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### Bureaucratic Decision-Making in Urban China - A City-Level Study on Green Public Procurement in North China after 2004

**Zusammenfassung:** Die Regulierung öffentlicher Güter stellt eine Herausforderung für die chinesische Regierung dar. Angesichts der vielgestaltigen lokalen Staatsebene, der wirtschaftlichen Liberalisierung und der Formalisierung der Verwaltung braucht die Regierung neue Instrumente, um an der Schnittstelle zwischen Staat und Markt intervenieren zu können. Das Grüne Beschaffungswesen der Regierung ist ein solches Instrument. Es versucht, die ökonomische und umweltpolitische Effizienz durch die Beeinflussung von Angebot und Nachfrage auf den Gütermärkten zu fördern. Es reguliert diese jedoch nicht direkt, sondern nimmt stattdessen die Kaufentscheidungen örtlicher Beschaffungsbeamter in das Visier. Diese Untersuchung versucht zu verstehen, wie die Umsetzung eines Grünen Beschaffungswesens als politisches Instrument in der Praxis funktioniert. Zu diesem Zweck beschreibt und analysiert sie die Kaufentscheidungen von Beschaffungszentren der Regierung in zwei nordchinesischen Städten – Tianjin und Qinhuangdao. Der Schwerpunkt liegt auf den Informationsstrukturen und den Einflussfaktoren hinter den bürokratischen Entscheidungen an der Schnittstelle zwischen Staat und Markt. Die Fallstudie ist primär deskriptiv angelegt. Durch die Verbindung von Literaturauswertung und empirischer Beobachtung wird darüber hinaus ein vorläufiges Modell vorgeschlagen, das als Basis für Replikationen und künftige Verbesserungen dienen kann.

**Schlagworte:** Staatsverwaltung, Beschaffungswesen, Informationsströme, lokale Entscheidungsprozesse, Tianjin, Hebei

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**Abstract:** Public good regulation poses a challenge to the Chinese government. In face of a polymorphous local state, economic liberalisation and the formalisation of administration, the government requires new instruments to intervene at the state-market interface. Green government procurement is such an instrument. It seeks to promote economic and environmental efficiency by influencing supply and demand on product markets. However, it does not regulate them directly but targets the purchase decisions of local procurement officers instead. This enquiry seeks to understand how the implementation of GGP as a policy instrument works in practice. To this end, it describes and analyses purchase decisions in the government procurement centres of two North Chinese cities—Tianjin and Qinhuangdao. The focus is on the information architecture and influencing factors behind bureaucratic decisions at the state-market interface. The case study is primarily descriptive in nature. Moreover, by combining literature research with empirical observation a preliminary model for pattern predictions is suggested as a basis for further replication and future improvements.

**Key words:** state administration, procurement, information flows, local decision-making, Tianjin, Hebei

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## **Abbreviations**

BL	Bidding Law of the PRC
CCP	Chinese Communist Party
CSCP	UNEP/Wuppertal Institute Collaborating Centre on SCP
DRC	Development and Reform Commission
EMCC	Environmental Management College of China
EU	European Union
GGP	Green Government Procurement
GPB	Government Procurement Bureau
GPC	Government Procurement Centre
GPL	Government Procurement Law of the PRC
IT	Information Technology
LBF	Local Bureau of Finance
LCC	Lifecycle Costing
MEP	Ministry of Environmental Protection
MOF	Ministry of Finance
NDRC	National Development and Reform Commission
OECD	Organisation for Economic Co-operation and Development
PA	Principal-Agent
PRC	People's Republic of China
QHD	Qinhuangdao
SCP	Sustainable Consumption and Production
SME	Small and Medium-Sized Enterprise
SOE	State-Owned Enterprise
SSTEC	Sino-Singapore Tianjin Eco City
SuPP-Urb	Sustainable Public Procurement in Urban Administrations in China
TJ	Tianjin
UN	United Nations
WCED	World Commission on Environment and Development
WI	Wuppertal Institute

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## Introduction

China's economic development has kept the Chinese political system stable for two decades<sup>1</sup>. However, this development poses new challenges for the Chinese government: economic growth has become a fundamental precondition for political survival, while pervasive environmental degradation and increasing disparities are sources of growing social unrest (Schucher, 2007, p. 43). The paradigm of Sustainable Consumption and Production (SCP) is a prominent normative answer to both challenges, because it addresses entwined economic, social and environmental goals. It refers to a variety of public good issues ranging from rural access to drinking water to smog problems in urban areas. This is exactly where markets alone typically fail and where state and civil society interactions are needed.

The Chinese state used to control political and market capital (Nee & Opper, 2010) through dominant state-owned enterprises (SOE) and authoritarian political power. While phasing out the planned economy, it did not give up its interventionist approach (Williams, 2005). In the growing private sector, however, it limited itself to a guiding role (PRC, 1982, para. 11)—at the cost of losing the lever of market capital (Naughton, 1996). This inconsistency brings about the need for new mechanisms to directly manipulate the market<sup>2</sup>. Seen in this context, green government procurement (GGP) is an attempt to apply a new instrument for direct market manipulation in favour of the normative goal of SCP<sup>3</sup>. The presented case study seeks to shed light on how this instrument actually works after respective regulation on energy-efficient (2004) and green products (2006) has been issued. To this end, it looks into purchase decisions in the government procurement centres of two North Chinese cities—Tianjin (天津) and Qinhuangdao<sup>4</sup> (秦皇岛).

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<sup>1</sup> See Shambaugh (2008, p. 77). In turn, unstable periods like 1989 often went along with economic problems like inflation (Zhao, 1982; quoted by Y. Huang, 1996, p. 19).

<sup>2</sup> This process is visible when looking at the quest for a new national innovation system (see X. Liu & White, 2001). On the level of concrete instruments, observers view the new Anti-Monopoly Law (PRC, 2008) as an attempt to regain market control (Masseli, 2007; Sprick, 2008).

<sup>3</sup> It does not include social criteria but still belongs to the set of policies for SCP.

<sup>4</sup> All Chinese phonetic notations follow the *pinyin* standard.

## Introduction

The focus of analysis lies on information architecture and influencing factors behind bureaucrats' decisions at the state-market interface.

## Rationale

The first part of the introduction defines the subject of the presented enquiry; it explains the motivation behind it and the methodology applied. The following main part is divided into three chapters, which reflect the underlying logic of a pattern-matching approach<sup>5</sup>: chapter I introduces and systematises relevant aspects of bureaucratic decision-making in China. Building on a literature research, it formulates expectations on how decision-making in GGP might look like and provides an analytical framework for a respective empirical enquiry. Chapter II reports observations made when applying the analytical framework to two case cities. It identifies common features and differences. The last chapter compares theoretical expectations from the first with empirical observations from the second chapter. From this, a preliminary model for describing patterns of bureaucratic decision-making in the field of GGP is developed.

## Scoping and Research Questions

The analysis is conducted from the perspective of the central government of the PRC. It does not seek normative answers to fundamental sustainability challenges, but focuses on the implementation of the policy instrument<sup>6</sup> GGP in North Chinese cities. After defining the most relevant terms, the following section points out the gap in current literature that this case study seeks to close and introduces the respective research questions.

### Definitions

The normative concept of **Sustainable<sup>7</sup> Consumption and Production** (SCP) was prominently described in the Johannesburg Plan of Implementation

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<sup>5</sup> This term is explained in the methodology section.

<sup>6</sup> Two major groups of instruments can be distinguished in a market economy: first, those shaping the institutions of resource allocation and, second, those directly manipulating resource flows. GGP is part of the latter category: When purchasing products with certain features the state automatically discriminates against others. Hence, GGP can be considered to belong to the same group of policy instruments for direct market manipulation as subsidies and tariffs on trade.

<sup>7</sup> SCP is linked to the term sustainability as defined by the Brundtland Commission (WCED, 1987).

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(UN, 2002, chap. III). In brief, it stands for specific consumption and production patterns, which have to allow for the minimisation of what is regarded as negative social and environmental side effects of economic prosperity. At the same time, they must not question the latter fundamentally<sup>8</sup>. Instead of defining what makes consumption ‘sustainable’ the idea of SCP is substantiated by concrete examples here. In line with this, the term *green government procurement* (GGP) means the procurement of products with an eco-label and with an energy efficiency label<sup>9</sup>. Government procurement is one form of public procurement. It focuses on the procurement of goods that are consumed by administrative units and public service units like hospitals or universities during their regular operations. It does not include procurement for SOEs or infrastructure development.

*Corporatism* means a system of interest mediation that ideally includes all group-state relations (Schmitter, 1974). Other scholars have already applied the concept to China (e.g. Oi, 1997). However, it is used in a broader sense here: ‘corporatist’ behaviour simply describes the tendency to give more importance to systemic factors than individual disposition when making decisions.

As far as *geographical denominations* are concerned, the term ‘China’ stands for the People’s Republic of China (PRC) here. ‘North China’ refers to the macro region as defined by Skinner and Baker (1977). The term ‘city level’ is more ambiguous: for Qinhuangdao it means the administrative level between province and district, while Tianjin—although being a city—ranks on province-level<sup>10</sup>. Hence, ‘city level’ is defined here as a distinct spatial urban entity administered by one political entity.

### *Current Literature on GGP: The Need for Site-Intense Research*

There are few studies similar to the presented case study. None of them takes the same approach in terms of the level of enquiry and the underlying

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<sup>8</sup>Although the terminology of SCP is not very common in China its core elements are being promoted through various concepts like Harmonious Society (*hexie shehui*, 和谐社会), Circular Economy (*xunhuan jingji*, 循环经济) and Scientific Development (*kexuehua fazhanguan*, 科学化发展观) (Shambaugh, 2008, chap. 6).

<sup>9</sup>This does not necessarily reflect regulatory terminology but is in line with the Chinese scientific discourse (chapter I, 1.3) and the discourse among practitioners (chapter II).

<sup>10</sup>For an overview of administrative levels in the PRC see Heilmann (2004, p. 103).

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motivation. Few scholars seem to be interested in the step of implementing GGP in China, while many proceed to the next step straight away and ask for the impact of GGP after implementation. This is the case for the Western body of literature as well as for literature in Chinese<sup>11</sup>. Scholars look into effects on innovation (Dalpé, 1994), production activities (Harris et al., 2005) and consumer behaviour (Van Wie McGrory et al., 2002). The principal-agent (PA) problem, however, remains underrepresented in research on GGP. At the same time, agent default, local discretion and corruption are discussed broadly in other fields: Wederman (2005) describes an increase of overall corruption in China, Dong and Yang (2010) dwell on anticorruption efforts and Zhou (2010) focuses on changes in performance management. Zhang (1998), however, argues for the beneficial role of some forms of corruption.

Most studies that actually do focus on the implementation of GGP in China do not systematically enquire what happens on the ground. Geng and Doberstein (2008) analyse China as a national case of GGP, van Wie McGrory et al. (2006) compare it with Mexico—both take into account procurement personnel and local political economy. However, both do not base their analysis on these dimensions systematically. Liu's and Li's nation-wide survey of 95 procurement officers dating back to 2005 is closest to the approach presented in this work. Its analysis was promoted in both the international and the Chinese domestic debate on GGP (C. Liu & T. Li, 2005, 2006). Similar to the presented analytic framework (section 2), Liu and Li ask for barriers. Still, they do not go as deep as this case study can do, because they build on a nation-wide cross section.

To date, no study could be identified that systematically combines both a focus on GGP implementation with a systematic micro approach to bureaucratic decision-making. In the following, it will be argued that such an analysis of decision-making is vital from a methodological and a content-related perspective for understanding policy implementation in the field of GGP. The present case study tries to contribute to closing this gap. Results could serve as a basis for

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<sup>11</sup> This includes government procurement of energy-efficient and of products labelled ‘green’. Subsuming both aspects under the term GGP appears appropriate, as search on the China Academic Journal database yields respective results for *gonggong caigou* 公共采购 or *zhengfu caigou* 政府采购 and *nengxiao* 能效 or *lǜse* 绿色.

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further studies on bureaucratic behaviour—in particular in urban administrations<sup>12</sup>. With a preliminary pattern model (chapter III) at hand, both replication and quantification could be pursued. More generally, the presented empirical findings (chapter II) can be related to existing literature on central-local relations, local corporatism, bureaucratic bargaining and other issues of political economy. Results can also add to the new field of information systems in developing countries (Walsham, Robey, & Sahay, 2007) and the debate on labelling and certification in China (Guan & Shen, 2010).

### *Research Questions*

It has been shown above why further contributions on the implementation of GGP are needed. However, so far it has not been explained yet what this implies for research design. One way to give this endeavour a clear direction is to ask when GGP could be considered a viable instrument for market manipulation at all. Seen from a government perspective, there is a minimal claim to make. As a viable instrument, GGP should allow for a certain level of pattern predictability regarding its implementation. Accepting less would mean being satisfied with yielding random effects or restricting government intervention to the symbolic level<sup>13</sup>. Asking for more than pattern predictability—e.g. for measuring the concrete impact of GGP—would demand modelling and controlling the economy. The Chinese government has positioned itself somewhere in between by designing a hybrid system for GGP implementation<sup>14</sup>. Its predictability is in the focus here.

Predictability can be achieved in a three-step process of (1) recognising, (2) creating a model of and (3) establishing a viable theory about patterns of behaviour—in this case the decision-making behaviour of local bureaucrats. The presented case study turns down the claim of comprehensiveness in favour of higher validity: it focuses on level (1) and does not aim further than recognising

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<sup>12</sup> For analysing cities work by Hurst (2006) and others can serve as guidance.

<sup>13</sup> Random effects would not comply with the aim of manipulation, while symbolic action would only have real effects on markets for a very limited period of time.

<sup>14</sup> As is depicted in chapter I, it controls parts of it in a top-down manner, and gives some freedom to local bureaucrats in other subsystems.

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decision-making patterns for two specific case cities. Still, by proposing a *preliminary* model it will take a first step in the direction of modelling (2) and thus eventually might become a nucleus for analytic generalisation (3) (Yin, 2009, p. 38).

Decision-making can be analysed from a variety of perspectives. This case study follows the perspective of Carroll and Johnson (1992) because they focus on the needs for field research in social sciences. Carroll and Johnson (1992, p. 21) distinguish seven temporal stages<sup>15</sup> of the decision-making process. In the case of government procurement, these are formally institutionalised by respective regulations. However, making government procurement *green* arguably raises new questions: What is a green product? How can public goods like the environment be included systematically in individual decision-making? Two of the seven stages are particularly relevant for these questions: First, more and different information has to be obtained (stage four). Second, choice has to be based on more and different criteria (stage five). The present case study seeks to shed light on these issues by focusing on the following research questions:

**Research Question One (Q1): Information for green government procurement**

- a.) On which information can procurement officers build their judgement?
- b.) How do procurement officers acquire and process such information?

**Research Question Two (Q2): Drivers and Barriers of Decision-Making**

- a.) Which drivers and barriers exist regarding decision-making in GGP?
- b.) How do drivers and barriers influence the process of decision-making?

These research questions reflect the intended descriptive scope of the analysis. They allow for identifying patterns of behaviour but do not seek to explain them. In chapter I, they form the basis for designing the analytical framework.

## Methodology

The implementation of GGP on the local level is a subtle and complex field. Although some scholars today even face an overload of data (Carlson, Gallagher,

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& Manion, 2010, p. 2), little official data is available for bureaucratic decision-making and limited access to primary sources prevails. As a consequence, a case study approach appears more feasible here than applying rigid large-n methods<sup>16</sup>. Thereby, ‘case study’ is here defined as

*“an empirical inquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident.”* (Yin, 2009, p. 18)

The main sources for this case analysis in Tianjin and Qinhuangdao have been semi-structured interviews, open interviews, talks, GPC documentation and public data. In addition, direct participation, participant observation and general information on case cities are used. Most of the seventeen semi-structured interviews were conducted in Chinese during a field trip in February and March 2011. They focus on decision-makers’ perception<sup>17</sup>; some ask for the perspective of stakeholders like users and suppliers of procured goods. These interviews are semi-structured and build on a modular questionnaire<sup>18</sup>. Furthermore, twelve open expert interviews and talks support triangulation of data and pattern matching.

Some scholars criticise case study approaches for their reliance on opaque data collection and processing methods, while others regard them as equal to large-n methods (Evera, 1997, p. 4). This case study does not claim to explain causal relationships or even establish a theory and, thus, avoids such debates. Nevertheless, three potential sources of biases have to be taken into account: the actors observed, the cases chosen and the investigator himself.

First, interviewees might have displayed a recall<sup>19</sup> or response bias. Documentations also could have suffered from recall biases. Such biases are expected to be less severe due to the fact that government procurement is richer in formal institutions compared to other case study subjects, like community life for

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<sup>15</sup> These are (1) recognition, (2) formulation, (3) alternative generation, (4) information search, (5) judgement or choice, (6) action and (7) feedback.

<sup>16</sup> For the complexity argument, refer to Carroll and Johnson (1992, p. 38), for the recommendation of site-intense methods for analysing hidden and subtle phenomena see Read (2010, p. 150).

<sup>17</sup> This includes decision-makers for concrete purchases and superiors directly setting frameworks.

<sup>18</sup> For detailed information on interviews please see the case study protocol in the appendix.

<sup>19</sup> Carroll and Johnson (1992, p. 33f) divide it into remembering, reconstruction and rationalisation.

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instance. Still, biases might be strong, because GGP is a political issue. Second, case selection can yield biases: access to the two sub-cases has been made possible through a Sino-European cooperation project on GGP under the EU SWITCH-Asia Programme<sup>20</sup>. This improves access but implies a super-normal awareness level leading to an atypical power and priority balance. Third, the investigator himself can create biases, if he has sufficient influence (Yin, 2009, p. 13). It is assumed that this has not been the case here. Finally, the research outline itself holds a major potential bias: pattern matching may induce pattern levelling, if the interviewer was led by expectations.

To avoid biases, the most relevant criteria for case studies are applied: construct, internal and external validity, as well as reliability of data (Yin, 2009, p. 40ff). In order to increase construct validity, this analysis uses triangulation of data—i.e. it combines interviews with different agents, additional observations and analysis of documentation to crosscheck information. Pattern matching, the fundamental concept applied here, is an important tool for reducing inferential biases and increasing internal validity. In addition, semi-structured interviews have allowed for flexibility when asking for competing explanations. With respect to external validity, limitations are acknowledged in two ways: first, this case study does not claim to directly contribute to theorising. If it does so indirectly, the presented research has to be evaluated from the perspective of analytical rather than statistical generalisation. Moreover, applying tested theories in the analytical framework can only ensure a certain degree of comparability and, thus, external validity. The criterion of reliability demands replicable research procedures. To meet this requirement the enquiry has to be mapped in form of a case study protocol. Parts of this protocol are provided in the second section of the appendix. Direct references are made throughout case description and analysis when quoting interviewees.

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<sup>20</sup> The author is indebted to the project managers of the SuPP-Urb Project (EMCC, 2011a) from the Wuppertal Institute (Germany) as well as from the Environmental Management College of China and Nankai University (both PRC) for their support.

## A Literature-Based Perspective on GGP

The presented case study strictly centres on the individual bureaucrat. This reflects the basic assumption that decisions are always made by individuals—alone or in groups, in private, in corporations or in bureaucracies—and, thus, should be analysed with a focus on the individual. Accordingly, the first section of this chapter seeks to explain who bureaucrats are and what their role in the Chinese bureaucracy and the implementation of GGP is. The first section also presents three streams of literature, which are then used to systematise bureaucratic decision-making with the help of an analytical framework in the second section. The third section builds on this framework to formulate expectations regarding decision-making patterns of bureaucrats in the field of GGP.

### Bureaucratic Decision-Making

Bureaucrats are individuals. However, their role and tasks within a bureaucratic system gives a specific meaning to their decisions and influences the way they take them. This section shows how this poses a challenge to the central government when marshalling the Chinese bureaucracy to implement GPP.

Unlike consumers or entrepreneurs, bureaucrats per definition act on behalf of a principal (Weber, 2005, p. 162). This indicates the importance for bureaucratic decision-making of what has been coined the principal-agent (PA) problem<sup>21</sup>: central political decisions can only be professionally translated into local action through a hierarchical system. However, this happens at the costs of legitimising local agents, i.e. delegating power to a certain degree. Departing from the more mechanistic Weberian view, such a situation is regarded as an often unstable compromise today<sup>22</sup>. Assuming asymmetric information<sup>23</sup>, a bureaucratic machine only works smoothly as long as the local agents' interests (Niskanen, 1968) are compatible with the principal's intentions. If interests differ sharply, the principal

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<sup>21</sup> For an overview see Miller (2005).

<sup>22</sup> One example is Aghion's and Tirole's (1997) work on formal and real authority in organisations.

<sup>23</sup> Leaving the agent with better knowledge concerning the particular matter than the principal has.

will face a number of trade-offs in his behaviour towards local agents that affect his ability to exercise power as originally intended. One crucial trade-off manifests itself in the choice between certainty and predictability on the one hand and more viable than customised solutions via local agent discretion on the other. At first sight, predictability and centralisation look more desirable: local agents find little leeway for deviating from directives. Yet, this concept often leads to a formalist conduct of agents. It can fail to achieve the actual policy goal in the face of complex local realities<sup>24</sup> or even result in actions that run counter to it.

