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IT OUTSOURCING AT THE STAGE OF PSYCHOLOGICAL CONTRACT: GOVERNANCE-IN-PRACTICE AND GOVERNANCE-IN-CONTRACT

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Abstract

The governance of IT outsourcing (ITO) has been identified as an essential determinant for ITO success. While prior studies have shed light on how to determine effective governance to inform practice, little research attention has been reversely initiated from practice when certain governance model is implemented. In this paper, I have addressed two concepts of Governance-in-Contract (GiC) and Governance-in-Practice (GiP) incorporating social network perspective and practice theory. The theoretical framework is built upon the stage of psychological contract in Miranda and Kavan's (2005) Moment of Governance (MoG) model. I applied a portion of the framework in a single case study combining Social Network Analysis (SNA) and document analysis. The findings contrast GiP with GiC, and show how they are interrelated on the same stage of psychological contract. I hope to inspire future studies to further investigate the GiP with qualitative enquiries such as in-depth interviews, combining deeper SNA with pertinent quantitative measures.

Keywords: IT outsourcing governance, practice theory, Social Network Analysis (SNA), psychological contract.

1 Introduction

During the last two decades, the outsourcing of information technology (IT) has become a significant part of management, manifested by the increasing IT expenditure in major organizations (Lacity, Khan, Yan and Willcocks, 2010). Concerning the success of IT outsourcing (ITO), practice associated with ITO governance has been identified as one of the essential determinants (Lacity, Khan and Willcocks, 2009). In the discipline of IT, governance is defined as “*the framework for decision rights and accountabilities to encourage desirable behaviour in the use of IT*” (Weill, 2004, p.3). An abundance of literatures have focused on the interaction of different governance mechanisms (Goo, Kishore, Rao and Nam, 2009; Poppo and Zenger, 2002; Sabherwal, 1999; Saunders, Gebelt and Hu, 1997), or the development of prescriptive governance models circumscribed by the ITO context (Koh, Ang and Straub, 2004). While these prior studies have shed light on how to determine effective governance, little research attention has been directed on what actually happens when certain governance model is implemented in an ITO practice. Considering the relationship between research and practice, most of these studies are building theories to inform practice or striving to provide certain practical solutions. However, due to the emergence nature of governance models (Miranda and Kavan, 2005), especially considering the persistent interactions between client and supplier in ITO, the subsequent practice would fail to conform to the pre-defined governance model more often than not.

The purpose of this research is to construct a theoretical framework with a practical research approach to effectively identify governance practices in ITO, and hence facilitate its comparison with the formal governance model. Therefore, I propose two concise concepts of governance, respectively Governance-in-Contract (GiC) and Governance-in-Practice (GiP), to represent the pre-defined formal governance model and the emergent governance practices in ITO. With these two concepts, I pose the following research questions:

- How to distinguish the GiP and GiC in ITO?
- How are GiP and GiC interrelated in an ITO relationship?

In contrast to most prior studies where governance models are built to influence practice, I tap into the practice in order to examine the relevance of theoretical understandings (Schultz and Hatch, 2005). Meanwhile, I adopt a network perspective on GiP for simplicity as well as comprehensiveness (Kilduff and Tsai, 2003). Such practice-based network embraces *praxes* and *practices* (Reckwitz, 2002; Vaara and Whittington, 2012) as nodes and ties. In this paper, I will first conceptually illustrate the perspective of practice-based network for ITO governance on the stage of psychological contract in Miranda and Kavan’s (2005) Moment of Governance (MoG) model. Then the ties of *practices* are investigated as an initial attempt to empirically access GiP and GiC networks in a case study combining social network analysis (SNA) and documents analysis. Specifically, I have investigated an outsourcing relationship for IT infrastructure services between an insurance company (client) and an IT service company (supplier), showing how the structure of GiP is revealed with governance-related communication networks, and comparing it to the GiC defined by the contract.

