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The Impact of Institutional Frameworks on Private Sector Participation in Water Supply and Sanitation: The case of the management contract for water and wastewater services in the Amman Governorate, Jordan

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**Sylvia Marlene Steiner**

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Sylvia Marlene Steiner

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The Case of the Management Contract  
for Water and Wastewater Services  
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Sylvia Marlene Steiner

Bochum, Germany

February 2008



## List of Abbreviations

AGWA	Amman Governorate Water Administration
AWSMP	Amman Water and Sanitation Management Project
CIP	Capital Investment Programme
EIB	European Investment Bank
EU	European Union
GATS	General Agreement on Trade in Services
GAWSIP	Greater Amman Water Sector Improvement Programme
IDA	Institutional Decomposition and Analysis
IMF	International Monetary Fund
JD	Jordanian Dinar
KfW	Kreditanstalt für Wiederaufbau
LEMA	Suez Lyonnaise Des Eaux and Montgomery Watson Arabtech Jardaneh
MC	Management Contract
MENA	Middle East and North Africa
MWI	Ministry of Water and Irrigation
NGO	Non-Governmental Organization
NIE	New Institutional Economics
OECD	Organisation for Economic Co-operation and Development
OIF	Operating Investment Fund
PIC	Performance Incentive Compensation
PMU	Programme Management Unit
PSP	Private Sector Participation
ROE	Rate of Exchange
UFW	Unaccounted-for-water
UNDP	United Nations Development Programme
USAID	United States Agency for International Development
WAJ	Water Authority of Jordan
WEF	World Economic Forum
WSS	Water Supply and Sanitation
WTO	World Trade Organization

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# 1 Introduction

Unsatisfactory access to water supply and sanitation is a key poverty issue which is affecting a substantial part of the developing countries.<sup>1</sup> Without a considerable improvement in the delivery of water and sanitation services this situation is expected to further aggravate. The Middle East and North Africa (MENA) region is struck by one of the most acute water shortages as most of the countries of the region are arid to semi-arid environments. More than half of the water resources in the MENA countries are brought in from outside the region and what makes it more critical is that most of the water resources in this region have already been accessed.<sup>2</sup> However, the public sector in many developing countries so far has been unable to manage this development as can be seen from the unsatisfactory provision of water and sanitation in the field.<sup>3</sup> Accordingly, the joint initiative on *Good Governance for Development in the Arab Countries*, launched by UNDP, OECD and the Hashemite Kingdom of Jordan in 2005, has identified the low quality and poor infrastructure of public services, such as water supply and sanitation, as a main challenge to governance. As a remedy to this, the initiative has advocated the participation of the private sector in water supply and sanitation.<sup>4</sup>

Private Sector Participation (PSP) in its various forms has often been suggested as a way out of ineffective and inefficient management systems, inadequate technology, and the lack of investment. However, as water involves the notions of a public good and a human need, PSP in the water sector stirs political emotions like little else. What is more, after more than 15 years of private sector participation in water services, frequently promoted through the development agencies, the results of empirical studies on the effects of private sector participation remain generally inconclusive, showing successes and failures. The early enthusiasm of the 1990s for private sector participation has therefore begun to fade away. Nevertheless, PSP – though in a more mature way, taking some of the key lessons learned into account – is still promoted by its advocates as a means of improving water supply and sanitation. The experience of the last 1.5 decades set off a trend to low-risk investments in selected countries.<sup>5</sup>

The inconclusive record of PSP in the water sector suggests that private sector participation does not *per se* contribute to an improvement of water supply and sanitation services. It rather indicates that the success of a PSP is determined by some exogenous and endogenous determinants. As previous research, which has been investigating the price mechanism and property rights allocation, proved unsatisfactory in the context of natural resource management,<sup>6</sup> this

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<sup>1</sup> cf. Carter, Richard C.; Danert, Kerstin., 2003, p.1

<sup>2</sup> cf. Abu-Zeid, Mahoud, 2003, p.1

<sup>3</sup> cf. Al-Hmoud, Richard C.; Edwards, Jeffrey, 2004, p.1

<sup>4</sup> cf. United Nations Development Programme, 2005, p.1

<sup>5</sup> cf. Marin, Philippe; Izaguirre, Ada Karina, 2006, p.1

<sup>6</sup> cf. Saleth, Maria R.; Dinar, Ariel, 2004, p.23

study intends to make a contribution by examining the impact of institutional frameworks on the performance of privately operated water utilities.

This thesis is organized as follows. Chapter 2 introduces the concept of governance, its relation with institutions and the developmental relevance of water supply and sanitation. It further presents the alternative modes of drinking water provision. Chapter 3 gives an overview of the research that has already been done with regard to the determinants of the performance of private sector participation in public infrastructure and identifies the research question. Chapter 4 presents the theoretical framework of the study, namely the concept of institutions and the new institutional economic approach by Levy and Spiller. The same chapter also reveals how this framework is going to be applied to the research and an empirically testable hypothesis is developed. Chapter 5 introduces the research methodology, including the consulted sources, the indicators and the data collection and procession methods. In chapter 6 the Jordanian background is presented, which is relevant for the case study. Chapter 7 displays the empirical findings and interpretations from the case, and chapter 8 provides a summary as well as final conclusions and considerations.

## 2 Water Governance and Development

### 2.1 Institutions and Governance

The introduction of reform-undertakings such as private sector participation has been advocated by the UNDP-initiative on *Good Governance for Development in the Arab Countries* as a remedy to some challenges that governance is facing. But what is governance and how does it relate to institutions?

The term *governance* is one of the more elastic concepts in the public and academic discourse. A broad definition by the World Bank defines governance as “the traditions and institutions by which authority in a country is exercised”.<sup>7</sup> This means that formal and informal institutions (traditions) form the framework by which deployed actors exercise their authority. The World Bank concept identifies three dimensions of governance: first, “the process by which governments are selected, monitored and replaced”; second, “the capacity of the government to effectively formulate and implement sound policies”; and third, “the respect of citizens and the state for the institutions that govern economic and social interactions among them”.<sup>8</sup> The first dimension refers to the institutions that determine how actors are deployed and replaced and in which way citizens participate in this process. The second dimension is concerned with those institutions that affect the effectiveness of policy-making and the regulatory quality of policies. The third dimension deals with the “respect of citizens for the institutions which govern their interactions”, measured by the rule of law and the control of corruption.<sup>9</sup> The economics and comparative political economy literature have found a multitude of manifestations that reveal a link between institutional frameworks and governance outcomes, such as the effect of political checks and balances “on regulatory and fiscal performance” or “the effects of democratic institutions on a wide range of socioeconomic outcomes”.<sup>10</sup> Consequently, a proper institutional framework is crucial for the social and economic development of a country as well as the effectiveness of international development assistance.<sup>11</sup>

### 2.2 Water Supply, Poverty Reduction and Economic Development

In recognition of the urgent water problems which developing countries are facing, the aim of considerably improving the provision of clean drinking water and adequate sanitation especially to the poor was included in the year 2000 in the Millennium Development Goals.<sup>12</sup> The escalating situation is elucidated by the world’s demand for water resources that has been growing much faster

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<sup>7</sup> Kaufmann, Daniel; Kraay, Aart; Mastruzzi, Massimo, 2003, p.2

<sup>8</sup> Kaufmann, Daniel; Kraay, Aart; Mastruzzi, Massimo, 2003, p.2

<sup>9</sup> Kaufmann, Daniel; Kraay, Aart; Mastruzzi, Massimo, 2003, p.3f.

<sup>10</sup> Kaufmann, Daniel; Kraay, Aart; Mastruzzi, Massimo, 2003, p.21

<sup>11</sup> cf. Kaufmann, Daniel; Kraay, Aart; Mastruzzi, Massimo, 2003, p.25

<sup>12</sup> cf. <http://www.un.org/millenniumgoals/>

than the world population itself.<sup>13</sup> Today one fifth of the world's population does not have access to safe and reliably provided drinking water and half of the world's population does not have access to sanitation. This results in 3-4 million deaths every year due to waterborne diseases.<sup>14</sup>

The importance of water for development, however, is not limited to nutrition and hygiene alone. An insufficient supply with water and sanitation affects further poverty dimensions. Poverty can be understood as a lack of essential economic, human, political, safety-related and socio-cultural capabilities.<sup>15</sup> This also shows the ties of the poverty concept with the concept of development. Development can be defined with the words of Amartya Sen as the expansion of "the capabilities of people [...] that is, the substantive freedoms he or she enjoys to lead the kind of life he or she values".<sup>16</sup>

On the *human* dimension an insufficient access to water and sanitation affects also the chances for education, especially for women and girls. They are predominantly in charge of fetching and sometimes cleaning the water, which is time-consuming and has led in many countries to the underrepresentation of girls in schools. The same but gender-unspecific effect on the chances for education have waterborne diseases, such as diarrhoea. Tightly connected to this problem are the people's *economic* chances. A lack of education and health affects their income. In addition, a shortage of the resource water may restrict the opportunities for the establishment of small enterprises on the community level, which need water for their operation (e.g. gastronomy). Unsatisfactory *political* freedoms make people powerless against an unfair distribution of water, polluted supplies and deficient services, which may strike especially the poor and thus increase the before mentioned negative impacts of an insufficient water supply. Finally, on the *safety-related* dimension, water stress through an insecure or insufficient supply with water is able to provoke violent water conflicts on local, regional and international levels as well as inner-family violence.

Besides the outlined direct effects of an insufficient access to water supply and sanitation on the people, also the long term and macroeconomic effects of efficient water services on the development of a country have to be taken into account. Firstly does an efficient and profitable operation reduce the burden on the governmental budget. Furthermore, where water resources are depleted over the replenishment rate, increases in efficiency may help to converge towards the goal of a sustainably managed water sector.<sup>17</sup> Poor people are disproportionately affected by insufficient and unsafe water supply and sanitation, as they have less access to medication, less water storage

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<sup>13</sup> cf. Cosgrove, William J.; Rijsberman, Frank R., 2000, p.19

<sup>14</sup> cf. Cosgrove, William J.; Rijsberman, Frank R., 2000, p.20

<sup>15</sup> cf. OECD/DAC, 2001, p.31f.

<sup>16</sup> Sen, Amartya, 1983, p.755 and Sen, Amartya, 1999, p. 87, quoted from Durth, Rainer; Körner, Heiko; Michaelowa, Katharina 2002, p.8

<sup>17</sup> cf. Shirley, Mary M.; Ménard, Claude, 2002, p.3f.

capabilities, less means to purchase water from alternative sources, etc. Improved water services therefore may contribute to poverty eradication. Finally do improved water services increase the business productivity through long term benefits of improved education and health, a higher resilience of agriculture and food production to rainfall variability, and industrial development as the industry is dependent on reliable water services. Sufficient, reliable and efficient water services of a high quality therefore also significantly contribute to economic growth.<sup>18</sup>

## **2.3 Alternative Modes of Drinking Water Provision**

Now that the interrelation between water, poverty and development has been pointed out, it is necessary to clarify how these problems may be addressed. With regard to the use of water in the water-scarce MENA region, it can be said that while “water per capita consumption rates are the lowest in the world, municipal and industrial water requirements are expected to double and triple over the next years”.<sup>19</sup> As stated before, water demand is therefore rising, but the world is actually not facing a water crisis in terms of scarcity, but rather a crisis in water management. With today’s knowledge, experience and technology, water problems are manageable as the resource can be used a lot more efficiently than in the past.<sup>20</sup> However, securing safe and affordable water and sanitation services for all is still a major challenge to water governance in developing countries.