### *The Chinese Bureaucracy*

Path-dependencies, fragmentation and decentralisation of the Chinese bureaucracy limit options for policy implementation. This status quo prevails, as the need for economic flexibility makes fundamental shifts of the system costly<sup>25</sup>.

China can claim to look back on two thousand years of bureaucratic history. Regardless of this tradition, a bureaucracy in Weberian terms only evolved after the 1970s<sup>26</sup>. Since then, cadres formerly fighting at the forefront of class struggle step by step turned into bureaucrats cultivating and guarding the institutions of the socialist market economy (Jing, 2010, p. 40). This change has gone along with a regular series of administrative reforms<sup>27</sup>. However, these gradualist<sup>28</sup> reforms have not wiped out what Jing calls path-dependent effects: regardless of technocratic dominance<sup>29</sup> in party leadership a “*politicised bureaucracy*” continues to give higher priority to political integrity than expertise. A “*moralized, but sometimes immoral bureaucracy*” easily exchanges moral doctrines for formal institutions and the rule of law (Jing, 2010, p. 37). For the PA problem this implies diverse effects. A politicised bureaucracy can be synchronised in cases of obvious

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<sup>24</sup> Van Rooij (2006a, p. 229) describes this for the regulation of land and pollution in China.

<sup>25</sup> Peerenboom (2002, p. 412) discusses this challenge in the context of the rule of law.

<sup>26</sup> Weber (2005, p. 1034) draws a sharp line between professional *bureaucrats* and ancient mandarins trained in literature and calligraphy. Maoist bureaucrats do not match his definition either. They are political custodians devoted to leaders rather than to their duties (Weber, 2005, p. 762).

<sup>27</sup> Practically, every new government carried out reforms. See Ngok and Zhu (2007).

<sup>28</sup> Please see (Fan, 1994; Ma & Jiang, 2007, p. 32).

<sup>29</sup> ‘Technocratic’ here refers to the educational background of Chinese leaders (C. Li, 2001, p. 27).

political crises<sup>30</sup>, but might hamper policy implementation in normal periods; a moralised bureaucracy might allow for desired forms of discretion<sup>31</sup> but is at risk of “*ethical crisis resulting from the loss of faith in socialism*” (Peerenboom, 2002, p. 407).

After Mao, decentralisation led to increased agent discretion (Chung, 1995). In their early path-breaking studies Lampton, Lieberthal and Oksenberg<sup>32</sup> describe an ambiguous attitude towards lower bureaucratic ranks: the central government often stipulates discretion without giving official permission for it. This has been identified as distinctive policy style (Heilmann, 2011). Scholars of institutional change have shown how it can prepare the ground for non-official experiments<sup>33</sup>. In the 1990s, case studies of the local state on county (Blecher & Shue, 1996) and city level (Duckett, 1998) revealed that such discretion had induced a variety of local agent behaviours. They range from predatory over clientelist and entrepreneurial to developmental attitudes (Baum & Shevchenko, 1999)<sup>34</sup>.

This fragmented and polymorphous (Howell, 2006, p. 282) image of the Chinese local state bears strong implications for the potential viability of policy instruments like GGP. First, fragmentation lowers overall predictability of agent behaviour; second, decentralisation increases the likelihood of agent discretion; and third, path-dependencies can undermine desired forms of discretion. Complaints about too much discretion (Peerenboom, 2002, p. 410) and concerns about administrative monopolies (Wang, 2008) are observable indicators for this.

### *The Case of Green Government Procurement*

In the face of the challenges related to the characteristics of the Chinese bureaucracy competing policy goals and opaque definitions make GGP particularly

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<sup>30</sup> Heilmann (2004, p. 32) coins the behaviour in such cases *Krisenmodus* (English: crisis mode).

<sup>31</sup> For example see van Rooij (2006a, p. 229) on sustainable compliance.

<sup>32</sup> Their central pieces of research reflect the path to the development of paradigms like fragmented authoritarianism and the bureaucratic bargaining model (Lampton, 1987; Lieberthal & Lampton, 1992; Lieberthal & Oksenberg, 1988; Oksenberg, 1981).

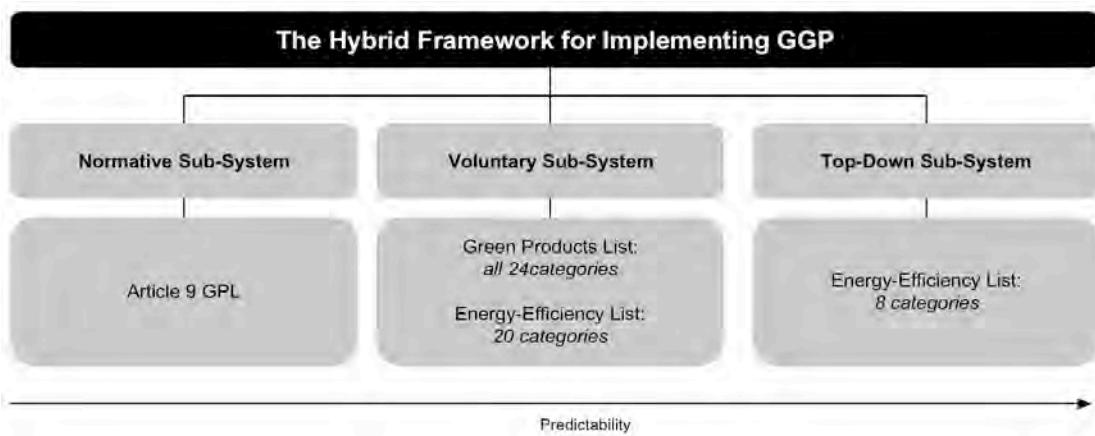
<sup>33</sup> Johnston (2002) describes how this coincided with factional fights in the party leadership, leaving local agents with remarkable room for discretion in the face of central disagreement.

<sup>34</sup> Other concepts like the one of local state corporatism (Oi, 1992) are used elsewhere.

difficult to implement. To still be able to realise the potential of GGP the Chinese government created a hybrid implementation system.

In theory, governments can manipulate the market according to their current political strategy simply by utilising their purchasing power<sup>35</sup>. GGP is one way to do this. However, in reality much of this potential is not used for two reasons: first, the government might try to realise a variety of goals through government procurement at the same time. Second, the principal-agent problem persists. It induces the creation of complex public management and monitoring systems. They aim at merging multiple goals and ensuring local agents' compliance. As a consequence of this complexity, government procurement is particularly prone to corruption (Søreide, 2002; for the case of China: WTO, 2010a, para. 70). The introduction of new procurement procedures like GGP becomes a major undertaking<sup>36</sup>. In transition countries these problems are more distinct than in Western democracies: institutions are weaker; bureaucratic capacity tends to be insufficient; the trade-off between dynamic and cost efficiency is more serious<sup>37</sup>. To sum up, planners in such countries are left with little choice. They have to focus on introducing basic procedures, reinforcing them with formal institutions and taking further measures to create capacity and compliance. There is no space for GGP.

**Figure 1: The hybrid framework for implementing GGP**



<sup>35</sup> According to estimates by the OECD (2006), public procurement adds up to 12-20% of a country's GDP on global average.

<sup>36</sup> Wilson (1989, p. xi) regards implementation to be the biggest challenge.

<sup>37</sup> Here, dynamic efficiency means cultivating sustainability through innovation (Thai, 2009a, p. 7).

The Chinese government took a different approach, in order to realise the potential of GGP. It opted for a hybrid framework<sup>38</sup> (see figure 1) and only formalised a part of the GGP implementation system in a top-down manner. A second subsystem provides guidance for voluntary implementation, while the overarching law only offers normative orientation. In China, government procurement and GGP are regulated by Government Procurement Law (GPL) 2002<sup>39</sup>. Its main objective—budget efficiency (Cao, 2009, p. 328f)—is pursued through fostering competition among potential suppliers. However, based on Article 9 of the GPL<sup>40</sup> secondary objectives come into play:

*“Government procurement shall be conducted in such a manner as to facilitate achievement of the goals designed by State policies for economic and social development, including but not limited to environmental protection, assistance to underdeveloped or ethnic minority areas, and promotion of the growth of small and medium-sized enterprises.”* (PRC, 2002a, para. 9)

These secondary objectives do not necessarily harmonise with the primary objective—the energy-efficient air conditioning is usually not the cheapest. They lift the challenges of government procurement to another level, as multiple and conflicting goals give a new meaning to the basic rule “*value for money*” (Rizzo, 2001, p. 159). What price can be given to innovation induced by a green purchase? How can a green product, not to mention a sustainable one, be identified? Article 9, GPL does not give an answer to these questions. It only provides the normative basis for GGP implementation.

In 2004, the ‘Government Procurement List of Energy Saving Products’<sup>41</sup> (*jieneng chanpin zhengfu caigou qingdan*, 节能产品政府采购清单) was released<sup>42</sup>. The implementation of eight<sup>43</sup> out of 28 categories is compulsory for procurement

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<sup>38</sup> The hybrid framework and its subsystems were identified as such and named by the author.

<sup>39</sup> For more detailed information on the legal framework refer to Cao (2009).

<sup>40</sup> Cao (2009, p. 329) emphasises that the BL does not contain many direct secondary objectives.

<sup>41</sup> The list also comprises six extra categories for efficient water use of products. However, this is not mentioned in the official title of the list. Of these six categories, urinals and lavatories are subject to compulsory regulation (NDRC & MOF, 2011).

<sup>42</sup> The list is updated biannually. After nine adjustments, it now includes over 30,000 products in 28 product categories manufactured by 600 enterprises.

<sup>43</sup> Air conditioner, lighting, televisions, computer, printers and screens underlie binding energy efficiency criteria; so do electric water heaters, belonging to ‘water heaters’ (NDRC & MOF, 2011).

agents. These categories represent the top-down subsystem of the hybrid implementation framework. The remaining categories are defined as voluntary. The ‘Government Procurement List of Environmental Labelling Products’ (*huanjing biaozhi chanpin zhengfu caigou qingdan*, 环境标志产品政府采购清单) is completely voluntary. It was first issued in 2006 containing 14 product categories. After the sixth update, in 2011, it covers 24 product categories (MEP & MOF, 2011). Obviously, voluntary categories in both lists give freedom to local procurement agents. Here, they can influence implementation outcomes when making decisions about how to define award criteria and select products. Therefore, the voluntary system is the focus of this case study.

### *Literature Used for Analysing and Systematising Decision in GGP*

Analysing the implementation of GGP in China involves three main streams of literature: the Chinese bureaucracy and its development provide the context for GGP implementation; literature on procurement provides insights in processes and systems; and research on decision-making helps to bring in the individual.

The presented approach departs from early works on bureaucracy like those by Barnett (1967) and Oksenberg (1974). It rather builds on the pathbreaking studies by Oksenberg, Lieberthal and Lampton (Lampton, 1987; Lieberthal & Lampton, 1992; Lieberthal & Oksenberg, 1988; Oksenberg, 1981) who coined terms like ‘fragmented authoritarianism’ and ‘bureaucratic bargaining’. Their theory<sup>44</sup> is enhanced by more recent Western perspectives—like those by O’Brien and Li (1999) and Mertha (2006)<sup>45</sup>. Looking at the Chinese literature body, Shi (2008)<sup>46</sup> and Huang (2003) focus on processes, while Jing (2010) describes the overall development of bureaucracy and its core features. Works dealing with the conduct of bureaucrats in the local economy—like literature on local corporatism (Ding, 1998; Oi, 1995; Unger & Chan, 1995; Wank, 2001) or the site-intensive study by Tsai (2004)—allow for further insights.

<sup>44</sup> Oksenberg, Lampton and Lieberthal, together with other scholars, replaced the image of a monolithic Leninist command-and-control structure with the concept of a fragmented state.

<sup>45</sup> Mertha describes how vague guidelines can increase efficiency of policy implementation; O’Brien’s and Li’s contribution underlines why the systemic dimension of bureaucratic decision-making should always be included when analysing implementation.

<sup>46</sup> Of relevance for this case study are especially chapter three, seven and eleven.

As for the specific analysis of government procurement, Ma and Jiang (2007) give a recent overview for the PRC (chapter two). Cao (2009), in his contribution to Thai (2009b), focuses on the development of legal institutions. In the introduction to the same anthology, Thai elaborates on implementation frameworks for government procurement, which are hardly discussed with reference to *green* government procurement in the literature though. The Chinese discourse at least emphasises information architecture: Ma and Chen (2010) find systemic limits to central provision of information in the form of procurement lists; Kang (2010) points out the crucial conflict between local and central information management systems. Chen and Chen (2010) suggest the institutionalisation of data collection and utilisation within procurement institutions. All in all, information seems to matter.

Decision-Making is an even less straightforward field than Chinese bureaucracy. In the relevant literature, three dimensions are distinguished: first, a direct institutional framework for decision-making<sup>47</sup>, second, individual features of decision-makers, and third, systemic factors influencing decision-makers. An essential underlying question for the decision-making side is what kind of decisions GGP purchases represent (Simon, 1960)—and if they are programmable or not (Csáki & Gelléri, 2009). If they were, centralised systems could execute them with the help of highly structured procedures. The literature on Chinese bureaucracy discussed above suggests that procurement decisions are not programmable. As a result, individual features of decision-makers should be highly relevant for systematically observing decision-making patterns. Literature on Chinese values and Chinese psychology<sup>48</sup> is used for framework design here. Among other aspects, this comprises thinking styles (Ji, A. Lee, & Guo, 2010), Chinese values (Kulich & R. Zhang, 2010), interpersonal relations (Gold, Guthrie, & Wank, 2002) and leadership (C. C. Chen & Farh, 2010), character of authority (J. H. Liu, M.-chih Li, & Yue, 2010) and the Chinese perception of the rule of law (Peerenboom, 2002).

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<sup>47</sup> Here, the direct institutional framework for GGP decision-making is the Chinese bureaucracy.

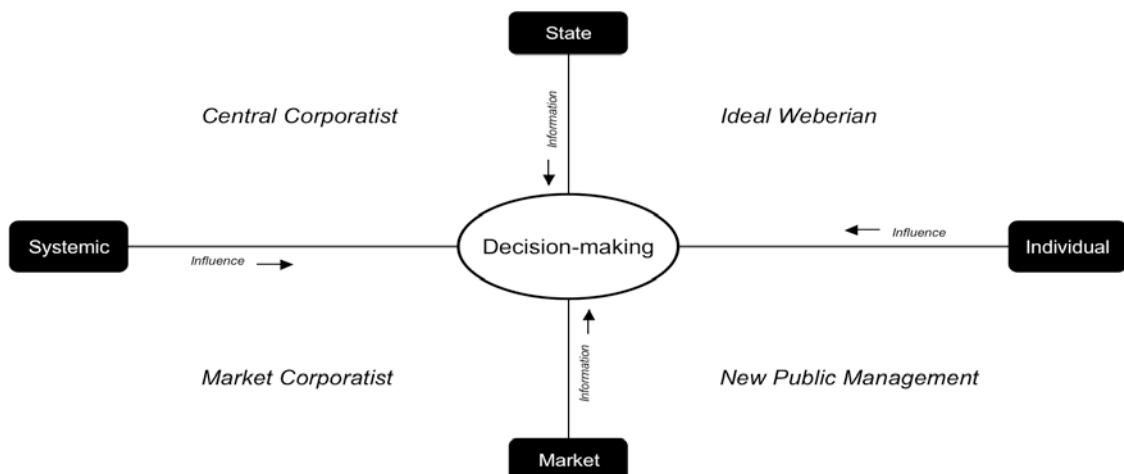
<sup>48</sup> With Bond (2010) a recent and extensive compendium is available.

## The Analytical Framework for Case Study Research

The aim to buy ‘green’ is much more difficult to operationalise for procurement officers than tangible criteria such as cost efficiency. This is assumed to be particularly relevant in two dimensions. First, officers need more and different information. Second, systemic factors and individual features might have more influence on their decision-making than usually. Each individual procurement officer can display a different pattern of behaviour in each of these two dimensions.

The analytical framework developed in the following assesses this variance systematically and, thereby, allows attributing one of four decision-making styles to interviewed procurement officers. The framework consists of two dimensions (see figure 2). The vertical dimension organises information flows relevant for decision-making; the horizontal dimension maps factors influencing decision-making. The whole framework centres on the decision-maker located at the intersection. Vertically, he can obtain information from the state and the market side. Horizontally, he is exposed to systemic influences and driven by his individual disposition. Most procurement officers will obtain information from both sides and be influenced by both systemic and individual factors. However, they still might turn to one side more often than to the other for obtaining information; and they still might perceive systemic factors to be more influential than individual ones or vice-versa.

**Figure 2: The analytical framework for analysing bureaucratic decision-making**



The presented analytical framework takes a qualitative approach<sup>49</sup> to identify these tendencies for individual procurement officers. In a first step, the interviewed procurement officer is asked<sup>50</sup> to report all aspects he regards as relevant for decision-making in GGP. In a second step, the interviewee has to rank all aspects with an ordinal scale. In a third step<sup>51</sup>, the interviewer uses this ranking to generate indicators that reflect the procurement officer's attitude. This procedure is applied to each of the two dimensions<sup>52</sup>. When combining the results, interviewees can be located in the two by two matrix shown by figure 1. Four combinations are possible. They represent four stylised decision-making types: The 'ideal Weberian' (state | individual) bureaucrat fulfils official tasks assigned to him within the bureaucratic system without respect to other systems or individuals (Weber, 2005, p. 162f). The 'New Public Management' (market | individual) bureaucrat orients himself to the market but makes 'objective' decisions based on his individual capacity (Schedler & Proeller, 2000, p. 229ff). Officers belonging to one of the two corporatist<sup>53</sup> styles, however, take their decisions with respect to the current institutional setting. Doing so, the 'market corporatist' (market | systemic) prefers decentralised information sources, while the 'central corporatist' (state | systemic) seeks to obtain information from within the state apparatus.

## Expectations From the Perspective of Current Literature

This section applies the presented analytical framework to the available literature discussed above. None of the four decision-making styles dominates clearly. However, systemic factors seem to be more relevant for bureaucratic decisions in GGP than individual factors, whereas state information is assumed to be more important than market information.

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<sup>49</sup> It is assumed that no sound quantitative measurement is available at this stage. To avoid any misleading semblance, mathematical operations are kept to an absolute minimum.

<sup>50</sup> For the full questionnaire please see appendix.

<sup>51</sup> This happens only after the interviewee has had time to confirm the minutes.

<sup>52</sup> These indicator methods are kept very simple and will be discussed in the run of the case study.

<sup>53</sup> For a definition of the term 'corporatist' please see the section of definitions in the introduction.

## Information Flows

Decision-makers often face one of two problems: either they lack sufficient information or the capability to process the volume of available information (Bazerman & Moore, 2008). Both problems apply to the case of GGP in China, even though with regards to different aspects. Local procurement agents face a dynamic market with an ever-changing variety of products. While a price is a simple-to-obtain efficiency criterion, environmental features are far more hidden<sup>54</sup> and hard to verify. Decision-makers might also lack capacity to evaluate green products<sup>55</sup>. At the same time, labelling systems that could make evaluation easier are said to be underdeveloped in China (Ma & C. Chen, 2010, p. 11). The decision to introduce nation-wide lists of energy-efficient and green products can be interpreted as a central government strategy to cope with this problem. However, as a result of this institutional design, decisions on which products to include in lists have to be made by central planners. They, on the one hand, confront the vast array of products on the national market—not to mention foreign products. On the other hand, they face the challenge of fragmented local realities. Economic feasibility and environmental effects of products vary throughout China. The increased but still low frequency<sup>56</sup> of inventory updates implies that central planners are overloaded with information. Obviously, “*the procurement scope of the green products list has limits*” (Ma & C. Chen, 2010, p. 11). Additional information architecture is needed (Y. Chen & G. Chen, 2010).

Combined with the literature review in the first section of this chapter, this brief analysis yields three results. First of all, information flows seem to be a vital issue in the field of GGP. Second, there is potential for improving the current information architecture for GGP: centralised information flows are a second-best solution. They compensate low local capacities but are still an insufficient basis for some procurement decisions. At the same time, capacity building begins to enable local agents to better acquire and process market information. Labelling schemes

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<sup>54</sup> These difficulties regarding impact assessment make GGP decisions non-programmable. This is relevant, as programmability can reduce external and systemic influence (Csáki & Gelléri, 2009).

<sup>55</sup> Jing (2010, p. 46) outlines how the focus of bureaucratic capacity building after 1978 slowly shifted away from command and control capacities to enabling decentralised decision-making.

<sup>56</sup> Please see the description of the framework for GGP in chapter I, 1.2.

could support them but are still weak. This leads to the third conclusion; a state-centred attitude can be expected for the majority of procurement officers. However, change towards using market information more is likely in future.

