility to acquire other modules (extra purchase cost request) | -First time contracting with this supplier |
| -Volume of $30 640 | -Volume of $154 083 |
| <strong>Relationship history</strong> | <strong>Relationship history</strong> |
| -Nearly one year contracting experience starting from first meeting | -Three years contracting experience with this supplier |
| -This service is partly adapted to buyer’s needs(buyer perceived); Supplier partly adapted its way to meet buyer’s need, e.g. developing some patches for buyers to meet certain needs | -This service is developed entirely for the buyer. A joint project team involving both parties makes sure a tailored outcome |
| <strong>Nature of relationship</strong> | <strong>Nature of relationship</strong> |
| -Deep interaction | -Close cooperation; |
| -close joint working process, supplier even learnt from this particular buyer(M-car) to enhance its own competence | -Got involved in the development of supplier’s competency, joint meeting to track the progress and measure supplier’s performance |
| -Relational purchasing strategy | -Relational purchasing strategy |
| <strong>Power dependency</strong> | <strong>Power dependency</strong> |
| -Many alternative suppliers in the market, at least 10 are strong qualified candidates. Currently working with sole supplier | -Only THREE alternative suppliers in the market |
| -Supplier is the leading player in this market, with more than 800 000 customers | -Supplier has a huge number of customer and it is facing a business boom |
| <strong>Service activities</strong> | <strong>Service activities</strong> |
| -There are 9 main activities in this service, pre-screening of the chosen packages, preparing for the venture, project planning, GAP analysis, designing the system, re-engineering, team training, testing and post implementation | -There are 9 main activities in this service, pre-screening of the chosen packages, preparing for the venture, project planning, GAP analysis, designing the system, re-engineering, team training, testing and post implementation |
| -The sequence definitely matters the outcomes | -The sequence definitely matters the outcomes |
| <strong>Service specification</strong> | <strong>Service specification</strong> |
| -High degree of difficulty to specify this service | -High degree of difficulty to specify this service |
| -This is the first time buyer sourcing ERP from this particular supplier. Person in charge with limited knowledge for this service | -This is the first time sourcing this kind of service. Person in charge with limited knowledge into this service |
| <strong>Risks associated with service</strong> | <strong>Risks associated with service</strong> |
| -This service controls the whole process of buyer’s core business operation | -This service controls the whole process of buyer’s core business operation |
| -Strong negative effect towards buyer’s business operation if fail delivery | -Strong negative effect towards buyer’s business operation if fail delivery |</p>
<table>
<thead>
<tr>
<th></th>
<th>Case 003</th>
<th>Case 004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buyer Characteristics</td>
<td>- Automobile part manufacturer</td>
<td>- Automobile part manufacturer</td>
</tr>
<tr>
<td></td>
<td>- Turnover of $30.65 million in 2010</td>
<td>- Turnover of $30.65 million in 2010</td>
</tr>
<tr>
<td>Supplier Characteristics</td>
<td>- A third party R&amp;D centre providing 3D modeling, testing and designing of automobile parts</td>
<td>- Logistics solution provider exclusively for automobile industry</td>
</tr>
<tr>
<td></td>
<td>- The size of the supplier is not available</td>
<td>- Annual turnover of $6.15 million in 2010</td>
</tr>
<tr>
<td>Service description</td>
<td>The service includes building a 3D model for a certain automobile part with the aid of computer and testing its availability</td>
<td>It’s a full logistics solution for the buyer including picking up products, transit warehousing, delivery to end customer’s production line, information feedback, containers returning</td>
</tr>
<tr>
<td>Control during ITT phase</td>
<td>- Technical specification, how and by who the service should be performed are requested before signing the contract</td>
<td>- Technical specification, quality certification and standards are requested. The CPO also emphasized the guarantee of information feedback is essential</td>
</tr>
<tr>
<td></td>
<td>- Two kinds of data above are the most important determinants but it’s easy to access; absence of these data will result in terminating this deal</td>
<td>- Technical (service) specification to guarantee successful delivery; ISO 9000 quality certification is required to be a qualified supplier</td>
</tr>
<tr>
<td>Control during contracting phase</td>
