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### **A Unified Framework for Outsourcing Governance**

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#### A Unified Framework for Outsourcing Governance

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#### **Abstract**

Outsourcing has become a trend for a business to pursue short-term operational efficiency and long-term strategic competency by delegating IT infrastructure, applications, and even business processes to external service providers. At the same time, new challenges are emerging along with outsourcing such as what are the right services that should be outsourced, how well these services get performed, what benefits outsourcing brings in, and so on. Thus, effective service governance and management mechanisms for both service outsourcers and service providers are essential to the success of outsourcing. However, current academic and industrial achievements cannot directly meet the requirements of governance in outsourcing. In this paper, a unified outsourcing governance framework not only for clients but also for providers is proposed, which provides a three-layer, three-perspective integrated governance model on three key dimensions of governance process, organizational structure, and measurement system. A typical call center outsourcing governance case study is illustrated to validate the framework. The future work and conclusion are discussed finally.

#### 1. Introduction

The growth in outsourcing over the last two decades has been unprecedented [1]. A recent Gartner report demonstrated that 10 mega-deals had been signed globally through November 2005 [2]. Reducing cost and focusing on core competencies are highlighted as two primary reasons for outsourcing [3]. However, outsourcing also adds complexity [4] and risks [5][6][7].

To benefit from outsourcing effectively, service outsourcers need to address a lot of issues, such as what are the right services that should be outsourced, how well these services get performed, what benefits outsourcing brings in, and etc. Service providers are correspondingly required to solve some problems

bought by the outsourcing, such as the fitness of the outsourcing deals with current service portfolio, what benefit / risk outsourcing deals bring in, how to control the risk of the outsourcing deals, and etc.

To obtain a successful outsourcing, these issues both from clients and from providers should be addressed properly [8]. However, existing research findings mainly focus on certain parts of these issues such as outsourcing decision and determinants [9][10], relationship management [11][12][13], contract design [14], and management competence [8][15][16]. Moreover, researchers do not pay much attention to issues from the provider perspective as equally as those from the client perspective.

A unified outsourcing governance framework from combined views is proposed in this paper to resolve the issues mentioned above. It provides an integrated solution for outsourcing governance at the strategic, tactical, and also operational layers which consider both the client's and provider's concerns. The framework focuses on three areas in particular: governance processes, governance organizational structure and performance measurement.

The rest of the paper is organized as follows. Outsourcing impacts and requirements for outsourcing governance are discussed in Section 2. In Section 3, the unified outsourcing governance framework is proposed and its components are discussed in detail. A call center case study is illustrated in Section 4. The related works from outsourcing domain and governance domain are reviewed in Section 5. The contribution and next steps of our work are discussed finally.

#### 2. Governance in Outsourcing

Outsourcing is not simply an issue of make-or-buy commodity activities, which constitutes only the first phase of a successful outsourcing arrangement. To ensure the success of outsourcing, the client and provider are required to confront some critical challenges, which are illustrated in Figure 1. When the client transfers an internal capability to an outside party, they lose some control over that capability [17].

Being afraid of data security and the erosion of in-house knowledge is a common issue to all clients. Appropriate controls must extend over any outsourcing activity to assist in managing and mitigating the risks [16]. The provider is required to working with its client to help reach regulatory compliance [18]. The introduction of outsourcing will rearrange the way staff and management work. The client focuses more on contract management and less on people management, more on managing the "What" and less on managing the "How". Moreover, outsourcing demands a dedicated department, for example, outsourcing office [4], responsible for establishing the strategy, processes and standards for outsourcing.