### *Drivers and Barriers*

The Weberian bureaucrat takes decisions only for his sphere of competence and in accordance with institutionalised rules (Weber, 2005, p. 162f). Doing so, he relies on his individual skills and grasp. As to the factors influencing such a decision-maker, individual values and conduct would be expected to dominate aspects stemming from embedment. This emphasis on strong individual factors prevails in Western theory on bureaucracy<sup>57</sup> despite the fact that the Weberian view might be regarded as outdated in the face of agency problems. Machine-like bureaucratic conduct would also be expected when a traditional Leninist bureaucracy is assumed. Ideally, such an organisational concept would leave no space for local systemic influence on decision-making<sup>58</sup>. However, in China deviation from the ideal Soviet model began in the 1960s at the latest. It led to the emergence of a Chinese-style dual bureaucracy characterised by party control and ambiguous lines of hierarchy (U, 2007, p. 2). Local decision-making in such a system, supposedly, is prone to systemic influences. Indeed, several streams of literature support this. Isolated fulfilment of tasks is not possible in most cases due to overlapping administrative, social and economic systems. Bureaucrats have to be politicians, entrepreneurs and managers of public affairs at the same time. Resulting street-level discretion is debated broadly<sup>59</sup>. Baum and Shevchenko (1999), for instance, seek to categorise bureaucrats' ways of dealing with this ambiguity, while scholars of policy implementation have identified various factors framing their behaviour: van Rooij (2006a, p. 223f) thus describes the influence of organisational structure and goals on the implementation of pollution and land

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<sup>57</sup> New Public Management, for example, rejects the isolated Weberian bureaucrat and argues for a market driven service culture. However, this refers to where bureaucrats get their information.

<sup>58</sup> Similar descriptions can be found in early works on Chinese bureaucracy (Barnett, 1967, p. 72f).

<sup>59</sup> For an overview of the debate until the late 90s please see o'Brien and Li (1999, p. 167f). Hurst (2006) emphasises the importance of the city as a level of analysis.

regulation<sup>60</sup>. Pronounced localism and various forms of local corporatism do often go along with local agent discretion (e.g. Foster, 2002; Wank, 2001). Decentralisation trends have supported these models of local governance during the reform period. They all share one common feature: bureaucrats are embedded in local systems.

Similar results are yielded when scholars dwell on individual features of Chinese decision-makers. Works in the field of Chinese psychology emphasise the importance of holistic thinking (Nisbett, 2004). According to Nisbett, Chinese perception of objects—and aspects—depends less on their inherent quality but on their context. Western decision-makers, in contrast, tend to over-attribute behaviour to personal disposition<sup>61</sup>. Such differences in perception can even influence memory, as Masuda and Nisbett (2001) show. And, if memory is affected, decisions presumably are as well—there should be an intertemporal influence of systemic factors on decision-making. The importance of interpersonal relations further supports the idea of dominant systemic influence. Procurement officers' tendency to find compromises and keep good relations with stakeholders is assumed to be higher than in the Western world. This assumption is based on value theory. Some concepts like ‘mianzi’ or ‘guanxi’<sup>62</sup> are widely referred to by the general population in China as well. They have been identified as being ‘Chinese’ by Western and Chinese scholars<sup>63</sup>. Such values might arguably dominate formal institutions like regulations due to their higher importance for individuals. In addition, leadership is described as being paternalistic (C. C. Chen & Farh, 2010). Superiors’ opinion might be valued higher than official regulations. This effect is enhanced, if Peerenboom (2002, p. 407) is right. He observes a readiness to deviate from administrative orders as a result of a “*crisis due to the loss of faith in socialism*”.

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<sup>60</sup> He also takes a micro approach focusing on lake Dianchi in Yunnan Province as a specific case.

<sup>61</sup> Ji et al. (2010) discuss analyses providing evidence for these patterns of behaviour.

<sup>62</sup> ‘Mianzi’ is about not embarrassing others—even at the cost of consistency. ‘Guanxi’ describe a certain approach to interpersonal relations (Gold et al., 2002).

<sup>63</sup> Please see Kulich and Zhang (2010) for an extensive discussion of empiric work supporting value theory from a psychological perspective. Gold et al. (2002) analyse the phenomenon of social connections with the means of social sciences.

Western game-theoretical concepts further support the idea of system-oriented decision-making in the field of GGP: poor measurability of impact and blurred definitions of goals and criteria represent disincentives. They hinder execution of tasks that is based on skill and order exclusively (Van Rooij, 2006a, p. 243). Finally, systemic influences benefit from path dependencies in China. Individual features like capacity and hands-on skills were of low importance in the Chinese bureaucracy for long<sup>64</sup>. Altogether, analyses of systemic and individual aspects both support an image of dominating systemic aspects.

### *The Overall Picture*

Based on Western and Chinese literature central corporatist<sup>65</sup> style of decision-making behaviour is assumed to prevail among Chinese bureaucrats implementing GGP. This would mean: embedment dominates individual aspects; state information dominates market information. However, while the former hypothesis is widely acknowledged, the latter might be subject to change and, thus, be more contestable. As a limitation, this literature review does not distinguish between different contexts of decision-making. It does not take into account regional or city characteristics. Hence, it can only be used as a first appraisal.

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<sup>64</sup> Actually, the importance of skills (G. W. Skinner & Winckler, 1980) remained low until the beginning of administrative reform under the macro strategy of reform and opening.

<sup>65</sup> Please refer to the above-mentioned category in the decision-making matrix (see figure 2) and the description of the central corporatist style in section 2 (chapter I).

## Decision-Making in Tianjin and Qinhuangdao

In China, central policy instruments have to prove viable in a decentralised system, in order to be effective. This is what studies on the Chinese bureaucracy imply. The policy framework for GGP indicates that the national government opted for a centralised solution to face this challenge. Central catalogues list all products the centre regards as green and recommends to local agents for purchase or even forces them to prefer to other products. However, local level decision-making remains to be of great importance. What looks like a pure enforcement challenge from a qualitative perspective, turns out to be an institutional setting demanding for local discretion: large parts of central procurement catalogues are non-binding; central regulations—mainly the GPL and related implementation guidelines—remain vague. In addition, Chinese local governments play an important role as well from a quantitative viewpoint. They are major spenders of overall government budget<sup>66</sup>. Accordingly, the presented case study focuses on the city level and picks out two Chinese cities as units of analysis: Tianjin and Qinhuangdao.

Tianjin and Qinhuangdao represent feasible sub-cases, because of their common features and the differences between them. Both are harbour cities, both are not outliers in their respective categories<sup>67</sup>, both are located in North China and—before Tianjin's promotion—both belonged to the area of Hebei Province<sup>68</sup>. This reduces undesired biases otherwise stemming from different regional path-dependencies, diverse topography and climatology, different spatial vicinity to the centre of power, differing regional product markets<sup>69</sup>. In addition, both cities take part in a project on GGP under the EU SWITCH-Asia programme<sup>70</sup>. Hence,

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<sup>66</sup> In 2008, local governments (the other category is central) spent 78.7% of the overall National Government expenditures (National Bureau of Statistics People's Republic of China, 2009, p. 264). Their share in government procurement expenditure was even 90.2% (WTO, 2010b, p. 40).

<sup>67</sup> Tianjin is less unique than Beijing and Shanghai concerning its economic and political status (Hendrischke, 1999), Qinhuangdao has a less peculiar political economy than cities like Wenzhou.

<sup>68</sup> Tianjin became a municipality directly under the central governments when the PRC was founded in 1949 (Tianjin Government, 2011).

<sup>69</sup> Although market concentration is low on a macro level in China, local administrative monopolies arguably strengthen protectionism and high local market concentrations (Williams, 2005, p. 160).

<sup>70</sup> For more information please refer to the programme website (CSCP, 2011).

awareness among decision-makers and incentives to procure green should be similarly high. On the other side, Tianjin is a province-level city (*zhixiashi*, 直辖市) and Qinhuangdao is a prefecture-level city (*dijishi*, 地级市). They are of different size, and have a different economic structure and status. This brings about systemic variation in key dimensions like purchasing power compared to surrounding regions, political influence, bureaucratic rank and other aspects useful for comparative analysis.

Before dwelling on sub-cases, the common ground for decision-making on GGP has to be clarified. Both case cities underlie the national procurement framework on the basis of the GPL and related implementation guidelines. Article 7 of the GPL states that procurement shall be centralised for all items compiled in central catalogues. Accordingly, in both cities government procurement centres (GPCs) were established. They procure what other government agencies within the same administration and service units under their control—like universities and hospitals—need for their operations<sup>71</sup>. This organisational model allows for the accumulation of expertise in the GPCs; it reduces transaction costs for tenders and enables bulk purchasing. In 2002, government procurement became a bureaucratic branch on its own on the local level by law<sup>72</sup>.

*“No procuring agency may be subordinate to any government department or have other relationship of interest with it.”* (PRC, 2002a, para. 60)

This organisational division helped to ease a structural weakness of the Chinese system sometimes referred to as the ‘problem of the two grandmothers’. When implementing GGP, a local GPC primarily acts on behalf of the central government—in the end, GGP addresses problems of national relevance<sup>73</sup>. At the same time, the GPC is under the auspices of the local government that provides funds and guidance; career chances of GPC bureaucrats might be higher in the local context (Heberer & Senz, 2009, p. 312) than in the central nomenclatura. If, under such circumstances, central and local interests divert, bureaucrats can find

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<sup>71</sup> This comprises simple commodities like printing paper as well as air conditioners and cars.

<sup>72</sup> Before 2002, it used to be controlled directly by the local subordinates of the Ministry of Finance.

<sup>73</sup> Climate change is a good example: for local governments actors abatement costs might be higher than costs caused by climate change. Only through collective action this relation can be turned around. In game theory, this is referred to as the prisoners’ dilemma.

themselves torn between two principals—two ‘grandmothers’. This problem was even stronger in the time 2002, when GPCs were a direct part of local bureaus of finance (LBF) that act in the interest of the local government. However, the influence of LBF is still big—even after bureaucratic division: they can influence allocation of procurement budgets and they are subordinated to the same central institution like GPCs: the Ministry of Finance (MOF).

Taking this into account, the following pages describe decision-making in Tianjin and Qinhuangdao. The general aim is to shed light on the role of information flows and influencing factors concerning GGP in the two cities. More specifically, it shall be ascertained, which aspects dominate the two dimensions: is state information more important than market information? Do external factors have a stronger influence on decisions than individual features of decision-makers?

The two sub-cases are analysed separately but both by applying the same procedure: For each city, conditions on an institutional level are evaluated. In this way, individual observations can be put into the local context later on. Reviewing procedures within the local GPC, as a second step, helps identifying underlying features of implementation. In a further step, evaluating the opinions of procurement officers allows for getting closer to the actual locus of decision-making—the individual. Interviews with suppliers and users serve the purpose of counterchecking procurement officers’ perceptions<sup>74</sup>. To the same end, the analysis draws on participant observations and primary sources such as official statements of GPCs and their websites<sup>75</sup>. Aspects reported by the interviewees are compiled and the most frequent ones are described. In doing so, a first appraisal of the importance of single aspects in the local context can be obtained. However, inferring their relative relevance for decision-making from their frequency would be an act of oversimplification. Instead, dominance of state over market information and dominance of external over individual factors are analysed for each procurement officer individually. By putting together the results, one of the

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<sup>74</sup> This was only done for the dimension of influencing factors.

<sup>75</sup> The approach of relating various sources to the same issues is called triangulation of data (Yin, 2009, p. 116). Its function was described in the methodology section.

four decision-making styles can be attributed to every one of them. Once procurers are categorised, an overall image of decision-making in the respective GPC can be appraised<sup>76</sup>.

The last subsection of this chapter combines findings from both sub-cases. It partly replicates the procedure used for single sub-cases<sup>77</sup>, but mainly serves other purposes: it points out differences and common features and tries to carefully evaluate, how they relate to the variance between city contexts and which empirical observations should be applied in the run of pattern matching.

### The Case of Tianjin

*"If we incentivise our suppliers to change their business and production model, our outreach will not be limited to Tianjin but we will have an impact on the whole region."*

A high-ranking officer from the GPC of Tianjin (TJ GPC, 2011a)

For years, the ten-million-inhabitant<sup>78</sup> city of Tianjin was a quiet achiever<sup>79</sup>. Located in the immediate vicinity of Beijing, it served as the capital's main shipping port and industrial hinterland. Since then, Tianjin has gained a better standing nationally and internationally. As for the sustainability arena, this became visible when the city hosted climate negotiations in 2010. In addition, it started fostering the creation of sustainable neighbourhoods and industrial zones around its seaport. Ambitious plans were presented for further development<sup>80</sup>. Altogether, supporting GGP seems to match the overall strategy of the local government.

Tianjin can draw on important resources when implementing GGP due to its provincial status, its relevant local product market<sup>81</sup> and advanced labour

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<sup>76</sup> As said, this is not meant as an act of statistical generalisation but of qualitative generalisation.

<sup>77</sup> Data from sub-cases cannot be combined randomly. Quite the reverse, the beauty of sub-cases stems from their capability to take local conditions into account.

<sup>78</sup> The Tianjin Statistical Yearbook (TJ Bureau of Statistics, 2010, p. 39) reports 9,686,700 registered inhabitants 2008. However, the number of actual inhabitants should be much higher when taking those into account who do not have a Tianjin registration (*hukou*). Such definitional problems are a basic flaw of Chinese population data (Scharping, 2001).

<sup>79</sup> Please refer to the corresponding contribution by Hendrischke (1999).

<sup>80</sup> For instance the Sino-Singapore Tianjin Eco City (SSTEC, 2011)

<sup>81</sup> Tianjin reached a per capita GDP of 55,473 Yuan in 2008 (TJ Bureau of Statistics, 2010, p. 108).

market<sup>82</sup>. Tianjin's government procurement bureaucracy has been detached from the financial administration (*caizheng ju*, 财政局) in line with the reform of the national procurement system in 2002. In Tianjin, unlike in Qinhuangdao, the public procurement bureaucracy is further divided. Alongside the GPC as implementation agency a public government procurement bureau (GPB) was established. It supervises the GPC and takes care of shaping local regulation, policy dialogue and budget bargains. The GPC, on the other side, handles the actual procurement procedure, processes information and makes concrete procurement decisions. With support from the GPB it starts hands-on initiatives towards suppliers and users and fosters exchange with implementation agencies in other cities. This division of labour given, the work of the GPC was in the focus of empiric research.

The GPC of Tianjin was established in 1999 as a department of the local bureau of finance (LBF). It has since become independent and has about 40 staff members. Within the implementation period of the SuPP-Urb<sup>83</sup> project the GPC<sup>84</sup> facilitated spending of 84,480,000 Renminbi on government procurement, 86% of which were spent according to GGP criteria<sup>85</sup>. The centre is organised in seven departments (*bu*, 部)<sup>86</sup> and three hierarchy levels<sup>87</sup>. The internal organisation of the centre largely mirrors the procurement process: the information department (*xinxi ziyuan bu*, 信息资源部) takes care of internal information architecture like databases and links it to state and market information systems. Based on this infrastructure it provides information for tendering processes. The tender invitation and tender evaluation department (*zhaobiao bu* 招标部 and *pingbiao bu*, 评标部) are responsible for the core activities of government procurement, namely tender design—including definition of award criteria—and evaluation of bids. The contract

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<sup>82</sup> Tianjin claims to have received investments from 110 out of the top 500 enterprises worldwide (Tianjin Government, 2011). They usually all need at least some trained staff for administration.

<sup>83</sup> Project duration is 36 months starting in 2008.

<sup>84</sup> The GPC of Tianjin besides routine government procurement facilitates other kinds of procurement as well. The GPCs overall spending accumulates to 30,000,000,000 Renminbi (Tianjin GPC, 2011a). The exchange rate was 10,8 Renminbi/Euro on August 29<sup>th</sup> 2011.

<sup>85</sup> Based on unpublished project data generated by EMCC and Nankai University.

<sup>86</sup> Please see section 2 of the appendix an organisation chart of the Tianjin GPC.

<sup>87</sup> The three levels are: officer, head of department and head of centre.

implementation department (*hetong zhixing bu*, 合同执行部) monitors fulfilment afterwards. All of the departments can have exchange with users and suppliers. The compliance and the general management department (*neishen bu*, 内审部 and *zonghe bu*, 综合部) supervise and facilitate the operations of the centre. The medical procurement department (*yaopin caigou bu*, 药品采购部) is the only exception<sup>88</sup>, as it is not divided from the other departments by function but rather by field of procurement. Personnel is mixed in age but young officers are numerous. Most of them hold a college degree and responsible positions<sup>89</sup>—some even as head of department. Procurement officers are trained in logistics, information technology, engineering, management and accounting. Experience does but seniority does not seem to be a dominant criterion for promotion and influence<sup>90</sup>.

In Tianjin, procurement activities begin in reaction to a concrete user request. They comprise five stages: first, information about the required products is compiled; building on this, an invitation to tender is designed and published on the GPC homepage (Tianjin GPC, 2011b). If at least three bidders participate, tender evaluation follows resulting in a purchase decision; eventually, contract fulfilment or enforcement takes place. If compulsory GGP categories apply, only products on the list can be procured, whereas products listed in voluntary categories receive a mark-up that helps them to compete with conventional products.

Internal procedural rules prescribe that officers shall never work alone on tenders but in teams of at least two. Such teams consist of procurement officers from the department currently handling the tender as well as upstream and downstream departments. Decisions, for instance to include a product or to award points, are revised several times throughout the process. Therefore, decision-making is not located in one department and not done by one procurement officer but arguably results from the interaction of various actors with various decision-

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<sup>88</sup> This is due to the particular character of medical care. However, it is of minor relevance here.

<sup>89</sup> This is based on observations and discussions during various meetings and semi-structured interviews with six procurers in Tianjin.

<sup>90</sup> Promotion to head of department, as far as reasons are visible, seems to happen according to a mixed assessment of tenure and expertise. In the overall power balance male and female officers seem to be of similar importance.

making styles. Hence, assumedly it does not make sense to fundamentally distinguish between different departments when analysing decision-making styles.

### *Information Flows*

Obtaining and managing information on products and user needs is a central aspect of government procurement activities. Procurement officers have to specify user demand for communicating it to the market and to evaluate products on behalf of users. In contrast, the GPC itself does neither produce nor design products, nor does it use more than a tiny fragment of what is purchased itself. Against this background, procurement officers have to rely on information and experience from outside the GPC. Only if central procurement lists can be applied straight away, is this information clearly defined and decision-making made easy. In all other cases, gathering and processing of information is the key to success. Without a precise formulation of award criteria and sound product evaluation, decisions will be subject to complaints by both users and suppliers.

Two main directions for obtaining information can be distinguished: it can be obtained from within the state apparatus or be provided by the market. This subsection seeks to clarify how procurement officers in Tianjin obtain information, how they utilise it and which origin of information—state or market—they perceive to be more important<sup>91</sup>.

The government procurement centre of Tianjin—compared to the expected Chinese average<sup>92</sup>—is in a good position when it comes to obtaining procurement information. This is true for seven reasons: first, gathering of information was already recognised as an important task by those establishing the GPC in Tianjin. The existence of an information department indicates this. Second, the Tianjin GPB—as a first-tier bureaucratic institution on province level—is able to communicate directly with the central procurement bureaucracy in Beijing. This eases the influence of and access to central-local information flows<sup>93</sup>. Third, the

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<sup>91</sup> This is what was defined as a research task in question 1a and 1b.

<sup>92</sup> This expectation is based on visits in the procurement centres of Qinhuangdao in Hebei Province and Lanzhou in the province of Gansu. Both are examples for certain groups of cities, namely East China's middle-sized cities and West China. They allow for a guess at average conditions.

<sup>93</sup> Central-local information flows are included in the analytical framework in form of the 'state' side of the vertical dimension (see figure 2).

staff of the Tianjin GPC have the capacity to generate and use databases. Given their education and observed conduct<sup>94</sup>, they should be capable of introducing new methods for processing product information<sup>95</sup> like lifecycle costing (LCC)<sup>96</sup>. Fourth, the centre is well equipped with computer hardware and located within the newly built Tianjin Municipal Service Centre. Hence, from a resources perspective, conditions for information processing are also promising. Fifth, the procurement centre has found an interactive way of supplier management: suppliers are urged to present their green products as well as their management and production procedures in the centre and to the general public. At the same time, the GPC introduces new analytical instruments used by procurement officers directly to high-level management of existing and potential procurers<sup>97</sup>. Thus, suppliers can provide more comprehensive information when participating in tenders. Sixth, with several universities and research institutions in town, the consultation of external experts for particularly complicated product evaluation is convenient for the Tianjin GPC. A seventh and last advantage is Tianjin's economic structure: with a 60.1% share of the secondary sector in local GDP<sup>98</sup>, many suppliers are located in Tianjin and, as a consequence, information can be exchanged directly without using wholesaling as an intermediary.

