Towards a Typology of Adaptive Governance: The Role of Decision-Making and Accountability

Cancan Wang
Copenhagen Business School
Frederiksberg, Denmark
cw.itm@cbs.dk

Rony Medaglia
Copenhagen Business School
Frederiksberg, Denmark
rm.itm@cbs.dk

Lei Zheng
Fudan University
Shanghai, China
zhengl@fudan.edu.cn

Introduction

The increasing complexity of public issues and the rapid advancement of IT development and services (e.g., social media, big data) put high demands on government to develop internal capacity to evaluate, respond to, and implement new technologies and internal processes. Moreover, as governments in the last decades have increasingly transferred their capacities externally through outsourcing projects, following the tenets of New Public Management, they are often left with reduced skill sets and limited capacity. This has created challenges for governments to adapt within a short time to deal with potentially disruptive changes, especially in the implementation of new information technologies.

Confronted with such challenges, governments have sought to deliver public services through new working relationships with private and non-government organizations. Such relationships are characterized by the voluntary combination of separate private and public organizations into a coherent service delivery system (Dawes and Eglene 2004), namely the public-private collaboration. In such new organizational set-ups, established mechanisms of governance that imply enhancing control and enforcing procedures are found no longer suitable for reacting and adapting quickly to changes in the environment (Gong and Janssen 2012). Governments are thus expected to adopt new organizational structures in order to accommodate the evolving and dynamic collaborative relationships around government.

One of such emergent approaches is adaptive governance. Adaptive governance is characterized by 1) decentralized bottom-up decision-making, 2) efforts to mobilize internal and external capabilities, 3) wider participation to spot and internalize developments, and 4) continuous adjustments to deal with uncertainty (Janssen and van der Voort 2016). These governance configurations aim at making governments more adaptable to the changes in their surrounding environment, while also preserving stability and accountability, which are highly valued by government organizations. Adaptive governance in this sense requires continuous balancing acts and ambidextrous capabilities.

While potentially apt to cope with uncertainty at a conceptual level, the notion of adaptive governance needs to be detailed and tested in real-life contexts. Further research is required to identify, stemming from the abstract principles of adaptive governance, the key dimensions across which adaptive governance can vary in the specific contexts of IT adoption, project management, and use. Tackling this need, we propose a typology of adaptive governance applicable to digital government contexts, with the aim of identifying key dimensions that characterize different forms of collaboration between public and private actors in IT-related projects. We develop this typology drawing on an analysis of four cases of public-private collaboration in IT-related projects.

The four cases on public-private collaboration selected for this study include:

A website development and social media management project in Lu'an city, China.

The Lu'an project is an IT outsourcing project between the informatization office of Lu'an Municipality, Anhui Province and a local IT medium sized company, name LH. LH handles the technical development and maintenance of the municipal website as well as the major social media portal on the website. The informatization office takes charge of content creation and co-develops their website by specifying their needs.

A social media management project in Shanghai, China.

The Shanghai WeChat Service project is part of a strategic partnership project between Shanghai Municipality and one of the largest IT companies in the country, Tencent Holdings Limited, that was agreed in 2015. Under the partnership project, Tencent facilitates the development and administration of digital service provision portals for Shanghai Municipality on their major social media platform, WeChat. The Shanghai Municipality and its subordinated bureaus take charge of content creation and co-develop the digital service provision platform by specifying their needs.

An open data-related contest project in Shanghai, China.

The Shanghai Open Data Apps (SODA) project is a municipal-level case competition organized in Shanghai, to award the best applications developed using government open data. It is an annual project started in 2015. The contest is initiated and organized by a variety of open data supporters from government, IT-related businesses, universities and NGOs. The organization of the contest primarily takes place in chat groups on the social media platform WeChat, complemented with offline meetings. In organizing the contest, the tasks are distributed contingently among the stakeholders.

A digital service provision-related workshop project in Shanghai, China.

The Observe project is a workshop that is initiated by an existing network of government, university and NGO actors across China. The workshop provides suggestions on digital service provision issues (i.e., big data, open data, and smart city) for specific local government in the form of seminars, lectures and visits. It also aims at broadening the network through these events. The workshop started with local government that was already involved in the network, and spread to other bureaus accompanying the widening of the participants. It started from 2015 and ran about twice a year. It was initiated in the chat group on the social media platform WeChat amongst the network members. In organizing the contest, the tasks are distributed contingently among the stakeholders.

