

## Critical Success Factors in Public Sectors Practicing Knowledge Outsourcing

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### Abstract

*In the 21<sup>st</sup> century, the broad utilization of computer technology has both competition type and organization type face changes. Information-oriented organizations are gradually led the management by experts, i.e. knowledge orientation. In face of such a knowledge revolution, the government has formulated policies towards knowledge management for the strategic planning. Regarding to the research and development, planning, negotiation, and promotion of various institutions in Executive Yuan led by the Research, Development and Evaluation Commission, various administrative authorities, based on the development of knowledge innovation, storage, and expansion, have formulated outsourcing research points or remarks, aiming at the research plans, after knowledge management becoming the key in Change Management, in order to regulate entrust procedure, control operation, and subsidies providing standards. Knowledge Outsourcing has been generally utilized by the government for the input of knowledge. The supervisors and the employees in the public sectors of Taipei City Government are taken as the research participants in this study. Total 270 copies of questionnaires are distributed, and 146 valid copies are retrieved, with the retrieval rate 54%. Among the evaluation indicators of Key Success Factor in Knowledge Outsourcing of public sectors, the hierarchical weights are sequenced as 1.Incentive Issue, 2.Oversight and Accountability, 3.Prevention and Management, 4.Contract, 5.Quality and Professionalism, 6.Supervision of Democratic Body and Works, 7.Constructive Communication, 8.Information Issue, 9.Rule by Law, and 10.Public-Private Interaction.*

**Keywords:** Public Sectors, Knowledge Outsourcing, Key Success Factor

### Research Background

In the globalization and the rapidly changing society, various governments are facing the pressure to enhance the efficiency and flexibility. Government institutions are likely to be eliminated either because of not being able to respond instantaneously, or to prepare in advance. Since 1980, the oversized government has enhanced the costs but slow down the action that the low administrative efficiency and the increasing financial deficit have the citizens question the capability of the government that the importance of a government is challenged. To cope with such a rising reform wave, a government needs to develop new strategies to break through the rigid dilemma of administrative authorities. For this reason, new public management to pursue performance and center on customers has prevailed in various governments. Such a trend even results in cultural transmission. Outsourcing has largely introduced private resources into the public service output of government sectors, as the mutual competition among private businesses would enhance the quality of service. Moreover, the outsourcing policy attempts to downsize the government and pursue the performance. In other words, the outsourcing policy and the principle of new public management, Government Piloting and Private Steering, provide practical connections. Knowledge business, in comparison with other businesses in public sectors, presents specialty and effectiveness and can rapidly change. With the rapid development of information industry, software, and hardware and the popularity of communication and network, government sectors reveal the inferiority on intending to deal with relevant knowledge businesses with original public affair systems. Consequently, Knowledge Outsourcing has become a critical trend in e-Government. Knowledge Outsourcing presents great effects on the promotion of electronic and networking government as well as the enhancement of administrative efficiency in public sectors. The practice of global outsourcing has greatly affected the role change of institutions and the government reengineering.

The breaking-in between the global outsourcing system and the present organization could deeply influence the efficiency and competitiveness of the government organization and appear impact on the service subjects of government institutions. What is more, comparing the global outsourcing of public sectors and the information businesses of a private company, it presents the specialty. In order to ensure the promotion and sustainable development of public sectors, such considerations become the challenge of Knowledge Outsourcing.

## **Literature Review**

### **I. Theory of Outsourcing**

Quinn and Hilmer (1994) indicated that an enterprise could lose the key technological ability or develop wrong technologies, deal with multi-functional technologies, develop new products or technologies with strategic flexibility, and control the suppliers because of outsourcing. Clouser (2002) mentioned the key function of outsourcing as flexibility that an enterprise could develop the optimal talent on the enterprise and focus on the core abilities. Quinn and Hilmer (1994) defined outsourcing as having a part or all functions beyond the selected core competitiveness of an organization be practiced by external suppliers through strategic outsourcing that merely the most professional and valuable activities were executed, but the rest was outsourced to other subcontractors. Outsourcing refers to entrusting parts or entire production activities practiced in an enterprise to external subcontractors (Hsin, 2010). Lomas (1997) considered ten outsourcing motives as 1.focusing on core competitiveness, 2.avoiding or reducing capital expenses, 3.increasing service flexibility, 4.acquiring new operating procedure, ideas, and technological channels, 5.acquiring professional knowledge, 6.dealing with specific logistics without economic scales, 7.enhancing productivity and efficiency, 8.preventing labor problems, 9.avoiding law costs, and 10.improving service performance.