<td>- Input and output service specification; resources e.g. hardware and competent human capital are specified as well as some key facts of outcome, e.g. deliver time and quality level</td>
<td>- A combination of input, through out and output service specification; resources e.g. hardware and competent human capital are specified, some main steps of working process and some key facts of outcomes requested</td>
</tr>
<tr>
<td></td>
<td>- No penalty is connected to poor quality and non-delivery</td>
<td>- Financial penalty is connected to missing and broken parts</td>
</tr>
<tr>
<td>Control during delivery phase</td>
<td>- Technical specification, how and by who the service should be performed are still requested during this phase</td>
<td>- Delivery time, Asset preservation ratio and accuracy of information feedback from end customer are requested</td>
</tr>
<tr>
<td></td>
<td>- Much more detail information regarding those two data above required to track the progress and monitor the execution process</td>
<td>- Those three kinds of data are equally important</td>
</tr>
<tr>
<td></td>
<td>- Three times in person meeting with project manager from supplier’s firm; frequent communication via emails and phone during whole process of execution; buyer check the performance once a week internally</td>
<td>- Monthly in person meeting with manager from supplier. For some cases, even inviting buyer’s end customer to join the meeting for emergent and important issues. Special team in buyer’s logistics dept to monitor supplier’s performance</td>
</tr>
<tr>
<td></td>
<td>- Delivery time and quality level are the most important KPIs to measure supplier’s performance</td>
<td>- Using KPIs(followed with its end customer):delivery time, container damage rate, error parts rate and scrap rate to measure supplier’s performance</td>
</tr>
<tr>
<td>Specificities</td>
<td>- Specific investment to human capital</td>
<td>- Investment on hardware and manpower</td>
</tr>
<tr>
<td>Uncertainties</td>
<td>- High switching cost on searching qualified suppliers</td>
<td>- High switching cost to transfer current business to other alternatives</td>
</tr>
<tr>
<td></td>
<td>- Limitation of human capital leads to source</td>
<td>- Consideration of end customer’s need, cost reduction</td>
</tr>
<tr>
<td></td>
<td>this service outside; dependent on supplier’s offering</td>
<td>regarding operation and investment lead to source this service outside; Highly dependent on this service</td>
</tr>
<tr>
<td>--------------------------</td>
<td>--------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>-Opportunism check from the buyer</td>
<td>-A combination of buyer’s Opportunism check and supplier’s self-reporting</td>
</tr>
<tr>
<td>Frequency/size</td>
<td>-A repeat purchasing contract; Each contract for different project</td>
<td>-Annual contract</td>
</tr>
<tr>
<td></td>
<td>-Volume of $3 070</td>
<td>-Volume of $153 815</td>
</tr>
<tr>
<td>Relationship history</td>
<td>-Three years contracting experience from this supplier;</td>
<td>-More than 6 years contracting experience from this supplier</td>
</tr>
<tr>
<td></td>
<td>-This service is partly adapted to buyer’s need. Buyer tracked every process of supplier’s work, and made their work under buyer’s control</td>
<td>-This service is a standardized service. Various suggestions raising from different kinds of meeting and review sessions to drive supplier’s adaptation and development of this service</td>
</tr>
<tr>
<td>Nature of relationship</td>
<td>-Medium degree of cooperation;</td>
<td>-The involved parties have close cooperation; -Setting up join working procedures and rules; supplier even could acquire some knowledge to enhance its own competence</td>
</tr>
<tr>
<td></td>
<td>-Jointly planning and budgeting; Supplier gained a few knowledge from buyer</td>
<td>-Relational purchasing strategy</td>
</tr>
<tr>
<td></td>
<td>-Relational purchasing strategy</td>
<td></td>
</tr>
<tr>
<td>Power dependency</td>
<td>-Dozens of alternatives suppliers in the market</td>
<td>-Four alternatives (end customer authorized) suppliers in the market</td>
</tr>
<tr>
<td></td>
<td>-Supplier also has a large customer base. The volume of this contract only accounts for less than 1% of supplier annual turnover</td>
<td>-Supplier has tens of alternative customers. The volume of this contract only accounts for 2.5% of supplier annual turnover</td>
</tr>
<tr>
<td>Service activities</td>
<td>-It’s a complicated service with various activities</td>
<td>-This service consists of 6 activities, picking up products, transit warehousing, delivery to end customer’s production line, information feedback, containers returning</td>
</tr>
<tr>
<td></td>
<td>- The sequence definitely matters the outcomes</td>
<td>-The sequence definitely matters the outcomes</td>