Data for all the four cases has been collected through an array of qualitative methods, including semi-structured interviews, participant observation, and document analysis. The four cases of public-private collaboration for IT-related projects have been analysed focusing on the governance strategies devised to cope with rapidly changing demands in a sustainable manner.

Findings

Two key dimensions characterizing the different observed configurations of adaptive governance have been identified. These two dimensions are: the distribution of decision-making power, and the attribution of the accountability among the stakeholders participating in the collaboration. By the distribution of decision-making power, we refer to the presence of multiple centers of decision-making power that are divided among the stakeholders (polycentric), as opposed to the concentration of decision-making power in one or few stakeholders (polarized). By attribution of accountability, we refer to how formal is the attribution of who is accountable for processes and outcomes of the collaboration among the stakeholders.

The combination of these two dimensions characterizes four types of adaptive governance. That is to say four configurations of how governments devise forms of collaboration with private and non-governmental actors in IT-related projects that can ensure adaptiveness to rapid changes in the environment, while aiming at preserving stability. The four types are illustrated in Table 1.

		Distribution of decision-making power	
		Polarized	**Polycentric**
Attribution of accountability	**Formal**	*Polarized governance*	*Polycentric governance*
	Informal	*Agile governance*	*Organic governance*

Table 1. A preliminary typology of adaptive governance

The first type of adaptive governance is characterized by polarized decision-making power and formal attribution of accountability. In this type of governance, polarized decision-making power is manifested through 1) contracted or agreed formal ownership among the stakeholders; 2) fixed institutional authority of government. Formal attribution of accountability is manifested through 1) pre-determined project goals; and 2) contracted accountability between stakeholders.

This is exemplified by case 2 – Shanghai WeChat Service Project. In this project, the Shanghai Municipality has signed the strategic partnership with Tencent Holdings Limited, in which Tencent provides facilitating services for government bureaus and departments to develop digital service provision platform. Even though Tencent strongly emphasizes their role as service provider for the municipality, however, while they are helping each bureau to develop their service provision platform on each bureau's accounts on WeChat, they are also developing a service provision platform that is independent from – and to some extent competes with – the bureaus' platforms. It is placed at a more visible position on the platform, and is designed more neatly. The relevant bureaus and municipalities, however, reacted positively to the change, and withheld the possibility to overpower the company and prioritize their own service provision platform on WeChat (which has happened before in other municipalities or on other platforms). The rationale behind the strategy is reported as to transfer some of the institutional authority to the market to decide which channels to use to ensure the sustainability of the project.

We label this type *polarized governance* to emphasize the possibility to adapt to new IT environment by transferring some of the decision-making power from the state to the market to increase adaptiveness of the government and the sustainability of the project.

The second type of adaptive governance is characterized by polarized decision-making power and informal attribution of accountability. Partly as in polarized governance, in this type of governance, the ownership of the project is also contracted or formally agreed amongst the stakeholders. While government has the institutional authority, the non-government stakeholders have the (IT) knowledge-based authority in decision-making. The goals of the project as well as the stakeholders' accountability are pre-determined in contracts or formal agreement. However, accompanying the changes in the environment, the stakeholders can deploy tactics that lead to a re-configuration of accountability and authority in decision-making.

This type of governance is well-exemplified by case 1. In the Lu'an project, the informatization office of Lu'an Municipality has signed an IT outsourcing project with the local IT company LH, asking the company to deliver a series of IT service in regards to the development and maintenance of the project. According to the contract, the company has an office in the government building to help them with any project-related issues. However, in a year after the project started, the security level of the government's IT system needs to be improved according to the state's regulation, and the servers have to be upgraded to accommodate the development of the new website which, according to the company, will result in a huge increase in the service price. The head of the informatization office then decides to internalize the IT capacity within the government by recruiting new employees with IT-related backgrounds, and organizing training in relevant fields. In a year the informatization office took over the routine IT help job, and managed to run the new website with very small adjustments to the server. This then led to a re-negotiation of the project contract with a much lower price and removed the office for the company from the government building.

We label this type of adaptive governance as *agile governance* to emphasize the possibility of transferring the knowledge-based authority amongst stakeholders with the appropriate (knowledge) internalization or externalization tactics in a top-down contracted project.