McHugh et al (1995) pointed out the advantages on cost, service, responsibility, and competitiveness from outsourcing. 1. Cost, to avoid fixed costs from off-peak and decrease total operating costs (when the outsourcing expenses are higher, it is not necessary that an organization could provide specific functions or services for an external world. 2. Service, an organization being able to reach wider skill repository through outsourcing. 3. Uniform responsibility, the roles being clearly discriminated through Organization-Subcontractor that the organization could better confirm the attribution of responsibility and avoid internal chaos caused by internal political struggle. 4. Competitiveness, an organization being able to concentrate the resources and the core business process through outsourcing. Sharpe (1997) considered the following benefits of outsourcing. 1. Outsourcing could reinforce the core competitiveness strategy of an enterprise and allowed an organization focusing on the core competitiveness. 2. Outsourcing allowed an organization acquiring the channels accessing to people with special skills; for an organization, it would be difficult or cost too much to directly acquire such people. 3. Outsourcing allowed an organization acquiring advance technology and skills without directly investing in such technology and skills that the risk of direct investment could be removed. 4. Outsourcing allowed an organization establishing a benchmark in specific professionalism, with externally proved efficiency.

### **II. Key Success Factor in outsourcing**

Lomas (1997) pointed out three success factors in outsourcing, including obeying basic guidance, selecting correct outsourcing suppliers, and constructing consolidated relationship with subcontractors. 1. Obeying basic guidance. Since outsourcing is not to pursue short-term benefits, but the commitment of long-term strengths through outsourcing, an outsourcing decision cannot be rashly made. Besides, outsourcing does not mean to transmit or give up responsibilities. Outsourcing therefore is involved in overall inspecting and redefining Success of the company, suitable corporate practice, optimal practice, operation of supporting systems and interaction with interfaces, and division of responsibility. The success of outsourcing relies on fully understanding current industrial approaches and allowing the freedom of subcontractors providing the optimal practice. 2. Selecting correct outsourcing suppliers.

A broad formal evaluation procedure is necessary for selecting a correct outsourcing supplier, including (1) setting the required abilities and performance standards of the subcontractors, (2) openly communicating current businesses and vision of the company with the subcontractors, (3) screening the subcontractors down to 3-5, (4) ensuring the possible subcontractors providing sufficient information about the understanding the current businesses and vision of the company, (5) covering interviews with present customers and the verification of the abilities, performance, and financial conditions of the subcontractors into the evaluation, and (6) selecting the optimal subcontractor. 3. Constructing consolidated relationship with subcontractors.

It is important to consolidate the relationship among subcontractors, the company and the customers, and suppliers. Such consolidated relationship depends on (1) clear objective being internalized, (2) definite attribution of responsibility, (3) frequently measuring the operating performance of the subcontractors with pre-agreement, (4) providing subcontractors with improvement incentives, and (5) compatible value and culture. Taricone (1997) mentioned the key success factors in outsourcing as 1. understanding the objective and purpose of the company, 2. strategic vision and planning of the company, 3. selecting correct subcontractors, 4. continuously managing outsourcing relationship, 5. constructing proper contracts, 6. open communications with influenced groups or persons, 7. support and participation of high-level managers, 8. carefully dealing with personnel problems, 9. short-term financial justification, and 10. utilizing external professional knowledge. Wingen and Verduin (2000) proposed ten success factors in outsourcing, containing 1. understanding the company objective, 2. strategic vision and plan, 3. selecting qualified supplier, 4. continuous relationship management, 5. well-structured contracts, 6. open communication with influential individuals or groups, 7. supports and participants of senior supervisors, 8. carefully noticing personal affairs, 9. recognition of recent finance, and 10. applying external professional knowledge.