However, many of the described advantages currently represent potentials for further improvements rather than fully developed actualities<sup>99</sup>. Thus, Tianjin might serve as a good practice example but not necessarily be an example of an already perfectly functioning GGP system. As for the analysis of decision-making

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<sup>94</sup> The author was present at a capacity building seminar on product analyses under the SuPP-Urb project in October 2010. There, procurement officers showed both profound knowledge and awareness with regard to challenges in the field of information management. This observation could be confirmed in the run of empiric research in March 2011.

<sup>95</sup> The analytical framework covers the flow of decentralised product information. It is included in the vertical 'market' side of the vertical dimension (see figure 2).

<sup>96</sup> A lifecycle costing (LCC) analysis yields prices that combine purchasing with use and disposal costs. Like this, the effective cost burden for use and recycling is taken into consideration.

<sup>97</sup> Behaviour towards suppliers was discussed in the run of a meeting on general strategy with a group of twelve staff members including the head of the centre on March 2<sup>nd</sup> (TJ GPC, 2011a).

<sup>98</sup> The Tianjin Statistical Yearbook (2010, p. 108) reports this share for 2008.

<sup>99</sup> Several interview partners, who wished to have more elaborated information management methods (TJ GPC, 2011b), underlined this.

styles, no clear advantage for ‘market’ or ‘state’ information channels can be found on an institutional level. Procurers’ attitudes and perceptions have to be analysed.

According to semi-structured interviews<sup>100</sup> with six procurement officers from four departments of the Tianjin GPC<sup>101</sup>, decision-makers draw on a variety of information sources. Asking for those sources used for work on GGP tenders<sup>102</sup>, the central governments procurement lists were the most frequent answer (six times). However, other sources like internally generated and managed information (five times) as well as industry standards (four times) seem to play an important role as well. This implies that central procurement lists are not sufficient for completing all GGP tasks. One reason for that is directly linked to the high level of complexity inherent to compiling national lists. The possible frequency of updates is simply too low in the eyes of some procurement officers<sup>103</sup>. In line with this, they mentioned further information flows on the ‘state’ and the ‘market’ side: besides central lists, local regulation<sup>104</sup> and specialised state-controlled media (two times) were mentioned on the side of state. Looking into further information obtained from decentralised—i.e. market—sources, aspects are numerous. Supplier information (four times), external experts (three times)<sup>105</sup>, labels, the Internet and company standards (once respectively) and others all play a role for procurement decisions.

Most procurement officers described an incremental approach to the utilisation information<sup>106</sup>. Central lists are sufficient only in straightforward cases. They have to be enhanced stepwise by market information, as soon as products are not listed or only in the voluntary part, or when user requests get more complicated. For such a case, the proceeding was described as follows: first, internal databases might be used; in a next step, requests for more information

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<sup>100</sup> Interviews were conducted following the attached questionnaire (see appendix, 2). They took between 40 and 70 minutes (average 57 minutes) and, were all done in Chinese. Interviewees were given time to review their answers afterwards. Four out of six used the opportunity to give feedback. Changes were mainly related to phrasing issues.

<sup>101</sup> The information, tender invitation, tender evaluation and contract implementation department.

<sup>102</sup> See questionnaire question B1.

<sup>103</sup> The limitation to two yearly updates was mentioned as a weakness (TJ GPC, 2011c).

<sup>104</sup> This includes local procurement lists (TJ GPC, 2011c).

<sup>105</sup> External experts can be hired as support in case of unclear data (TJ GPC, 2011d).

<sup>106</sup> See questionnaire question B5.

might be sent out to suppliers; and, eventually, external experts might be consulted.

The way procurement officers ranked reported information sources supports the image of a partly centralised system<sup>107</sup>. Central lists are important as well in relative terms. They represent a convenient as well as legally binding starting point<sup>108</sup>. However, their relevance is limited; procurement officers' opinions on the effectiveness of central lists remain controversial<sup>109</sup>. Speaking about their hopes for the future, they did not focus on the procurement lists as such. They rather stressed the lack of concrete methods for working around them if necessary (mentioned three times). In their eyes the development of a decentralised complimentary system seems to be the main challenge.

Information flows have to be codified<sup>110</sup>, in order to allow for locating individual procurement officers in the underlying matrix of decision-making styles<sup>111</sup>. Both number and rank of reported information sources have to be taken into account in order to avoid a loss of information. To this end, three different indicators<sup>112</sup> were generated for each officer by summing up codified characteristics:

Indicator A shows the relative frequency of state to market information. Here, market information dominates in five out of six cases. However, this indicator is rejected for two reasons. First, sources of market information might simply be more diverse than state sources, i.e. they might as well be subsumed, with the effect of reducing their relative frequency. As a second downside, indicator A is blind for prioritisation by procurers—it does not at all reflect relative importance<sup>113</sup>.

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<sup>107</sup> See questionnaire question B3.

<sup>108</sup> Central lists were given the highest priority level in five out of six cases.

<sup>109</sup> One procurer emphasised the strength of the lists (TJ GPC, 2011d), another criticised their relative weakness (TJ GPC, 2011c).

<sup>110</sup> Information obtained from the 'state' side were coded 1, those from the 'market' side -1, internal information was coded 0.

<sup>111</sup> See figure 2.

<sup>112</sup> Since this is a purely qualitative enquiry, no statistical significance is claimed with regard to indicators. They solely serve as orientation.

<sup>113</sup> For further elaborations on this issue please see the third section of the appendix.

Indicator B combines frequency and relative importance. It picks out only the upper 50% of ranked information sources and sums them up. In case of the Tianjin GPC this method yields a balanced result with three procurers preferring market and three preferring state information<sup>114</sup>. Indicator C puts even higher emphasise on ranking positions by dropping all but the upper 25% of ranked sources. In six out of six cases state information dominates<sup>115</sup> when applying this method. However, this indicator is rejected as well. Due to its strict focus on prioritisation it holds the risk of dropping relevant information. This risk is regarded as too high here, given that the ranking was done with an ordinal and not a cardinal scale<sup>116</sup>.

Altogether, none of the three indicators are statistically reliable. However, indicator B promises to deliver most viable appraisals for which information flows dominate procurers' decision-making for GGP. This method does not yield a clear result in favour of any of the two directions: three procurers tend to orient towards the market, three show a propensity to turn to the state for information.

### *Drivers and Barriers*

Procurement officers in Tianjin are exposed to a variety of influences: they have to deal with central and local regulation, with user demand, supplier management, the opinions of external experts and with those of their superiors and colleagues. Ideally, their work is subject to strict supervision by their internal compliance department, the GPB, compliance institutions of the local government<sup>117</sup> and, eventually, the Communist Party. Courts assess GPCs decisions if suppliers sue the GPC in reaction to a lost bid. Implementing green government procurement is particularly delicate in this regard because purchases are harder to defend if they are based on lifecycle costing or mark-ups for green products.

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<sup>114</sup> A relation between education or age and choice could not be identified qualitatively.

<sup>115</sup> For an overview of methods and results see section 3 of the appendix.

<sup>116</sup> With a cardinal scale relevance would have a unit. Therefore, it would be possible to cut off the lower 75% of relevance, not the lower 75% of reported sources. With an ordinal scale it is not clear if dropped reported sources are nearly as relevant as those used for the indicator. Indicator B suffers from the same problem but limits its effect via giving more weight to frequency.

<sup>117</sup> Ma and Jiang (2007, p. 32) describe the fundamental idea of controlling government procurement for the Chinese case.

Procurement officers make their decisions while being exposed to all these influences. Sometimes, central procurement lists provide them with clear answers. However, the frequently limited applicability of the lists forces procurement officers to base their choices on their own considerations. In these cases, they need to draw on individual capacities and have to somehow react to systemic pressure. This section analyses what individual capacity and embedment look like in Tianjin, how procurement officers handle the situation and what they regard to be more important concerning green purchases —individual or systemic drivers and barriers<sup>118</sup>.

The GPC of Tianjin is in a good position when it comes to human capital and stakeholder relations. As described above, procurement officers in Tianjin are well-trained and young on average. Tenure, expertise and ability seem to be more relevant for internal promotion than seniority or political opinion—the structure of the management team<sup>119</sup> suggests that<sup>120</sup>. The collective capacity benefits from institutionalised procedures within the GPC that were described above. Regular internal capacity building helps to improve skills and knowledge, and cross-link them. According to one procurement officer, 40% of these trainings focus on GGP (TJ GPC, 2011c). All in all, the implementation of GGP has high priority for the work of the GPC. Participation in the SuPP-Urb project underlines this— independent initiatives by the GPC do as well<sup>121</sup>. The head of the GPC is highly committed to bringing GGP forward in Tianjin<sup>122</sup>. This includes public constructive criticism and demand for more—and more supportive—regulation<sup>123</sup>.

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<sup>118</sup> See research question 2a and 2b.

<sup>119</sup> The management team comprises the head of the centre and all heads of departments here.

<sup>120</sup> When analysing career opportunities in detail, data on party membership among procurement officers should be generated. This has not been done in this case. However, party membership seems to have lost in importance as compared to education and expertise in some cases (B. Dickson & Rublee, 2000). Therefore, it seems justifiable to have a rough guess at the relation between promotion and tenure or experience as well without monitoring party membership.

<sup>121</sup> For instance, they invite suppliers to present their green business models (TJ GPC, 2011a).

<sup>122</sup> This impression is based on participant observation, interviews and analysis of initiatives via interviews with externals and the website of the Tianjin GPC (TJ GPC, 2005).

<sup>123</sup> In 2005, the GPC publicly commented on the emergence of central procurement lists, criticising their limited scope and blurry underlying labelling system (TJ GPC, 2005).

Such an active participation in the policy dialogue on GGP implies a proactive attitude towards stakeholders. In fact, the GPC of Tianjin has to deal with a variety of external influences. Within the state apparatus, it is directly subordinated to the government procurement bureau (GPB) and influenced by the local bureau of finance (LBF) via budget allocation; it is subject to the strategy put forward by the Development and Reform Commission (DRC) of Tianjin and it collaborates with the environmental protection bureau (EPB). All this further enhances the GPC's embedment, which is already strong due to its role as an intermediary between the public service sector and the market<sup>124</sup>.

A strong sense for being embedded is also displayed by statements of some procurement officers. One emphasised the role of the bureaucratic network (TJ GPC, 2011e), another one pointed out the strong exposure to the influence of industry and users (TJ GPC, 2011f). However, a third procurement officer did not see any dependency at all (TJ GPC, 2011c). Taking an outside perspective, the GPC's influence on external stakeholders can be significant. This was observed in the run of a Sino-European capacity building event at the GPC in October 2010<sup>125</sup>, where around two hundred enterprises, bureaucrats as well as high-ranking government representatives from other provinces attended a public discussion.

Overall, Tianjin's procurement officers seem to be in a good position. They benefit from the national standing of the city of Tianjin<sup>126</sup> combined with a supportive political climate for GGP in Tianjin. In addition, they enjoy a strong leadership that protects them from certain external influences—and keeps them in line with the GPC's strategy. Officers handle the remaining external pressure by working in teams and reconfirming their judgements jointly. They invest in their skills and stick to central regulation as much as possible<sup>127</sup>.

The institutional analysis shows that potential influence of both individual capabilities and systemic factors is arguably strong. However, this analysis does

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<sup>124</sup> Naturally, users and suppliers use their potential to directly influence procurement activities and general strategy. Industry association have an influence via standards (see section on information).

<sup>125</sup> See appendix, section 1.1.

<sup>126</sup> This even enables the GPC to support local SME that apply for inclusion in central procurement lists (TJ GPC, 2011g). Procurement officers (TJ GPC, 2011b, 2011g) stated that newly established SME would struggle to enter procurement markets otherwise.

<sup>127</sup> Their way of utilising information supports this view. Please refer to section 1.1 (chapter II).

not show which of the two fields is more relevant for decision-making. Similar to the analysis of information flows, the enquiry, therefore, shifts to include the individual level: six procurement officers were asked to report relevant drivers in the individual<sup>128</sup> as well as the systemic field<sup>129</sup>. Societal demand for green purchases (mentioned ten times) and environmental awareness of procurement officers (eight times) turned out to be most important aspects<sup>130</sup>. Received training (eight times), and local government strategy and regulation (together eight times) were found to be highly relevant for purchase decisions, in the eyes of interviewees<sup>131</sup>. Budget constraints on the side of users (five times) and their awareness (four times), supplier strategy and supplier capacity (three times each) also play a distinct role<sup>132</sup>.

All this is based on cumulated frequencies<sup>133</sup>. However, these frequencies do not indicate a clear dominance of either individual or systemic factors. Hence, importance of aspects is compared on an individual level. To this end, reported individual and systemic drivers for GGP are codified<sup>134</sup> and cumulated. Indicators based on this data can increase clarity, because they allow for describing and comparing single units of observation within the sub-case of Tianjin. Similar to the analysis of information flows, three indicators are generated for each procurement officer. Indicator A simply cumulates frequencies on an individual level. Applying this method, external drivers dominate in the eyes of six out of six procurement officers. However, indicator A is rejected<sup>135</sup>, because it ignores prioritisation and runs the risk of being biased due to definitional problems. Indicator B combines frequency and prioritisation in the way of dropping the lower 50% of reported

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<sup>128</sup> See question C1 and C2 in the questionnaire. C2 was not discussed in detail, sometimes it was left out, when it was assumed that barriers (C2) were the opposite of drivers (C1).

<sup>129</sup> See question D1 and D2 in the questionnaire. D2 was treated similarly to C2.

<sup>130</sup> Similar answers were subsumed under certain categories for the sake of comparability.

<sup>131</sup> The GPB of Tianjin issued a local procurement list in addition to central lists. This list was reported to have only seven categories and to be stricter than the others (TJ GPC, 2011c).

<sup>132</sup> Some suppliers even lobby for stricter regulation by the local government (TJ GPC, 2011c)

<sup>133</sup> Cumulated frequency means the combination of all questions for all groups.

<sup>134</sup> This happens with the help of an overall ranking (D7) of all drivers (from C1, C2, D1 and D2). Individual features are coded 1. External influences are coded -1.

<sup>135</sup> Please also refer to the discussion of indicators in section 1.1 of the same chapter.

drivers. Only one out of six interviewees regards individual drivers to be more important than systemic ones, according to this indicator. The remaining five interviewees still perceive systemic drivers as being stronger. Indicator C focuses on prioritisation even more than indicator B. Qualitatively, the result is the same as for indicator B: systemic factors dominate. However, indicator C is rejected<sup>136</sup>.

The evaluation of relative factor importance yields similar results from an external perspective. Two suppliers and two users were asked to rank the factors they had reported for the individual and the systemic field<sup>137</sup>. Systemic factors dominated in all four cases when summing up codified aspects (indicator A). This did not change after the lower 50% of ranked aspects were dropped (indicator B). Only, after dropping another 25% (indicator C) did the results for one supplier changed. However, this will not be taken into account in the following, because the method behind indicator C is rejected for reasons discussed before. Altogether, systemic factors dominate decisions from an internal and an external perspective.

### *GGP Decisions in Tianjin*

The analysis above has shown that decisions on GGP in Tianjin are strongly influenced by systemic factors. They build on state and market information alike. Conditions for implementing GGP are good with regard to information and embedment as well as their interplay. However, perception of and conditions in the field of information management seem to be changing.

Six indicator values were generated for each procurement officer—three in the subsection on information and three in the subsection on influencing factors<sup>138</sup>. Indicator B was accepted as a viable appraisal of procurement officers' perception. The methods behind indicators A and C were rejected but were nevertheless generated for all units of analysis, in order to understand how reliable information

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<sup>136</sup> See previous footnote.

<sup>137</sup> Users and suppliers were confronted with slightly different questionnaires. Questions C2 asks for individual factors, questions D1 and D2 ask for systemic ones (see appendix x).

<sup>138</sup> For an overview please refer tables 6 in the appendix.

yielded with indicator method B is<sup>139</sup>. Once indicator values are at hand, specifying decision-styles is possible by combining both dimensions in one matrix<sup>140</sup>.

The ‘market corporatist’ attitude (three times) is the decision-making style observed most frequently in Tianjin. Two procurement officers displayed a ‘central corporatist’ decision-making style (twice); one officer was classified as ‘ideal Weberian’ decision-maker. No interviewee fell into the category ‘New Public Management’. Overall, a high level of embedment is the most visible general finding. Five out of six procurement officers perceive external influences as more important than individual capacity. For the field of information management the result is less clear<sup>141</sup>. However, for two reasons dominant systemic factors neither need to be an indicator for passiveness or corruption nor do they necessarily imply low individual capacity. First, the small number of units observed demands careful interpretation of observation. Second, individual conduct must be put into context:

Put into context, observed ways of handling information shed new light on systemic embedment in Tianjin: although external factors were found to be highly relevant, stakeholders<sup>142</sup> do not necessarily have the power to determine the implementation of green government procurement in Tianjin. In fact, the opposite might be the case. The Tianjin GPC uses its purchasing power and its capacity in the field of information management to actively include stakeholders in policy implementation—this is the official strategy of the GPC<sup>143</sup> and was confirmed by a supplier (TJ Supplier, 2011) as well as a user (TJ User, 2011a). In such a situation, embedment does not mean exposure but leverage. This observation

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<sup>139</sup> Indicators A and C are modifications of indicator B. They only vary with regard to the weighting of frequency and prioritisation. Stark differences between the three indicators would imply strong elasticity of results on weighting. Wrong weighting would lead to a strong bias, accordingly.

<sup>140</sup> Please see figure 2.

<sup>141</sup> Three procurement officers perceive market information as more important, three prioritise state information.

<sup>142</sup> This mainly means users and suppliers.

<sup>143</sup> The strategy was presented to the author by the head of the GPC. According to her statement, it is a declared aim to influence suppliers (TJ GPC, 2011a). To this end, best practices in the field of GGP are collected, implemented internally and then spread to externals—already today, some suppliers support GGP by demanding regulation (TJ GPC, 2011c).

implies, that the interplay of information management and embedment should be included in a preliminary pattern prediction model.

## The Case of Qinhuangdao

*"We have no capacity to check data on green products. We are only the implementing agency, not environmental experts."*

A high-ranking officer of the GPC in Qinhuangdao<sup>144</sup>

Qinhuangdao is a medium-sized prefecture-level city in Hebei Province with 2.9 million inhabitants<sup>145</sup>. Located on the coast of the Bohai Sea it strives to become a major tourist destination. Main attractions are historic monuments like the East end of the Great Wall and natural sights like wetlands frequented by migratory birds. A high-speed railway to Beijing is being constructed. It does not only bring Qinhuangdao closer to the centre of political power, but also improves its attractiveness as a weekend destination for residents of Beijing and Tianjin in the South, and Shenyang in the North. Against this background, environmental protection receives more attention compared to the average Chinese city. Ecosystems are of immediate and strategic economic importance.

In parallel with being developed as a tourist destination, Qinhuangdao has gained great importance as a harbour (China Today, 2001). Every day, huge amounts of coal—China's most important energy resource—arrive in Qinhuangdao by train. They come from the North Chinese coal-producing province of Shanxi and leave Qinhuangdao by ship heading towards the industrial centres in South China. Compared to logistics and tourism the industrial sector is weak in Qinhuangdao<sup>146</sup>. This can make enforcement of environment-friendly policies easier. Pressure on the GPC of Qinhuangdao to purchase local products might be lower. However, access to product markets may suffer from the absence of producers. Wholesalers have to be used as intermediaries. Supplier management follows a different pattern. The labour market for skilled personnel is not very

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<sup>144</sup> This statement was noted down during participant observation (QHD GPC, 2010). It was made during a project trip in 2010 that actually led to the concrete idea for the research presented here.

<sup>145</sup> Data was obtained from the official website of the government of Qinhuangdao on August 27<sup>th</sup> 2011. Population data refer to the number of officially registered citizens in 2008 (QHD Government, 2011).

<sup>146</sup> According to a Chinese expert (EMCC, 2011b).

strong but nevertheless developing. Universities like Yanshan University and Hebei Normal University of Science and Technology produce graduates in information technology (IT), engineering and accounting. These fields are interesting for recruiting officers able to implement GGP. With increasing attractiveness as a tourist destination and an improving infrastructure—in particular with a quicker link to Beijing—Qinhuangdao becomes a more desirable place to work and live for skilled personnel. However, it remains unclear how this recent trend influences the work of the GPC in the short-run, given that the centre has been seeing a low fluctuation of employees so far<sup>147</sup>.

In 2005, government procurement became an independent bureaucratic entity in Qinhuangdao as prescribed by the GPL (PRC, 2002a, para. 60)<sup>148</sup>. At present, the government procurement centre (GPC) is a direct subordinate to the local government. An additional bureaucratic level between GPC and the government—e.g. a government procurement bureau (GPB)—does not exist in Qinhuangdao<sup>149</sup>. The GPC primarily serves as an implementation agency. It also contributes to the local government procurement strategy due to the absence of a GPB. However, it does not have direct access to the central procurement bureaucracy in Beijing, not to mention the national policy dialogue. The main task of the GPC is to purchase products for administrative and other public service units. This ranges from computer hardware to simple pens. Projects, for instance in the field of infrastructure<sup>150</sup> development, do not belong to the centre's area of competences. During the implementation period of the SuPP-Urb project the implementation of GGP by the GPC of Qinhuangdao was monitored externally. According to this evaluation, products worth 7.869.000 Yuan were purchased according to GGP guidelines compared to an overall procurement budget of 9.869.000 Yuan<sup>151</sup>.