Figure 1. Outsourcing Impacts on Businesses

The organizational and technical challenges brought by outsourcing force the client and the provider to establish or redesign corresponding governance mechanisms such as organization structure and processes to deal with the changes. All of these should be governed in a consistent and effective way. The issues addressed by governance are mainly in two categories:

- (1) To ensure that outsourcing delivers value to organization. Pursuit for long-term business needs and competitive advantage has driven the need of strategic outsourcing, which has become an important consideration in the strategy making process in every business. Two issues should be explored to reach the ideal state: Are we getting the outsourced done well? Are we getting benefits from outsourcing? They are related to outsourcing performance and benefits.
- (2) **To control and minimize the risks.** The risks of outsourcing highlight the need both to outsource the right things and to outsource them in the right way [19]. They are related to outsourcing decision and processes. Mitigation of risks is also driven by embedding accountability into the business [20]. Therefore, the ownership and accountability for outsourcing decisions should be assigned appropriately.

Therefore, the five aspects of outsourcing including outsourcing decisions, processes, benefits, performance, and accountability should be governed effectively. The loop of outsourcing governance is illustrated in Figure 2



Figure 2. Key Aspects of Outsourcing Governance

## **3.** Unified Outsourcing Governance Framework

The unified outsourcing governance framework combines the governance model of clients and providers together into a three-perspective, three-layer, three-dimension structure to ensure the consistency and effectiveness of outsourcing governance which is illustrated in Figure 3. The framework consists of three governance dimensions: the outsourcing governance outsourcing process, organizational and performance measurement. structure. governance model spans three layers: the strategy, the tactic, and the operation. Meanwhile, the governance model has three viewpoints: the client perspective, the provider perspective, and the client-provider joint perspective.

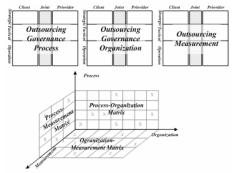


Figure 3. Unified Outsourcing Governance Framework

The outsourcing governance processes define the explicit and manageable steps for key outsourcing decisions, which makes them more communicable, measurable, and accountable. The outsourcing organizational structure clarifies the roles and their accountabilities in the outsourcing. The outsourcing performance measurement focuses on monitoring the performance of outsourcing and appraising the benefit. The governance framework crosses traditional enterprise boundaries and aligns the governance of

clients and providers tightly to ensure the success of outsourcing.

The strategic layer addresses significant outsourcing issues such as setting directions and goals, exchanging ideas between executives, and reviewing the strategic outsourcing activities. The tactical layer discusses some management issues such as contract management, key project reviews, key performance reviews, quarterly governance meetings, performance indicator definition, and etc. The operational layer would consider the daily operation problems such as daily critical issue monitoring and reviews, ongoing service requests, performance monitoring and management, and etc.

#### **3.1. Outsourcing Governance Processes**

Governance means the process of keeping under control [21]. It is crucial to establish a set of disciplined outsourcing processes that consider the needs of the organization, prescribe the controls to ensure financial and regulatory compliance, manage the relationship with realistic performance standards, and proactively manage the potential risks. There are proprietary processes for certain themes on each side and also joint processes involving both parties. These processes occurre at strategic, tactical and operational layers respectively while certain processes cross mutliple layers. Figure 4 illustrates a governance process reference framework for outsourcing.

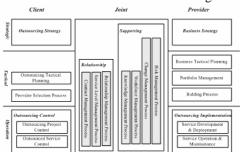


Figure 4. Outsourcing Governance Process
Reference Framework

In this process reference framework, the managable processes span the client related processes, provider related processes, and client-provider joint processes. The former two types of processes are governed by the internal governance of enterprises. In this paper, we specially address the joint process category in detail, which includes relationship management processes and supporting processes.

The fundamental associations between the client and the provider are in the form of Service Level Agreements (SLAs) or contracts. Outsourcing contract is often complex with multiple clauses aimed at reducing unexpected contingencies, risks, and so on.

But it is impossible to spell out every possible scenario in a contract, and client-provider interactions often go beyond rules, agreements, and exceptions. Therefore, a formal and disciplined process is needed to manage the relationship based on mutual trust.