### III. Key Success Factor in Knowledge Outsourcing

With Delphi Method, System Aspect and Management Aspect are proposed and guided to the key factors in Knowledge Outsourcing for further exploration.

#### (1) Discussion of System Aspect

1. Rule by Law. Law and regulations are referred to the effects on outsourcing source of law, executive order, and regulation. Relevant regulations would be the criteria of administrative behaviors, based on Administration according to Law and Bureaucracy in public sectors. Meanwhile, complete Rule by Law would present positive effects on the practice of subcontractors. For government sectors, actual regulations, executive orders, uniform rules, or previous examples would help promoting outsourcing (Huang, 2010). 2. Contract. According to the literatures, Contract allowed the work being more definite, provided rules for public/private sectors to follow, and connected the price comparison, output, and results. Accountability, as a critical instrument of supervision scheme, also becomes crystal and precise because of Contract. Contract presents guarantee of actual rights and obligation for both parties. Public-Private Interaction. A market failure highlights the important status and role of a government in completing social objectives, maintaining fairness and justice, and reallocating social resources in the selection of public services. However, government failure has the government be examined. For this reason, modern governments have developed towards the combination of government and market. 4. Supervision of Democratic Body and Works. Democratic body and works play an important role in supervising the democratic society and balancing administrative authorities abusing power and negative behaviors. Regarding the design of government system, a parliamentary organization presents the functions of supervising the policies of administrative authority and auditing budgets that the effects on decisions cannot be neglected. 5. Prevention and Management. A bidding process might not confirm the best service provider that Prevention and Management of problems are considered as an ideal measure.

#### (2) Discussion of Management Aspect

1. Information Issue. According to client-agent theory, a party possessing complete information which the other party does not have is regarded as information asymmetry, which could result in Adverse Selection and Moral Hazard (Lin, 2009; Zhai, 2010).
2. Incentive Issue. Walsh (1995) proposed to solve the problem of uneasy supervision with Contract by incentives, as positive incentives could develop effectiveness and largely reduce the demands for supervision.
3. Quality and Professionalism. It focuses on the recognition of quality and professionalism of a subcontractor. The former refers to the standards and regulations for quality of service formulated by the government and the contract contents, while the latter focuses on the determination of a subcontractor's professionalism.
4. Oversight and Accountability. Two issues are concerned, including 1. how to ensure the process following the contract and 2. how to establish the accountability scheme when the government faces occupational changes.
5. Constructive Communication. The government intention and the provider result could be reduced when communication and contract are strictly supervised.