Traditionally water and sanitation have been provided publicly. However, in many developing countries the public sector proved incapable of overcoming ineffective and inefficient management systems, of introducing modern technologies and of providing sufficient investment. As a remedy to this challenge donors have over the past two decades promoted private sector participation. Private sector participation shall be defined here as including all arrangements between a public and a private partner that involve the latter in the delivery of infrastructural services.<sup>21</sup> The possible forms of coordination therefore range from the hybrid forms of a management contract, an affermage contract, a lease contract or a concession to fully private provision (divestiture) as the main alternatives (see Figure 1).<sup>22</sup>

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<sup>18</sup> cf. Stockholm International Water Institute, 2002, p.9ff.

<sup>19</sup> Abu-Zeid, Mahmoud, 2003, p.1

<sup>20</sup> cf. See Biswas, Asit K.; Tortajada, Cecilia, 2005

<sup>21</sup> cf. World Bank, 2006a, p.xiii

<sup>22</sup> Further alternatives known as BOT, BOO, BOOT and others are available, but make no difference with regard to the causal mechanisms assumed in this research.



**Figure 1: Forms of PSP**

Option	Ownership of		Financing infrastructure investment	Operations
	operating assets	infrastructure assets		
Management contract	Contracting authority	Contracting authority	Contracting authority	Private Operator (receives a fee)
Affermage contract	Private Operator	Contracting authority	Contracting authority	Private Operator (retains a fee)
Lease contract	Private Operator	Contracting authority	Contracting authority	Private Operator (pays a lease fee)
Concession	Private Operator	Contracting authority	Private Operator	Private Operator (retains revenues, pays concession fee)
Sale or full divestiture	Private Operator	Private Operator	Private Operator	Private Operator (retains revenues, pays license fee)

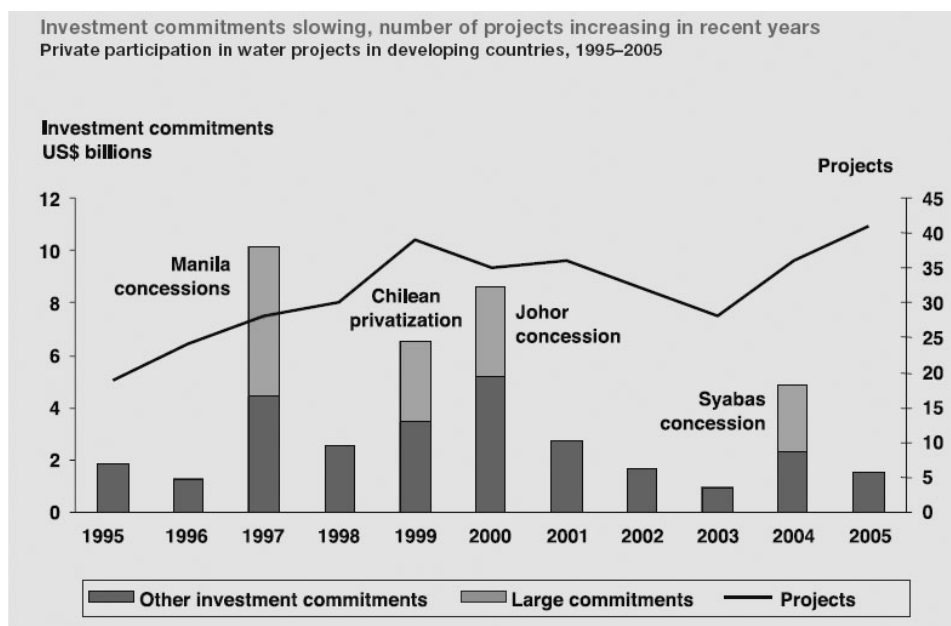
Source: Merged and adapted from Prasad, Naren (2006), p.682 and World Bank (2006a), p.9

In case of a management contract the responsibility for the management and operation of a utility is transferred to a private operator, but the ownership and the responsibility for investments remains public. The operator receives a fee of which a part is usually conditioned on achieving performance targets. In affermage and lease contracts, the contracting authority keeps the task to finance the investments, but the operator is responsible for operating and maintaining the business and therefore owns the operating assets. The options differ in the way that in affermages the operator retains a fee from the revenues that have been collected on behalf of the contracting authority, while the operator in case of a lease contract has to pay a lease fee from the collected revenues to the public authority. The concession is a form of a PSP where the operator, in addition to the responsibilities mentioned in the previous two options, is responsible for financing the investments but without owning the infrastructural assets. In this case, the operator retains the revenues in return for a concession fee. Finally, the divestiture is an arrangement where the operator is obliged to pay a license fee, but has the full responsibility for the business and owns the infrastructural assets.<sup>23</sup> With the increase of responsibility and ownership transfer in the mentioned arrangements, also the risk and potential profits for the operator increase.

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<sup>23</sup> cf. World Bank, 2006a, p.7ff.

**Figure 2: Investment Commitment and Number of Projects**



Source: Marin, Philippe; Izaguirre, Ada Karina, 2006, p.2

Recent trends show that governments and operators are shying away from arrangements involving major risks such as in a concession or divestiture. The share of management and lease contracts in PSP projects has been rising from 19% in the second half of the 1990s to 24-25% in the years 2001-2005.<sup>24</sup> Especially countries with no previous experience of PSP in the water sector tend to fall back upon arrangements where the private operator is in charge of increasing the operational efficiency of the utility, while the public authority remains responsible for financing the investments. The fact that developing countries have been able to obtain the necessary financing on better conditions from donors may have been a catalyzing factor for the described trend.<sup>25</sup> Now, while the amount of private investments in the water sector is declining, the number of new contracts is growing (see

<sup>24</sup> cf. Marin, Philippe; Izaguirre, Ada Karina, 2006, p.3

<sup>25</sup> cf. Marin, Philippe; Izaguirre, Ada Karina, 2006, p.3

Figure 2). This shows that neither governments nor private operators have turned away from PSP in general, but are rather concentrating on the managerial and operational competences of the private side while avoiding the risks that result from entering into long-term commitments with high risks.

In review of the past two decades of private sector participation in water management, the effect of PSP remains without a final proof regarding their efficiency as results have been mixed and empirical studies remain open to doubt. Although various case studies have revealed improvements in the sector following privatization, these studies used samples that typically did not entail "enough variation either across countries or over time to find strong, statistically significant results".<sup>26</sup> Opponents of PSP have argued that the privatization of water supply and sanitation services has often been characterized by problems such as corruption, excess pricing, excess profits and low water quality; problems which are often associated with the replacement of public monopolies by private ones.<sup>27</sup> For this reason and because of the political sensitivity of the water issue the debate on water privatization has become extremely polarized. Over time, "water has been conceptualized as a service, an economic good, a social good, an environmental need, a human right, and in many other ways".<sup>28</sup> However, too often pro- and anti-privatization proponents have ignored the new insights each of these concepts has brought, and advocated water either as a commodity or as a right. While the resource water can be considered as a social good, the reliable provision of safe water is a service "which costs money, energy and human resources".<sup>29</sup>

Having introduced the relevant terms and concepts related to private sector participation, water governance and development, the author will now give an overview of the literature relevant for this study.

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<sup>26</sup> Clarke, George R.G.; Kosec, Katrina; Wallsten, Scott, 2004, p.4

<sup>27</sup> cf. Lobina, Emanuele; Hall, David, 2000, p.36

<sup>28</sup> Carter, Richard .C.; Danert, Kerstin 2003, p.1070

<sup>29</sup> Carter, Richard C.; Danert, Kerstin 2003, p.1071

### 3 Literature Review: Approaches, Attempts and Limitations

This chapter gives a brief overview on the research that is enquiring the determinants of performance of private sector participation in infrastructure. As far as possible, the review will concentrate on literature that is looking at performance in the sense of the effectiveness of PSP arrangements, i.e. the degree to which the private operator is meeting contractual goals and targets.<sup>30</sup> However, the determinants of the effectiveness of PSP have not yet been thoroughly examined,<sup>31</sup> although they play an important role in gaining knowledge on the circumstances and procedures by which PSP can be most successful. Thus, whenever literature is found to be useful for the literature review, performance will be dealt with in an expanded sense (e.g. change in efficiency), but it will also be indicated as such. It is also worth mentioning that most empirical literature on PSP refers to large-scale projects with high private investments, hence leaving small-scale projects and PSP of a management or lease contract type aside.<sup>32</sup> The author regards this as an inappropriate narrowing of the view on PSP, especially as the recent development shows that the share of low-risk options is rising.<sup>33</sup>

The literature review is structured according to the level of analysis on which the determining factors (that the authors put forward) can be located. The definition of levels is borrowed from a later work of Oliver Williamson.<sup>34</sup> Williamson makes out four levels for the analysis of transactions: 1. the level of institutional embeddedness, 2. the level of the institutional environment, 3. the level of governance and 4. the level of resource allocation and employment (see Figure 3). Level 1 and 4 will be introduced only for completeness, while the focus of the review is on the two middle levels. The levels will be listed in reverse order, starting with the fourth level.

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<sup>30</sup> A justification of the chosen definition of performance can be found at the end of chapter 4.1.

<sup>31</sup> cf. Budds, Jessica 2000, p.56

<sup>32</sup> cf. Budds, Jessica 2000, p.55

<sup>33</sup> cf. Marin, Philippe.; Izaguirre, Ada Karina 2006, p.3

<sup>34</sup> cf. Williamson, Oliver, 2000, p. 597

**Figure 3: Levels of Analysis**

	Level	Frequency (years)	Purpose
L1	Embeddedness: informal institutions, customs, traditions, norms, religion	10 <sup>2</sup> to 10 <sup>3</sup>	Often noncalculative; spontaneous
L2	Institutional environment: formal rules of the game – esp. property (polity, judiciary, bureaucracy)	10 to 10 <sup>2</sup>	Get the institutional environment right. 1 <sup>st</sup> order economizing
	Governance: play of the game – esp. contract (aligning governance structures with	1 to 10	
L3	Resource allocation and employment (prices and quantities; incentive alignment)	continuous	Get the governance structures right. 2 <sup>nd</sup> order economizing
L4			Get the marginal conditions right. 3 <sup>rd</sup> order economizing

L1: social theory  
L2: economics of property rights/positive political theory  
L3: transaction cost economics  
L4: neoclassical economics/agency theory

Source: Adapted from Williamson, Oliver, 2000, p. 597

### 3.1 Level of Resource Allocation and Employment

We find the fourth level to be the 'playground' of neoclassical economics as well as the agency theory. The neoclassical economists are mainly concerned with prices and quantities as they find that an optimal resource allocation is automatically created through competition in the market. However, this finding is based on the assumption of perfect competition. But the provision of infrastructure services, esp. water and sanitation entails natural monopoly characteristics.<sup>35</sup> A mere reliance on price mechanisms and competition therefore seems inadequate for infrastructure services. Proper price setting mechanisms may therefore only be considered as one building block, which is affecting the performance of PSP arrangements.