</tr>
<tr>
<td>Service specification</td>
<td>-High degree of difficulty to specify this service</td>
<td>-High degree of difficulty to specify this service</td>
</tr>
<tr>
<td></td>
<td>-Many times sourcing experience with this particular supplier; person in charge with remarkable knowledge into this service</td>
<td>-More than 6 years sourcing experience from this particular supplier. person in charge with remarkable knowledge into this service</td>
</tr>
<tr>
<td>Risks associated with service</td>
<td>-Important supplementary for buyer’s product development</td>
<td>-Close to its core business, part of buyer’s products</td>
</tr>
<tr>
<td></td>
<td>-Negative effects e.g. project delay, cost raising, dissatisfied from the end customer</td>
<td>-Serious negative effects for buyer, e.g. loss of profits, loss of reputation from its end customer, financial penalty, even potential risks of order loss</td>
</tr>
<tr>
<td>Case 005</td>
<td>Case 006</td>
<td></td>
</tr>
<tr>
<td>----------</td>
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<td></td>
</tr>
</tbody>
</table>
| **Buyer Characteristics** | - Silicon dioxide Manufacturer, chemistry industry  
- Annual turnover of $0.77 million |
| **Supplier Characteristics** | - Logistics provider  
- Turnover is not available, SME |
| **Service description** | - Supplier provides logistics service to delivery buyer’s products to its end customer (inter-city) and get feedback information from buyer’s end customer |
| **Control during ITT phase** | - Technical specification, how and by who the service should be performed and quality certification and standards are requested during this phase  
- Among those data, technical specification is the most important determinant. Absence of anyone of those data above will result in terminating of negotiation |
| **Control during contracting phase** | - Output service specification; delivery time and broken rate are specifying  
- Financial penalty is connected to missing and broken products and late delivery |
| **Control during delivery phase** | - Technical specification, how and by who the service should be performed and quality certification and standards are requested during this phase  
- Buyer concerns most of the quality standards and level, other two data are served as the less important determinants  
- In person meeting involving two parties held every three months to evaluate supplier’s performance; weekly communication with staff at supplier’s side to get end customer’s feedback; monitoring supplier’s performance internally once a month  
- Using service efficiency (data regarding updated delivery track status) as the main KPI to measure supplier performance |
| **Control during contracting phase** | - Input and output service specification; number of consultants and competence level are specified as well as delivery time, reaction time and functional availability level  
- Financial penalty is connected to late-delivery and loss of data |
| **Control during delivery phase** | - Technical specification, how and by who the service should be performed, quality certification and standards as well as the plans regarding future investments are requested during this phase  
- How many consultants in this project? Competence level? Which quality certificate does the supplier have? How many successful installation cases? Frequency of update, warranty terms as well as supplier’s future investment direction, sustainability need to be specified in this phase |
| **Control during delivery phase** | - Input and output service specification; number of consultants and competence level are specified as well as delivery time, reaction time and functional availability level  
- Financial penalty is connected to late-delivery and loss of data |

- Technical specification, how and by who the service should be performed, quality certification and standards as well as the plans regarding future investments are requested during this phase  
- How many consultants in this project? Competence level? Which quality certificate does the supplier have? How many successful installation cases? Frequency of update, warranty terms as well as supplier’s future investment direction, sustainability need to be specified in this phase  
- Technical specification, how and by who the service should be performed, quality certification and standards as well as the plans regarding future investments are requested during this phase  
- Check the consistency of technical specification and quality standards with the previous proposal in ITT phase; Detailed execution plan (by who and how) are needed in this phase  
- In person meeting held every month to evaluate execution process, summary of each meeting note will be documented in a written report.  