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<sup>147</sup> All the four procurement officers interviewed in Qinhuangdao had been working there for more than four years. One had been there since 1999.

<sup>148</sup> According to an officer of the Qinhuangdao GPC independency was only gained by then—three years after the GPL was issued (QHD GPC, 2011).

<sup>149</sup> See figure 6 in the appendix.

<sup>150</sup> They form part of the Bidding Law (PRC, 1999).

<sup>151</sup> This means a share of 80% being spent according to GGP criteria. Estimates are based on unpublished project data generated by EMCC and Nankai University.

The GPC of Qinhuangdao is divided in four departments (*ke*, 科)<sup>152</sup>. Two procurement departments (*caigou yi ke*, 采购一科 and *caigou er ke*, 采购二科) organise procurement procedures from beginning to end. They are supported by an information department (*xinxi ke*, 信息科), and supervised and supported by the management department (*bangongshi*, 办公室). This division does not reflect the procurement process but rather a horizontal division of labour. Resources for implementing GGP are limited in Qinhuangdao. Besides the budget, human resources reflect this. Most of the fifteen procurement officers are middle-aged. Only some hold a college degree in IT or engineering. Others are demobilised soldiers. Promotion criteria are not clearly observable. Formal education does not seem to be a binding criterion; tenure and expertise supposedly play a bigger role.

In Qinhuangdao, the procurement process also begins by user demand. Public administration or public service units approach the GPC with a certain demand. The GPC takes on the purchasing process for them. However, specification of award criteria is often a result of negotiations between the GPC and the user institution. This need for bureaucratic bargaining is the result of low awareness for environmental issues on the side of users (QHD GPC, 2010). It implies a relatively weak position of the GPC. In a next step, one of the two procurement departments takes care of tender design, supported by the information department. Products falling into the compulsory categories of the energy-efficiency list are strictly preferred to others. Products from the voluntary categories of the energy efficiency list receive a 2% mark-up; products included in both lists receive a 5% mark-up. These mark-ups help green products to compete with conventional alternatives that generally have the advantage of a lower purchasing price<sup>153</sup>. However, beyond granting mark-ups, the GPC of Qinhuangdao has few opportunities to influence procurement results. It lacks the power to shape local regulation and procedures for GGP. At the same time, it is responsible for implementation results. A high-ranking officer emphasised this gap

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<sup>152</sup> The description is based two introductory meetings with three procurement officers on March 14<sup>th</sup> 2011. The meetings took 40 minutes each (QHD GPC, 2011b, 2011c).

<sup>153</sup> Mark-ups were discussed during a Sino-European capacity building event in Qinhuangdao (QHD GPC, 2010).

as the major flaw of the procurement system in Qinhuangdao (QHD GPC, 2010). In the following, information management and embedment of the Qinhuangdao GPC are described. Does the procurement officers' perception of these two aspects reflect the gap just mentioned?

### *Information Flows*

Central procurement lists do not cover all products that have to be procured on a local level. Hence, the Qinhuangdao GPC has to find a way to enhance the application of lists by local procedures. Information management is an important aspect of such local solutions. This subsection analyses how procurement officers in Qinhuangdao obtain information, how they utilise it and which origin of information—state or market—they perceive to be more important<sup>154</sup>.

Information management in GGP represents a challenge for the Qinhuangdao GPC for four reasons. First, officers' capacities for processing product information are limited due to a lack of training. Second, wholesale has to be used as an intermediary because of the absence of local producers. This makes obtaining additional product information difficult. Third, the link to the central procurement bureaucracy in Beijing is relatively weak. Direct exchange of information is not easy. Fourth and last, resources like hardware capacity are limited.

However, there are potentials for successful information management. First, the existence of a separate information department gives particular importance to information management<sup>155</sup>. Second, lack in capacity can partially be compensated by a close cooperation with the Environmental College of China based in Qinhuangdao. This cooperation was deepened in the run of the SuPP-Urb project. Third, Qinhuangdao is one of eleven prefectures in Hebei Province<sup>156</sup>. Exchange between the different administrations is used for pooling of knowledge and experiences to a certain degree. Overall, information management is not easy but holds some potential for implementing GGP in Qinhuangdao. When comparing

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<sup>154</sup> This is what was defined as a research task in question 1a and 1b.

<sup>155</sup> See figure 6.

<sup>156</sup> Information on the province of Hebei was retrieved from the official website of the government of Hebei on August 28<sup>th</sup> 2011 (Hebei Government, 2011).

access to state and market as providers of information, no clear advantage for one of the two can be found. All the more, it is important to dwell on individual perception.

Semi-structured interviews<sup>157</sup> were conducted with four procurement officers of the GPC in Qinhuangdao, of which all four had worked on GGP in the past. Asked for relevant information sources, the officers frequently named central procurement lists, further central regulation and exchange with other GPCs (three times each). However, user information and the Internet appeared with the same frequency. Seen in the institutional context, use of the Internet and contacts to other cities underline the problem of few direct contacts with suppliers. The demand for an integrated database, where GPCs from different municipalities can enter their data, shows the wish to pool experiences and knowledge. Altogether, it is difficult to ascertain a clear state or market dominance based on cumulated frequencies. Therefore, single decision-making styles are analysed with regard to information management in the following.

State information dominates individual decision-making in Qinhuangdao according to officers' perceptions. The assessment of procurers' perceptions leading to this result follows the same procedure applied in the sub-case on Tianjin. Interviewees were asked to rank the information flows they reportedly used in their work on GGP<sup>158</sup>. Based on their codified answers, indicator methods A, B and C can be utilised. Indicator A solely takes frequency of named aspects into account. It yields a state focus in four out of four cases. Indicator B builds on both frequency and prioritisation. Analysed with this method, one out of four procurement officers displays a market focus. Indicator C weighs prioritisation much higher than frequency. Qualitatively, the result is the same as for method B. None of the three indicators is statistically reliable. However, similar to the first sub-case, indicator B is accepted as an appraisal while indicators A and C are rejected.

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<sup>157</sup> Interviews lasted between 35 and 55 minutes (46 min on average) and were done in Chinese. Four out of four officers used the opportunity to give feedback on notes taken during the interview.

<sup>158</sup> See questionnaire question B3. Ranking was done with an ordinal scale.

Altogether, information management is characterised by state information in Qinhuangdao. The only procurement officer focusing on market information is a middle-aged former soldier<sup>159</sup>. However, central state information is only one part of this state dominance. As mentioned before, horizontal cooperation with other GPCs seems to be vital<sup>160</sup>. Besides being reported as one of the existing information flows (three times), this kind of exchange was recommended as a future information source twice. What does this type of state focus imply? One explanation might be that central state information is regarded as insufficient, while market information is too complex. Decentralised cooperation of state agencies can be one solution for this dilemma in the face of limited local capacities<sup>161</sup>. In any case, the number of observations is too small for generalisation at this point.

### *Drivers and Barriers*

The GPC of Qinhuangdao is subject to central and local influences. Underlying national and local interests can differ starkly, especially in the context of a developing city. National climate change mitigation efforts and long-term innovation strategies can get in the way of local ambitions. Qinhuangdao's aim to increase its attractiveness as a tourist destination makes things easier in this regard. However, single bureaucratic agencies can still display a different attitude. They might not be willing to sacrifice consumption for the sake of a more sustainable development. Suppliers, on their side, might emphasise the responsibility of the local government to support local economic activities. At the same time, the government procurement centre has limited capacity for proper product analyses and management of communication processes with users and suppliers. Access to green products depends on their availability at local markets and, sometimes, the number of suppliers actually offering green products can be below that required, according to one officer (QHD GPC, 2011f). In many cases,

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<sup>159</sup> This observation is counterintuitive.

<sup>160</sup> Such cooperation, for instance, would include exchange on ex-post knowledge on product performance, pricing and so forth.

<sup>161</sup> Stakeholders did not underline the importance of inter-city exchange. However, this might be due to their focus. A user pointed out the relevance of central government and Internet—i.e. market—data (QHD GPC, 2011d). A supplier emphasised the importance of clearly specified information needs (QHD GPC, 2011e). This does not relate to which information streams are dominant. However, it re-emphasises the importance of tender design by GPC and users.

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producers cannot be approached directly. Even if products are available, budgets of public institutions might be insufficient.

All in all, the GPC of Qinhuangdao faces several challenges with regard to implementing GGP. Supervision and formal institutions can help to protect procurement officers when working under such conditions by enforcing legally tenable actions. The head of the GPC plays an important role here, as he carries out internal supervision himself (QHD GPC, 2011g). In addition, external experts supervise tender evaluation; the city government assesses the overall work of the GPC. As far as supervision from the market side is concerned, suppliers have the possibility to sue the GPC on the basis of administrative law.

Against this background, the purchase of green products from the compulsory categories of the energy efficiency list works well. Central regulation represents a solid foundation for defending purchase decisions against supplier and user complaints. The key to successful voluntary procurement of green products lies elsewhere: only if users agree on the specification of strict award criteria, legally tenable tender awards can be granted to suppliers of green products later on. Accordingly, the capability of managing GPC-user relations is an important factor for successful implementation of GGP in Qinhuangdao (QHD GPC, 2011f).

Drivers and barriers reported by procurement officers in Qinhuangdao underline this challenge. Procurer commitment was mentioned four times, implying that personal attitude matters for promoting green purchases. Procurers' and users' awareness concerning the need for GGP were emphasised three times each. These aspects can be interpreted as indicators for the importance of common goals of procurement officers on the one side and users on the other side. The binding character of regulation, central pressure and general central regulation—each mentioned twice—all stand for a need for formal institutions to protect out-of-favour procurement decisions. The bureaucratic independence of the GPC was mentioned as well and refers to the same need. Bureaucratic standing is a sensitive issue in Qinhuangdao. All these aspects help to complete the picture of conditions for implementing GGP in Qinhuangdao. However, they do not allow for a clear statement on which kind of drivers are more important for its

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success—individual or systemic. To this end, an analysis is carried out regarding the relative relevance that procurement officers attribute to each group of drivers and barriers.

Decisions made by procurement officers in Qinhuangdao are rather driven by systemic than by individual factors<sup>162</sup>. Nearly all indicators—regardless of the underlying method A, B and C—support this result<sup>163</sup>. When applying method A, one of four interviewees is found to value individual features higher than systemic factors. The other three procurement officers believe systemic factors to have more influence on procurement decisions. Evaluations based on indicator B and C both indicate a complete dominance of systemic factors: in each case, four out of four procurement officers regard systemic factors to be more relevant for GGP decisions than individual features. This can be interpreted as a confirmation of the institutional setting described above: the GPC of Qinhuangdao is highly exposed to the local political economy.

External stakeholders interviewed also confirmed the dominance of external drivers (QHD GPC, 2011d, 2011e)<sup>164</sup>. Regardless if generated with method A, B or C, all indicators show that stakeholders value systemic factors higher than procurers' capacities. In their eyes, public awareness was the most important driver (mentioned three times) for green purchase decisions. Talking about procurement officers, stakeholders attributed most relevance to officers' awareness and the training they receive. The role of central government pressure and compulsory green purchases was not as important for them as it was for procurement officers. This might be the result of communication of the GPC or it might actually represent a perception gap and respectively a different approach to the issue of GGP.

### *GGP Decisions in Qinhuangdao*

Decisions in the field of green government procurement in Qinhuangdao are dominated by systemic factors. When it comes to obtaining information, most of

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<sup>162</sup> Again, perception of relevance is used as an indicator for influence on decisions.

<sup>163</sup> Please refer to the sub-case of Tianjin for a detailed discussion of indicators.

<sup>164</sup> These are results from interviews with one user and one supplier of the Qinhuangdao GPC. Please refer to the respective questionnaire in the second section of the appendix.

the interviewed procurement officers turn to the state first. These results are rather clear. They indicate that implementation of GGP is a challenge in Qinhuangdao. Still, procurement officers in Qinhuangdao seek for solutions to actively improve their capacity for policy implementation.

Six indicator values were generated for each interviewed procurement officer in Qinhuangdao. These values are based on the indicator methods A, B and C discussed above. Three values shed light on the individually perceived relevance of market information as compared to state information, and three values show the relative importance of individual features and systemic factors for procurement decisions. Indicator method B was selected as most viable<sup>165</sup>. On the basis of the respective indicator values, it is possible to attribute decision-making styles to the interviewed bureaucrats<sup>166</sup>. The dominant style in Qinhuangdao is the ‘central corporatist’ style. Three out of four interviewed procurement officers belong to this group. Only one displayed a ‘market corporatist’ style. None of the interviewees saw a dominance of individual features over systemic factors. This means that none of them shows an ‘ideal Weberian’ or a ‘New Public Management’ attitude.

Systemic embedment and state-orientated information management both are pronounced features of GGP implementation in Qinhuangdao. Nevertheless, methodological sound statistical inference is not possible based on these results. All the more, they have to be seen in the local context:

The local context for implementing GGP in Qinhuangdao is ambiguous. On the one hand, the aims of the city government are in line with the strategy of green government procurement. Fundamental economic parameters like the focus on tourism and logistics allow for this. On the other hand, bureaucratic standing and capacity of the GGP are not sufficient for leading or even dominating users and suppliers. The overall situation presents itself as a typical case of bureaucratic bargaining. Thereby, the GPC does not receive direct support from the central procurement bureaucracy except for central procurement lists. This casts a different light on information management in Qinhuangdao. The strong focus on exchange with other government procurement centres in peer cities appears to be

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<sup>165</sup> For a discussion of indicator methods please see appendix, section 3.

<sup>166</sup> Decision-making styles are introduced in the section on the analytical framework.

a third way between command-and-control and absolute local embedment. If such an exchange helps to increase capacity and provide good practice examples, it can be a viable strategy for fulfilling agency objectives in a challenging environment without all-embracing central support. However, for the implementation of GGP this presumably only works alongside with other supportive factors like the relative little power of local suppliers<sup>167</sup>, general local government support and, obviously, the availability of partners for external exchange.

### Comparing Cases: Common Features and Differences

The national procurement system represents a common framework for decision-making in all Chinese municipalities. However, empiric findings from Tianjin and Qinhuangdao imply that local decisions vary nevertheless. ‘Market corporatism’ is the most frequent decision-making style in Tianjin, while procurement officers in Qinhuangdao mainly showed ‘central corporatist’ features. This means, systemic factors dominate in both cases, but information management differs. Where does this variance come from?

The sub-cases of Tianjin and Qinhuangdao have many underlying features in common that otherwise could explain part of the variance. Since they are important harbour cities, both are part of a globalised economy; both are located in the same region with regard to climate, topography and distance to the centre of power in Beijing. The two GPCs share common features as well. Both were established as implementation agencies and hold the position of an intermediary between state consumers and market actors<sup>168</sup>. Both became independent bureaucratic entities as article 60 of the GPL prescribes. Finally, both are partners in the SuPP-Urb project on green public procurement in China. Still, the two sub-cases vary in other regards. Relevant external and internal factors influencing the activities of the GPCs differ—and so do the roles GPCs play in the respective local political economy. Varying factors can be divided into three groups: institutional

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<sup>167</sup> Only a little share of products purchased by the GPC in Qinhuangdao comes from local production. The central procurement list as a benchmark excludes local SMEs (QHD GPC, 2011b).

<sup>168</sup> SOE are owned by the state but count as market actors as well.

setup of the GPCs, reported individual information management, and drivers and barriers of green purchases.

Although they hold similar positions, the GPCs of Tianjin and Qinhuangdao are organised differently<sup>169</sup>. The organisation chart of Tianjin reflects the procurement process. This kind of labour division supports the specialisation of procurement officers. The Qinhuangdao GPC is, however, subdivided in fixed teams that handle procurement processes from the beginning till the end. Such a division of labour strengthens thematic competences and collaboration<sup>170</sup>. Nevertheless, both GPCs have an information department that is specialised on information management. Hence, the direct influence that organisational setups have on information management is assumed to be limited. All the more, individual perceptions of information management, and individual drivers and barriers are in the focus when seeking to explain the variance between the two sub-cases.

### *Information Flows*

The central information architecture, i.e. the lists, established by the national government applies equally to both cities. At the same time, observed information management differs from city to city. The core question is how a procurement officer behaves when products do not fit into compulsory purchasing categories.

Here the approaches of the Tianjin and the Qinhuangdao GPC differ. This mainly derives from their capacity and bureaucratic standing. Both GPCs grant mark-ups for green products that are purchased on a voluntary basis. These mark-ups can improve their competitiveness compared to conventional products. However, in many cases mark-ups will not be sufficient for allowing them to win the tender. Two other aspects are more important for voluntary green procurement.

First, the proper definition of award criteria can narrow down competition. Very vague criteria will allow suppliers of cheap low quality products to participate in the process. They will win the tender, because pricing is still the most important criterion. This directly leads to the second aspect. When internalising use and

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<sup>169</sup> The organisation charts for both GPCs are provided in the appendix (figure 4 and 6).

<sup>170</sup> One of the teams, for instance, usually takes care of computer purchasing (QHD GPC, 2011f).

recycling costs in prices, green products can turn out to be cheaper than conventional ones. Both these approaches demand a certain level of information management—with a qualitative difference between the two. Designing a sound set of award criteria makes a good knowledge of user needs and product features necessary. This is already hard to achieve, but internalising costs from the use and recycling phase in a legally tenable way represent a much bigger challenge.

Procurers of the Tianjin GPC have good knowledge in the field of products and user needs. They can rely on their internal databases and experiences (mentioned five times); they work with industry standards (mentioned four times) and draw on supplier information directly (reported three times). The challenge lies elsewhere, as interviews confirmed<sup>171</sup>: the Tianjin GPC currently works towards the application of lifecycle costing (LCC), i.e. the internalisation of use and recycling phase costs in purchasing prices. Central state information is insufficient for applying such methods. This could be a reason for a beginning re-orientation towards market information that has just set in within the Tianjin GPC.

Information management for defining sound award criteria means a challenge to the Qinhuangdao GPC<sup>172</sup>. Several aspects described in the sub-case analysis on Qinhuangdao explain this. Overall, capacity is limited due to characteristics of the team, the availability of skilled personnel on the labour market and other reasons described<sup>173</sup>. Central state information compensates this to a certain degree but remains insufficient in the end. At the same time, market information is hard to obtain in Qinhuangdao. In reaction to this, the GPC seeks to pool knowledge and experience with other GPCs. This is interpreted as state focus. It induces a dominance of state information in the indicator results.

All in all, both GPCs deal with the problem of insufficient state information. Their different capacities and development levels bring about different objectives and make different approaches necessary. Assumedly, this causes at least part of the variance observed for procurement officers' decision-making styles.

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<sup>171</sup> Three officers named methods as most important potential for better information management.

<sup>172</sup> Another related challenge is described in the next section on drivers and barriers.

<sup>173</sup> Frequencies are not comparable across cases, because numbers of interviewees differ.

### *Drivers and Barriers*

The perception of influencing factors is similar across both sub-cases described, in both of which so-called corporatist decision-making styles prevails<sup>174</sup>. This means that the feeling of embedment is stronger than the awareness of individual abilities to change the environment. Despite their homogeneity, results for this dimension of analysis play into the variance observed for attitudes related to information management. In addition, they are relevant for any further analysis.

The most basic task of a GPC lies in buying products that help users fulfil their function in the local government apparatus or public service sector. Not surprisingly, users and suppliers are crucial for decision-making in both cities. However, the way of handling interdependencies differs due to local conditions. Again, voluntary rather than compulsory procurement helps to define the difference.

In both cities, fundamental conditions for voluntary GGP are given—first of all a supportive local government. However, capabilities to translate this positive momentum into the daily work depend on the GPCs standing compared to other actors. In Tianjin, the GPC has the capacity to take a proactive attitude towards stakeholders. What looks like exposure to stakeholders in the first place, turns out to be influencing others' consumption and production behaviour. The Qinhuangdao GPC, on the other side, has to win over users in the run of negotiations. Here, it is not easy to get hold of producers, so that production patterns can only be influenced via wholesaling as a transmission belt. This is supported by observations on the individual level. While interviewees in Tianjin emphasised the role of societal demand (mentioned six times), for interviewees in Qinhuangdao other aspects were more relevant. They stressed aspects helping to justify GGP like central government pressure and binding regulations (each named twice) as well as their own institution's independency. In short, the GPCs of Tianjin and Qinhuangdao represent two different realities described with the same term: embedment. Obviously, embedment can take different forms on the urban level in China.

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<sup>174</sup> As described in the cases, there is only one procurement officer in Tianjin who perceived individual features to be more important for decision-making than systemic ones (TJ GPC, 2011e).