The agency theory instead emphasises the alignment of incentives and an efficient sharing of risks between the contracting parties before the signing of a

<sup>35</sup> A natural monopoly occurs where the fixed costs for entering the market are very high. The high investments that are necessary especially for piped distribution systems make it uneconomic for a second supplier to enter the market.

contract (ex-ante).<sup>36</sup> Thus, this theory would explain failures of PSP to deliver with deficiencies in the contract, respectively in the incentive schemes. Better contractual conditions could hence avoid a future failure.

### 3.2 Level of Governance

In contrast to the foregoing approaches, the transaction cost economics focus on the governance of contractual relations. A pioneer of the transaction cost approach is Oliver Williamson. His particular interest was to explain why specific transactions governed by specific institutional arrangements are undertaken more or less efficiently. As this new institutional economic approach is also vital for the understanding of the following theoretical framework of this study, it will be explained comprehensively.

Williamson's main argument is that the level of transaction costs is directly related to the degree of (mis)fit between *transaction characteristics* and the chosen *governance structure* (e.g. contract type). He discerns three dimensions for characterizing transactions: uncertainty, frequency and idiosyncrasy. Uncertainty refers to the unknown circumstances that will prevail during a contract's implementation. As the rationality of human beings is bounded, it can become necessary to adapt the contract, which involves costs for renegotiation and modification. With regard to the frequency dimension, three types can be identified: one-time, occasional and recurrent transactions. This dimension affects costs, because recurrent transactions over a long time require other enforcement mechanisms than occasional transactions. Finally, the last dimension classifies investments into non-specific, mixed and idiosyncratic ones. With an increasing degree of idiosyncrasy (i.e. the more specific the investments are), the supplier's capability to transfer investments to other locations or purposes without considerable loss of value decreases. Thus, the supplier is "'locked into' the transaction to a significant degree".<sup>37</sup> The lock-in effect describes a situation where sunk costs induce the supplier to continue supplying even when the business is in short term uneconomic in order to prevent the loss of the investments. If the buyer is aware of this lock-in, the danger of the buyer's opportunism grows, who is able to exploit this situation.<sup>38</sup> The transaction costs that can be associated with this feature are the costs for preventing the buyer from opportunism and the costs that arise from enforcement mechanisms to ensure that the supplier makes the agreed-upon investments.

To make the transaction efficient, the level of (especially ex-post) costs has to be kept low. According to Williamson, transaction cost efficiency can be achieved through the right choice and design of a governance structure. Governance structures are "arrangements [e.g. contracts] between economic

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<sup>36</sup> cf. Williamson, Oliver, 2000, p. 600

<sup>37</sup> Williamson, Oliver, 1979, p.240

<sup>38</sup> For a definition and explanation of the term 'opportunism' see chapter 4.1.

units that govern the way they cooperate and/or compete”.<sup>39</sup> Williamson distinguishes three main types of arrangements available for the governing of transactions: markets, hierarchies, and hybrids. These types differ with respect to the flexibility they allow for and the commitment they evoke, as these have to be regarded as opposing features (trade-off). A market transaction is the simplest and most flexible governance structure because ex-ante contracting costs are low and no specific enforcement mechanisms have to be established. This is mainly because competition protects each party against opportunism of the other party. The flexibility of the arrangement makes it especially suitable for transactions with a high degree of uncertainty, but a market is only appropriate for non-specific investments of all frequencies. If more specific goods or services are involved, possible market alternatives decrease and room for opportunism emerges.<sup>40</sup> In the case of a hierarchy a single authority decides upon the use of assets and bears all risks. The transaction is vertically integrated into the firm or any other entity, thereby securing a high commitment and minimizing the danger of opportunism. But due to a lack of competition, internal organization tends to be short of incentives for cost reductions and productivity enhancements. Thus, a hierarchy is only appropriate, if the transaction is highly idiosyncratic and uncertain. Finally, hybrids are those kinds of contractual frameworks, for which various possibilities exist in which way the ownership of assets, the risks and decision-making rights can be distributed between the parties and for which a variety of mechanisms can be established to protect from opportunism. In general, Williamson recommends them for transactions with mixed investment characteristics of a recurrent type and idiosyncratic investments of an occasional type. However, for the special case of the regulation of a natural monopoly, such as water supply, which demands highly idiosyncratic investments, he argues: If efficiency concerns “necessarily join[] buyers and sellers in a bilateral trading relation of a continuing nature”, then a specialized governance structure, namely a hybrid, is the appropriate governance structure.<sup>41</sup>

The preceding explanation of Williamson’s approach has pointed out that the degree of a (mis)fit between the characteristics of a transaction and its chosen governance structure determines the transaction costs. This hypothesis is empirically supported by a research by Ménard and Saussier (2002) who have applied the transaction cost approach in their examination of contractual choice and performance in the water supply in France.<sup>42</sup> They were able to econometrically test the assumptions underlying the approach and what they found is what the theory suggests: If the mode of governance is chosen in accordance with what the transaction situation requires, then the performance of this arrangement is similar or better than the performance of arrangements

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<sup>39</sup> Huet, Freddy; Saussier, Stéphane, 2003, p.413

<sup>40</sup> cf. Williamson, Oliver, 1979, p.253

<sup>41</sup> Williamson, Oliver, 1979, p.258

<sup>42</sup> cf. Ménard, Claude ; Saussier, Stéphane, 2002, p.8

working in comparable conditions but under a different mode of governance. The performance was relatively good when a transaction characterized by a high uncertainty and specificity of investments was governed by an integrated arrangement,<sup>43</sup> i.e. public provision or a management contract. Empirical results further showed that whenever the transaction is less uncertain and investments are less specific, a concession is an advisable PSP arrangement. From their findings Ménard and Saussier conclude that there is no absolute advantage for one specific governance mode, but “comparative advantages that depend crucially on the characteristics of the transactions that modes of governance organize”.<sup>44</sup> *Getting the governance structure right* is therefore one key determinant of the performance of a transaction (such as a PSP arrangement), whereas performance is used here in the sense of transaction cost efficiency.

### 3.3 Level of the Institutional Environment

When we move to the second level we may distinguish between approaches that originate from political economy or public choice theory on the one hand and new institutional economics (NIE) theories on the other hand. The NIE approaches of the second level differ from the transaction cost economics on the third level (which are also part of the NIE) in the sense that they are concerned with the *rules of the game*, and not with the *play of the game*.<sup>45</sup>

The case study by Baietti, Kingdom and Ginneken (2006) identifies political factors as the main determinants of success and can therefore be assigned to the first category. Their study examines public water utilities, but the identified key attributes of well-performing public utilities are also regarded as valid for private utilities.<sup>46</sup> The findings of the case study show a link between the performance of the utilities and the way they are connected with their environment: Well performing utilities are boasting a significant degree of autonomy and an accountability framework that is capable of maintaining an equilibrium between the various stakeholders (national government, municipal officials, community leaders, financing institutions and customers).<sup>47</sup> In contrast, poorly functioning utilities showed a low autonomy and distorting influences from the various stakeholders. Their conclusion is therefore that a utility's autonomy combined with balanced accountabilities to a variety of stakeholders (including customers) prevents politicians and others from pursuing their short-term political interests by arbitrarily interfering into the utility, thus fulfilling an important condition for good performance.

Another view is taken by Rufin and Romero (2003) who find that the independence of a regulatory entity is a crucial criterion to both secure

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<sup>43</sup> cf. Ménard, Claude ; Saussier, Stéphane, 2002, p.25

<sup>44</sup> Ménard, Claude; Saussier, Stéphane, 2002, p.27

<sup>45</sup> cf. Williamson, Oliver, 2000, p. 599

<sup>46</sup> cf. World Bank, 2006b, p.2

<sup>47</sup> Baietti, Aldo; Kingdom, William; van Ginneken, Meike, 2006, p.10ff.



commitment from the public side and to prevent capture from the private side. The possibility of a capture of regulatory entities by the regulated companies depends on the resources and capabilities available to regulators. The danger of a lack of commitment of the public side on the other hand lies within what they call "time inconsistency in public policy", i.e. the pursuing of policies that are inconsistent with past ones.<sup>48</sup> They find this phenomenon especially prevalent in infrastructure services because of their vulnerability to patronage. The danger of appropriation becomes likely, which is the "'gradual erosion' of private property rights".<sup>49</sup> But in the case that regulatory independence has been established, its sustainability depends on structural features that determine the actors' ability to commit. Stability-providing constitutions, effective legislative and judicial supervision, high competence, participation and transparency are features that make the reversal of regulatory independence more difficult. In summary, Rufin and Romero identify in their analysis a mix of political and institutional factors as determinants of the likelihood of appropriation and capture which again affect the performance of a utility.

This brings us to the NIE approaches of the second level which concentrate on institutional factors. Saleth and Dinar (2004) have developed a framework to identify those institutions, institutional linkages and external influences that may have an impact on water sector performance.<sup>50</sup> They distinguish between water institutions and exogenous or contextual influences. The water institutions are composed of the water law (water rights, scope for private participation etc.), the water policy (use priority, project selection etc.), and the water organization (structure of water administration, finance patterns etc.). The environment which may have an influence on the water institutions or directly on the water sector performance is characterized by the political system, the legal system, the demography, the economic development and policies as well as the resources environment. Institutions affect water sector performance by their effects on the transaction costs, since they are able to minimize uncertainty and thus facilitate exchange.<sup>51</sup> Regarding the factors exogenous to the water sector Saleth and Dinar find that they "represent the exogenous constraints and opportunities facing the water sector" and thus shape the interaction between institutions and water sector performance.<sup>52</sup>

Another approach on the second level which emphasizes the institutional environment is the one by Levy and Spiller (1994).<sup>53</sup> While Ménard and Saussier have narrowly applied the generic form of the transaction cost approach, Levy and Spiller (1994) have augmented it with macro-institutional factors, namely political and judicial institutions, and tested the validity of this framework in a

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<sup>48</sup> Rufin, Carlos; Romero, Evanán, 2003, p.1

<sup>49</sup> Rufin, Carlos; Romero, Evanán, 2003, p.3

<sup>50</sup> cf. Saleth, Maria R.; Dinar, Ariel, 2005, p. 3

<sup>51</sup> cf. Saleth, Maria R.; Dinar, Ariel, 2004, p. 35

<sup>52</sup> cf. Saleth, Maria R.; Dinar, Ariel, 2004, p. 105

<sup>53</sup> cf. Levy, Brian; Spiller, Pablo T., 1994, pp.201-246

comparative analysis of privatized telecommunications regulation. Their objective was to verify if the institutional environment in a country affects the regulatory commitment of the government and if this has an influence on the sector's economic performance. The results of their empirical examination show that if a country lacks the necessary institutional environment that substantiates commitment and if this lack is not absorbed by a regulatory system that is correspondingly designed (misalignment), the performance of the private operator will be weak. Holburn and Spiller (2002) have made use of the same theoretical framework and applied it to international electricity sector reforms.<sup>54</sup> Their findings confirm Levy and Spiller's assumptions once more since they have also identified institutional provisions, particularly a credible regulatory environment, as major conditions for the success of private sector participation. We will come back to this approach later and will now continue with a short reference to Williamson's last level of social analysis.