Supporting process, as it name implies, is committed to assist the other processes. It may cross more than one layer. Thus, organizational structures at various lavers have different concerns accountabilities for it. Taking risk management for instance, senior executives at strategic layer concern the strategic impacts brought by outsourcing; executives at tactical level address on the risks of vague requirements, interruption of supply, the poor outsourcing management competence; personnel at operational level pursue for maintaining the continuity of service delivery, the availability, reliability, accessibility of the services and so on.

#### 3.2. Outsourcing Governance Structure

Governance implies the assignment of decision-making authority and accountability to ensure desirable behavior in the outsourcing. The enterprise should address the issues of who is responsible for outsourcing decision and who is accountable for the results of the decisions. The roles and the accountabilities for dedicated topics on client and provider side at strategic, tactical and operation layer should be clarified. The outsourcing governance organizational structure reference model is shown in Figure 5.

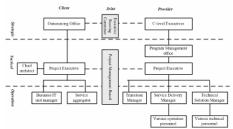


Figure 5. Outsourcing Governance Organization Reference Model

At the client side, the **Outsourcing Office** [22] employs a central body to guide and direct the performance of outsourced services toward its common business objectives. It is responsible for establishing the outsourcing strategy, processes and standards that a business must use to deploy the necessary IT resources, services and processes. At tactical level, **Chief Architect** is responsible for defining Enterprise Architecture which clarifies key processes, application and infrastructure components to provide a foundation for the "plug and play" of services. The standardized

and componentized architecture is helpful to identify the potential parts to be outsourced [21]. The **Project Executives** work with provider counterparts to manage contracts and resolve issues, review contract compliance (cost and quality), and measure customer satisfaction and service levels. At operational level, **Service Aggregator** cares about how internal and external sources interrelate and what dependencies they have. By the well-defined and componentized enterprise architecture, aggregator integrates all the sources seamlessly in a consistent and coherent way. **Business/IT Units** are the user of infrastructure services, business process services or application services which are outsourced.

provider At the side, The Program Management Office plays a critical role in collecting, analyzing and disseminating project and program information throughout all levels of the organization. It manages and supports a set of projects to implement the business objectives. Same to the client counterpart, the Project Executive implements contracts, reviews solution with client requirements, reviews schedule, budget and resource needs, and addresses improvement opportunities. At operational level, Technical Solution Managers are responsible for managing daily tasks, tracking development performance, resolving solution ongoing issues and managing variable demand. Technical solution managers mainly focus on the stage of solution development, while Service Delivery Manager works in the phase of service running, tracking service level performance and resolving ongoing issues during service operation. The Transition Manager is responsible for smoothly transferring resources between provider and client or other service providers. In initiation, the resources are transferred to the organization as it takes responsibility for service delivery. This transfer may include people, processes, technology, and knowledge needed to effectively perform that service delivery. In completion, the enterprise transfers resources to the new service provider (either the client or an external service provider) in a manner that ensures continuous service to the client during the transfer period. The **Technical Personnel** performs daily tasks of solution development or service operations.

In the joint view, an **Executive Steering Committee**, led by the executives from both the client and the provider, is to provide overall guidance for the outsourcing project, review progress and project health, ensure organizational and resource commitment, resolve any cross organizational issues not resolved at

lower levels and to approve any significant changes to the project schedule, scope, requirements or cost. The executive steering committee would appoint the Project Management Board at the tactical and operational layers to address the operational, organizational, geographical issues. The Project Management Board is composed of project executives and project managers for each sub-project from both the client and the provider to manage development of project plans, schedules and budgets; integrate plans across projects and organizations; manage progress of all sub-projects; ensure smooth integration & communication of all sub-project plans, activities and communications; review and consolidate status reporting and resolve all but the most significant cross-organizational & cross sub-project issues.

#### 3.3. Outsourcing Performance Measurement

Governance requires thorough and coherent measurement of performance against the required values. It implies that expectations either are known already or created proactively. In this paper, the Outsourcing Balanced Scorecard (OBSC) extended from Balanced Scorecard (BSC) [23] is applied to enable businesses to develop an effective performance management system.