The following sections are organized as follows. I first explicate the theoretical background of governance in ITO; and address the concepts of GiC and GiP, drawing upon social network perspective and practice theory with the distinction between *praxis* and *practices*. The case study is then introduced in the methodology section, focusing on the *practices* of ITO governance. I continue by illustration of empirical findings. The relevance of these results is then reflected in the discussion section. And the last part of conclusion summarizes the paper, advances the contributions, and suggests implications for practitioners and future research.

2 Theoretical background

2.1 ITO governance

In the discipline of IT, a widely accepted definition of governance is “*the framework for decision rights and accountabilities to encourage desirable behaviour in the use of IT*” (Weill, 2004, p.3). This definition covers the pre-specified characteristics of governance models, yet in the specific context of ITO practices, governance mechanisms also emerge in the persistent interactions between client and supplier. An abundance of literatures have distinguished between contractual governance and relational governance (Lacity et al., 2010). Some researchers endorse the combination of these two mechanisms of governance, (Goo, et al., 2009; Poppo and Zenger, 2002; Sabherwal, 1999; Saunders et al., 1997); others attempt to re-organize the governance mechanisms into contract types, namely psychological contract and formal/written contract (Koh et al., 2004). Miranda and Kavan (2005) proposed a Moments of Governance (MoG) model that synthesizes prior perspectives on ITO contract and governance. They suggest a sequential order of two governance stages, promissory contract and psychological contract, leading to differentiated inter-organizational rents. The three governance options, namely market, hierarchy, and network governance (Adler, 2001), are thus circumscribed by the outsourcing context into each governance stage.

Considering the lifecycle of ITO, I position this paper to study the post-adoption governance. Therefore, I zoom in to the governance practices in Miranda and Kavan’s (2005) second governance stage of psychological contract, and investigate its two governance alternatives of hierarchy and network. Psychological contract facilitates inter-organizational cooperation, and is developed in the execution process of promissory contract. This cross-boundary alignment process includes the routinized coordination, and non-routinized conflict resolution. Meanwhile, social capital (Nahapiet and Ghoshal, 1998) emerges in the process through three structural elements of control: inter-organizational linkages, the extent of trust and shared understandings. The distinctive characteristics of two types of governance mechanisms, hierarchy and network, are then mapped into these five elements of governance at the stage of psychological contract (Table 1).

<i>Elements of governance at psychological contract</i>		<i>Hierarchy governance</i>	<i>Network governance</i>
<i>Execution</i>	Coordination	Document-based	Interaction-based
	Conflict resolution	Distributive	Integrative
<i>Social capital</i>	Inter-organizational linkages	Few and formal	Extensive and informal
	Extent of trust	Presumed opportunism	Presumed trust
	Extent of shared understandings	Discrete understandings	Shared understandings

Table 1 Governance alternatives at the stage of psychological contract (Adapted from Miranda and Kavan, 2005)

The hierarchy governance and network governance mapped in Table 1 are two ideal-typical forms of governance mechanisms, which can be combined in different proportions according to their contexts (Adler, 2001). As an outcome of promissory contract, a formal governance model in the contract document represents initial expectations on the ITO governance at the stage of psychological contract (Miranda and Kavan, 2005). These expected governance mechanisms can fall into the categories of either hierarchy or network governance, or a hybrid form combining both. Moreover, it is not possible to cover, by any type of contracts, all the emerging issues in practice (Ring and Van de Ven, 1994). Therefore, in the psychological stage of governance, the occurrence of conformity and disconformity of practice with contract would then further blur the distinction between hierarchy and network governance. Although such plural forms of governance have been well discussed in the existing literature, many of them are not specifically focused on the ITO context (e.g. Adler, 2001; Bradach and Eccles, 1989; Brown, 1997; Poppo and Zenger, 2002). Furthermore, most of the relevant studies in the scope of ITO governance are built upon the project level (Gopal and Gosain, 2010; Heiskanen, Newman and Eklin, 2008; Sabherwal, 1999; Tiwana, 2010), with a few exceptions on the

organizational level (Goo et al., 2009). This study scrutinizes the plural elements of hierarchy and network governance in both GiP and GiC, and in both client and supplier organizations. The conformity and deviation between practice and contract then reveal their mutual influences on the evolution of governance mechanisms of the ITO relationship.