### 3.4 Level of Institutional Embeddedness

On the level of institutional embeddedness informal institutions such as customs, norms, tradition and religion are located. Analysis on this level has been undertaken by economic historians and other social scientists.<sup>55</sup> As each higher level imposes constraints on the level immediately below, the level of embeddedness also restrains the possible efforts to *get the institutional environment* right. However, informal institutions themselves can hardly be shaped deliberately, but usually develop in a non-calculative and spontaneous way. Therefore Level 1 is often taken as given.

The preceding survey of the literature shows that the research on the determinants of the performance of private operators in public infrastructure projects has been carried out on different levels. Many enquiries have been devoted especially to the first level, however, the neoclassical economics have largely failed to explain the experienced malfunctions of PSP arrangements and the basic assumptions of the theory have been widely challenged by the NIE theories. Therefore, the first level has been traced here only marginally. Within NIE theories much of the research has been regarding regulation as a contracting problem and thus focused on investigating the adequate allocation of property rights, the definition of incentive and enforcement schemes and the fitting of the contractual terms with the transaction characteristics. However, the current development debate shows that a country's governance is increasingly recognized as a vital requirement for development. The described approaches of the second level start exactly from here. Saleth and Dinar's interest is in investigating the impact of institutions, institutional linkages and

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<sup>54</sup> cf. Holburn, Guy L.F.; Spiller, Pablo T., 2002, pp.1-40

<sup>55</sup> cf. Williamson, Oliver, 2000, p. 596

other exogenous influences on countrywide water sector performance.<sup>56</sup> By evaluating the overall performance of the entire water sector, however, the framework is not qualified to explore the impact of institutions on a private operator, especially where publicly and privately operated utilities exist within the different regions of a country. Moreover, Saleth and Dinar have developed their theoretical framework for an empirical study, which makes use of questionnaires. Thus, their approach is especially suited for comparative analysis. The intention of this study, however, is to examine the impact of institutional frameworks on the performance of a privately operated water utility and to draw convincing and profound conclusions from a single case. A framework that – with some amendments – is well-suited for this task is the one by Levy and Spiller.

The present study therefore aims at closing a gap in research by providing a systematic application of a framework, which aims at identifying in which way institutions (and not the contract design as such) affect the performance of private sector participation in the water sector. Thus, it will take into account the specific characteristics of the water sector, as it is assumed that the characteristics of other infrastructure services (such as telecommunication and electricity) will not allow a one-to-one transfer of the conclusions of existing research in these fields. The conceptual framework will be adapted to be applicable to all types of private sector participation, thereby compensating for the bias in literature towards large-scale and high-risk investments.

### 3.5 Research Question

The aim of this study is to investigate in how far a country's institutional framework affects the performance of a private sector participation arrangement in the water sector. The institutions under observation comprise all political, judicial, international and regulatory institutions that – deduced from theory – are assumed to be of relevance. Performance here refers to the effectiveness of the contract. The research question reads:

*In how far does the institutional environment in a country, composed of its political, judicial, international and regulatory institutions, affect the performance of a privately operated water utility?*

The scope of this work is limited to the study of the impact of institutions on existing private sector participation arrangements. This study neither identifies the preconditions to attract PSP, nor does it explain the accomplishment of a PSP contract nor will it judge upon the appropriateness of a chosen PSP option.

The following chapter presents the concept of institutions, introduces the framework developed by Levy and Spiller and identifies the changes and extensions to the approach that are found to be required.

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<sup>56</sup> cf. Saleth, Maria R.; Dinar, Ariel, 2004, p. 99

## 4 Theoretical Framework

### 4.1 The Concept of Institutions

Institutional economists define institutions as “humanly devised constraints that structure human interaction”<sup>57</sup> or, more detailed, as “rules that together describe action situations, delineate action sets, provide incentives and determine outcomes”.<sup>58</sup> In other words, the notion of an institution contains several elements: Behavioural rules may be formal (e.g. laws, constitutions) or informal (e.g. norms of behaviour, conventions, self-imposed codes of conduct).<sup>59</sup> In any case, these rules constrain or encourage a certain human behaviour. This applies because institutions entail mechanisms that enforce these rules, either through incentives or through enforcement mechanisms. Here, one can distinguish between private and state enforcement. While the former means the enforcement of customs, norms and conventions through society, or of formal private rules through organized private monitoring, the latter is the organized enforcement of positive law by the state.

A set of institutions that is regulating a particular realm is called an *institutional arrangement* or *governance structure*. Organisations are governed by such institutional arrangements. The wholeness of institutions in a country excluding organisations is called *institutional structure*, while the concept of an *institutional environment* comprises all institutions in a country including organisations.<sup>60</sup> The term *institutional framework* that will be frequently used in this study, refers to all those institutions that are found to be of relevance for the observed transaction.

Now that these terms have been clarified, it is necessary to look into the different categories of institutions. One can identify judicial institutions that regulate legal interactions through the definition and enforcement of rights and duties. Another category are political institutions, which govern political interactions, for example constitutions, electoral rules and federalism. Economic institutions rule economic interactions, by means of markets, contracts, allocation of ownership etc. Finally, social institutions regulate social interactions, such as informal norms, but also formal rules like gender quotas.

Institutions affect interactions by constraining and encouraging a certain human behaviour through incentives and disincentives. Acting according to the rules of the game rewards the players or at least does not lead to their punishment. However, acting against the rules results in sanctions and is therefore costly, provided that the institutions are properly enforced. By shaping the incentives of the actors, institutions increase the information level of the players about the strategies that are available for their counterparts and about their related costs

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<sup>57</sup> North, Douglass, C., 1994, p.360

<sup>58</sup> Saleth, Maria R.; Dinar, Ariel, 2005, p.2

<sup>59</sup> cf. North, Douglass, C., 1994, p. 360

<sup>60</sup> cf. Saleth, Maria R.; Dinar, Ariel, 2004, p.25

and benefits for them. For example, an administrative actor will not exceed his/her competences, if the consequences for him/her are costly. In this example, this may be the case if the water sector is properly juridified and the administrative actor can expect to be held responsible for misconduct. Being aware of the constraints on the behaviour of the administrative actor, his/her counterpart possesses information on the likelihood of the different strategies available to him/her. Thus, institutions are able to decrease uncertainty. The ability to forecast the strategic behaviour of the players to some extent reduces risk and consequently facilitates exchange.<sup>61</sup>

Institutions are also related to the costs of transactions. A transaction can be defined as a transfer of a good or service "across a technologically separable interface".<sup>62</sup> The terms of a transaction may be specified in a contract between the transaction partners. In economic terms, a contract can be defined as an agreement under which at least two contracting parties "make reciprocal commitments in terms of their behaviour".<sup>63</sup> When setting up a contract ex-ante costs for information, negotiation, writing, and ex-post costs for monitoring and enforcing arise. If the contract also entails the combination of resources, further costs are added such as organization, ongoing communication, reporting etc. With the preciseness of the contract also the costs of the transaction rise. Nonetheless, even if high contracting costs are computed, contracts are necessarily incomplete, because the rationality of all players is bounded.

Now, when the institutional framework insufficiently constrains the discretion of the actors in a transaction (e.g. through incomplete contracts, lacking regulation or ineffective enforcement), opportunistic behaviour may arise, which is defined here as the pursuit of self-interests by one transaction partner with the aid of cunning.<sup>64</sup> This shall include all breaches or disregards of the contract, pressure for its renegotiation or manoeuvres of manipulation and deception. Even though a highly precise contract might discourage opportunism to a major extent, opting for precision is not a solution to the problem of opportunism. The reason is that it makes the transaction inflexible and that with the precision of the contract the costs of contracting rise.<sup>65</sup> While the set up of institutions (such as contract law) creates costs, institutions are also able to reduce transaction costs by limiting the discretion of the actors, which again decreases the need for precise contracts, large-scale monitoring and detailed enforcement mechanisms.

The argumentation above has shown that the institutional environment affects the contractual performance of the transaction partners (i.e. their behaviour

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<sup>61</sup> cf. Saleth, Maria R.; Dinar, Ariel, 2004, p.35

<sup>62</sup> Williamson, Oliver, 1981, p.552

<sup>63</sup> Brousseau, Eric; Glachant, Michel, 2001, p.2

<sup>64</sup> cf. Durth, Rainer; Körner, Heiko; Michaelowa, Katharina, 2002, p.214. [Translated by the author]

<sup>65</sup> cf. Saleth, Maria R.; Dinar, Ariel, 2004, p.99

within the transaction) by limiting their discretion. An inappropriate alignment of institutions is likely to have unintended outcomes. The same applies in case of an insufficient enforcement of institutions, i.e. if actors expect that sanctions will not be imposed even if rules are broken. However, the proper design of institutions may contribute to bring about a good performance, in terms of contractual performance and consequently also the effectiveness of the contract (i.e. achieving contractual targets). This means that institutional frameworks can be more or less developed, i.e. more or less effective in helping to bring about desired outcomes. Due to this link between the institutional framework and the effectiveness of the contract, this study assesses the success of a PSP in terms of the effectiveness of the contract. Naturally, an effectively implemented contract is not necessarily successful in developmental terms, if the increase of efficiency and welfare is not among its objectives. But neither is a contract a success in developmental terms merely for the reason that it aims at the increase of efficiency and welfare. To be a success in these terms it first needs to be effectively implemented. From a developmental perspective, it is therefore important to identify the institutional determinants of the effectiveness of efficiency- and welfare-enhancing contracts.

## 4.2 Theoretical Framework Developed by Levy and Spiller

The theoretical framework by Levy and Spiller is rooted in transaction cost economics, but it supplements the transaction cost approach by adding the *institutional environment* as an exogenous variable. The specific objective of their study is to show how political and judicial institutions affect regulatory processes by abating and amplifying the potential for administrative expropriation or manipulation, and may thereby affect the performance of a privately operated water utility.<sup>66</sup> They define political institutions as those formal mechanisms that establish how laws and regulations are made and how the members of the legislative and the executive are appointed, how these laws are implemented, and what the nature of the relation between the executive and the legislative is. Judicial institutions are defined as those formal rules that determine the internal structure of the judiciary and the mechanisms for appointing judges, as well as the resolution mechanism for conflicts among private parties or state-private party conflicts.<sup>67</sup>

Before explaining which effects these institutions may have, it makes sense to trace the linkage between the terms used by Levy and Spiller and those by Williamson. Williamson defines the *governance structure* of a transaction as an "institutional matrix within which transactions are negotiated and executed".<sup>68</sup> Although with this definition he mainly refers to contractual institutions, which regulate the behaviour of the parties, the concept can easily be expanded at

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<sup>66</sup> cf. Levy, Brian; Spiller, Pablo T., 1994, p.202

<sup>67</sup> cf. Levy, Brian; Spiller, Pablo T., 1994, p.205f

<sup>68</sup> Williamson, Oliver, 1979, p.239

this point. Levy and Spiller distinguish two notions: the *regulatory governance framework* and the *regulatory incentives*. The regulatory incentives are those rules (institutions) that constrain the monopoly behavioural tendencies of utilities, such as pricing, subsidies, and assignment of risks and rewards.<sup>69</sup> The regulatory governance framework comprises the mechanisms that constrain regulatory discretion of political and administrative actors who have the final authority over the sector. Furthermore, it includes the rules that resolve conflicts, which come up in relation to these constraints.<sup>70</sup> Levy and Spiller argue that most of the literature dealing with regulation has been preoccupied with what falls under the regulatory incentives, and that this focus is inadequate. They state that regulatory incentives indeed matter for performance, but that “their impact (positive or negative) comes to the forefront only if regulatory governance has successfully been put in place”.<sup>71</sup> One example is that incentives for an operator to invest are only effective if the operator does not need to fear that his investments – once they are made – are devalued by the opportunistic actions of the regulator. This problem is known to Williamson as a *hold-up problem*. To fill the gap in the literature, Levy and Spiller concentrate on the regulatory governance of transactions and the institutional environment in which it is embedded.