A generic OBSC is shown is Table 1. It is applicable to both client and provider sides. The corporation contribution perspective captures the business value created from the outsourcing decisions. The user orientation perspective represents the user's evaluation of the outsourced services and captures the user satisfaction based on surveys and the attained overall service levels for applications and operations. The operational excellence perspective represents the outsourcing processes employed to acquire/deliver the demanded services. The future orientation perspective represents the human and technology resources needed by the outsourcing process to acquire/deliver services over time.

Table 1. Outsourcing Balanced Scorecard (OBSC)

Perspective	Mission / Objective / Measurement
Customer	Mission To meet business requirements of users and to improve user satisfaction.  Objectives Improved the quality of services[24] Improved the availability of services [1] Improved user satisfaction [3] [25] Measures Service level quality Customer satisfication
Corporation contribution	Mission To obtain a reasonable business contribution from outsourcing decisions. Objectives

	<ul> <li>Reduced operating costs [15] [26]</li> <li>Enhanced profitability [1] [27]</li> <li>Increased concentration on core competency[3] [24] [26]</li> <li>To access cutting-edge technology [15] [24] [26].</li> <li>Acquisition of specialized knowledge and skills [11] [29].</li> <li>Measures</li> <li>Financial / budget</li> <li>Business Values</li> <li>Knowledge and skills</li> </ul>
Operational Excellence	Mission To ensure effective and efficient outsourcing operation Objectives A standardized IT environment [30] A well functioning IT environment [31] A disciplined outsourcing process Risk mitigation Compliance of external laws and regulations Measures Environment Process effectiveness
Future orientation	Mission To develop opportunities to answer future challenges Objectives Enhanced partnership Flexibility to adapt to environmental change [24] Equipped with the necessary knowledge and skills Measures Business value Partnership performance Human resource Knowledge and skills

In order to achieve these expectations, a set of measures are defined. The typical measures are listed in Table 2 from the perspectives of financial/budget, time/schedule, business values, service level performance, user satisfaction, relationship performance, environment, process effectiveness, knowledge and skills and human resources.

Table 2. Measure categories of OBSC

Category	Description	Typical measures
Finance / budget	It focuses on financial management of the engagement and the ability to deliver the agreed to services within budget.	Return on investment Actual vs. budgeted expenses Efficiency Productivity
Time/schedule	It focuses on critical service, product, or project time frames and the ability to deliver within the service commitment.	<ul><li>Actual vs. planned schedule</li><li>Time-to-market</li><li>Duration</li></ul>
Business values	It focuses on the measurement of the attainment of the outcome of the sourcing agreement in terms of the client and service provider objectives.	<ul> <li>Core competency</li> <li>Flexibility</li> <li>Operational effectiveness</li> </ul>
Service level performance	It focuses on the objective and measurable aspects of the quality of services and products delivered.	<ul><li>Availability</li><li>Responsiveness</li><li>Reliability</li><li>Efficiency</li></ul>
user satisfaction [25]	A measure to assess how users are satisfied with the service delivered.	<ul> <li>User retention</li> <li>User satisfaction ratings</li> <li>Complaint resolution</li> </ul>
Relationship performance [32]	Assessment of the relationship success can be viewed as the level of or fitness between partners' expectations and	Financial (long-term profitability, ROI, purchasing volume, running

	the relationship outcomes.	costs) non-financial (user satisfaction, flexibility, operational effectiveness, stability)
Environment	The standardized degree and well-functional capabilities of the environment to support for service delivery.	Environment readiness level
Process Effectiveness	Assessment of whether an outsourcing process has achieved its business requirements and how well it is performing in enabling the goals to be reached.	Process maturity level Process KGIs Process KPIs
Knowledge & skills	Enhancement of knowledge and innovation the organization achieving from the outsourcing engagement.	Expertise with outsourcing
Human resource	Changes to the skill inventory and internal job satisfaction.	Personnel turnover Frequency of training Employee satisfaction

In certain outsourcing case, the generic OBSC framework can be translated to the more specific needs of outsourcing projects and specific processes. In building an organization-specific outsourcing scorecard, the objectives and measure described in Table 1 should be customized to meet with the organizational needs, contract requirements and service types. The customization example of the generic OBSC will be discussed in Section 4.