2.2 Governance-in-Practice and Governance-in-Contract

As mentioned in the last section, the formal governance model in the contract document is the outcome of promissory contract stage and initial expectations of psychological contract stage. I define this formal framework as Governance-in-Contract (GiC), which is also comprised with the five elements of governance at the stage of psychological contract (See Table 1). The subsequent practice in the governance stage of psychological contract is then defined as Governance-in-Practice (GiP). In contrast to the concrete and explicit nature of GiC, GiP is emergent in the micro level actions of each governance role, and in the macro level interactions between client and supplier. Hence, I will focus on the investigation of GiP, and use GiC as a comparative reference.

It is worth noticing that some studies have already highlighted who the different roles are in IT governance, be them on the individual level (Weill, 2004) or on the business unit level (Brown, 1997). By identifying the roles, these studies have provided a sketch for the holistic understanding of GiP. However, the links between roles are yet to be explored. Weill (2004) breaks down IT governance into the locus of decision and input, and how the involved people can be held accountable for their collective role. Regarding this elaboration as the point of departure, I develop the network of GiP with the distinction between *praxis* and *practices* (Reckwitz, 2002; Vaara and Whittington, 2012). The network perspective captures each individual's activities in a collective web of interactions (Kilduff and Tsai, 2003). However, as I seek for an in-depth understanding of what actually happens when the practitioners struggle to achieve effective governance, traditional network perspective focusing on purely structural matters is not sufficient (Jack, 2005; Martínez, Dimitriadis, Rubia, Gómez and De la Fuente, 2003). This objective entails the engagement of practice as a means to connect the macro level interactive structures and micro level individual activities. *Praxis* refers to each practitioner's governance-related actions; and the web of interactive *practices* is where *praxes* are embedded, consisting of the contact and communication across different governance roles. The network of GiP thus embraces practitioners and their individual *praxes* as *nodes*, and their interactive *practices* as the assemblage of *ties*. These elements of GiP network are then mapped into the corresponding elements of GiC at the stage of psychological contract. In this way, the networks of GiP and GiC can be compared in the same framework (Table 2). Due to the complexity of the framework with various elements, its empirical illustration would require multiplicity of methods. Therefore, I concentrate in the empirical study on only a portion of the network elements. In particular, I will elaborate in the next section how the *practices* of GiP can be empirically acquired and contrasted with GiC. Therefore, I will focus on the coordination in the execution process, and inter-organizational linkages in the structure of social capital.

<i>Psychological contract</i>	<i>Elements of GiC network</i>	<i>Elements of practice in GiP network</i>
<i>Execution: process</i>	Coordination	Practices, ties
	Conflict resolution	Praxis, nodes
<i>Social capital: structure</i>	Inter-organizational linkages	Practices, ties
	Extent of trust	Praxis, nodes
	Extent of shared understandings	Praxis, nodes

Table 2 GiC and GiP networks at the stage of psychological contract

3 Methodology

As an attempt to illustrate the network structure of GiP and explore its interrelations with GiC in a real-life situation, I have conducted an exploratory case study combining social network analysis

(SNA) and documents analysis. Case study as an approach to understand the “dynamic present with single settings” (Eisenhardt, 1989, p.534) well suits the purpose to demonstrate the emergence and interaction of the two concepts. Meanwhile, due to the exploratory nature of this study, mixed methods are adopted to illuminate GiC and GiP with different approaches, so that divergent views of governance can be obtained in a single study (Mingers, 2001; Venkatesh, Brown and Bala, forthcoming). Specifically, I studied an outsourcing relationship for IT infrastructure services between an insurance company (client) and an IT service company (supplier). The process of data collection and analysis will show how the *practices* part of GiP is revealed, and comparing it to the GiC defined by the official documents.