Levy and Spiller find that political and judicial institutions affect the regulatory processes between regulator and operator in two ways: *on the one hand* by influencing the potential for manipulation and expropriation by political and administrative actors; and *on the other hand* by determining which PSP options are wise to implement. The latter is valid, as long-time complex contracts that transfer more responsibility to the private party require more effective regulation and supervision than short-time and simpler contracts that transfer less responsibility. This study will concentrate on the first aspect of institutions and come back to the second one in the final chapter when concluding on the role that the institutional framework played in the case study.

When looking at the regulatory problem it becomes clear that the special transaction features of utilities intensify the danger of arbitrary political and administrative action. First, public infrastructure is characterized by large sunk investments (or idiosyncrasy). This means that a private operator that has assumed the responsibility for such investments (like in concessions) is locked into the transaction to a considerable extent. Second, the potential for economies of scale<sup>72</sup> entail monopoly characteristics. And third, the fact that utility services are massively consumed creates a strong attention of politicians and interest groups towards the level of utility pricing and service quality.<sup>73</sup>

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<sup>69</sup> cf. Figure 1, Level 4

<sup>70</sup> cf. Holburn, Guy L.F.; Spiller, Pablo T., 2002, p.8

<sup>71</sup> Levy, Brian; Spiller, Pablo T., 1994, p.205

<sup>72</sup> Economies of scale are present when an increase of input factors (e.g. by 100%) leads to an even higher increase of output (more than 100%). This typically leads to a reduction of suppliers in the market.

<sup>73</sup> cf. Holburn, Guy L.F.; Spiller, Pablo T., 2002, p.3

These three features, sunk investments, monopoly characteristics, and massive consumption, provide governments with an opportunity and incentive to expropriate an operator's sunk assets or to manipulate the regulatory regime.

However to do so, governments do not need to renationalise a utility, but can gradually usurp the assets of a private operator and manipulate the contractual conditions through regulatory procedures and administrative measures. This is profitable for a government if "the direct costs (reputation loss vis-à-vis other utilities, lack of future investments by utilities) are small compared to the (short term) benefits of such action (achieving re-election by reducing utilities' prices, by challenging the monopoly, etc.), and if the indirect institutional costs (e.g. disregarding the judiciary, not following the proper, or traditional, administrative procedures, etc.) are not too large".<sup>74</sup> From this it can be concluded that the likelihood of arbitrary action from political and administrative actors is the highest in those countries where the indirect institutional costs and the direct costs are small and the time horizon of the government is short. The indirect institutional costs are determined by the political and judicial institutions. If the checks and balances on decision-making are marginal, if the administration has strong regulatory power, and if the judiciary is not independent enough to review administrative decisions, then the regulatory discretion of political and administrative actors is large. If, moreover, the elections take a highly contested form and there is a strong need of political actors to satisfy interest groups, then the incentive to use this regulatory discretion rises and opportunism becomes more likely.<sup>75</sup>

Levy and Spiller conclude from this (with a bias towards PSP of a concession or similar type) that under such circumstances, uncertainty is a major factor for private companies, which may result in under-investment. A utility might still invest, but it will only do so in fields, where a high market return is combined with a short payback period. Furthermore, it will limit its maintenance expenditures, which leads to a decreasing quality of the infrastructure. In addition, the technologies used will tend to have a lower degree of specificity, as they entail lower costs and can be transferred to other uses. Finally, a short payback-period may be realized through high service prices.<sup>76</sup> To attract sustainable long-term investments the government will therefore have to design regulatory frameworks, which limit its own ability for opportunism that is given by the institutional environment. Such institutional arrangements can for instance prescribe price-setting procedures or specify if conflicts are solved through an arbitrator or the judiciary. However, specialized governance structures entail costs and the types of regulations that are credible within a detrimental institutional environment are limited.<sup>77</sup>

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<sup>74</sup> Holburn, Guy L.F.; Spiller, Pablo T., 2002, p.4

<sup>75</sup> cf. Holburn, Guy L.F.; Spiller, Pablo T., 2002, p.4

<sup>76</sup> cf. Holburn, Guy L.F.; Spiller, Pablo T., 2002, p.5

<sup>77</sup> cf. Levy, Brian; Spiller, Pablo T., 1994, p.202



Hence, to allow for efficient regulation and satisfactory performance of private operators three complementary mechanisms restraining arbitrary administrative action need to be in place: (a) substantive restraints on regulatory discretion, (b) formal or informal restraints on changing the regulatory system, and (c) institutions that enforce both the substantive restraints and restraints on system changes.<sup>78</sup> To remain within the logic of the levels that were introduced in the literature review, we will start backwards:

Mechanism (c): The basic precondition for a government to show that it credibly refrains from expropriation and manipulative administrative action is the existence of an independent judiciary. This guarantees that restraints on discretion and restraints on system changes will be enforced. It is unlikely that countries, where the judiciary is not independent, will be capable of sustaining efficient private sector participation and investments. Yet, if in such a case, the government still prefers a PSP to a vertically integrated public supply, then international guarantees might secure enough commitment to attract some private investment.

Mechanism (b): Institutional restraints on *changing the regulatory system* can be composed in a variety of ways. Levy and Spiller distinguish two main categories: (i) systems that can provide credible regulatory commitment via *legislation*, and (ii) systems in which political actors need to show commitment by basing the regulatory process in *contract law*. The former category (i) in the broadest sense includes political systems with separated executive and legislative powers, multi-chamber legislatures elected non-simultaneously under different voting rules, federalism with strong decentralization, and proportional representation which tends to generate a large number of parties. If a number or all of these features characterize a political system, its legislation becomes more credible, since they make a change of legislation more difficult as a variety of contending actors would need to agree to such changes (checks and balances). The regulatory decision-making procedures of these systems may therefore be specified in administrative law. However, a political system with overlapping executive and legislative powers, one-chamber legislatures, strong centralization as well as majority vote systems (category ii) involve the danger for the private contracting party that legislation is easily adjusted, when priorities of a government change or the ruling party/parties change. In other words, in countries where the governmental power alternates between two parties with substantially different interests, changes in the law could follow directly from a change of the government or a change in priorities and therefore specific legislation does not represent a realistic protection against arbitrary administrative action. However, commitment can be shown by stipulating the regulatory process in contract law.

Mechanism (a): Substantive restraints *on regulatory discretion* can again be classified into two categories: (i) If the institutional environment includes informal constraints or bodies of administrative law that constrain arbitrary

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<sup>78</sup> cf. Levy, Brian; Spiller, Pablo T., 1994, pp.209-211

discretion even in absence of explicit legal constraints, or if arbitrary use of governmental power is limited by an institutionalized process of argumentation and consensus formation, then flexible regulatory processes are sufficient to restrain regulatory discretion. (ii) But if the discretion is not constrained by informal, administrative or process regulation, a country has to set substantive rules. But the ability to set, monitor and enforce complex rules depends on its administrative capabilities. If these are weak, the country has to rely on less efficient rules for their regulatory system to work.

The preceding remarks have shown that political and judicial institutions determine the governance of a government by constraining arbitrary action in making it prohibitively costly for the actors. Good governance and legal certainty are therefore critical dimensions considered by companies before making their investments. However, a government can use a variety of available mechanisms to show commitment – as one mechanism may compensate for the shortage of another – though at different costs and levels of efficiency. Moreover, Levy and Spiller point out that credibility sometimes is attained at the expense of flexibility. The same devices that constrain arbitrary discretion can also delay reforms or obstruct adaptations to changing circumstances.<sup>79</sup> The following section will present the amendments to Levy and Spiller's approach that were found to be essential for a comprehensive evaluation of the impact of institutional frameworks on PSP in the water sector.

#### **4.3 Amendments to the Framework and Application to the Water Sector**

The preceding summary of Levy and Spiller's approach has shown that this theory only deals with explaining contractual distortions initiated by the government and not by the private contracting partner. In the author's eyes this is an inadequate narrowing of the view on the effects of institutions on a PSP arrangement. The same institutions that are qualified for constraining the discretion of the public contracting party may also have an impact on the discretion of the private contracting party. Well-defined and efficient regulatory processes are likely to reduce the potential for opportunism of the private operator. An independent judiciary, a tradition of upholding contracts, effective penalization and administrative capabilities that allow for complex rules are effective enforcement mechanisms which increase the potential costs of an operator for manipulating or exploiting a contract and thus make opportunistic behaviour less advantageous. This again affects the incentives of the operator to fulfil contractual goals and targets and thus has an impact on the effectiveness of the contract. Therefore, in this study the effects of institutions on both parties shall be taken into account.

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<sup>79</sup> cf. Levy, Brian; Spiller, Pablo T., 1994, p.207

Furthermore, the approach by Levy and Spiller will be enlarged by one element that is lacking within their framework. Their concept of institutional environment includes only national institutions. However, international institutions may as well have a direct impact on the regulatory discretion of political and administrative actors. These institutions comprise at least the submission to international economic institutions (e.g. through membership in international economic organizations) and international or bilateral monitoring in the case that loans or other types of development assistance are received. International institutions can "support contracts and partially substitute for weak domestic institutions".<sup>80</sup> They may do so by making opportunistic behaviour costly for political and administrative actors, as the exploitation of a private operator will presumably lead to a considerable decrease in future development assistance or private investment. This reduces the incentives for opportunistic behaviour where no national institutions restrain arbitrary action and thus improves contractual performance. Therefore, international institutions will be considered along with national political, judicial and regulatory institutions.