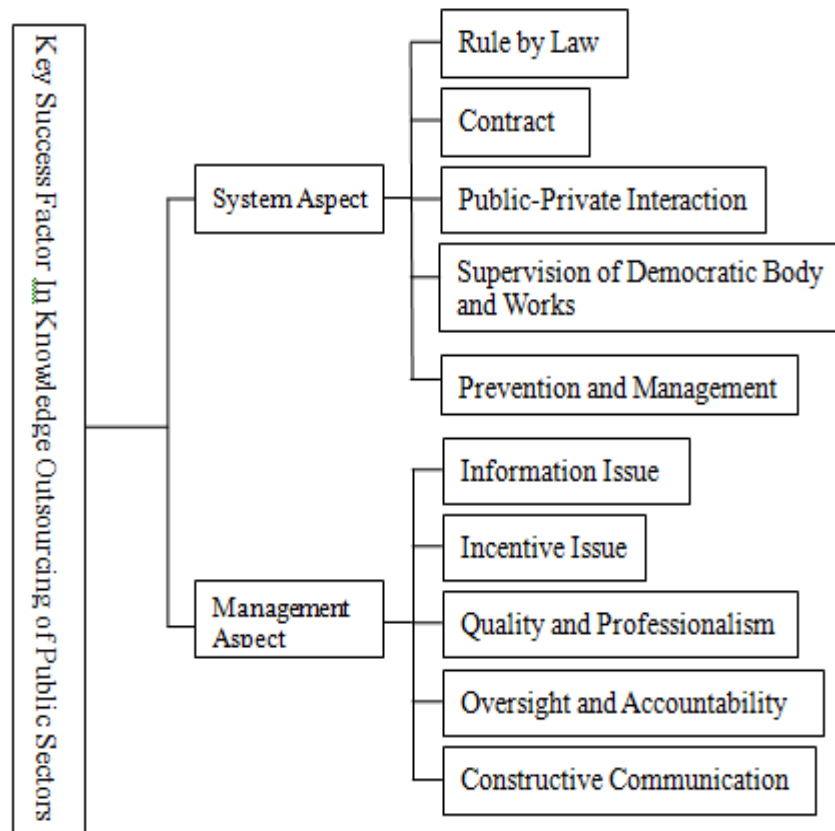
**Research design and methodology**

**I. Delphi Method**

Based on the above learning motives, Delphi Method is applied to establishing the AHP criteria. Delphi Method, also named expert investigation, is a decision-making method by separately distributing problems to experts through mails, requesting for opinions, and retrieving all expert opinions for the comprehensive opinions; such comprehensive opinions and predicted problems are delivered to experts for further revising the opinions and organized. Repeating the steps for several times, a consistent prediction is acquired. According to the system program of Delphi Method, the opinions are given anonymously, i.e. the experts do not discuss with each other and no horizontal connection between experts, but with researchers. By asking the experts for opinions about the questionnaires for several rounds, the repeated enquiries, conclusion, and revision are finally organized the consistent opinions as the predicted results. Such an approach is reliable as it reveals broad representativeness.

**II. Establishment of evaluation indicators**

The questionnaires are emailed to the experts in various fields. The management theories and factors in outsourcing are first organized for the considerations of Knowledge Outsourcing. The factors with similar properties are classified and sent back to the experts for further opinions. The final results are acquired after several rounds of emails. From the major classifications, the experts are invited to a meeting for setting the key success factors in Knowledge Outsourcing of public sectors. Such key factors are regarded as the AHP dimensions, and the classifications are considered as the criteria for the AHP questionnaire. Fig. 1 shows the research framework revised with Delphi Method.



**Fig. 1: Research framework**

**III. Research Subject**

The supervisors and employees in the public sectors of Taipei City government are selected as the research participants. Total 270 copies of questionnaires are distributed, and 146 valid copies are retrieved, with the retrieval rate 54%.

Under the mayor and the deputy mayor, 22 bureaus, 5 departments, including Department of Civil Affairs, Department of Finance, Department of Education, Department of Economic Development, Public Works Department, Department of Transportation, Department of Social Welfare, Department of Labor, Taipei City Police Department, Department of Health, Department of Environmental Protection, Department of Urban Development, Department of Cultural Affairs, Taipei City Fire Department, Department of Rapid Transit System, Taipei Feitsui reservoir Administration, Department of Information and Tourism, Land Administration Department, Department of Compulsory Military Service, Department of Sports, Department of Information Technology, Department of Legal Affairs, Secretariat, Department of budget, Accounting and Statistics, Personnel Department, Department of Government Ethics, and Department of Civil Servant Development, and 4 committees as well as Taipei Rapid Transit Corporation, Taipei Water Department, and 12 district offices are organized in Taipei City government.

### Data Analysis Result

Having completed the hierarchical weights, the relative importance of the evaluation indicators are distributed proportionally to show the importance of the factors as well as to generate the global weight of the key success factors in Knowledge Outsourcing of public sectors, Table 1.

**Table 1: Global weights of Knowledge Outsourcing in public sectors**

Dimension	Weight of hierarchy 2	Sequence in hierarchy 2	Indicator	Weight of hierarchy 3	Sequence in hierarchy 3	Global weight	Global sequence
System Aspect	0.317	2	Rule by Law	0.183	4	0.049	9
			Contract	0.233	2	0.034	4
			Public-Private Interaction	0.129	5	0.092	10
			Supervision of Democratic Body and Works	0.206	3	0.089	6
			Prevention and Management	0.249	1	0.061	3
Management Aspect	0.683	1	Information Issue	0.138	5	0.039	8
			Incentive Issue	0.257	1	0.029	1
			Quality and Professionalism	0.212	3	0.065	5
			Oversight and Accountability	0.231	2	0.047	2
			Constructive Communication	0.162	4	0.016	7