3.1 Case description

The case study is carried out in both client and supplier companies within an ITO relationship. The client company is a large insurance company mainly operating in the Nordic countries (Nordic Insurance, a pseudonym, referred to as NI hereinafter), with about 7000 employees. The case study initiates in the department of IT services (referred to as DIS hereinafter) in NI which has 61 employees. The main task of DIS is to manage outsourced IT services with various external suppliers, and to serve their internal customers in different Business Areas (referred to as BA hereinafter) of NI. One of DIS’s most important outsourcing relationships is established with an IT service supplier called Knowledge IT Management (a pseudonym, referred to as KIM hereinafter). KIM is a leading IT service company with approximately 18000 employees worldwide, and a core team (referred to as KIM1 hereinafter) of 24 people is dedicated to the services for NI, who have direct daily contacts with people in DIS. Figure 1 shows the relationships between the companies and departments studied in this case; the arrows show the direction of service provision among different units. The outsourcing contract was signed in 2005 for IT infrastructure services between DIS and KIM1. Hence it can be considered as a long-term and on-going relationship on the stage of psychological contract, and therefore serves as a typical case to fulfil the exploratory purpose of this study. The contract concerns the services on delivery and development of server and storage, end-user services, mainframe services, and other ad-hoc IT projects.

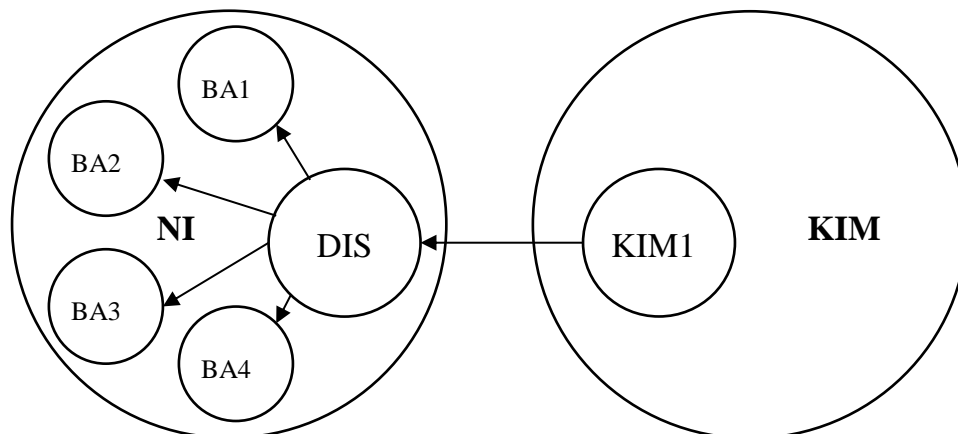


Figure 1 Relationships for IT service provision in the case study

3.2 Data collection

I collected data in both NI and KIM in autumn 2012. I started by investigating the communication networks among employees from both NI and KIM1. Communication has been associated with the effectiveness of IT governance practices (Huang, Zmud and Price, 2010; Weill, 2004) in disseminating the governance decisions and forwarding relevant inputs. Especially since I choose to empirically focus on the *practices* part of GiP as an assemblage of ties embracing coordination and inter-

organizational linkages, the communication networks in the scope of ITO governance can render structural insights to fulfil this purpose.

I applied Social Network Analysis (SNA) (Hanneman and Riddle, 2005; Wasserman and Faust, 1994) as an effective tool to describe the relationship patterns and structures among different roles of governance. Since a large number of people are involved in the scope of this ITO governance case, I opted to focus on the most active ones. Therefore, I first sent out a social network survey to all the 24 team members in KIM1, requesting each respondent to select his/her most contacted 10 persons from a list of NI employees in the communication of technical and non-technical issues. This list is discussed and decided together with the team leader of KIM1, and it involves 88 names from both DIS and different BA's of NI. The purpose of this survey was stated in an email sent to all participants, and the specific focus on ITO governance was indicated explicitly. Of the 24 people, 23 people, or 95.8%, completed the survey. I used UCINET (Borgatti, Everett and Freeman, 2002) for the SNA. As a result, 49 people from NI were selected as contacts by KIM1. Then, I held another discussion for a new list of active NI employees for this ITO governance with a business liaison manager in DIS, who has the most relevant knowledge on the overall picture under investigation. Using the KIM1's SNA result of 49 names as a basis, the new list was determined by deleting some of the retired or transferred employees, and adding new names with other key roles in the governance. Consequently, 60 people were listed for the second SNA, including 36 from DIS and 24 from BA's. The same survey was then sent to these NI people identified in the new list, except that the contact list in the questions became the 24 KIM1 team members this time. Up to date I have received 51 responses (85%) for the second survey. Thus, the technical and non-technical communication networks were unfolded on the ITO governance between the units. I will discuss these networks in details in the section of findings.