#### 3.4. Relationships

To define the relationships among outsourcing governance processes, outsourcing organizations, and measurement, the Extensive RACI (xRACI) chart is proposed to represent the relationships. RACI chart [33] articulates how the organizational structure supports the decision-making process. There are four types of relationships, accountable, responsible, charged or informed. The xRACI chart is extended to add a section of the measurement parallel to the roles to define the relationship between governance processes and measurement. Figure 6 shows the structure of an xRACI chart.

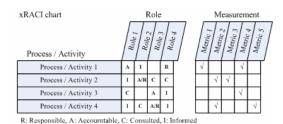


Figure 6. xRACI Chart Structure

#### 4. Case Study

The call center outsourcing is one of the fastest growing segments of Strategic Outsourcing according to Kenney Information [34]. In this paper, the governance model of a typical call center outsourcing project between Client X and Provider Y based on the Unified Outsourcing Governance Framework is illustrated.

The Governance Process Model is designed based on the process reference framework discussed in Section 3.1 showed in Figure 7.

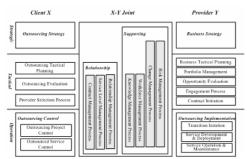


Figure 7. The Call Center Outsourcing Governance Process Model

The detailed Service Level Management (SLM) process, illustrated in Figure 8, aims at planning, drafting, agreeing, monitoring and reporting on SLAs, and performing the on-going reviews to ensure that the service quality is maintained and gradually improved.

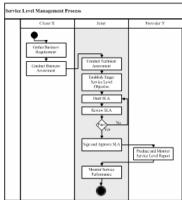


Figure 8. The Call Center Outsourcing Service Level Management Process

The governance organization is designed based on the structure reference framework discussed in Section 3.2 showed in Figure 9.

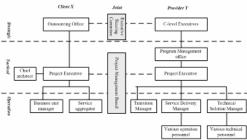


Figure 9. The Call Center Outsourcing Governance Organization

The OBSC for the call center outsourcing project is illustrated in Figure 10. The fundamental objective is to improve cost efficiency and the operational cost is derived from basic measures - average cost per call, discount or bonus for meeting or exceeding service levels, etc. Service qualities primarily pay attention to the measures such as Average Speed to Answer, Percent Answered within an Interval, Abandon Rate, and First Call Resolution. The user satisfaction is used to assess how users are satisfied with the service and whether the service meets contractual service level. In turn, a SLM process is needed while a set of associated measures are set to show how well the SLM process is performing in enabling the goals to be achieved, for example, Number of delivered services not in the catalogue, Percent of services meeting service levels. Finally, in order to achieve all these goals, the staff should be trained and equipped with the SLM knowledge and skills.

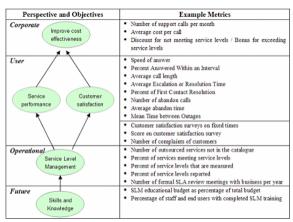


Figure 10. The Call Center OSBC of SLM Process Measurement

The xRACI chart for SLM process is shown in Figure 11. It specifies the relationships between SLM process, involved roles, and measurement.