Another criticism of Levy and Spiller's approach touches the notion of private sector participation that is preconceived by them as arrangements with significant risks and major transfers of responsibilities. However, by definition the term private sector participation includes also minor-risk arrangements like management and affermage contracts. Where no significant infrastructure investments are involved, an opportunistic public contracting party still has the possibility to manipulate or exploit the contract. This is because in any arrangement the private partner has made ex-ante 'investments' in terms of informing, bargaining and setting up a business in that country. Moreover, the operator has invested in its reputation and may fear that its reputation is harmed when conflicts with the government arise or the contract is unsuccessful. A company's reputation is of even greater importance in the water sector, which is highly visible and where private sector participation is widely challenged. Thus, the private operator in a management or affermage contract is also 'locked in' the transaction, yet to a lower degree than in, for example, a concession, where the operator has a high entrepreneurial risk. Instead of Levy and Spiller's notion of 'expropriation' by the public partner, which is limited to infrastructure investments, the author will use the term 'exploitation', which may include all kind of arbitrary action that takes advantage of the private operator's situation and is to its detriment. However, when there is no possibility to expropriate an operator's assets, it is necessary to outline which incentives political and administrative actors may still have to manipulate or exploit a contract. One conceivable interest that leads to arbitrary interference into the operator's business is that politicians may try to provide their clientele with advantages. Another possible reason is that a reduction in staff that may result from PSP brings bureaucrats up against the arrangement,

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<sup>80</sup> Shirley, Mary M.; Ménard, Claude, 2002, p.24

which again can lead to opportunistic action. However, according to Levy and Spiller's theory, the room for opportunism may be constrained by the institutional framework, namely rule of law, political checks and balances and a clear and balanced regulatory framework.

Finally, what deserves attention is that Levy and Spiller have applied their approach to telecommunications regulation, while Holburn and Spiller have later applied the same approach to electricity sector reforms. However, what distinguishes these two utility services from water services, are the specific characteristics of water, which are relevant for the transaction situation. What all kind of utilities have in common is that they may entail large sunk investments, economies of scale, and a massive consumption.<sup>81</sup> Economies of scale imply that the profitability for other companies to compete with a supplier is limited. This is especially true for natural monopolies where the fixed costs for entering the market are very high.<sup>82</sup> Nevertheless, several countries have managed to introduce competition into their electricity or telecommunication sector. However, with regard to water, 66% of costs are considered to be in non-competitive areas, such as transmission and distribution, and only about 34% in potentially competitive areas, as compared to competitive areas amounting to 60% of costs in electricity.<sup>83</sup> Furthermore, water cannot be generated as for example electricity, because it is a natural resource. A country's underground and surface water resources are rather local and though often regarded as a renewable resource this is not always the case<sup>84</sup>. This becomes especially evident in cases where the extraction rate is higher than the replenishment rate. The latter is of special importance, as diminishing resources in many countries go along with a demographic development, which in the future might bring about water conflicts. Moreover, water is such an urgent basic human need – crucial for life and health – that one may consider it as a human right.<sup>85</sup> The human need for water explains the inelasticity of demand, which is essential concerning pricing.<sup>86</sup> Water is also a merit good as it entails significant positive externalities<sup>87</sup> as already outlined before.<sup>88</sup>

These stronger monopoly characteristics, the potential for conflict, the limitedness of the resource, the inelasticity of demand, and its features as a human right and a merit good have a strong impact on the transaction situation. This is because the idiosyncrasy of the good, the uncertainty of the sector and the strong interest of the consumers – at the same time being voters – in the quality of the supply and the pricing maximise the incentives and

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<sup>81</sup> cf. Holburn, Guy L.F.; Spiller, Pablo T., 2002, p.3

<sup>82</sup> cf. Soto-Vazquez, Abdelali, 2006, p.6

<sup>83</sup> cf. London Economics, 1998, drawn from Shirley, Mary, M.; Ménard, Claude, 2002, p.9

<sup>84</sup> cf. Noll, Roger G., 2002, p.45

<sup>85</sup> cf. Klawitter, Simone; Qazzaz, Hadeel, 2005, pp.253-271

<sup>86</sup> cf. See Holburn, Guy L.F.; Spiller, Pablo T., 2002, p. 15

<sup>87</sup> cf. Lepenies, Philipp; Bauer, Armin, 2006

<sup>88</sup> cf. Chapter 2.2

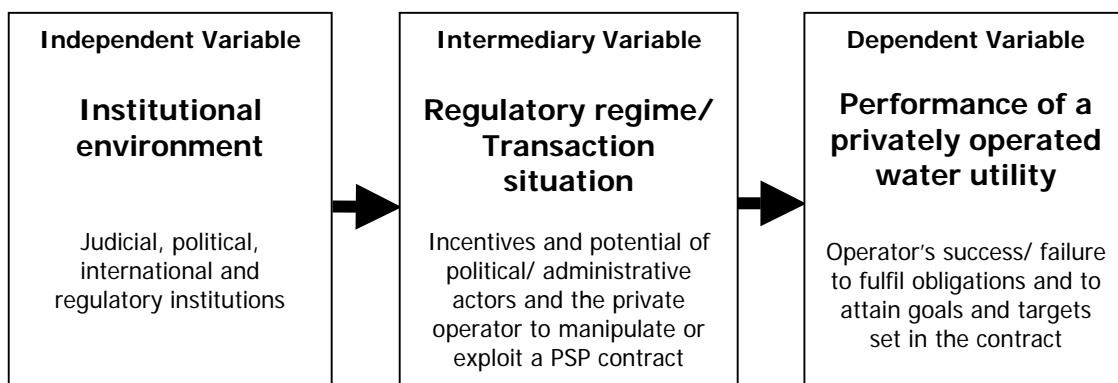
the opportunity of politicians for arbitrary interference into the business. This finding is valid in comparison with other sectors, while the strength of incentives within the water sector again varies with the chosen PSP option. The following section will introduce the hypothesis and sub-hypotheses that can be derived from the theoretical framework and the outlined amendments to it.

#### 4.4 Theoretically Derived Hypothesis and Sub-Hypotheses

The aim of this study is to look at the problem of water utilities regulation through the lens of transaction cost economics, supplemented by the exogenous variable of the institutional environment of a transaction. The performance of a privately operated water utility will be explained through the contractual problems that arise from the potential and incentives of the public and private contracting party for opportunistic behaviour. Therefore, the hypothesis derived from the theoretical framework to be tested in the case study is the following:

**General Hypothesis:** *If the potential of political and administrative actors as well as the private operator to manipulate or exploit the contract are not sufficiently constrained by judicial, political, international and regulatory institutions, the performance of a privately operated water utility will be negatively affected.*

Figure 4: Theoretically Derived Hypothesis and Variables



To test the central hypothesis it is necessary to explore, whether the regulatory regime/transaction situation provides the *political and administrative actors* and *the private operator* with the incentives and the potential to manipulate or exploit the contract. The incentives and the potential for manipulation or exploitation are regarded as being low if sufficient constraints are established. These constraints are specified in the following concrete hypothesis:

**Concrete hypothesis:** *If, (a) substantive restraints (regulatory institutions) on regulatory discretion, and (b) formal or informal restraints on changing the regulatory system, and (c) institutions that enforce both the substantive*

*restraints and restraints on system changes are properly established, the potential for manipulation or exploitation by political and administrative actors and by the private operator is low, and thus the institutional framework will not negatively affect the performance of a privately operated utility.*

***Sub-Hypothesis 1:*** *Weak performance (i.e. operator's failure to fulfil obligations and to attain goals and targets set in the contract) arises, when judicial institutions are incapable of enforcing both substantive restraints and restraints on system changes and when there are no international institutions that are able to compensate for this lack, and thus an opportunistic behaviour of political/administrative actors and the private operator is likely.*

This is because judicial institutions that provide for the rule of law are the basic precondition that accredits regulatory institutions and the stability of legislation. Rule of law makes the disregard of laws and contractual rules extremely costly for both the public and the private contracting party. However, if the judicial institutions are not independent, international institutions might secure sufficient commitment, e.g. through international monitoring. In other words, weak performance arises when element (c) is missing and there are no international institutions that are capable of compensating for this lack.

***Sub-Hypothesis 2:*** *Weak performance arises, when – despite the existence of rule of law – the checks and balances are not sufficient to prevent legislative changes of the regulatory system and sufficient commitment is not secured through informal constraints or an institutionalized consensual process or contract law or international institutions.*

This is because in a system where the executive is not constrained by horizontal and vertical checks and balances and the electoral system produces two alternating parties with very different interests, a change in the priorities of the government or a change of the executive power from one party to the other may easily result in legislative changes. Hence, if the potentially instable legislation is not balanced by non-legislative substantive constraints<sup>89</sup> or international institutions, the discretion of political and administrative actors is insufficiently constrained. In anticipation of this instability and in doubt of the steadiness of contractual covenants the private operator might behave opportunistically and try to exploit the contract. In other words, weak performance arises when element (b) is missing and this lack is not compensated by non-legislative constituents of element (a) or by international institutions.

However, this means that a lack of checks and balances may be compensated through substantive constraints. The reason for this is that even if a new government comes to power it comes across the same given informal

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<sup>89</sup> 'Non-legislative substantive constraints' refer here to those constraints that cannot be altered through a change in the legislation, like informal constraints (Civil society monitoring and institutionalized consensual processes) and contract law. Thereto does not belong administrative law which *can* be altered through a change in legislation.

constraints, international institutions, and consensual processes. At the same time it is basically impossible for it to unilaterally change specific rules set in the contract if there is rule of law. The room for opportunistic governmental behaviour becomes even smaller, when a number of substantive constraints are established.

***Sub-Hypothesis 3:*** *Weak performance arises, when – despite the existence of the rule of law or constraining international institutions, and – despite sufficient checks and balances that legally restrain system changes, the regulatory process is not written in administrative law (> juridification of the water sector) or in the contract (> specific regulatory constraints) and thus opportunistic behaviour of political/administrative actors and the private operator is likely.*

This is because regulatory discretion is unchecked, if the process, by which regulatory decisions are to be taken, is unspecified. In recognition of this lack of regulation and thus exposed to the risk of arbitrary interference by political and administrative actors, also the private operator might behave opportunistically. In other words, weak performance arises when element (a) is missing.

The preceding hypotheses have shown that it is assumed that some institutions may compensate for a lack of another and they will compensate the lack even better the more constraining institutions are established. International institutions may have a constraining effect on all three mechanisms and thus can partly compensate for (a), (b), and (c). The ability to compensate institutional lacks implies that a government may use a variety of available mechanisms to show commitment, though – as mentioned before – this occurs at different costs and levels of efficiency. If much of a government's commitment needs to be secured through detailed contracting, the transaction costs swell. On the other hand, if sufficient commitment is shown through judicial and political institutions, this may be valid for all transactions in the country and thus might save on transaction costs in each transaction. It is another advantage of a sound institutional environment that it may not only reduce costs, but at the outset establish the preconditions that are necessary to attract considerable investments (as in concessions). What is left to be stated is that commitment-securing institutions are naturally not an ample condition or a guarantee for good performance, but they are one important determinant. The following chapter introduces the research methodology that has been applied in the case study.

## 5 Research Methodology

The case that was chosen in this study to test the hypothesis is the Management Contract for Water and Wastewater Services in the Amman Governorate, Jordan. One of the most acute water shortages strikes the Middle East and North Africa (MENA) region as most of the countries in the region are arid to semi-arid environments. Experience with private sector participation is rare since only 3% out of the 158 contracts in the middle and low-income countries signed in the 1990s were in the MENA region.<sup>90</sup> As one of the nation states in this region, Jordan is of greater interest because it ranks among the world's seven poorest countries when it comes to its water resources<sup>91</sup> and because Morocco and Jordan are precursors in the region regarding the implementation of PSP in the water sector.<sup>92</sup> However, each of the two countries has adopted a different strategy with regard to the type of partnerships chosen: while Morocco relies on concessions, Jordan prefers options where fewer risks and tasks are transferred to the private sector. As the author (as outlined before) intends to compensate for the lack in research, which has been biased towards the former type of PSP,<sup>93</sup> the Amman Management Contract (MC) in Jordan presents itself. It is furthermore very suitable as it was Jordan's first PSP experience in the water sector and the contract has only recently ended, thus a full project cycle can be taken into account.