Besides the social network survey, I also analysed the appendix on the governance model in the latest version of ITO contract last modified in June 2010. It is a Word document with 29 pages, including a pre-defined governance model of three levels (i.e. strategic, tactical, and operational), as well as relevant tools, processes, and escalation paths. This document provides the secondary data to understand the GiC in this ITO relationship, and is referred to as "*governance appendix*" in the following sections.

3.3 Data analysis

In accordance with Table 2, the analysis of data incorporates the interpretation of network data for *practices* part of GiP. In addition, GiC is constructed upon the textual material of the governance appendix.

As mentioned in the last section, I began the SNA immediately after collecting the responses of first network survey in KIM1, in order to generate the respondents list in the second network survey in NI. After I received the responses from the second survey, I analysed the communication structure with UCINET (Borgatti et al., 2002) to calculate the network *density* between different units (i.e. BAs and DIS, KIM1 and DIS) and different governance levels. In directed networks where ties have a direction, density is the ratio of the number of actual ties and possible number of ties (Wasserman and Faust, 1994) between the groups in question. As one of the most widely used group-level index, density is used to indicate the degree in which different groups of network members are connected to other groups (Haythornthwaite, 1996). Thus coordination and inter-organizational linkages in the governance can be illustrated by density values across the network.

The same elements of coordination and inter-organizational linkages are highlighted with evidences in the governance appendix. In this way, I position GiP and GiC in two equivalent networks incorporating comparable ties of *practices* as shown in Table 2. Finally, I contrast the coded categories of these two networks with the distinction between hierarchy governance and network governance (See Table 1). The findings are presented in the next section.

4 Findings

In this section, I will contrast the GiP to GiC with the distinctive characteristics of hierarchy and network governance emerging in the coordination and inter-organizational linkages at the stage of psychological contract (see Table 1). Consistent with Miranda and Kavan's (2005) elaboration on the governance stage of psychological contract, inter-organizational linkages concern the distribution and patterns of network ties, representing a facet of the structural dimension in social capital (Nahapiet and Ghoshal, 1998). And coordination is defined as the processes *"integrating or linking together different parts of an organization to accomplish a collective set of tasks"* (Van de Ven, Delbecq and Koenig, 1976, p.322). For both GiC and GiP, I present first the structural matters of inter-organizational linkages, and then the process matters concerning coordination.

4.1 Governance-in-Contract (GiC)

In this particular case, the governance appendix of the ITO contract is the only official document elaborating the formal governance model. Hence, this document can directly represent the GiC under investigation. First, the overview of governance appendix has indicated a formal structure of inter-organizational linkages among different units of DIS, KIM1 and the BA's. As explicitly termed, governance applies to the ITO relationship between two parties, i.e. DIS and KIM1.

"This Appendix describes the cooperation between the [DIS] and [KIM1]. [...]. The governance model shall be implemented by both Parties delegating responsibilities to functions and individuals."

Although some of the employees from different BA's are also engaged in the governance hierarchy, they are expected to only communicate through DIS people, and not directly with KIM1.

"[DIS] will be the service integrator towards [BA's], but [KIM1] will co-operate with [DIS] and its other suppliers as is set forth in the Agreement."

Moreover, the governance structure is designed into three hierarchical levels: strategic, tactical and operational. Relevant employees from both DIS and KIM1 are explicitly assigned in different forums on each level. For instance, in the forum of *"Executive board"* on the strategic level, the *"[DIS] members"* involve *"CEO, CIO, and head of IT services"*; and the *"[KIM1] members"* involve *"CEO, head of financial services, strategic customer manager and [specific IT product] business manager"*. The outputs of forums are mostly distributed horizontally, i.e. to other forums on the same governance level; and sometimes also vertically but only to the adjacent forums. Thus, the information is intended to flow across various forums in a hierarchical way, and no direct information exchange is determined between the strategic and operational levels. Figure 2 demonstrates the vertical flow of decisions and outcomes out of selected illustrative forums in the governance appendix.