- Using system stability, system reaction time and expansibility as the main KPIs to measure ERP’s performance
<table>
<thead>
<tr>
<th>Specificities</th>
<th>-No specific investment</th>
<th>-Investments on hardware installation, staff training</th>
</tr>
</thead>
</table>
| Uncertainties | -Low switching cost on searching for qualified supplier(testing their capabilities)  
- Limitation of internal resource(hardware) to source this service outside; dependent on supplier’s offering  
- A combination of buyer’s opportunism check and supplier’s self-reporting | -High switching cost on transferring to a new system  
- Limitation of internal resources leads to source this service outside; highly dependent on supplier’s offering  
- Opportunism check by the buyer |
| Frequency/size | -Annual contract  
- Volume of $23072 | -Annual contract, will renew year by year  
- Volume of this contract $6 152 |
| Relationship history | -Three year contracting experience  
- This is a standard service. There is few adaptation in this transaction | -One and half years contracting experience  
- This service is partly adapted for buyer’s need; Deep interaction in the system design(providing suggestions), a lot of adaptations |
| Nature of relationship | -Medium degree of cooperation;  
- Only joint meeting to evaluate supplier  
- Transactional purchasing strategy | -Medium to deep degree of cooperation  
- Jointly planning and budgeting, joint working team, a number of interactions  
- To some extent, relational purchasing strategy |
| Power dependency | -Hundreds of alternatives suppliers in the market. Currently working with three  
- Supplier also has a large number of customers base. The volume of this contract only accounts for 1% of supplier annual turnover | -At least 15 qualified alternative suppliers  
- Tens of alternative customers. The volume of this contract only accounts for 1% of supplier annual turnover |
| Service activities | -Two main activities in this service, delivery goods and collect feedback from buyer’s end customer  
- Sequence seem does not matter | -There are 9 main activities in this service, pre-screening of the chosen packages, preparing for the venture, project planning, GAP analysis, designing the system, re-engineering, team training, testing and post implementation  
- The sequence definitely matters the outcomes |
| Service specification | -Easy to specify this service  
- Buyer has many years experience of sourcing this service. A relatively simple service, does not require too much professional capability | -High degree of difficulty to specify this service  
- First time sourcing this kind of service; first time contracting with this supplier. Person in charge has limited knowledge into this service |
| Risks associated with service | -Supporting function to buyer’s core business  
- Non-delivery or poor quality brings complaints from end customer, and loss of time | -This service controls the whole process of buyer’s core business operation,  
- Strong negative effect towards buyer’s business operation, e.g. production, finance, supply chain etc. if fail delivery |
<table>
<thead>
<tr>
<th></th>
<th>Case 007</th>
<th>Case 008</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Buyer Characteristics</strong></td>
<td>- A global leading semi-conductor manufacturer</td>
<td>- Voip Telecom Supplier, ICT industry</td>
</tr>
<tr>
<td></td>
<td>- Revenue of 2010 is $13,966 millions</td>
<td>- Annual turnover is not available</td>
</tr>
<tr>
<td><strong>Supplier Characteristics</strong></td>
<td>- Independent Developing House (IDH), working as a third party R&amp;D oriented firm</td>
<td>- A management consulting firm exclusively for ICT industry</td>
</tr>
<tr>
<td></td>
<td>- Volume of the turnover $2 millions</td>
<td>- Annual turnover of $15.38 million</td>
</tr>
<tr>
<td><strong>Service description</strong></td>
<td>The service is to provide design principle, technical documents, technical reference solutions, prototype for semi-conductor peripheral industries</td>
<td>This service consists of three main tasks: building up KPIs measurement system for HR, redefining each position’s job responsibilities and setting up a clear career path for each job function</td>
</tr>
</tbody>
</table>
| **Control during ITT phase** | - Technical specification, how and by who the service should be performed, sub-contractors, quality certification and standards, plans regarding future investments are requested during this phase  
-Buyer concerns the technical specification most. The execution plan (how and who) is also an important determinant. Sub-contracting is forbidden | - Technical specification, how and by who the service should be performed, quality certification and standards, and plans regarding future investments are requested during this phase  