### 5.1 Research Questions for the Case Study

To apply the theoretical framework to the case of the Management Contract for Water and Wastewater Services in the Amman Governorate, the following specific research questions need to be answered:

- *Background knowledge:* What is the country's economic, political and social situation? How is the Jordanian water sector situated? What does the Amman Management Contract (MC) look like?
- *Independent variable:* What kind of political and judicial institutions exist in Jordan? What kind of international institutions affect the transaction? What kind of substantive constraints are established?
- *Intermediary variable:* Which incentives and potential do political/administrative actors and the private operator have to manipulate or exploit the contract? What is the degree of occurrence of opportunistic behaviour by the contracting parties? Have the monitoring and enforcement mechanisms been effective?

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<sup>90</sup> cf. Attia, Bayoumi, 2002

<sup>91</sup> cf. United Nations, 2003, p.34

<sup>92</sup> cf. Attia, Bayoumi, 2002

<sup>93</sup> cf. Palaniappan, Meena, et al., 2006, p.5 and World Bank, 2005, p.23f



- *Dependent variable:* How successful has the operator been in fulfilling obligations and attaining goals and targets set in the contract?

## 5.2 Data Needs and Indicators

### 5.2.1 *Independent Variable: Judicial, Political, International and Regulatory Institutions*

In order to answer the research questions and to test the hypothesis in the case study, sets of indicators for the independent, the intermediary and the dependent variable need to be developed (for whole tables see annex A).

For an assessment of the independent variable judicial, political, regulatory (substantive constraints) and international institutions have to be distinguished. As far as *judicial institutions* are concerned two indicators will be used to test the existence of the rule of law: **independence of the judiciary (J.1.)** and **protection of property rights (J.2.)**. While quite a number of indicators is commonly used to measure rule of law,<sup>94</sup> the author regards these two indicators as the most important ones in the context of an investigation into state-private sector interaction. This is because judicial independence shows in how far the state and other external (e.g. private) actors are able to influence and interfere with the legal system. This may occur either in formal and legalized ways or informally and by corruption. By looking at the history of property rights protection in a country, meaningful information is gathered on the extent to which basic rights of private businesses have been respected. To assess the independence of the judiciary Levy and Spiller have opted to measure the extent of perceived judicial corruption<sup>95</sup> and to analyze if there is a history of courts' decisions against the government, as they have found these two features to be the key determinants.<sup>96</sup> These two measurements will be complemented by looking at the appointment mechanisms for judges, which allows for drawing conclusions about legalized possibilities of influence by the state. The protection of property rights is verified by checking if property rights have been upheld efficiently in the past.

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<sup>94</sup> cf. Kaufmann, Daniel; Kraay, Aart; Mastruzzi, Massimo, 2003, p.96

<sup>95</sup> The need to measure the *perceived* corruption is owed to the fact that corruption is covert and therefore "it is virtually impossible to come up with precise objective measures of it". (Kaufmann, Daniel; Kraay, Aart; Mastruzzi, Massimo, 2007, p.321)

<sup>96</sup> cf. Levy, Brian; Spiller, Pablo T., 1994, p.208

**Figure 5: Indicators and Measurements for Judicial Institutions**

Independent variable		Indicators	Measurements
Judicial institutions	Existence of rule of law	J.1 Independence of the judiciary	<ul style="list-style-type: none"> <li>• Appointment of judges does not lie in the sole responsibility of the executive</li> <li>• Extent of perceived corruption in the judiciary</li> <li>• Occurrence of former courts' decisions against the government</li> </ul>
		J.2 Protection of property rights	<ul style="list-style-type: none"> <li>• Tradition of efficiently upholding property rights</li> </ul>

*Political institutions* can pose legal constraints on the discretion of the executive if they include **checks and balances (Po.1)**. These can firstly comprise a constitution and a full separation of powers, which limit the legislative power of the executive. Furthermore does the institution of two legislative houses elected under different voting rules create electoral checks and balances, as non-simultaneous elections tend to produce political divisions. An electoral system with proportional representation, which tends to produce a larger number of parties usually requires coalition rule and thus puts another constraint on political discretion. Finally, does federalism with strong decentralization provide constraints through a vertical separation of powers.

**Figure 6: Indicators and Measurements for Political Institutions**

Independent variable		Indicators	Measurements
Political institutions	Legal constraints on the discretion of the executive	Po.1 Checks and Balances	<ul style="list-style-type: none"> <li>• Existence of a constitution</li> <li>• Full separation of powers</li> <li>• Two legislative houses elected under different voting rules</li> <li>• Electoral system with proportional representation</li> <li>• Federalism with strong decentralization</li> </ul>

Indicators for *regulatory institutions* constraining the discretion of political and administrative actors and the private operator are: first, a **proper juridification of the water sector (S.1)**, which will be evaluated by checking if specialized government agencies for the regulation of the water sector exist, if their responsibilities are clearly assigned and if the regulator is

autonomous. The autonomy of the regulator is given, when the regulator “is free to make decisions within [its] scope of authority without having to obtain prior approval from other officials or agencies of the government”.<sup>97</sup>

Secondly, **informal (civil) society monitoring (S.2)** may pose informal constraints on both parties. ‘Civil society’ is understood here as comprising all citizens that are organized in non-governmental organizations and are committed to regularly monitor the water sector. ‘Society’, on the other hand, is defined as comprising all non-organized citizens that are informally and irregularly observing the water sector. It is assumed that due to the importance of water for the people, informal monitoring by civil society organizations or the unorganized society puts pressure on political actors and the private operator to provide water and wastewater services of a good quality. To determine if the (civil) society in Jordan is effectively monitoring the water sector, the author will analyze to which extent the society is organized, informed and consulted as a stakeholder. The degree of organization of society is assessed by taking into account the number of civil society organizations that are monitoring the sector and their freedom to monitor it without restrictions. Thereby it is assumed that a high number of organizations or fewer but prominent organizations will be able to increase the effectiveness of monitoring. It will furthermore be examined if major malfunctions in the water sector have resulted in resignations of politicians from office.

Thirdly, an **institutionalized consensual process (S.3)** in the water sector regulation may put process constraints on the discretion of the public contracting party, whereas a “consensual process” is not understood here in the narrow sense of unanimity in voting, but shall refer to a process of argumentation and consensus formation. If institutionalized consensual processes within the regulatory agencies precede the regulatory decision-making, this may prevent single administrative or political actors from behaving opportunistically. Thus, such a process may compensate for a lack of checks and balances.

Fourthly, **specific regulatory constraints (S.4)** i.e. complex rules may limit the potential for opportunism of the public and private contracting party. The author will therefore investigate if price-setting procedures, conflict resolution procedures, arbitration mechanisms, monitoring systems, penalty provisions and performance incentives are specified in the contract.

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<sup>97</sup> Brown, Ashley C.; Stern, Jon, 2006, p.59

**Figure 7: Indicators and Measurements for Regulatory Institutions**

Independent variable		Indicators	Measurements
Regulatory institutions	Administrative constraints on the discretion of public and private contracting parties	S.1 Proper juridification of the water sector	<ul style="list-style-type: none"> <li>Existence of specialized government agencies for the regulation of the water sector</li> <li>Clear responsibility assignment among regulating agencies in the water sector</li> <li>Autonomy of the regulator</li> </ul>
	Informal constraints on the discretion of public and private contracting parties	S.2 Informal (civil) society monitoring	<ul style="list-style-type: none"> <li>Degree to which the civil society is organized</li> <li>Degree to which the civil society is consulted as a stakeholder</li> <li>Coverage and discussion of water sector policies and outcomes in the press</li> <li>Realization of public awareness campaigns by public or private contracting party</li> <li>Resignations of politicians from office as a consequence to malfunctions in the water sector in the past</li> </ul>
	Process constraints on the discretion of the public contracting party	S.3 Institutionalized consensual processes	<ul style="list-style-type: none"> <li>Institutionalized process of argumentation and consensus formation in the water sector regulation</li> </ul>
	Specific regulatory constraints on the discretion of public and private contracting parties	S.4 Specific regulatory constraints	<ul style="list-style-type: none"> <li>Complex specific rules for the water sector (price-setting procedures, conflict resolution procedures, arbitration mechanisms, monitoring systems, penalty provisions, performance incentives)</li> </ul>

Finally, *international institutions* affect the potential for arbitrary action when the government is interested in international investments and trade and is dependent on international financial assistance.<sup>98</sup> Indicators for these constraints are the **submission to international economic institutions**

<sup>98</sup> cf. Shirley, Mary M.; Ménard, Claude, 2002, p.24

**(I.1)** and the existence of **international or bilateral monitoring (I.2)**. A membership in international economic organizations (such as the World Trade Organization, WTO) constrains the behaviour of the public contracting party through the rules that such organizations impose on a country. Furthermore, does the application for such a membership express an interest in international trade and investments and is a sign of the government's concern about its reputation with such organizations and investors. The membership of a country in international economic institutions may also have an impact on the private partner, who engages in a transaction with the country. This is because such economic institutions may stipulate procedures that are relevant for the enforcement of contracts. Thus, both parties of a transaction are affected. If international development agencies are involved in the transaction, for instance by supporting expenses associated with the contract, or if loans involve conditions on disbursement, these agencies have an interest in knowing if the recipients are using the finance adequately and if they are fulfilling the conditions for disbursement. For this purpose the financing agency and the recipient may have agreed upon monitoring mechanisms. But monitoring may also take place informally in the sense that an international or bilateral agency is not officially and upon agreement in charge of monitoring the country's water sector, but is still engaged in the sector (e.g. through technical assistance) and therefore observing its performance. In such kinds of settings a state will be required to show commitment and a good performance to be able to attract future assistance. The higher the dependence of a country on such financial and technical assistance the higher will be the government's commitment. International or bilateral monitoring may also affect the potential for opportunism of the private contracting party that is concerned about its reputation. However, the effect of international monitoring on the private partner is not formally established and can thus be expected to have a lower impact than on the public partner.

**Figure 8: Indicators and Measurements for International Institutions**

Independent variable		Indicators	Measurements
International institutions	International constraints on the discretion of the public and private contracting party	I.1 Submission to international economic institutions	<ul style="list-style-type: none"> <li>• Application for, or membership in international economic organizations</li> <li>• Policies favouring foreign investment and trade</li> </ul>
		I.2 International or bilateral monitoring	<ul style="list-style-type: none"> <li>• Loans from development organizations for the transaction which involve monitoring</li> <li>• Other international/ bilateral involvement in the transaction which entails (in)formal monitoring (such as technical assistance)</li> </ul>

#### 5.2.2 Intermediary Variable: Potential for Opportunism

For the assessment of the intermediary variable, the *potential for opportunism by political/administrative actors and the private operator*, one can – as the potential itself is hardly measurable – instead measure the **degree of occurrence of opportunistic behaviour by political and administrative actors (R.1)**. Signs of occurrence are unilateral changes of the contract or attempts to do so, as well as contractual violations. In addition, renegotiations may indicate opportunistic behaviour, but in this case the reasons for renegotiation need to be examined in detail. The simple occurrence of a renegotiation is not an ample indicator for opportunistic action. A further hint at manipulation or exploitation may be conflicts between the regulator and the operator, but in order to rate them as opportunistically motivated, the quality of the conflict needs to be assessed. Another indicator for an insufficiently constrained potential for opportunism is **ineffective monitoring and enforcement (R.2)**. This can be measured by checking if the monitoring mechanisms were actually suitable to overcome information asymmetries and if administrative capabilities were sufficient to properly monitor the operator and to apply the stipulated enforcement mechanisms.