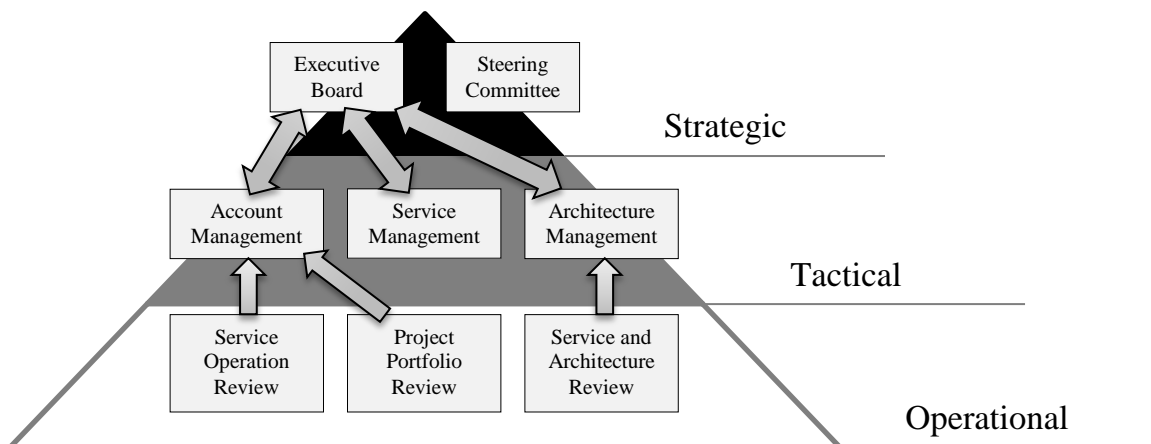


Figure 2 An example of typical vertical communication structure defined in GiC

It is worth noticing that the characteristic of extensive and informal inter-organizational linkages, as in network governance, has been mentioned but only once in the vision of governance appendix:

“The governance model will facilitate a free and open dialogue between the [DIS] and [KIM1] across all tiers of the relationships and functional groups.”

However, as illustrated above, both the overall governance structure among different units and the linkages across different governance forums are overwhelmingly hierarchical in the GiC.

As to the process matters of coordination, the GiC envisions *“strong control of the Service, through a well-structured governance framework, [...] As such, the governance framework shall touch all parts of the Services.”*

Moreover, the governance appendix outlines a list of procedures and standard processes, such as *“existing [DIS] processes and new processes according to Information Technology Infrastructure Library (ITIL)”*. And it *“assumes responsibility [of KIM1] that these will work effectively in practice”*.

In addition, different responsibilities are pre-defined on different levels of governance. The strategic level focuses on non-technical issues such as:

“Establish and review the broad objectives for the partnership [...]. Express the mutual expectations [...]. Express and discuss the feedback from executive level review [...]. Provide guidance on matters of policy, value, integration and the allocation of resources [...]. Make high-level decisions relating to project scope, timeline, budget and policy.”

In contrary, the operational level is mainly responsible for technical issues in the processes of *“incident”, “problem”, “change”, “end-user services”, and “disaster recovery”*.

On the tactical level located between the other two levels, the main processes exhibit a combination of both technical and non-technical responsibilities:

“The main processes governed in tactical governance are: Financial management, performance management, resource management, workflow management, contract management, Security and Disaster Recovery Services management, technical management.”

Similar to inter-organizational links, the vision of GiC also resembles some extent of network governance concerning coordination, such as interaction, mutual adjustment, and teamwork:

“The Parties will review and as appropriate modify the governance model over time in light of experience and as necessary to meet changing requirements. [...] The governance model will provide a framework for close collaboration [...] to tie together all the different teams [...]”