### Conclusion

According to the empirical analyses, the following conclusions are proposed, based on Table 1, and it is expected to provide a definite guidance and direction for Knowledge Outsourcing of public sectors. From the global weight of the evaluation indicators in the key success factors in Knowledge Outsourcing of public sectors, Management Aspect, weighted 0.683, about 68.3% of the global weight, is mostly emphasized in hierarchy 2, followed by System Aspect (weighted 0.317). Such a result reveals that Management Aspect is mostly emphasized dimension in Knowledge Outsourcing of public sectors. The hierarchical weights of evaluation indicators in hierarchy 3 are sequenced as 1.Incentive Issue, 2.Oversight and Accountability, 3.Prevention and Management, 4.Contract, 5.Quality and Professionalism, 6.Supervision of Democratic Body and Works, 7.Constructive Communication, 8.Information Issue, 9.Rule by Law, and 10.Public-Private Interaction.

The research findings show that the most advantageous tender or the lowest-price bid should be selected for Knowledge Outsourcing of public sectors, and they rely on the decisions of the clerk. For clerks in administrative units, using the lowest-price bid is better for the execution and risk avoidance, as officials inevitably show the negative attitude of Make Life Secure. From the perspective of bureaucratic self-interested behaviors in Public Choice Theory, it reflects the behavior of an individual benefit guiding the choice of the lowest-price bid.

Under the basis of self-interest, the process is simple and the person would not be charged with making money. Contrarily, the most advantageous tender merely presents the strength of screening out an excellent subcontractor to reduce the risk of information asymmetry, but does not show any direct advantages for a civil servant.

It is worth noticing that the lowest-price bid could reduce the administrative effectiveness and risks of public sectors, but the simple examination standards and processes would increase the risks of information asymmetry. It therefore needs to be regulated in Contract. Positive incentives negative threats in an outsourcing contract model are based on economic benefits, accompanied with the profits of the client. A good reward and punishment system would benefit both parties. When the trust and guidance between both parties are established, it would reduce the risks accompanied with Bounded Rationality. On the other hand, when the subcontractor is selected with the lowest-price bid, the professional abilities and quality cannot be acquired before the contract; even the previous experiences could not be screened under current system that unevenly matched Quality and Professionalism might be caused and the supervision costs are increased. As a result, Incentive Issue, Oversight and Accountability, Prevention and Management, Contract, and Quality and Professionalism are relatively important.

### ***Suggestion***

Based on the above conclusions, the following suggestions are proposed in this study.

#### **1.Reinforce incentives and establish long-term evaluation system**

It is considered that alternative incentives are necessary for highlighting the strengths of the subcontractors. The long-term historical records therefore should be established. The records of subcontractors should be constructed and fairly evaluated. Moreover, the negotiating system should be practice, the reward and punishment systems should be improved, and the public sectors should be enhanced to the level of actively planning Knowledge Outsourcing businesses.

#### **2.Contract management ability**

It is suggested that the contract management ability should be included in the test for civil servants, who are further trained in National Academy of Civil Service in the public affair system to reinforce the abilities. Furthermore, the familiarity with contracts and the practice experiences should be taken into account for the promotion of civil servants. The government should encourage the researchers on management, politics, and public administration do academic research on contract management. Such academic and practical processes could enhance the global management abilities of contract managers in public sectors.

#### **3.Certified communication channel**

An officially certified communication channel should be provided, such as telephone recording, online visa, and official fax, so as to reduce the standard format of administrative document and prevent public sectors from employing many employees for transmitting administrative document as well as for creating the instantaneity.

#### **4.Education and training for relevant employees**

In regard to internal training, supervisors should be re-educated and re-trained the understanding of latest Information Issue and management skills. Since the relevant employees to Knowledge Outsourcing in public sectors have changed into communicators and supervisors, they need to be changed by educational trainings and organization reengineering and to enhance the Oversight and Accountability abilities so as to achieve the largest benefits of Knowledge Outsourcing.

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