### *Prominent Overall Features of Decision-Making in GGP*

This chapter has provided systematic insights into two cases of GGP implementation in urban China. Implementing agencies—the GPCs—have been analysed regarding their environment, their structure and, most prominently, individual decision-making by their personnel. Three major features of GGP can be derived. They become clear when seen from the perspective of decision-makers.

First of all, the national GGP framework is a hybrid system comprising three subsystems. The compulsory categories<sup>175</sup> of the procurement lists represent a subsystem based on a command-and-control logic. They only cover a limited set of products, but decisions are clear here. In practice, the voluntary part of the procurement lists is a decentralised system. This subsystem demands local discretion with regard to decision-making. GPCs have to define, carry out and defend procedures for granting mark-ups and so forth. Case cities have shown that potentials in this subsystem can highly depend on local conditions. The last subsystem is mainly normative in nature. The request to bear in mind sustainability when procuring—formulated in article 9, GPL—invites local experiments. However, it does not provide any clear guidance for decision-making in GGP.

Second, the national information architecture for GGP mirrors the hybrid national framework. It neither provides all information needed for full implementation of GGP nor methods for obtaining that information. Decision-makers have to adapt to this situation. Cases suggest that capabilities in the field of information management on the local level are a crucial factor for success in the voluntary and the normative subsystem.

Third and last, the hybrid character of the procurement system has been found to give great importance to the position of the GPC in the local political economy. A high level of embedment is a distinctive feature of both sub-cases. However, implications of embedment vary greatly. While one GPC turns embedment into a potential for influencing stakeholders, embedment implies the challenge of constant bureaucratic bargaining in the other case.

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<sup>175</sup> In both cases this system worked. However, officers in Tianjin pointed out that they knew about cities not implementing GGP at all (TJ GPC, 2011h).

## Theory and Practice of Local Decision-Making

China's national policies target the whole country<sup>176</sup>, but policy implementation results tend to differ from place to place<sup>177</sup>. The presented case study confirms this phenomenon after looking into the implementation of green government procurement in two North Chinese cities. This chapter seeks to link this and further empirical findings to existing theory with a pattern matching approach (Yin, 2009, p. 136). The aim is to prepare those findings for further use in three steps.

The first step to be taken is to have a second look at the introduction. This step recalls the assumed need for predictability of policy instruments from a government perspective. The Chinese policy framework for decision-making in GGP is used for discussing trade-offs and retracing potential solutions on the macro level. The second step returns to the micro level of decision-making. It offers a preliminary pattern model as *one way* of systematising local variance in procurement decisions. Here, research questions raised in the introduction are taken up. The final step suggests how further studies on variance in China's policy implementation systems could use these contributions. It also outlines what this case study does not tell or cover.

### Framing Local Decision-Making: a Macro View on GGP

*"State cadres at any rank could monopolize public authorities while the bureaucracy as a whole functions as the wielder of political power in China."* (Chow, 2010, p. 263)

Local agents' discretionary power and a corporatist organisation of the local political economy (Oi, 1997) do not necessarily indicate a malfunction of the bureaucratic system in China. It is argued here that heterogeneous policy implementation can be a sign of strength and weakness alike. In the best-case scenario, each sub-central level realises the core idea inherent to central policy best, because it uses its freedom to customise instruments properly. Applied all

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<sup>176</sup> An exception would be the Special Administrative Zones of Hong Kong and Macao.

<sup>177</sup> Tsai (2004) describes this in detail for the field of finance. She observed how different local government strategies produced strongly varying institutional settings and effective forms of finance for entrepreneurs in Chinese cities.

the way down the hierarchy, this concept implies that local agents will strictly use their discretionary power for realising central policy objectives and harmonise them with the needs and capacities of the local economy. Using the terminology of Baum and Shevchenko (1999) they will display a developmental state behaviour. In this scenario, decentralisation allows for maximisation of overall policy impact. In the worst-case scenario, however, sub-central administrations implement only those aspects of the central policy that they consider to be beneficial for their own good, i.e. individual decision-makers only look after their personal interest. Such an attitude might be coined predatory local state behaviour or booty socialism (Lu, 2000). It can dilute the policy impact or even run counter to intended policy goals.

In China, local discretion is a reality<sup>178</sup>. However, this reality presumably lies somewhere in between the scenarios described above. Nevertheless, extreme cases are relevant to orientation from a government perspective. The core problem is that decentralised implementation scenarios are hardly predictable while decentralisation is necessary for policy outreach in a polymorphous state<sup>179</sup> at the same time. Particularly for the case of public good regulation this holds a high risk of principal-agent problems<sup>180</sup>. GGP represents such a case. Hence, the presented empirical research serves as one example for how the central government handles the challenge just outlined. The case study emphasises that framing decision-making with the help of sound policies can be an important part of the solution.

Empirical findings from Tianjin and Qinhuangdao allow for taking a local decision-maker's perspective on the national policy framework for GGP. Both sub-cases support the existence of a hybrid system (see figure 1) that comprises top-down instructions, formalised guidance for local discretion and a general normative impetus at the same time. This eclectic mix might be surprising at first glance. However, it can be a solution for the challenge of regulating public goods

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<sup>178</sup> Many scholars describe corporatist-like local states and administrative monopolies as an important feature of Modern China (Foster, 2001, 2002; Wang, 2009).

<sup>179</sup> The ongoing discourse on authoritarian resilience emphasises the relevance, if not the strengths, of this policy-making style in China (Heilmann & Perry, 2011a; Shambaugh, 2008).

<sup>180</sup> Please refer to chapter I, section one for a definition.

in a polymorphous state. Compliance and initiatives beyond compulsory implementation in Tianjin and Qinhuangdao support this hypothesis<sup>181</sup>.

In a hybrid decision-making framework, basic but strict regulation ensures a predictable minimum of implementation. In the case of GGP, the compulsory categories of the central procurement lists represent this first subsystem. Their application can be evaluated and deviation can be punished. Tianjin and Qinhuangdao both successfully implemented this instruction-like regulation. The second subsystem invites supportive local discretion by providing formalised guidance. In the case study, this subsystem comprises voluntary parts of the central lists as well as underlying labelling schemes. In both sub-cases, the formal character of voluntary lists helps local procurement agents to plan and justify their initiatives going beyond minimum implementation. The third subsystem is merely an open invitation to tackle an issue. However, such normative statements can send out strong signals regarding future policy-making. As a result, they can influence strategic decisions<sup>182</sup>. Looking at the framework for GGP, article 9 of the GPL (2002b) represents the core of this subsystem. Based on this article, strategic decision-makers in local governments could have predicted upcoming implementation guidelines—like central lists published in 2004 and 2006—in 2002 already. In addition, central government strategy and pressure also remain important background music for implementation activities in the top-down and the voluntary subsystem. They serve as argument for implementation within the bureaucracy and towards externals.

As a whole, the analysis of decision-making frameworks yields two major results. First, the central government has come up with a framework design that combines the need for predictable policy implementation with the necessity of local customisation through agent discretion. This kind of framework has been coined a hybrid policy framework here. It combines traditional central planning (first subsystem) with Western public administration methods (second subsystem) and the normative tradition of maoist leadership (third subsystem). Second, such a framework can create varying implementation practices on the ground. The

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<sup>181</sup> This assumption is based on procurement data and GGP shares provided in the case study.

<sup>182</sup> Strategic decisions were not in the focus here. They demand a different analytical framework.

variance between Tianjin and Qinhuangdao is an example for this. Two questions remain: are these implementation styles predictable at all? If yes, what can be done to better understand their dynamics? The following two subsections seek to provide first answers to these questions based on empirical research and theory.

## Preliminary Pattern Predictions: a Micro View on GGP

Combining empiric observation on the micro level with macro theory on the polymorphous Chinese state (Howell, 2006) the presented case study shows that hybrid frameworks can have positive effects on policy implementation. However, as long as only the top-down part is predictable, the other ‘random’ subsystems have little to offer for strategic policy-making. Hence, what policy-makers might want to know is just which patterns decision-makers tend to follow along in general, i.e. in all the three subsystems. The following preliminary pattern prediction model lays the foundation for further enquiries towards this direction. It argues that individual decision-making is at the centre of the whole implementation system.

### *A Three-Dimensional Structure for Preliminary Pattern Predictions*

The subsystems within a framework are not necessarily isolated from each other. In fact, they can communicate and show strong interrelations. This is clearly observable at least for the case of GGP<sup>183</sup>. The top-down system is the core of implementation activities serving as an anchor for including new practices in business-as-usual scenarios. The normative subsystem provides the basis for strategic reorientation and overall implementation; in the case of GGP several normative parameters exist at the same time, but the environmental parameter is the focal point of analysis. The voluntary subsystem, eventually, has been identified as the major source of variation<sup>184</sup> between those municipalities that

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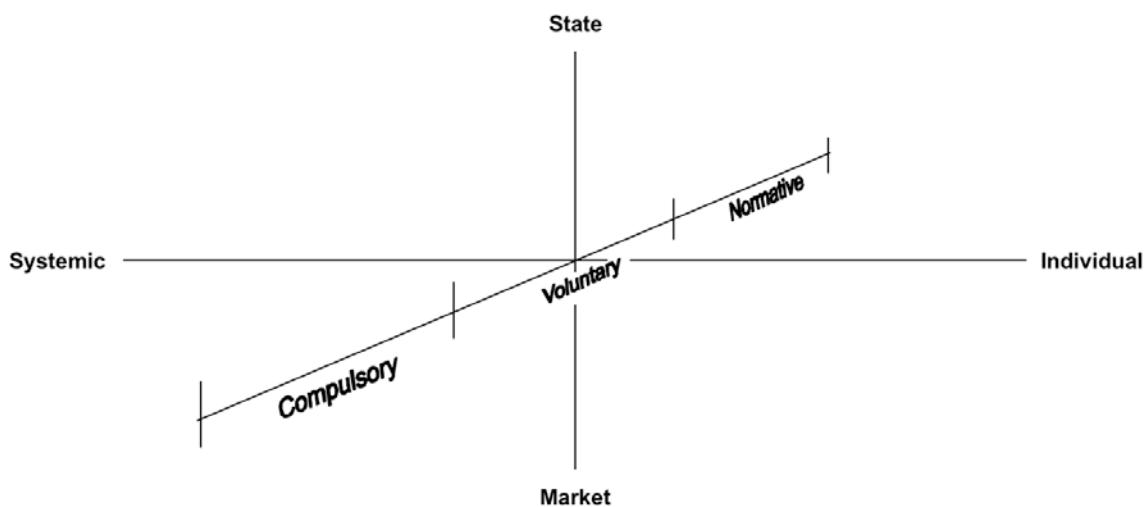
<sup>183</sup> The enquiry focused on the voluntary system. However, top-down and normative aspects played into decision-making a lot according to interviewees.

<sup>184</sup> In the following it will be assumed that the central government has fundamental capacities to enforce top-down instructions and that state and party monopolise what Jing (2010, p. 41) calls value engineering. Hence, the preliminary pattern matching is limited to regions where this applies.

have reached a minimum compliance level<sup>185</sup>. In this subsystem, clear top-down instructions have to be enhanced and normative parameters have to be concretised. Hence, this seems to be where local bureaucrats can actually make decisions and effectively influence policy implementation results in a legal way.

When accepting the voluntary subsystem as the main source of variance, research questions posed in the introduction become highly important. At the same time, the analytical framework applied in the presented case study can be used as an underlying scheme for preliminary pattern predictions. To this end, the scheme has to be enhanced by a third dimension (see figure 3). In this enhanced framework, decision-making has three functions: horizontally, it is the point where external influences on bureaucrats and their individual disposition compete in decision-making processes; vertically, it marks the interface between state and market<sup>186</sup>; and, laterally, it represents the voluntary subsystem in between the two other subsystems, i.e. top-down instructions mark one end of the lateral continuum and vague normative parameters mark the other. This three-dimensional structure serves as the backbone of systematisation within the proposed preliminary decision-making model.

**Figure 3: Three-dimensional preliminary pattern prediction model**



<sup>185</sup> A high-ranking officer indicated that there exist cities ignoring the compulsory part of the energy efficiency list, i.e. not even the top-down subsystem works in these cases (TJ GPC, 2011h).

<sup>186</sup> This interface has been empirically analysed in particular with regard to information architecture.

The influence of the central government is biggest in the lateral dimension<sup>187</sup>, i.e. the dimension of framework design. Here, it can shift boundaries between subsystems by changing legislation. It can increase coverage of compulsory purchase lists or concretise normative goals in the shape of implementation guidelines. In the vertical dimension of information flows, the national government has some direct influence as well. It can at least orchestrate state information and try to institutionalise market information in form of labelling schemes. Contrary to this, its influence in the horizontal dimension is rather limited. Here, the centre can try to change individual capacity via training schemes; it can seek to change local power structures by reforming the bureaucratic system. Still, such approaches usually do not work without local support. They can easily fail in the face of heterogeneous local conditions and, typically, take time. Based on these assumptions, the analytical framework can support a systematic approach to policy-making. This happens in two steps: pattern matching and preliminary pattern predictions.

### *Pattern Matching*

This case study provides systematic insights into micro-level policy implementation. It has investigated its horizontal and vertical dimension from a theoretical and an empirical angle. Results allow for a strong supposition regarding the horizontal dimension, i.e. systemic and individual factors influencing decision-making, and an open suggestion concerning the vertical one, i.e. information management. The supposition is that factors of local embedment dominate individual capacities in the horizontal dimension. This is supported by theory-based expectations and empiric observation. The suggestion is that individual capacity, if embedment allows it, can fuel the development of a decentralised information management. Thereby, it can improve implementation activities in the voluntary subsystem of the policy framework—this interdependency is only supported by empirical observations. It apparently follows intuition on a theoretical level but has not been predicted in the course of formulating literature-based expectations in chapter I.

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<sup>187</sup>This is supported by other analyses like Jing (2010, p. 48) who suggests sound legal principles and well-designed institutions to manage central-local relations.

When it comes to factors influencing local bureaucratic decision-makers, their environment was found to be vital. This phenomenon has been coined ‘corporatist behaviour’ in the analytical framework. It means that a bureaucrat’s role and duty is defined depending on situation and current position. The literature review in the field of policy implementation (e.g. Van Rooij, 2006a, 2006b), local political economy (e.g. Baum & Shevchenko, 1999; Foster, 2001, 2002; Howell, 2006; Tsai, 2004), public administration (e.g. Jing, 2010; Thai, 2009b) and socio-psychological behaviour studies (e.g. C. C. Chen & Farh, 2010; Gold et al., 2002; Ji et al., 2010; Kulich & R. Zhang, 2010; J. H. Liu et al., 2010; Nisbett, 2004) has confirmed that Chinese bureaucrats are likely to display this attitude. Empirical findings support this: all but one of the interviewed procurement officers were categorised as corporatist decision-makers.

All in all, decision-making behaviour on the micro i.e. city level<sup>188</sup> seems to depend on the role of personal and institutional relations, the role of superiors and societal demand, the economic structure and, partially, the role of ideology<sup>189</sup>. All these parameters are more or less fixed in the short run. Hence, predicting a corporatist attitude is rather reliable in the short term. However, this case study has also shown that personal features and institutional capacities possibly play into how embedment affects policy implementation<sup>190</sup>: if the embedded entity is strong enough and has capacity large enough, embedment can mean the availability of multiple channels for influencing others—like in the case of Tianjin. If the embedded entity is relatively weak and capacity small, embedment can mean exposure and imply the need for constant bargaining—like in the second case. Apparently, even micro-level categorisations like using an indicator for ‘embedment’ imply the risk of obfuscating local conditions that actually differ even within categories.

Looking into the vertical dimension, information management has been found to be vital for local decision-making, especially when decisions relate to the implementation of public good regulation like in the case of green government

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<sup>188</sup> This means city level here.

<sup>189</sup> The role of ideology was not prominently present in the empiric research. However, it is emphasised as a fundamental path dependency by literature (Jing, 2010, p. 37) and, thus, included here.

procurement. This is underlined by both literature review and empirical observations. However, pattern-matching results do not allow for identifying a predictable pattern concerning how decision-makers handle information. The literature on information flows (e.g. Y. Chen & G. Chen, 2010; Kang, 2010; Ma & C. Chen, 2010) has lead to the expectation that procurement officers orient themselves towards state information. However, this did not result from the quality of state information so much as from the lack of institutionalised market information: in China, the state lacks information on enterprises (Ma & Jiang, 2007, p. 39). This makes monitoring of decentralised information architecture difficult. Interestingly, products on the central procurement lists are all labelled, but not all labelled products are included in the central lists<sup>191</sup>. This implies that the government's trust in labels is limited.

Accordingly, the persistence of a state-focused information management has already been questioned when expectations were formulated in chapter I. A look at empirical observations, can confirm this uncertainty. Information management on the micro level differs between the two cases. While the sub-case of Qinhuangdao confirmed the expected state focus, the sub-case of Tianjin, however, did not reveal any focus either on market or on state information. Altogether, the expectation of state-focused information management cannot be confirmed due to conflicting observations in Tianjin. In addition, in both cities centralised information has been found to be insufficient for voluntary implementation of GGP. Qualitatively, observations in Qinhuangdao also deviate from the expected patterns: from the perspective of literature review, state focus has been defined as focus on centralised information architecture. However, state focus in Qinhuangdao derives from the tendency of local procurement officers to rely on peer entities in other administrative areas for information exchange, not on central information.

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<sup>190</sup> Foster (2002) discusses the direction of embedment-related influence for another case.

<sup>191</sup> This should also be related to secondary objectives behind government procurement like the protection of domestic producers. In fact, the representative of one user institution in Tianjin reported a clear hierarchy for procurement (TJ GPC, 2011i). According to him, first local, then national and then international products are being procured in Tianjin.

Although pattern matching does not allow for reliable preliminary predictions for the vertical dimension, a guess can be made about the source of deviation. Conditions for information management and processing enable the Tianjin GPC to start initiatives like the introduction of lifecycle costing on its own. The strong stand of the GPC in the local political economy benefits from information management capacities, but it also opens the way for actually carrying out initiatives. All in all, it can be assumed that there might be a relation between information management capacities, less orientation towards state information and an active role and a strong standing in the local political economy. When comparing the two case studies, this seems to be the case in Tianjin.

### *Preliminary Pattern Predictions*

Four assumptions regarding GGP implementation result from combining the above pattern matching outcomes with the suggested three-dimensional model. The first one is that the horizontal dimension will be dominated by local systemic factors. The implication is that the volume of voluntary implementation *ceteris paribus* depends more on local conditions than on normative parameters or decision-makers' individual disposition. This attitude is unlikely to change in the short run. The central government possibly accepts it as a given. Secondly, decision-makers' behaviour in the vertical dimension cannot be predicted without knowledge about individual and institutional capacity on the local level. These parameters can change in the mid-run, but cannot be easily influenced by the central government. As a third assumption, information management capacity is probably interrelated with the way in which local systemic embedment is handled in practice. This implies that information management is one trigger for influencing the effects high embedment has on policy implementation. The central government might best be able to use this trigger by improving decentralised information architecture, and promoting capacity building in the long run. Finally, the effectiveness of voluntary implementation supposedly depends on the interaction of embedment and information management capacities. This implies that the government might want to make giving freedom of voluntary implementation subject to expected local capacities. Such capacities might depend on regional path dependencies and general indicators of development.

If they can be confirmed, these assumptions from the micro level should be transferred to the macro level. They would be beneficial for managing hybrid policy frameworks like the one for GGP. Boundaries between top-down, voluntary and normative subsystems could be shifted most effectively and with more predictable effects when taking into consideration prevailing local patterns of decision-making. This is closely related to the current discourse on the concept of adaptive government (Heilmann & Perry, 2011b). It underlines that experimental policy-making happens not only in spatial dimensions or when one policy gradually displaces another but also within hybrid policy frameworks, i.e. in the shape of shifting boundaries between subsystems.

### **Limitations and Starting Points for Further Research**

The presented case study has provided insights into bureaucratic decision-making in two North Chinese cities. By combining them with a literature review, these micro-level observations could be related to the macro-level challenge of public good regulation in a polymorphous state. However, interpretations—not to mention the generalisation—of findings are subject to a number of relevant limitations. These limitations underline what has already been emphasised in the introduction. This piece of research seeks to prepare the ground for further enquiries rather than aiming at establishing a new theory. As a consequence, the content-related and methodological limitations presented in the following also indicate starting points for further research.

A model for preliminary pattern predictions has been introduced. It puts decision-making at the state-market interface in the centre and allows for the analysis of hybrid frameworks for public good regulation. However, this happens with a very limited scope. Five content-wise limitations shall be emphasised here.

First of all, with the focus being on the state-market interface, the framework applied here tends to neglect the party-state and the party-market interface. In fact, the CCP still upholds structures in parallel to the state bureaucracy and there is evidence for vivid party-market interaction<sup>192</sup>, although with varying

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<sup>192</sup> Such interactions have been found significant in analyses on *guanxi* (Bian, 1994, p. 991) and are crucial when enquiring party-market corporatism (C.-C. Lee, H. Zhou, & Yu, 2007).

interpretations<sup>193</sup>. The presented case study has ignored these interfaces for the sake of brevity. However, the party should be included in more detailed enquiries on bureaucratic decision-making. It is probably a relevant systemic factor and plays a major role as “*value engineer*” (Jing, 2010, p. 41).