However, these mutual adjustments *“will be agreed and incorporated through the [formal procedure of DIS]”*. Furthermore, the last modification was finalized in 2010, thus the frequency of revision and change is considerably low, and the document remains rather stable over time.

Therefore, considering overall coordination, the GiC in this ITO relationship emphasizes the document-based feature of hierarchy governance, demonstrated by impersonal enforcement of rules based on a detailed documentation which intends to be all-inclusive. It also promotes standardized processes and plans to guide the expected governance activities, which is also a distinctive characteristic of hierarchy governance.

4.2 Governance-in-Practice (GiP)

In this study, GiP is represented by the governance-related communication networks in ITO. Table 3 and Table 4 present the results of calculation by UCINET on network densities between and within different groups, regarding communications on both technical and non-technical issues. In the social network survey, communications on technical issues are indicated as *“communication directly related to IT, e.g. incidents/problems related to server, application, telecom, etc.”*; and those on non-technical

issues are “communications not directly related to IT, e.g. contract negotiation, budgeting, and other managerial issues”. In addition, I also recap the survey design that the ties refer to the inter-unit linkages between DIS and KIM1, and between DIS and the BA’s. The internal ties within either unit are not included in the calculation. The tables also exhibit the direction of communications, i.e. initiated by the actors on the first column towards the actors on the first row.

The linkages of GiP in the tables suggest contrasting governance characteristics in comparison with the formal and hierarchical structure in GiC. First, direct contacts can be observed between BA’s and KIM1, as shown in the cells painted in grey in Table 3 where the density value is a positive figure. Moreover, the density values of the direct links from BA to KIM1 are substantial compared to their links to DIS; while the network densities are considerably lower from KIM1 to BA than those from KIM1 to DIS. These observations indicate that the *practices* differ significantly from GiC, in which no direct links between the BA’s and KIM1 are suggested, and where the status of BA participants is considerably peripheral. Therefore I interpret these direct contacts as informal linkages, a characteristic in network governance, departing from the formal and hierarchical governance structure among the three units. Furthermore, the supplier (i.e. KIM1) has a higher tendency to conform to the contract compared to the business client (i.e. BA). Similarly, the grey cells in Table 4 also show evidences of direct linkages between strategic and operational levels in both technical and non-technical networks which again indicates deviation from the formal model.

Network Density on Technical Issues				Network Density on Non-Technical Issues			
	BA	DIS	KIM1		BA	DIS	KIM1
BA	0	0.057	0.056	BA	0	0.051	0.059
DIS	0.035	0	0.100	DIS	0.046	0	0.115
KIM1	0.021	0.071	0	KIM1	0.042	0.087	0

Table 3 Network density between different units

Network Density on Technical Issues				Network Density on Non-Technical Issues			
	Strategic	Tactical	Operational		Strategic	Tactical	Operational
Strategic	0.029	0.021	0.053	Strategic	0.071	0.067	0.061
Tactical	0.011	0.030	0.049	Tactical	0.043	0.042	0.038
Operational	0.024	0.034	0.049	Operational	0.036	0.032	0.050

Table 4 Network density between different governance levels

Regarding coordination, the GiP also shows both conformity and disconformity to the GiC. The formal processes in GiC have set clear boundaries between technical and non-technical responsibilities on strategic and operation levels, and determined the tactical level as an intermediary managing both responsibilities. Comparing the two parts of Table 4, the density of horizontal ties within each level suggests that the operational level actors dominate the technical network, and the strategic level becomes more active in the non-technical network. These show the conformity of GiP to the GiC, demonstrating a hierarchical feature of the network. However, a considerable extent of disconformity is also evident in the table: strategic actors still involve in the technical network, and plenty of operational actors also take part in the non-technical network. These observations of exceptions indicate that the intended all-inclusive control in GiC is not fully applied in practice. Instead of sticking strictly to their assigned responsibilities, different governance roles adjust their communicative activities based on the emerging needs of interaction, which resembles the main feature of coordination in network governance.

5 Discussion

Within the ITO relationship in this case study, I have distinguished and contrasted the GiC and GiP on the stage of psychological contract by focusing on the coordination and inter-organizational linkages.