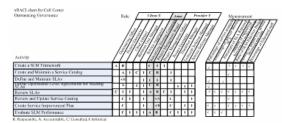


Figure 11. The Call Center Outsourcing xRACI chart for SLM Process

#### 5. Related Works

After Eastman Kodak's outsourcing decision was reported in 1989, outsourcing became a strategic choice for enterprises and emerged as one of the top ten issues for survival in the 1990s [35]. Till now, the outsourcing market is still growing. A number of studies have been conducted to address a variety of outsourcing issues from different theoretical and empirical orientations. The typical theories among them are the transaction cost theory, resource theory, relationship theory and strategic management theory. In research studies, the areas of outsourcing decision and determinants [9] [10], relationship types [11] [12][13], contract design [14], and management competence [8] [15][16] have been investigated and discussed. The need for outsourcing governance has been acknowledged in practice and academia, but papers discussing an actual outsourcing governance framework are scarce. [36] proposed a governance model for managing outsourcing engagements, which mainly focused on issues from client perspective and ignored the performance measurement and monitoring in the governance model. The current governance standard, the COBIT [33], is a generally applicable and accepted standard for IT governance. It defines control objectives for procuring IT resources and managing third-party services, but its perspective is largely limited to the management of internal IT organizations.

#### 6. Conclusions and Future Work

Outsourcing has become an important consideration in strategy-making process for every business. However, outsourcing efforts are often failed due to some reasons such as there was no explicit outsourcing strategy in place, and the decision to outsource was poorly conceived and executed [2]. Establishing effective sourcing governance is critical to the success of Outsourcing [37].

The paper proposes a unified outsourcing governance framework which addresses governance issues from the combined perspectives of both the client and the provider. It waves the governance processes, governance organization, and performance

measurement together at strategic, tactical, and operational layers. It avoids the failure caused by the inconsistence and asymmetry in the both counterparts.

The framework is now applicable to one client-one provider arrangement. Multiple clients or multiple providers' arrangement will increase the complexity of outsourcing governance which will be addressed in our future work. Further, the supporting tools based on the unified outsourcing governance framework are under development.

#### 7. References

- [1] A. Kakabadse, N. Kakabadse, "Outsourcing Best Practice: Transformational and Transactional Considerations", *Knowledge and Process Management*, 2003, pp. 60-71
- [2] Garnter, Gartner on Outsourcing, Gartner report, G00131095, 2005
- [3] A. Kakabadse, N. Kakabadse, "Outsourcing: Current and Future Trends", *International Business Review*, 2005, pp. 183-204.
- [4] C. Dreyfuss, It's Time to Move Sourcing up the Management Agenda, Gartner report, AV-18-4877, 2002
- [5] J.H. Rochester, H. Rochester, "Advantages and Disadvantages of Outsourcing", *IEEE International Professional communication Conference*, 1995, pp. 77-82.
- [6] B.A. Aubert, S. Dussault, and etc. "Managing the Risk of IT Outsourcing", *Proceedings of the 32nd Hawaii International Conference on System Sciences*, 1999
- [7] B. Bahli, S. Rivard, "a Validation of Measures Associated with the Risk Factors in Information Technology Outsourcing", *Proceedings of the 36th Hawaii International Conference on System Sciences*, 2003
- [8] S. Balaji, Susan A. Brown, "Strategic IS Sourcing and Dynamic Capabilities: Bridging the Gap", *Proceedings of the 38th Hawaii International Conference on System Sciences*, 2005, pp. 1-8.
- [9] C. Yang, J. Huang, "A Decision Model for IS Outsourcing", *International Journal of Information Management*, 2000, pp. 225-239
- [10] B. Watjatrakul, "Determinants of IS sourcing decisions: A comparative study of transaction cost theory versus the resource-based view", *Journal of Strategic Information Systems*, 2005, pp. 389-415
- [11] E. Beulen, P. Ribbers, Managing Complex IT Outsourcing -Partnerships, in Proceedings of the 35th Annual Hawaii International Conference on System Sciences, 2002,
- [12] M.J. Gallivan, W.oh, Analyzing IT Outsourcing Relationships as Alliance among Multiple Clients and Vendors, in Proceedings of the 32nd Hawaii International Conference on System Sciences, 1999
- [13] R. Kishore, H.R. Rao, and etc. "A Relationship Perspective on IT Outsourcing", *Communications of the ACM*, 2003, pp. 87-92.
- [14] N. Thornton, "Developing business-led outsourcing contracts", *Engineering Management Journal*, 1997, pp. 21-26.
- [15] Z.Z. Shi, A.S. Kunnathur, and TS. Ragu-Nathan, "IS outsourcing management competence dimensions: instrument