Secondly, state consumption is only one of several different state-market interfaces. The state, besides its role as a consumer, acts as producer, investor and service provider. Bureaucratic decision-making at these other state-market interfaces can be very different and, therefore, conclusions cannot be transferred straight away. However, an application of the analytical framework to other state-market interfaces could be interesting. A third limitation is that the role of the state as consumer has not been analysed comprehensively either. While focusing on government procurement, this enquiry has ignored other areas of public procurement like infrastructure development or procurement done by SOEs. These other areas are organised differently<sup>194</sup>. Therefore, results cannot be transferred directly, but a transfer of methodological approaches could be interesting.

A fourth limitation has to be acknowledged for the selection of sub-cases. Qinhuangdao and Tianjin both comply with GGP regulation. Accordingly, the variance between different styles of policy implementation observed in the two case cities derives from the subsystem of voluntary implementation activities. As a consequence, the preliminary pattern prediction model does not apply to cities not complying at all<sup>195</sup>, i.e. not even with the compulsory part of the hybrid framework. The fifth content-wise limitation concerns the scope of sub-cases. In both cities the government procurement centres were the only entity analysed in detail. Neither the internal processes on the side of users<sup>196</sup> nor the strategies of suppliers were

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<sup>193</sup> Some scholars see entrepreneurs as leading forces challenging the CCP’s dominance, others conclude that they are major beneficiaries and supporters of the status quo Dickson (2010, p. 200) gives an overview of exponents of these differing views.

<sup>194</sup> The Bidding Law is the central piece of regulation for these areas.

<sup>195</sup> One high-ranking procurement officer (TJ GPC, 2011h) and one external expert (Expert, 2011) suggested that selective policy implementation is reality in the field of procurement in China.

<sup>196</sup> One user (TJ User, 2011b), for instance, emphasised that specification of products would most likely change as soon as costs for energy consumption and procurement were part of the same budget within the user institution.

analysed systematically, although representatives from both sides were interviewed. These interviews helped to gain first insights but should be conducted more systematically in further studies on bureaucratic decision-making.

Altogether, these five content-related limitations show that the presented case study is not intended as a stand-alone piece of research but as a first step towards a systematic approach to bureaucratic decision-making. The same is true for the methodological aspects. Here, four limitations are of particular relevance.

To begin with, no statistical significance can be claimed for the case study as a whole. No randomised representative sample has been drawn. Quite the contrary, access via the SuPP-Urb project biased the selection of sub-cases and interview partners. With more independent variables than units of observations, no viable estimate could have been computed<sup>197</sup>. However, this has never been the aim of the presented enquiry. Instead, it has sought to collect and identify potential independent variables like, for instance, information sources, systemic aspects and individual features of decision-making. Now, after these variables have been prepared, quantitative studies could follow. They might apply the ordinary least squares regression method for estimating coefficients for the influence of different factors on GGP implementation. The vital lesson learned with regard to such an endeavour is the strong relevance of local conditions and the interdependency of local factors such as embedment and capacity. As a consequence, it might be necessary to extensively model local conditions and integrate interaction terms on the local level in regression models. This would happen at the cost of a decrease in degrees of freedom—which, in return, would demand for bigger samples.

As a second methodological limitation, the sub-cases of Qinhuangdao and Tianjin are not independent from each other. They share several features. Hence, fundamental drivers of policy implementation might have been overlooked. Within sub-cases, units of analysis, i.e. procurement officers, are not independent from each other either. In short, applying a broader scope of analysis might reveal new insights into bureaucratic decision-making. The third limitation is also related to this. Within sub-cases, interviewed samples might not be representative. Studies

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<sup>197</sup> Only ten semi-structured interviews with procurement officers were conducted. Other interviews cannot be accounted for here out of categorisation reasons.

that cover a sufficiently big share of the overall staff working at a GPC *ceteris paribus* would yield better results and higher validity than the presented one. Last but not least is that the pattern matching approach, besides reducing biases, can also create one. This is, because the expectations formulated in chapter I may have influenced interviews and their evaluation. Using open questions within the modular questionnaire has helped reducing this bias<sup>198</sup>. However, it remains a considerable threat also when transferring the preliminary pattern prediction model to other fields of application.

The discussion of methodological limitations has underlined what content-related limitations have indicated: this case study stops at a preliminary stage. Nevertheless, both fields have proven to offer potentials for further enquiries at the same time. Beyond such enquiries, five other applications might be interesting.

First, the methodological approach to decision-making could be transferred on the micro level, i.e. to organisations with bureaucracy-like set-ups like large state-owned enterprises. Secondly, a transfer on the macro level could evolve in the course of identifying and analysing other hybrid policy frameworks. As a third potential starting point for further research, the role of hybrid policy frameworks could be linked with debates on government in China<sup>199</sup> and the ongoing discourse on authoritarian resilience (Heilmann & Perry, 2011b; Shambaugh, 2008). As a fourth additional field, the effects of international competition on government procurement could be analysed<sup>200</sup>. Last but not least, this case study on China could be used for comparative analyses on bureaucratic decision-making in Asia and the rest of the world as well as the analyses of information systems in developing countries (Walsham et al., 2007).

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<sup>198</sup> See section two of the appendix.

<sup>199</sup> It, for instance, could be communicated within research programmes like “Regieren in China” (English: “Governing China”) (Kuhnle & Alpermann, 2011).

<sup>200</sup> An external expert (Expert, 2011), for instance, emphasised the role of procurement lists in improving the protection of intellectual property rights by actually naming product brands.

## Concluding Remarks

Bureaucrats in the two North Chinese cities Tianjin and Qinhuangdao implement green government procurement according to national regulations. Nevertheless, implementation styles differ between the two sub-cases. The presented analysis indicates that this variance derives from local conditions as well as the overall framework design for GGP. The underlying findings are relevant for both policy-making in consideration of bureaucratic dynamics and a better understanding of the state-market interface in the particular case of China.

Public good regulation is a challenge for the Chinese government. In the face of a polymorphous local state, economic liberalisation and the formalisation of administration the government requires new instruments to intervene at the state-market interface. Green government procurement is such an instrument. It seeks to promote economic and environmental efficiency by influencing supply and demand on product markets. The peculiarity of GGP as a policy instrument is that the state does not regulate these markets but its own agents.

The presented case study has shed light on this policy instrument on different levels. It has looked into the underlying macro framework, policy implementation in the run of bureaucratic decision-making on the micro level, and some dynamics in between the two levels. The scope has been limited to the description of two sub-cases. However, with the proposition of a preliminary pattern prediction model, future replication and, eventually, theorising have been prepared.

This preliminary model combines all three levels mentioned above: the policy framework (lateral dimension), local conditions (horizontal dimension) and information systems linking the two (vertical dimension). It has been derived in a three-step process. In chapter I, an analytical framework has been created and expected patterns of bureaucratic behaviour have been described—both based on literature research. In chapter II, the framework has been applied to bureaucratic decision-making in Tianjin and Qinhuangdao. General features and differences between sub-cases have been identified. Chapter III, eventually, has put together empirical observations and literature research according to the logic of a pattern-

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matching approach. The results have served as basis for preliminary pattern predictions.

Literature research has led to the expectation that government procurement officers generally tend towards a ‘central corporatist’ decision-making style. This means, they rather orient themselves towards state information than market information, whereas their decisions rather depend on systemic influences than on individual features. However, empirical observations have confirmed these expectations only partially. Bureaucratic decision-making in Qinhuangdao follows ‘central corporatist’ patterns, while bureaucrats in Tianjin also tend to act in a ‘corporatist’ way, but neither show a clear tendency towards state nor towards market information. Obviously, different styles can coexist within one national framework for policy implementation. In the case of GGP, this framework is a hybrid. It sets clear minimum implementation standards and provides general normative goals but gives freedom for voluntary implementation practices at the same time.

All in all, these results imply that bureaucratic decision-making in GGP is a dynamic field that deserves further analyses. Nevertheless, confirmed findings allow for four propositions in terms of pattern predictions. First, corporatist embedment seems to be a deep-rooted characteristic of decision-making at the state-market interface. The central government might find it difficult to change this in the short run. Second, the use of market information seems to be positively correlated with information management capacity. This could explain why styles differ between cities and between bureaucratic entities. The central government might be able to influence this capacity to a certain extend. Third, information management capacity seems to influence the way embedment takes effect. High capacity can amplify the influence of players in the local political economy; low capacity can increase exposure of players to bureaucratic bargaining. Fourth, the sound definition of the boundaries that subdivide hybrid implementation frameworks should orient itself towards the interaction between capacity and embedment mentioned above. The stronger implementing agencies are the bigger the voluntary part of implementation systems can be without diluting

## Conclusion

implementation. This is, where the central government can improve policy implementation most easily.

However, all these propositions are subject to strict limitations. Only after being applied to other cases and tested with quantitative methods, they might serve as foundation for systematic policy-making and policy-analysis.

## Appendix

For the sake of clarity not all the details of this case study were presented in the main part (chapter I-III). However, since it is important to be able to retrace the enquiry, the details are given in this appendix. They can be divided into three groups: First, a case study protocol describing the action; second, materials that have been used; and, third, the core results.

### 1 Case Study Protocol

This section explains how access to the case cities was gained; it gives an overview of interviews that were conducted and names other sources used for the enquiry on the implementation of GGP in Tianjin and Qinhuangdao.

#### *Access to Cases*

Tianjin and Qinhuangdao participate in the SuPP-Urb project under the EU SWITCH-Asia Programme (CSCP, 2011), which was a crucial door opener for analysing the implementation of GGP in the two municipalities. The project brings together Western researchers from the Wuppertal Institute (WI) and the UNEP/Wuppertal Institute Collaborating Centre on Sustainable Consumption and Production (CSCP) with Chinese researchers from Nankai University and the Environmental Management College of China (EMCC). It links them all to procurement officers in the two case cities as well as to those in the city of Lanzhou.

Building on this Sino-German collaboration, the first contact with local bureaucrats could be established in summer 2010 via email. A few months later, in October 2010, the author was given the chance to meet them in a series of capacity building events in all participating cities. At this point, it was agreed that the actual research should take place in Tianjin and Qinhuangdao during the months of February and March 2011. Thanks to the on-site support of researchers from Nankai University and EMCC the author was able to carry out interviews and establish contacts to other GGP experts in a relatively short period of time, as planned.

## Appendix

### *Interviews and Similar Sources of Evidence*

Direct communication with practitioners and experts was central to understand the implementation of GGP on the micro level in North China. This kind of direct communication took different shapes, which was intended to obtain different kinds of information. Three participant observations and nine informal talks helped to identify issues at hand and specify questions for a more systematic enquiry.

Three open interviews were conducted to discuss the strategic aspects of GGP implementation and learn about the opinions of external experts on specific questions. The author formulated most of these questions during the informal talks and observations; or during one of the seventeen semi-structured interviews. The latter represent the core material for analysing decision-making behaviour in Tianjin and Qinhuangdao. Since the results had to be ranked and categorised pre-structured questionnaires were applied, which will be provided in the second section of the appendix. Even though they are designed bilingual, all semi-structured interviews and most of the talks, observation and open interviews were conducted in Chinese. Notes were taken in Chinese during interviews and sent to interviewees via email for them to verify the content. Sound recordings were avoided in order to make interviewees more comfortable. Results from talks and observations were documented but not reconfirmed with the respective counterpart, which explains the exploratory character of these sources. All interviewees preferred to remain anonymous, which makes it difficult for other scholars to reassess their statements. However, it was necessary for being able to talk to them at all or for winning their trust when talking about delicate issues.

### *Quoting Interviews and Similar Sources*

A few of the described sources were quoted explicitly throughout the case study. This happened for different reasons. Some sources only provided codified results for identifying decision-making patterns. In certain cases, it did not make sense to name them all explicitly, for instance when stating that X out of Y procurement officers displayed a particular attitude in one of the two case cities. Other sources only served the purpose of leading the author to more relevant avenues of investigation. Quoting them would have resulted in an unnecessary

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increase in complexity. However, whenever a source has directly contributed to compiling evidence it has been quoted. The identifications used for these references reveal which category they belong to. Table 1 gives a brief survey of all sources including their identification number, expertise, location and duration of meeting.

**Table 1: All interviews and similar sources at a glance**

ID	Expertise	Other people present	Institution / company	Location	Date	Duration minutes
V01	PO	Foreign Experts, POs	QHD GPC	QHD	27.10.10	120
T02	Western Exp.	none	Civil Society Organisation	TJ	28.10.10	30
V03	POs	Foreign Experts	TJ GPC	TJ	29.10.10	120
V04	POs, Experts	Foreign Experts	Lanzhou LBF, EPB and GPC	Lanzhou	01.11.10	120
T05	Chinese Exp.	none	College	Beijing	27.02.11	45
T06	Chinese Exp.	none	University	TJ	01.03.11	45
T07	PO	11 POs	TJ GPC	TJ	02.03.11	45
S08	PO	none	TJ GPC	TJ	03.03.11	65
S09	PO	2 POs	TJ GPC	TJ	04.03.11	70
S10	PO	PO	TJ GPC	TJ	04.03.11	50
S11	PO	none	TJ GPC	TJ	07.03.11	70
S12	PO	none	TJ GPC	TJ	07.03.11	45
S13	Supplier	none	Chinese Multinational Corporation	TJ	08.03.11	80
S14	User	none	University	TJ	08.03.11	50

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<b>S15</b>	<b>Supplier</b>	<b>none</b>	<b>Chinese Domestic Producer</b>	<b>TJ</b>	<b>09.03.11</b>	<b>55</b>
<b>S16</b>	<b>User</b>	<b>none</b>	<b>University</b>	<b>TJ</b>	<b>09.03.11</b>	<b>50</b>
<b>T17</b>	<b>PO</b>	<b>none</b>	<b>TJ GPC</b>	<b>TJ</b>	<b>09.03.11</b>	<b>20</b>
<b>ID</b>	<b>Expertise</b>	<b>Other people present</b>	<b>Institution / company</b>	<b>Location</b>	<b>Date</b>	<b>Duratio n minutes</b>
<b>S18</b>	<b>PO</b>	<b>none</b>	<b>TJ GPC</b>	<b>TJ</b>	<b>10.03.11</b>	<b>40</b>
<b>S19</b>	<b>PO<sup>201</sup> (cancelled )</b>	<b>-</b>	<b>TJ GPC</b>	<b>TJ</b>	<b>10.03.11</b>	<b>-</b>
<b>T20</b>	<b>User</b>	<b>none</b>	<b>Urban Infrastructure</b>	<b>TJ</b>	<b>11.03.11</b>	<b>10</b>
<b>I21</b>	<b>PO</b>	<b>6 POs</b>	<b>TJ GPC</b>	<b>TJ</b>	<b>11.03.11</b>	<b>30</b>
<b>T22</b>	<b>PO</b>	<b>2 POs</b>	<b>QHD GPC</b>	<b>QHD</b>	<b>14.03.11</b>	<b>40</b>
<b>T23</b>	<b>PO</b>	<b>PO</b>	<b>QHD GPC</b>	<b>QHD</b>	<b>14.03.11</b>	<b>40</b>
<b>S24</b>	<b>PO</b>	<b>none</b>	<b>QHD GPC</b>	<b>QHD</b>	<b>15.03.11</b>	<b>45</b>
<b>S25</b>	<b>PO</b>	<b>none</b>	<b>QHD GPC</b>	<b>QHD</b>	<b>15.03.11</b>	<b>50</b>
<b>S26</b>	<b>Supplier</b>	<b>none</b>	<b>Wholesaler</b>	<b>QHD</b>	<b>16.03.11</b>	<b>40</b>
<b>S27</b>	<b>User</b>	<b>none</b>	<b>Administration</b>	<b>QHD</b>	<b>16.03.11</b>	<b>50</b>
<b>S28</b>	<b>PO</b>	<b>none</b>	<b>QHD GPC</b>	<b>QHD</b>	<b>17.03.11</b>	<b>55</b>
<b>S29</b>	<b>PO</b>	<b>none</b>	<b>QHD GPC</b>	<b>QHD</b>	<b>17.03.11</b>	<b>35</b>
<b>T30</b>	<b>PO</b>	<b>PO</b>	<b>QHD GPC</b>	<b>QHD</b>	<b>18.03.11</b>	<b>40</b>
<b>I31</b>	<b>Western Exp.</b>	<b>none</b>	<b>Business Association</b>	<b>Beijing</b>	<b>22.03.11</b>	<b>35</b>

<sup>201</sup> The procurement officer had to participate in an unexpectedly long meeting.

I32	Chinese Exp.	none	Civil Society Organisation	Beijing	24.03.11	40
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**Captions**

V = Observation; T = Talk; I = Open Interview; S = Semi-Structured Interview; PO = Procurement Officer; Exp. = Expert; ID = Identification Number. For other abbreviations please see the list of abbreviations.

## Questionnaires

The seventeen semi-structured interviews were conducted with the help of modular questionnaires. Each questionnaire consists of four parts: a general part (A), a part on information flows (B) and two parts related to factors influencing decision-making in GGP—(C) asks for individual factors, (D) dwells on systemic factors. Questionnaires were written in English and Chinese. An expert from Nankai University and an expert from EMCC checked them before they were used in the field. All questionnaires were provided to the hosting GPC in advance. None of the questions were rejected.

### *The Application of Questionnaires*

Interviews were conducted in a *semi-structured* way. Questionnaires represented a guide for each session. This means that single questions could be discussed between the interviewer and the interviewee in depth with the possibility of additional questions. As a result, questions originally included in the questionnaire could be left out; sometimes questions had to be rephrased or explained; sometimes the interviewer went deeper in order to seize an opportunity for learning more about a specific topic. This carries the risk of a decrease in comparability. However, there are three major advantages: first, the interviewer could make sure that the interviewee really understood the question. Second, questions were left open allowing freedom of response from the interviewee, making it easier to gain new insights. Finally, discussions allowed the interviewer to probe for alternative explanations. With the help of a log observations not included in the regular questionnaire were documented. This includes descriptions of the interviewee's attitude, his outer appearance, the context of the interview, communication before and after the interview and other related factors. The log is not included in the appendix.

### *The Questionnaire for Procurement Officers*

Theoretically, procurement officers had the chance to prepare interviews with the help of the questionnaire shown in table 2. However, none of them did so in Tianjin and only one of them did in Qinhuangdao. As a result, interviewees did not have pre-prepared answers to questions. Most procurement officers were very engaging during interviews. However, some of them hesitated to answer questions C2 and D2. This was partially due to the content, but mainly derived from insufficient framework design: actual answers to questions C2 and D2 often turned out to be the opposite of the answers to questions C1 and D1. The questions were C2 and D2 were not dropped, in order to uphold comparability of interviews. However, they were rephrased and left out if they proved to be problematic in a specific case. The following questionnaire was used in Qinhuangdao and the one used in Tianjin is obtained by replacing the city name.

**Table 2: The questionnaire for procurement officers**

	<b>General part</b>	总则
A1	Please briefly describe your job!	请你介绍一下你工作的内容！
A2	How long have you been working here?	你在这里工作了多长时间？
A3	Do the tenders you work on regularly include sustainable products?	你参加的评标是否都有生产绿色产品的企业参加？
A4	What do you decide on when making a procurement decision?	采购产品的时候你做出什么样的决定？
A5	How does the supervision of your decisions look like?	谁负责监督你的工作？ 有什么样的监督体制？
A6	To which bureaucratic entity does your procurement centre belong?	秦皇岛市政府采购中心隶属于哪个政府机构？
A7	Which other bureaucratic units have a direct influence on your procurement centre?	哪些其他政府机构影响你们的工作？
	<b>Information Flows</b>	信息流
B1	When working on a GPP tender, which sources of information can you draw on?	进行政府采购的时候你可以利用哪些信息？
B2	If you could choose, which other sources of information would you like to have access to?	你希望工作中利用哪些信息？或者增加哪些可以利用的信息？

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B3	Please rank the above sources (B1) according to their importance for the procurement decision!	请把 B1 的信息流进行排序（从最重要的到最不重要的）！
B4	Please rank the above sources (B2) according to their importance for the procurement decision!	请把 B2 的信息流进行排序（从最重要的到最不重要的）！
B5	How do you utilise information flows named above (B1)?	政府绿色采购时，在你的工作中如何使用 B1 中的信息？
	<b>Individual</b>	<b>个人因素</b>
C1	Which individual features support the implementation of GPP in your eyes?	你认为哪些个人因素影响政府绿色采购的执行？
C2	Which individual features make the implementation of GPP hard in your city?	哪些个人因素对政府绿色采购有负面影响？
C3	Please rank the above positive features (C1) according to their importance for the procurement decision!	请把 C1 中的因素进行排序（从最重要的到最不重要的）！
C4	Please rank the above hampering features (C2) according to their importance for the procurement decision!	请把 C2 中的因素进行排序（从最重要的到最不重要的）！
C5	How do individual factors affect the implementation of GPP	个人因素如何影响政府绿色采购的执行？
	<b>Systemic</b>	<b>政府绿色采购的外部条件</b>
D1	Which circumstances make implementing GPP easier in your city?	执行政府绿色采购过程中有哪些有益的外部条件？
D2	Which circumstances make the implementation of GPP hard in your city?	执行政府绿色采购过程中有哪些不利的外部条件？
D4 <sup>202</sup>	Please rank the above positive features (D1) according to their importance for the procurement decision!	请把 D1 中有益的外部条件进行排序（从最重要的到最不重要的）！
D5	Please rank the above hampering features (D2) according to their importance for the procurement decision!	请把 D2 中不利的外部条件进行排序（从最重要的到最不重要的）！
D6	How do systemic features affect the implementation of GPP in your city?	在秦皇岛，外部条件会如何影响政府绿色采购的执行？
	<b>Final overview: please rank all the below items from C3, C4, D4, D5</b>	<b>概述：</b> 请把 C3,D4,D5 影响政府绿色采购的方面进行排序（从最重要的到最不重要的）！

<sup>202</sup> The absence of a question D3 in all questionnaires is a mistake and not related to the enquiry.