The finding shows that while the GiC resembles hierarchy governance in general, the GiP manifests a hybrid governance pattern sustaining prominent features in both hierarchy and network governance (Table 5).

Selected elements of Psychological Contract		Governance alternatives	
		GiC	GiP
Structure: <i>Inter-organizational linkages</i>	Network density between units	Hierarchy	Network
	Network density between governance levels	Hierarchy	Network
Process: <i>Coordination</i>	Technical and non-technical responsibilities on different governance levels	Hierarchy	Hierarchy and network

Table 5 Contrasting GiC and GiP by governance alternatives

These findings depart from Miranda and Kavan’s (2005) MoG model by (1) separating GiC and GiP from the general concept of governance, and (2) discovering in GiP the possibilities of co-existence and combination of different governance alternatives on the same stage of psychological contract. The hybrid governance mechanism in GiP is evident in the analytic results in Table 5: inter-organizational linkages resemble network governance in general; while in the coordination patterns, hierarchy and network governance mechanisms are combined and intertwined with each other. Although the GiC is found to be generally hierarchical in nature, I also find minor features of network governance, e.g. in its vision statements. Therefore, both GiC and GiP can potentially retain hybrid features with co-existing and intertwined elements of hierarchy and network governance. This is consistent with the research stream of plural governance, suggesting that these two governance alternatives are only ideal-typical forms, that they are combined in different proportions according to the contexts.

The separation of GiC and GiP would raise further questions, such as how these two concepts are interrelated, as concerned by the second research question. The case study has discovered certain degree of conformity of GiP to the GiC, showing the influence of GiC on GiP as a reference and guideline for practice. And I also interpret this influence as a reason for GiP to still sustain certain features of hierarchy governance. Furthermore, out of the SNA method, I have distinguished the GiP with the density values among different network groups, and the distinctions of practice and contract have also been presented in the findings. I argue that the disconformity of GiP from GiC is the key to determine the necessities to modify the GiC. In this way, this study contrasts to prior understandings, where governance models are perceived as the precedent of practice, by evaluating the relevance of models from practice (Schultz and Hatch, 2005). The next step may be to uncover *how* relative and tangible improvement can be planned in both contract and practice. This question can be answered only after close scrutiny on the reasons of the disconformity between GiC and GiP, which requires deeper understanding of the *praxis* out of empirical analysis. Therefore, this further question is not included in the scope of this study.

6 Conclusion

In this paper, I have addressed two concepts of GiC and GiP for ITO incorporating social network perspective and practice theory with the distinction between *praxis* and *practices*. The theoretical framework of practice-based network is built on the basis of Miranda and Kavan’s (2005) MoG model on the stage of psychological contract. Due to the complexity of the framework concerning empirical study, I explored only the “*practices*” part of the framework in a single case study.

This study has two major implications for ITO governance research. First, I break down the general governance concept into GiC and GiP under the theoretical framework of practice-based network. Compared to prior research on plural governance in ITO, this study renders new insights by probing deeper into the organizations for the theoretical understanding of governance in ITO research, as the separation of these two concepts attains the comparison on the nuances from both perspectives of contract and practice within a single case of ITO governance. Second, the application of SNA combined with qualitative document analysis provides a practical approach to uncover and contrast

GiC and GiP for both researchers and practitioners. Of course, this design of approach represents only one of the effective ways to fulfil this purpose, thus I warmly invite future researches to discover various innovative approaches as such to bridge practice and model.

I consider the partial empirical application of the conceptual framework as a major limitation. I have planned future studies to further investigate the *praxis* of ITO governance by in-depth interviews and ethnographic observations. Meanwhile, the SNA is settled upon the density of ties between different groups, intra-group communications are excluded from the scope of this study. This might over simplify the analysis, as intra-group ties can convey extra information, especially on the network between different governance levels. Therefore, deeper analysis on a more complete network would be necessary to advance the findings with a higher level of explanation power, as well as an enhanced impact on practice. Nevertheless, as an exploratory attempt, I hope this study can be an inspiration for future researches to bridge practice and theory in the field of ITO governance.

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