-Buyer claimed technical specification and execution plan (how and by who) are used to judge supplier’s competence; future investment plan in written document is not required, but should be expressed during the initial negotiation |
| **Control during contracting phase** | - Throughout and output service specification; buyer will provide detail working instruction (process) and judge the final outcome by deliver time and functional availability  
- No penalty applies | - Input and output service specification; number of consultants and their competence level are specified. For the HR KPIs measurement system, every KPI for each job function and each level should be specified in the final report  
- Financial penalty is connected to late-delivery |
| **Control during delivery phase** | - Technical specification and how and by who the service should be performed are requested during this phase  
- Still the buyer concerns the technical specification most. Execution plan in this phase should be stated in very detailed level  
- Personal meeting held four times a year to review the supplier’s performance; joint planning; combination of buyer’s observation and supplier’s self-reporting. Still, supplier enjoys its own freedom to develop the project. They have high trust on each party | - Only how and by who the service should be performed is requested in this phase  
- In this phase, the execution plan should be stated in much more details based on the framework which has reached agreement in ITT phase  
- This project is divided into three sections. At the end of each section, there will be a joint meeting to evaluate supplier’s performance and current progress. Only by approval of buyer, the service fee will be paid for last section. Routine meeting held every week to monitor the progress. There are written reports for each weekly review and final judgment  
- No KPIs used to measure supplier’s performance, often by top executives subjective opinions |
<p>| <strong>Specificities</strong>         | - A few specific investments                                               | - Investment on staff training and opportunity cost from organization change |
|                           | - Hardware, technical support                                              |                                                                          |
| <strong>Uncertainties</strong>         | - High switching cost comes from searching for                            | - Switching cost comes from time consuming to                             |</p>
<table>
<thead>
<tr>
<th><strong>qualified suppliers</strong></th>
<th><strong>identify new supplier, deposit unrefundable</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>- Sourcing outside due to consideration of core competency</td>
<td>- Limitation of internal resource (competent human capital) leads to source this service outside; partly dependent on supplier’s offering</td>
</tr>
<tr>
<td>- A combination of buyer’s opportunism check and supplier’s self reporting</td>
<td>- Opportunism check by the buyer</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Frequency/size</strong></th>
<th><strong>- It’s a long term contract without due date</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Annual volume of this contract is $1 million</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Relationship history</strong></th>
<th><strong>- Two years contracting experience</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Buyer provided market trend and technical consulting for supplier to adapt this service development</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Nature of relationship</strong></th>
<th><strong>- Very deep and close cooperation.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Buyer put a lot of resource and effort for IDH’s development. Setting up joint procedure, joint meeting to evaluate the project progress.</td>
</tr>
<tr>
<td></td>
<td>- Relational purchasing strategy</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Power dependency</strong></th>
<th><strong>- Quite a lot of alternative suppliers in the market.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Currently buyer is working with 5 IDHs</td>
</tr>
<tr>
<td></td>
<td>- Supplier has very few alternative customers. The revenue from this buyer accounts for more than 50% of supplier annual turnover</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Service activities</strong></th>
<th><strong>- This service consists of three main activities: building up KPIs measurement system for HR, redefining each position’s job responsibilities and setting up a clear career path for each job function.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- It’s a complicated service with a number of activities</td>