### *The Questionnaire for Users and Suppliers*

Obviously, the questionnaires used in the interviews with users and suppliers were different from the one for procurement officers. This difference becomes apparent in module A. Nevertheless, where possible, questionnaires were designed to be similar to improve the value of these interviews for triangulation of data.

**Table 3: The questionnaire for users**

	<b>General part</b>	<b>总则</b>
A1	Please briefly describe your work unit: its activities (service, administration etc.) its size (budget, employees), bureaucratic rank and position in the administration of Qinhuangdao!	请你介绍一下贵单位。包括单位所处的行业（提供服务，管理等），预算金额和人员数量，单位级别，隶属于哪个政府机构等。
A2	How many products do you purchase through the PPC per month at average?	贵单位平均每个月由秦皇岛政府采购中心购买多少产品？
A3	Which were the last five products you purchased through the PPC?	最近由采购中心为您单位购买的五个产品是什么？
A4	How many of them were on the government procurement list or labelled energy-efficient or green?	这五个产品中有几个在政府采购的绿色清单或能效标识能效或是绿色产品？
A5	Which role does sustainable public procurement play in the strategy of the Qinhuangdao government in your eyes?	你认为可持续政府采购在秦皇岛市政府发展战略中具有什么作用？
	<b>Information Flows</b>	<b>信息流</b>
B1	When ordering products, which information does the PPC require you to provide them with?	通过政府采购中心购买产品时，政府采购中心要求贵单位提供哪些信息？
B2	Do you provide them with additional information?	此外，还提供别的信息吗？
B3	How easy is it for you to provide such information (B1 and B2) and why?	贵单位提供上面的信息（B1 与 B2）是否容易？为什么？
B4	Why—do you think—does the central government issue the procurement lists? Why does it not mandate the local authorities to find a selection method?	你认为政府为什么发布绿色采购清单和节能（水）清单？为什么不通过地方政府寻求决策方法？
B5	What does the existence of this list mean for your work unit?	这些相关的绿色清单对贵单位有何影响？
B6	What would be your favourite system for identifying sustainable products for PP?	你觉得政府采购中怎样的可持续产品识别机制更适用（统一的绿色清单或由各

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		地方制定各自的采购方法) ?
B7	How do you think will the procurement system in China look like in five and respectively ten years regarding the use of product information?	你认为基于绿色清单这种形式的政府绿色采购体制未来(5年后或10年后)会怎样?
	<b>Individual</b>	个人因素
C1	How important are the personal features of PPC personnel for decision-making in SPP?	政府采购中心人员的个人因素对可持续政府采购的决策发挥多大作用?
C2	Which individual features of procurement officers influence their decisions in your eyes (e.g. a green mindset)?	你认为哪些个人因素会影响政府绿色采购的执行(如,采购人员的环保意识)?
C3	Please rank the above features (C2) according to their importance for the procurement decision!	请把C2的个人因素进行排序(从最重要的到最不重要的)!
C4	How do individual factors affect the implementation of GPP	个人因素如何影响政府绿色采购的执行?
	<b>Systemic</b>	政府绿色采购的外部条件
D1	Which circumstances make implementing GPP easier in your city?	执行政府绿色采购过程中有哪些有益的外部条件?
D2	Which circumstances make the implementation of GPP hard in your city?	执行政府绿色采购过程中有哪些不利的外部条件?
D4	Please rank the above positive features (D1) according to their importance for the procurement decision!	请把D1中有益的外部条件进行排序(从最重要的到最不重要的)!
D5	Please rank the above hampering features (D2) according to their importance for the procurement decision!	请把D2中不利的外部条件进行排序(从最重要的到最不重要的)!
D6	How do systemic features affect the implementation of GPP in your city?	在秦皇岛,外部条件会如何影响政府绿色采购的执行?
	<b>Final overview: please rank all the below items from C3, D4, D5</b>	<b>概述:</b> 请把C3,D4,D5影响政府绿色采购的方面进行排序(从最重要的到最不重要的)!

The questionnaires for users and suppliers presented here were used for field research in Qinhuangdao. However, they do not differ from those applied in Tianjin—except for the city name. Stakeholders in the two cities acted differently.

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Users and suppliers in Qinhuangdao seemed to be less comfortable and prepared better for the interviews with the help of the questionnaires provided beforehand.

**Table 4: The questionnaire for suppliers**

	<b>General part</b>	<b>总则</b>
A1	Please briefly describe your company: its activities (production, wholesale etc.), its size (turnover, employees) and ownership structure (state-owned, TVE, private, joint venture, foreign-owned)!	请你介绍一下贵公司。包括公司类型（例如产品，销售等），公司规模（销售额数，人员数量），公司性质(私人公司, 国有公司, 股份制公司)
A2	What is your most important market (product-wise and geographical)? How important is Qinhuangdao and the public sector?	贵公司的那些产品占主要市场份额?贵公司的产品主要哪些区域销售? 秦皇岛和秦皇岛市的单位有多重要?
A3	Are any of your products on the central government's procurement lists? If yes, which products and on which of the two lists?	你公司是否有列入环境标志清单、节能（水）清单等绿色清单的产品？如果有请列出产品及其清单？
A4	Do any of your products have an energy or eco-label but are not on the respective list?	贵公司有没有获得能源生态方面的标志但并没有列入绿色清单的产品？
A5	How often have you participated in an invitation to tender at Qinhuangdao PPC so far? With which products do you participate (listed, labelled and non-listed and/or normal products)?	至今为止，贵公司参与了多少次秦皇岛市政府采购中心的招标？投标了哪些产品（清单上的产品，清单以外但获得标志的产品与/或非绿色产品）？
A6	Have you won any tender so far in Qinhuangdao? If yes, which product did you sell?	在秦皇岛的政府采购中，贵公司是否中过标？中标产品有哪些？
A7	Which role does getting listed play in your product marketing strategy?	生产可以进入绿色清单的产品对贵公司的市场营销战略发挥何种作用？
A8	Which role does sustainable public procurement play in the strategy of the Qinhuangdao government in your eyes?	你认为，政府绿色采购对秦皇岛市的发展战略发挥何种作用？
	<b>Information Flows</b>	<b>信息流</b>
B1	When tendering, which information does the PPC require you to provide them with?	投标时，政府采购中心要求贵公司提供哪些信息？
B2	Do you provide them with additional information?	此外，还提供别的信息吗？
B3	How easy is it for you to provide such information (B1 and B2) and why?	贵公司提供上面的信息 (B1 与 B2) 是否容易？为什么？

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B4	Why—do you think—does the central government issue the procurement lists? Why does it not mandate the local authorities to find a selection method?	你认为政府为什么发布绿色采购清单和节能（水）清单？为什么不通过地方政府寻求决策方法？
B5	What does the existence of this list mean for your company?	这些相关的绿色清单对贵公司有何影响？
B6	Have you ever applied for being included in the lists with your product(s)? If you applied already, which information did you have to provide? If you did not apply, why?	贵公司是否向政府申请将贵公司的产品加入绿色清单中？如果是，贵公司需要提供什么信息？如果否，为什么没有申请？
B7	What would be your favourite system for identifying sustainable products for PP?	你觉得政府采购中怎样的可持续产品识别机制更适用（统一的绿色清单或由各地方制定各自的采购方法）？
B8	How do you think will the procurement system in China look like in five and respectively ten years regarding the use of product information?	你认为基于绿色清单这种形式的政府绿色采购体制未来（5年后或10年后）会怎样？
	<b>Individual</b>	<b>政府采购的个人因素</b>
C1	How important are the personal features of PPC personnel for decision-making in SPP?	政府采购中心人员的个人因素对可持续政府采购的决策发挥多大作用？
C2	Which individual features of procurement officers influence their decisions in your eyes (e.g. a green mindset)?	你认为哪些个人因素影响政府绿色采购的执行（如，采购人员的环保意识）？
C3	Please rank the above features (C2) according to their importance for the procurement decision!	请把 C2 的个人因素进行排序（从最重要的到最不重要的）！
C4	How do individual factors affect the implementation of GPP	个人因素如何影响政府绿色采购的执行？
	<b>Systemic</b>	<b>政府绿色采购的外部条件</b>
D1	Which circumstances make implementing GPP easier in your city?	执行政府绿色采购过程中有哪些有益的外部条件？
D2	Which circumstances make the implementation of GPP hard in your city?	执行政府绿色采购过程中有哪些不利的外部条件？
D4	Please rank the above positive features (D1) according to their importance for the procurement decision!	请把 D1 中有益的外部条件进行排序（从最重要的到最不重要的）！

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D5	Please rank the above hampering features (D2) according to their importance for the procurement decision!	请把 D2 中不利的外部条件进行排序（从最重要的到最不重要的）！
D6	How do systemic features affect the implementation of GPP in your city?	在秦皇岛，外部条件会如何影响政府绿色采购的执行？
	<b>Final overview: please rank all the below items from C3, D4, D5</b>	<b>概述：</b> 请把 C3,D4,D5 影响政府绿色采购的方面进行排序（从最重要的到最不重要的）！

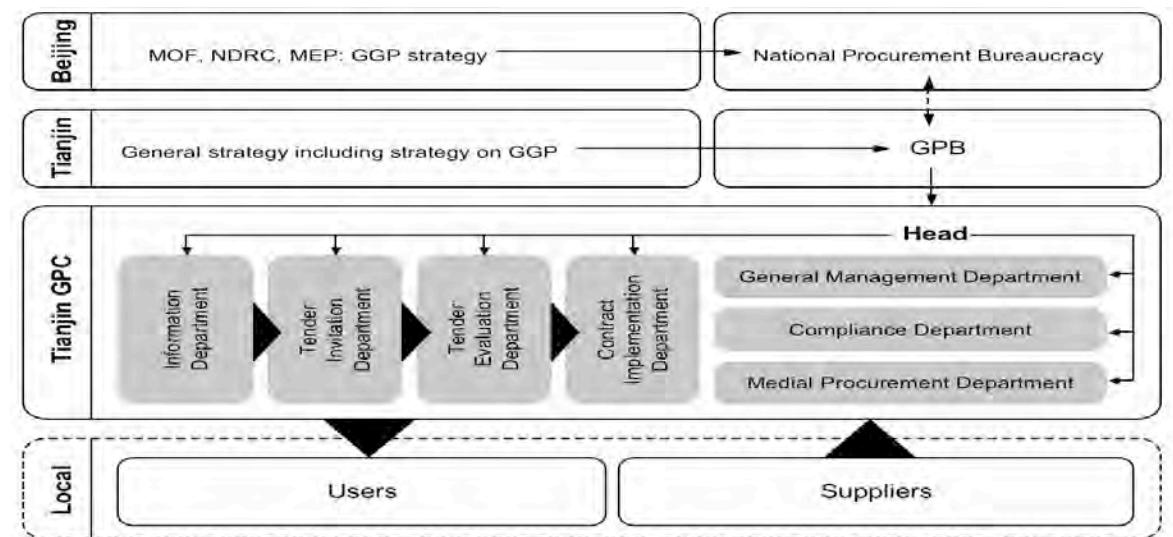
## Results

The findings of the empirical research in Tianjin and Qinhuangdao were presented and interpreted in chapter II. However, for the sake of brevity, they were not all depicted in detail. This section fills these gaps with regard to the organisation of the two analysed GPCs, their direct environment and the indicators generated for identifying decision-making styles of local bureaucrats.

### *The Organisation of GGP Implementation in Tianjin*

The organisation of government procurement in Tianjin is centred on the procurement process. Four out of seven departments specialise on only one of the steps within this process. Like this, they can gain experience and expertise in a specific field. The medical procurement department represents the only fundamental exception to this rule. Here, a specialised team takes care of the whole process.

**Figure 4: The organisation of GPP implementation in Tianjin**



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Figure 4 depicts this internal organisation and also shows the links with other administrative levels and actors. For the sake of clarity it does not show the team consisting of members from different departments. These teams handle the process. For an explanation of the symbols please see figure 5.

**Figure 5: Caption for organisation charts**

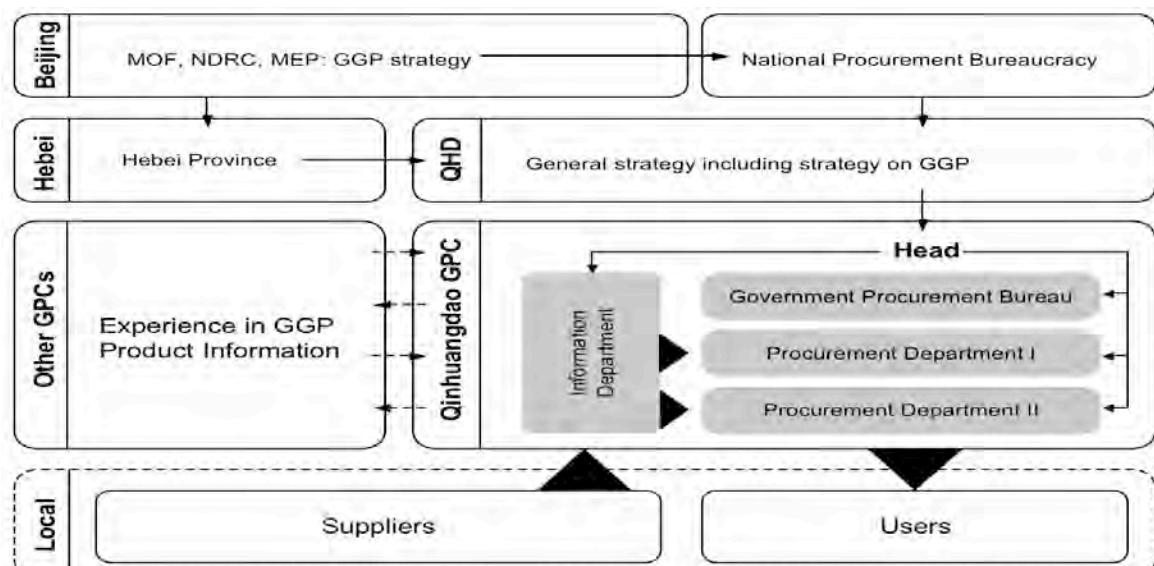
Caption	A → B Leadership relationship	A ←→ B Consultative relationship	A ➔ B GGP process relationship	Department Internal sub-unit	Users	Local Local Political Economy	Department Sub-unit with function in process-orientated structure
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The role of the Government Procurement Bureau is a peculiar aspect of the organisation of government procurement in Tianjin. The GPB has a direct consultative relationship with the central procurement bureaucracy and serves as an intermediary between the government of Tianjin and the GPC (see figure 4). This indirectly reflects the fact that Tianjin is a provincial-level city.

### *The Organisation of GGP Implementation in Qinhuangdao*

The GPC of Qinhuangdao is organised in a different way compared to the one in Tianjin. Here, only one department specialises on a specific step in the procurement process. One of the two government procurement departments handles the whole process. Here, specialisation has to happen within departments.

**Figure 6: The organisation of GGP implementation in Qinhuangdao**



## Appendix

The absence of an independent government procurement bureau is a noticeable feature of the organisation of government procurement in Qinhuangdao; another are the consultative relations with GPCs in other cities, which underlines that the GPC of Qinhuangdao lacks direct contact with the centre in Beijing.

### *Indicator Results for the Identification of Decision-Making Styles*

The case study is primarily qualitative in nature. Aspects reported by procurement officers and other interviewees have been compiled and interpreted carefully within the limitations outlined in chapter III, 3. Indicators for distinguishing decision-making styles are the only quantitative element included in the research design. These indicators do neither represent highly precise benchmarks nor do they claim any statistical significance. Instead, they serve as rough categories that help uncover blurry and hidden variances between individuals and sub-cases.

Three different methods for the categorisation of decision-makers have been applied. They all build on ordinal rankings. These rankings were conducted for each procurement officer with the help of the questionnaires provided in section 2 of this appendix. Mathematical operations were minimised, when generating indicators. Each aspect belongs to a certain dimension (see figure 2) and represents one credit point—regardless of its ranking position. These credit points are the basis for applying three different indicators methods (see table 5).

Method	Weighting of Prioritisation	Weighting of Frequencies	Viability
A	None	High	Very low
B	Medium	Medium	Medium
C	High	Low	Low

**Table 5: Methods for indicator generation**

Method A simply looks into frequencies. Here, that side of a continuum accounting for more aspects dominates the other side. For instance, a decision-maker reporting four sources of market information and only two sources of state information would be categorised as being market-focused. This method was rejected, because it ignores prioritisation.

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Method B drops the lower fifty percent of all ranked aspects. The aspects kept in the sample all have equal power when it comes to influencing the result—they all count as one credit point for their side of the continuum. In this way, method B includes both priorities and aspects reported by interviewees. As a consequence, it is regarded to be more viable than method A.

Method C follows the same logic as method B. However, it drops the lower seventy-five percent of all ranked aspects and, accordingly, gives even more importance to the prioritisation. This method was rejected as well, because it carries high risk of biases: based on an ordinal ranking aspects might be dropped that are nearly as important as those remaining in the sample. Against this background, dropping seventy-five percent of the reported aspects implies a too big loss of information on the frequency of aspects.

**Table 6: Indicator results for identifying decision-making styles in Tianjin**

ID	Method	Resulting Style	Age	Education
S08	Method A	Market Corporatist	Young	Logistics
S09	Method A	Market Corporatist	Middle-aged	Accounting
S10	Method A	Central Corporatist	Young	Management
S11	Method A	Market Corporatist	Old	Accounting
S12	Method A	Market Corporatist	Young	Engineer
S18	Method A	Market Corporatist	Young	Informatics
S08	Method C	Central Corporatist	Young	Logistics
S09	Method C	Central Corporatist	Middle-aged	Accounting
S10	Method C	Ideal Weberian	Young	Management
S11	Method C	Central Corporatist	Old	Accounting
S12	Method C	Central Corporatist	Young	Engineer
S18	Method C	Central Corporatist	Young	Informatics
S08	Method B	Market Corporatist	Young	Logistics
S09	Method B	Central Corporatist	Middle-aged	Accounting
S10	Method B	Central Corporatist	Young	Management

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S11	Method B	Market Corporatist	Old	Accounting
S12	Method B	Ideal Weberian	Young	Engineer
S18	Method B	Market Corporatist	Young	Informatics

Method B was identified as the one most viable out of the three. Nevertheless, for each procurement officer all the three indicators were generated, in order to control sensitivity of results against the background of dropping aspects. Sensitivity was found to be higher for the dimension of information flows than for the dimension of influencing factors, as tables 6 and 7 show. In addition, sensitivity was also found to be higher in Tianjin than in Qinhuangdao. This supports the observation that decision-making styles in Tianjin are less clearly defined with regard to the dimension of information management (see chapter II, 1).

The indicator tables for Tianjin (figure 6) and Qinhuangdao (figure 7) also show information on age and education. These details were included to control relations—like the one between education and the use of complex market information—that might have played a role. However, no such relations became visible<sup>203</sup>.

**Table 7: Indicator results for identifying decision-making styles in Qinhuangdao**

ID	Method	Resulting Style	Age	Education
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S24	Method A	Central Corporatist	Middle-aged	Informatics
S25	Method A	Central Corporatist	Young	Engineer
S28	Method A	Central Corporatist	Middle-aged	Former Soldier
S29	Method A	Ideal Weberian	Middle-aged	Former Soldier

S24	Method C	Central Corporatist	Middle-aged	Informatics
S25	Method C	Central Corporatist	Young	Engineer
S28	Method C	Central Corporatist	Middle-aged	Former Soldier
S29	Method C	Market Corporatist	Middle-aged	Former Soldier

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<sup>203</sup> However, proving that they do not exist would demand for the application of inferential statistics.

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S24	Method B	Central Corporatist	Middle-aged	Informatics
S25	Method B	Central Corporatist	Young	Engineer
S28	Method B	Central Corporatist	Middle-aged	Former Soldier
S29	Method B	Market Corporatist	Middle-aged	Former Soldier

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