- development and relationship exploration", *Information & Management*, 2005, pp. 901-919.
- [16] ITSqc. A Framework for Best Practices in the Sourcing Life-Cycle: The Architecture of the eSourcing Capability Model for Client Organizations, CMU-ITSQC-WP-05-001, 2005
- [17] J.C., Henderson, "Plugging into Strategic Partnerships: The Critical IS Connection", *Sloan Management Review*, Spring, 1990, pp. 7–18.
- [18] M.L. Brown, S. Kelly, "IT Governance and Sarbanes-Oxley: The latest sales pitch or real challenges for the IT Functions?", in Proceedings of the 38th Hawaii International Conference on System Sciences, 2005
- [19] N. Venkatraman, "Beyond Outsourcing: Managing IT as a Value Center", *Sloan Management Review*, 1997, pp. 51-64.
- [20] ITGI, Board Briefing on IT Governance, 2nd Edition, ITGI, 2003
- [21] S. Hamaker, A. Hutton, "Principles of Governance", *Information Systems Control Journal*, 2003
- [22] C. Ambrose, Aggregate Multiple Delivery Sources, Gartner Report, V-16-5109, 2002
- [23] R.S. Kaplan, and D.P. Norton, "The balanced scorecard measures that drive performance", *Harvard Business Review*, 1992, pp. 71-79
- [24] T.F. Espino-Rodriguez and A.M. Gil-Padilla, "Determinants of Information Systems Outsourcing in Hotels from the Resource-based View: an Empirical Study", *International Journal of Tourism Research*, 2005, pp. 35-47 [25] K. Sengpta, M. Zviran, "Measuring User Satisfaction in an Outsourcing Environment", *IEEE Transactions on Engineering Management*, 1997, pp. 414-421

- [26] G. Goth, "The Ins and Outs of IT Outsourcing", IT Pro, 1999, pp. 11-14
- [27] L. Loh and N. Venkatraman, "Determinants of information technology outsourcing: a cross-sectional analysis", *Journal of Management of Information Systems*, 1992, pp. 7-24.
- [29] S. Slaughter, S. Ang, "Employment Outsourcing in Information Systems", *Communications of the ACM*, 1996, pp. 47-54.
- [30] S. Namasivayam, "Profiting from Business Process outsourcing", IT Pro, 2004, pp.12-18.
- [31] T. Dahlberg, M. Nyrhinen, "A New Instrument to Measure the Success of IT Outsourcing", in Proceedings of the 39th Hawaii International Conference on System Sciences, 2006
- [32] T. Lehtonen, "Attributes and success factors of partnering relations a theoretical framework for facility services", *Nordic Journal of Surveying and Real Estate research (Special Series)*, 2004(2), pp. 31-46
- [33] ITGI, COBIT (Control Objectives Management Guidelines Maturity Models) 4.0, ITGI, 2005
- [34] Kennedy Information, Operations Management Consulting 2005-2008: Key Data, Trends & Forecasts. 2005 [35] J. Lee, Q. Huynh, and etc., "IT Outsourcing Evolution: Past, Present, and Future", *Communications of the ACM:* 46(5), pp. 84-89
- [36] H. Gewald, K. Helbeig, "A Governance Model for Managing Outsourcing Partnerships A View from Practice", in Proceedings of the 39th Hawaii International Conference on System Sciences, 2006
- [37] Gartner, The Future of Outsourcing, Gartner Report, G00130977, 2005