</tr>
<tr>
<td></td>
<td>- Sequence definitely matter the final outcome</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Service specification</strong></th>
<th><strong>- High degree of difficulty to specify this service</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Buyer has more than 10 years experience sourcing this kind of service. Person in charge also has good knowledge into this service</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Risks associated with service</strong></th>
<th><strong>- Close to core business</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Poor quality and late delivery will result in the delay for the following R&amp;D work</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Power dependency</strong></th>
<th><strong>- Thousands of alternatives suppliers in the market</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Supplier also has a LARGE number of customer bases. The volume of this contract only accounts for 1‰ of supplier annual turnover</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Service specification</strong></th>
<th><strong>- High degree of difficulty to specify this service</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- First time sourcing this kind of service; first time contracting with this supplier. Person in charge has limited knowledge into this service</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Risks associated with service</strong></th>
<th><strong>- This is a supporting function to buyer’s core business, will influence its future development</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Poor or non-delivery will decelerate buyer’s efficiency</td>
</tr>
<tr>
<td>Case 009</td>
<td>Case 010</td>
</tr>
<tr>
<td>----------</td>
<td>----------</td>
</tr>
<tr>
<td><strong>Buyer Characteristics</strong></td>
<td><strong>Supplier Characteristics</strong></td>
</tr>
<tr>
<td>- A leading online game developer in China</td>
<td>- A leading online game developer in China</td>
</tr>
<tr>
<td>- Turnover more than $15.4 million in 2010</td>
<td>- Turnover more than $15.4 million in 2010</td>
</tr>
<tr>
<td><strong>Supplier Characteristics</strong></td>
<td><strong>Service description</strong></td>
</tr>
<tr>
<td>- Top five online game operation platform in China</td>
<td>- This service include marketing, and operation one of buyer’s products (online game)</td>
</tr>
<tr>
<td>- Turnover more than $123.2 million in 2010</td>
<td><strong>Control during ITT phase</strong></td>
</tr>
<tr>
<td></td>
<td>- Technical specification, how and by who the service should be performed, quality certification and standards, general financial data, and plans regarding future investments are requested during this phase</td>
</tr>
<tr>
<td></td>
<td>- The data above are prerequisites to be a qualified supplier and be invited into bidding phase. All of them are accessible from the supplier</td>
</tr>
<tr>
<td><strong>Service description</strong></td>
<td><strong>Control during ITT phase</strong></td>
</tr>
<tr>
<td></td>
<td>- Who is in charge of this project and his/her competence level is requested during this phase</td>
</tr>
<tr>
<td></td>
<td>- Buyer mainly expressed their expectation and feeling(color preference, company culture) through in person meeting orally</td>
</tr>
<tr>
<td><strong>Control during contracting phase</strong></td>
<td><strong>Control during contracting phase</strong></td>
</tr>
<tr>
<td></td>
<td>- Input and through out service specification; resources e.g. a customer service team, an operation team and some technical hardware are specified as well as the general framework of execution plan</td>
</tr>
<tr>
<td></td>
<td>- Financial penalty is connected to poor quality or late delivery</td>
</tr>
<tr>
<td></td>
<td>- Financial penalty is connected to poor or even non-delivery</td>
</tr>
<tr>
<td><strong>Control during delivery phase</strong></td>
<td><strong>Control during delivery phase</strong></td>
</tr>
<tr>
<td></td>
<td>- There is no specific data required from the list at this phase. The execution of this transaction is mainly built on mutual trust. The data regarding, number of players in this game, monthly turnover, players’ behavior actions in the game and technical fault and errors occurred should be reported monthly</td>
</tr>
<tr>
<td></td>
<td>- An electronic data sharing system is open for both buyer and supplier. The buyer can easily access the key figures during whole operation process. Monthly meeting involving two parties to evaluate operation performance at that point. Frequent daily communications happen at each level and every certain issue</td>
</tr>
<tr>