The third type of adaptive governance is characterized by polycentric decision-making power and formal attribution of accountability. Different from the first two types of governance, here there is no agreed contract to indicate the formal ownership of the project, meaning that the project is initiated in

a bottom up fashion. As the government actor often partakes as a member of the group of the initiators, there is no clear sign of institutional power of the government actor in decision-making. Rather, the decision-making power centers emerge at a later stage. They are however multiple and distributed across the group of stakeholders, depending the types of the decisions to be made (i.e., operational, technical or strategical). However, the goal of the project is agreed upon prior to the start of the project. And the accountability to a great extent follows the pattern of the sectorial backgrounds of the stakeholders.

This is well exemplified by case 3. In the Shanghai SODA project, the project is initiated by a group of government, university and industry actors. The goal of the project was decided in the phase of initiation. The government actor, together with the rest of the stakeholders, clearly reported that "there is no owner of the project". The accountability of the stakeholders follows their own sectorial backgrounds, for example the industrial stakeholders operates the organization (e.g., contacting venues, finding sponsorship), the government is in contact with the municipal bureaus when there is a demand, and the university stakeholders provide apt advice and IT infrastructure for the contest. However, within such a polycentric configuration, there also lies instability, especially when the interests of different decision-making individuals/organizations clash. In this case, what we have observed is a 'revitalization' of institutional authority of government when confronted with such a situation.

We label this type *polycentric governance*, as the multiple and decentralized decision-making power provides a great extent of adaptiveness to the changes in the environment. This however may result in instability in the project, which can be accommodated when the decision-making power is re-centralized in the government.

The fourth type of adaptive governance is characterized by decentralized decision-making power and informal attribution of accountability. Here there is no agreed formal ownership and no fixed institutional authority of the government, for similar reasons as mentioned in the polycentric governance. The knowledge-based authority is also distributed, as the stakeholders are many in the network.

Moreover, the project goals are broad and not formally indicated. The purpose of such kind of project is more approximate to networking itself. And the accountability in organization is also contingently assigned amongst the stakeholders.

This is well exemplified by case 4. The Observe workshop is organized by an existing network of government, university and NGO actors. The organizers of the workshop are often the ones who propose the next destination for the workshop, therefore the available resources for organizing projects are often contingent and follow the individual networks. The outcome of the project is usually broadly defined, mostly for the purpose of networking and learning or knowledge exchange. Government in this case is updated about the latest knowledge in academia and industry, and is provided with the outreaching possibilities to network and initiate new projects.

We label this type *organic governance*, as it features the most openness in participation and an organic adaptiveness to the changes in the environment. Individual interests are served to a great extent in this type of governance.

Contributions and future research

As the theory of adaptive governance developed, one of the important features that scholars identified for adaptive governance is "institutions and organizations to be nested across levels of governance, structured with multiple centers of power, redundant in function, and connected across space and time through networks" (Chaffin et al. 2014). Combing the stream of adaptive governance scholarship (Chaffin et al. 2014; Dawes and Eglene 2004; Janssen and van der Voort 2016) with the governance practices we have observed, we have identified two dimensions that are at stake in understanding different configurations of adaptive governance, one being the distribution of decision-making power, and the other the attribution of accountability.

With the developed typology of adaptive governance, this study potentially contributes to the scholarship of adaptive governance in the following dimensions.

First, we start to embark on the issues recently proposed by Janssen & van der Voort (2016), particularly on the ambidextrous relationship between stability and accountability, and adaptiveness and agility, through contextualized case studies. Second, based on this, we are able to follow Janssen and van der Voort's framework to further provide concrete adaptive governance strategies.

Additionally, we also enrich the understanding of adaptive governance, by showcasing the possibilities to govern top-down projects with adaptive strategies and tactics. Specifically, by showing the typologies of polarized governance, agile governance, polycentric governance, and organi governance, we point to which kind of organizational capacity government needs to mobilize in order to deal with uncertainties and complexities.

The proposed typology can form the basis for future research on a) determinants of different modes of adaptive governance: what are the factors that determine the emergence of one type of adaptive governance instead of another? What needs can each type of adaptive governance fulfill? And b) effects of different type of adaptive governance. Which type of governance proves most effective? And in which conditions? What are impacts of different types of governance on aspects other than project success, such as e.g., stakeholder motivation and satisfaction, and collaboration sustainability?

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