<td></td>
<td>- KPIs not available</td>
</tr>
<tr>
<td><strong>Specificities</strong></td>
<td><strong>Uncertainties</strong></td>
</tr>
<tr>
<td>- No specific investment</td>
<td>- No specific investment</td>
</tr>
<tr>
<td><strong>Uncertainties</strong></td>
<td><strong>Specificities</strong></td>
</tr>
<tr>
<td>- High switching cost to search a qualified alternative supplier</td>
<td>- No specific investment</td>
</tr>
<tr>
<td>- Sourcing outside due to the limitation of internal</td>
<td>- Switching to another supplier will result in loss of time consuming, efforts, and human resource into the current supplier</td>
</tr>
<tr>
<td><strong>resources and capabilities (hardware and human capital)</strong></td>
<td><strong>-Sourcing outside due to the limitation of qualified designer internally</strong></td>
</tr>
<tr>
<td>---------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>-A combination of buyer’s observation and supplier’s self-reporting</td>
<td>-A combination of buyer’s observation and supplier’s self-reporting</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Frequency/size</strong></th>
<th><strong>-One time purchasing</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>-Annual contract</td>
<td>-Volume of this contract $20,000</td>
</tr>
<tr>
<td>-Buyer and supplier share the total income from the game operation, ratio at 3:7</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Relationship history</strong></th>
<th><strong>-Duration of this contract is 4 months</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>-Four years contracting experience</td>
<td>-This service is partly adapted (there is a basic framework) to meet buyer’s need. Intensive interactions into the adaption of this service. Suggestions from buyer heavily influence the service</td>
</tr>
<tr>
<td>-This is a highly customized service. Intensive interactions to adapt this service into better performance</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Nature of relationship</strong></th>
<th><strong>-Basic degree of cooperation.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>-Very deep cooperation upon this transaction.</td>
<td>-Setting up a nominal joint work team, but does not work well. Joint planning, and meeting. -Transactional purchasing strategy</td>
</tr>
<tr>
<td>-Supplier brings feedback from the players to the buyer (G-game), while the buyer provides necessary technical support and routine updates. Frequent meetings both in person and via phone or email to track the progress</td>
<td></td>
</tr>
<tr>
<td>-Relational purchasing strategy</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Environment</strong></th>
<th><strong>-More than ten qualified (based on their reputation and competence) suppliers in the market</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>-More than ten qualified suppliers in the market</td>
<td>-Accurate number of supplier’s alternative customers is not available. The buyer estimated that it should be a large number</td>
</tr>
<tr>
<td>-Around ten alternative customers working with the supplier</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Service activities</strong></th>
<th><strong>-This service includes activities e.g. customer need identify (color, shape preference), initial proposal, negotiation, re-editing, negotiation, final agreement -The sequence definitely matters the outcomes</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>-A complicated service including various activities, difficult to identify each of them</td>
<td></td>
</tr>
<tr>
<td>-The sequence definitely matters the outcomes</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Service specification</strong></th>
<th><strong>-High degree of difficulty to specify this service</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>-High degree of difficulty to specify this service</td>
<td>-Buyer’s first time sourcing this kind of service. As buyer expressed, there are many problems in this sourcing and they learnt a lot experience</td>
</tr>
<tr>
<td>-Four years sourcing experience from this buyer. Person in charge with remarkable knowledge into this service</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Risks associated with service</strong></th>
<th><strong>-Not close to core business</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>-Very close to its core business; the only resource of its profit flow</td>
<td>-Negative effect towards buyer’s presence in the market and its customers</td>
</tr>
<tr>
<td>-Negative effects towards its profit and following updates if poor delivered</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Case 011</td>
</tr>
<tr>
<td>-------------------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Buyer Characteristics</strong></td>
<td>- A leading online game developer in China</td>
</tr>
<tr>
<td></td>
<td>- Turnover more than $15.4 million in 2010</td>
</tr>
<tr>
<td><strong>Supplier Characteristics</strong></td>
<td>- A interior design and decoration agency</td>
</tr>
<tr>
<td></td>
<td>- Volume of turnover is less than $1.54 million</td>
</tr>
<tr>
<td><strong>Service description</strong></td>
<td>- This service is an interior designing work for buyer’s new working place at a new launched building</td>
</tr>
<tr>
<td><strong>Control during ITT phase</strong></td>
<td>- How and by who the service should be performed, quality certification and standards are requested during this phase</td>
</tr>
<tr>
<td></td>
<td>- The execution plan at this level is in a general framework; quality and professional qualification issued by the government is prerequisite to be a qualified supplier</td>
</tr>
<tr>
<td><strong>Control during contracting phase</strong></td>
<td>- Throughout and output service specification; the detailed execution plan and working schedule is specified in the contract. The final outcome should be feasible and easy for the workers to implement</td>
</tr>
<tr>
<td></td>
<td>- Financial penalty is applied for late delivery</td>
</tr>
<tr>
<td><strong>Control during delivery phase</strong></td>
<td>- Technical specification, how and by who the service should be performed, quality certification and standards as well as the environmental certification is requested during this phase</td>
</tr>
<tr>
<td></td>
<td>- Buyer did not comment the above data in detail</td>
</tr>
<tr>
<td></td>
<td>- Intensive interactions e.g. personal meetings, conference call, emails etc. using written report to control each progress(key milestones) of this project</td>
</tr>
<tr>
<td></td>
<td>- No KPIs to measure supplier’s performance</td>
</tr>
<tr>
<td><strong>Specificities</strong></td>
<td>- No specific investments</td>
</tr>
<tr>
<td><strong>Uncertainties</strong></td>
<td>- Switching cost comes from searching for the qualified supplier (consistence with buyer’s concept). Buyer would not switch any more when the contract is signed</td>
</tr>
</tbody>
</table>

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| Frequency/size | Sourcing outside due to lack of qualified designer internally. Dependent on supplier’s offering. A combination of buyer’s opportunism check and supplier’s self-reporting. | dependent on supplier’s offering. A combination of buyer’s opportunism check and supplier’s self-reporting. |
| Relationship history | One time purchasing. Volume of this contract $50,847; Compensation of $4,600 in total for participants who did not win the bidding. | A renew contract; four times transaction experience. Volume of this contract $6,163. |
| Nature of relationship | First time contracting with this supplier, duration of this contract is 5 months. This service is partly adapted to meeting buyer’s need. Intensive interaction with supplier, bringing in a lot of suggestions to adapt the final outcome of this service. | Half a year starting from the first contract; this is the fourth contract. This is a customized service; supplier is working under detailed instructions from the buyer. |
| Power dependency | Deep degree of cooperation. Joint procedure and rules. Buyer took part in the enhancement of supplier’s competence in term of introducing a more professional procedure. Relational purchasing strategy. | Relatively high level of cooperation. Joint working team; frequent interactions during the whole process; supplier even learnt some technical capabilities from the buyer. Relational purchasing strategy. |
| Service activities | Around 15 alternative local suppliers. Supplier has tens of alternative customers. | Thousands of alternative suppliers in the market. Supplier also has a big number of alternative customers. |
| Service specification | This service includes activities e.g. customer need identify, initial proposal, negotiation, re-editing, negotiation, final agreement. The sequence definitely matters the outcomes. | There are mainly three activities in this service, such as original manuscripts, 3D modeling, and transferring 2D output files. The sequence definitely matters the outcomes. |
| Risks associated with service | It’s difficult of specify this service. Buyer’s first time sourcing this kind of service. Person in charge has limited knowledge into this service. | It’s relatively a bit difficult of specify this service. Many times sourcing this kind of service. Person in charge with remarkable knowledge of this service. |
| | Not close to core business. Resulting in late moving into the new working place. | Very close to core business. Negative effects towards the user experience. |

The end.