**Figure 9: Indicators and Measurements for the Regulatory Regime/Transaction Situation**

Intermediary variable		Indicators	Measurements
Regulatory regime/ Transaction situation	Incentives and potential of political/administrative actors and the private operator to manipulate or exploit the contract	R.1 Degree of occurrence of opportunistic behaviour by political/administrative actors and the private operator	<ul style="list-style-type: none"> <li>• (No) Push for renegotiation of the contract by either side</li> <li>• (No) Unilateral changes of the contract by political/administrative actors</li> <li>• (No) Attempts by political/administrative actors to unilaterally change the contract</li> <li>• (No) Contractual violations by either side</li> <li>• (No) Failure by private operator to report regularly and properly to the regulator</li> <li>• Quality of disagreements between political/ admin. actors and the private operator</li> </ul>
		R.2 (In-) Effective monitoring and enforcement	<ul style="list-style-type: none"> <li>• (In-)Sufficient mechanisms to overcome information asymmetries</li> <li>• (In-)Sufficient administrative capabilities to properly monitor the operator and to apply stipulated enforcement mechanisms</li> </ul>

### 5.2.3 Dependent Variable: Performance of the Privately Operated Water Utility

Finally, for the variable of the *performance of the privately operated water utility*, it is necessary to assess the operator's success or failure in fulfilling contractual goals and targets, for which the indicator will be the **(Non-) Compliance of results with contractual obligations, goals and targets at the end of the contract (Pf.1)**. This can be measured by comparing the goals and targets in the contract with the outcome of the transaction. In case that renegotiations have changed the stipulated targets the outcome will be

assessed both against original and changed targets. If the results of these two assessments differ with regard to the compliance, it will be taken into account if the renegotiations were opportunistically motivated or not (as assessed for the intermediary variable).

**Figure 10: Indicators and Measurements for the Performance of the Privately Operated Water Utility**

Dependent variable		Indicators	Measurements
Performance of the utility	Operator's success/ failure to fulfil obligations and to attain goals and targets set in the contract	Pf.1 (Non-) Compliance of results with contractual obligations, goals and targets at the end of the contract	<ul style="list-style-type: none"> <li>Comparison of obligations/ goals/ targets stated in the contract with output/ outcome of the transaction</li> </ul>

### 5.3 Methods of Data Collection

The data was gathered through qualitative research techniques during a field research period in Amman comprehending desk research of secondary sources, supplemented by primary data collected through interviews.

#### 5.3.1 Interviews

The interviews were composed as semi-structured interviews with open-end comment questions, which served to add observed, anecdotal and perception-based information as respondents were allowed to express themselves as they wish. Two different sets of questions were prepared: the first set was used in interviews with political foundations' staff and NGOs and served to verify the indicators for the judicial institutions, the political institutions and international institutions (I.1); the second set was used in interviews with water and privatization experts as well as the relevant personnel in the government and served to verify the indicators for international institutions (I.2), regulatory institutions, the regulatory regime/transaction situation and the performance of the private operator. In addition, the interviews provided the occasion to obtain important documents from the interviewees. Limitations arose with regard to the available interview partners. While some interviews with government staff and experts could not be arranged, the problem with the private contract operator LEMA (Lyonnaise Des Eaux-Montgomery Watson and Arabtech Jardaneh) was that the company (as the contract has ended) was not present in Jordan anymore.



### 5.3.2 Desk Research

The secondary data that has been used for the examination of this case are:

- The Management Contract for Water and Wastewater Services in the Amman Governorate that provides information about the contractual clauses, which is needed to judge upon violations of the contract.
- Documents associated with the transaction, which were published by the involved Jordanian governmental and administrative institutions to obtain an understanding of the activities of the institutions and the relation between the government and the operator.
- Documents associated with the transaction, which were published by LEMA to acquire information about the position of the operator.
- Documents associated with the transaction, published by the World Bank that financed this project, in order to gather information on its potential monitoring role and further information on the performance of the government and the operator.
- Performance evaluations by Suleiman (2002), Rothenberger (2004), as well as assessments by the United Nations (2003), and the World Bank (2007) in order to obtain answers on all variables.
- Previous research on the subject, including that on the Jordanian political system.

## 5.4 Methods of Data Processing

The hypothesis and sub-hypotheses are tested through the information collected from the interviews as well as from desk research. The qualitative analysis of the data gives insight into the institutional environment, the regulatory regime and the performance of the operator. Then, the link from the independent to the intermediary variable is drawn through an argumentative conclusion in the sense that the extent to which the discretion is constrained explains the degree of opportunistic action (in case that this assumption is confirmed by the data). The performance of the operator then results from the occurrence of opportunistic action and thus establishes the link between the intermediary and the dependent variable. Thus, it will be possible to test the assumptions of the hypothesis and sub-hypotheses. The result of this test will allow to draw conclusions about the validity of the theoretical framework of Levy and Spiller and the modifications made for the case study. Possible limitations that result from the chosen method are that no quantitative statements can be made about the degree to which each criterion had an impact on the dependent variable. This is because the interviews and desk studies are of a qualitative nature. Indeed, perceptions about the degree of impact could have been obtained through questionnaires. But as these perceptions would be based upon rough estimates, and as the small sample of

interview partners is not representative, the author has decided to not analyse statistically the degree to which each criterion has affected the dependent variable.

## 6 Background Information on the Case Study

### 6.1 Jordan's Political, Economic and Social Situation

Following the defeat of the Ottoman Empire Great Britain and France divided the region amongst them. In 1920, Great Britain newly established the state Transjordan and proclaimed Abdallah Ibn Hussein as king. Having achieved its independence from British rule in 1946, the Emirate Transjordan was renamed three years later in the Hashemite Kingdom of Jordan. The country has been decisively influenced by the Israeli-Palestinian conflict during which Jordan had annexed the West Bank. The conflict has heavily affected the country's population structure through the influx of Palestinian refugees and has created inner-societal tensions between East-Jordanians and Jordanians of Palestinian origin.<sup>99</sup> Following the 6-Day-War and the loss of the West Bank in 1967, martial law was imposed and not lifted until 1990. Beginning in 1989 the monarchy initiated a gradual liberalization that is often attributed to the political and economic crisis in which the state found itself during that time. Jordan had to accept an IWF structural adjustment programme, which among other things demanded the privatization of state operations.<sup>100</sup> Economic liberalization was accompanied by a political opening, such as restoring parliamentary elections, lifting the ban on parties and broadening participation. This process, however, is sometimes viewed as a "defensive democratization", that is a series of measures which preserve the existing political system and the interests of the elite and prevent fundamental reforms.<sup>101</sup>

Two structural features that have evolved since Jordan's independence characterize its politics until today: First, the shortage of economic resources in the Kingdom (few natural resources, barely developed industrial sector, only 6% of the land is arable<sup>102</sup>) has made it strongly dependent on external financial sources. Jordan may be referred to as a semi-rentier economy.<sup>103</sup> While the notion 'rentier economy' describes states with a direct financial source (like oil in the Arab Gulf States), the semi-rent stands for financial sources from abroad. In the case of Jordan these are made up of remittances from Jordanian migrant workers in the Gulf States, of financial aid from the Gulf States, and of credits and other forms of development assistance from western countries.<sup>104</sup> The latter two payments have been flowing mainly because of Jordan's important geostrategic location, the admittance of thousands of Palestinian refugees and the country's constant efforts to suit and balance international and regional interests. As a consequence of this financial inflow the Jordanian producing economy plays a subordinate role in the state

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<sup>99</sup> cf. Ben Salha, Edwige, 2003, p.36f

<sup>100</sup> cf. Dieterich, Renate, 1999, p.129

<sup>101</sup> Ben Salha, Edwige, 2003, p.51

<sup>102</sup> cf. World Bank, 2007, p.1

<sup>103</sup> cf. Dieterich, Renate, 1999, p.124

<sup>104</sup> cf. Ben Salha, Edwige, 2003, p.43f

budget.<sup>105</sup> The need to acquire rents limits the room for Jordanian foreign policy and puts pressure on the state to meet demands of international financiers for the establishment of a democratic system.<sup>106</sup>



**Figure 11: Map of Jordan**

Source: Joffé, George, 2002, Cover

The second feature that characterizes Jordanian politics is Neopatrimonialism, which can be defined as a form of rule which has its legitimacy in traditional loyalties and the allocation of goods and services. It is combined with modern forms of state organization (like bureaucracies).<sup>107</sup> Since the 1950s the Hashemite monarchy has been relying considerably on the loyalty of east-Jordanian tribes as many Palestinian-Jordanians have challenged the institution of the monarchy.<sup>108</sup> This is reflected in the electoral law, which privileges rural

<sup>105</sup> cf. Ben Salha, Edwige, 2003, p.44

<sup>106</sup> cf. Dieterich, Renate, 1999, p.388

<sup>107</sup> cf. Ben Salha, Edwige, 2003, p.52

<sup>108</sup> cf. Baaklini, Abdo; Denoeux, Guilain; Springborg, Robert, 1999, p.140

constituencies and cultivates tribalism. To safeguard the monarchy, the royal court has furthermore relied on clientelistic mechanisms and elite rotation. The Jordanian elites who can be located mainly in the bureaucracy, have divided the power, the resources and the access to them amongst themselves. They dominate the connections between the political elite and the society by allocating employment, social status or privileges of all kinds. 'Wasta' which may be translated with 'connections' with tribe, clan or family patrons is therefore bypassing state institutions<sup>109</sup>, hinders the development of civil society organizations<sup>110</sup> and has a detrimental influence on Jordan's economy.<sup>111</sup> Beyond this, the mechanism of elite rotation, which is controlled by the monarch, is suitable to balance the power of various elites as it enables the participation of all elites within the political system and the granting of privileges to them. At the same time it may weaken the opposition (as frequent changes of the cabinet have shown) and is qualified to prevent the monopolization of administrative and political posts through single clans or tribes.<sup>112</sup>

## **6.2 The Jordanian Water Sector and the Pre-Privatization Situation**

In its Water Strategy of 1997 the Ministry of Water and Irrigation (MWI) asserts that the demographic pressure on Jordan's water resources is at its highest, while it is expected that from 2005 on no further freshwater resources can be developed.<sup>113</sup> What makes this prediction more severe is that from 1973 until today renewable groundwater resources have decreased by 66%.<sup>114</sup> Besides the problem of overexploitation, the MWI also regards the operation and maintenance costs at a high level. This is especially true for the capital city of Amman that emerged distant from water resources. Acknowledging these facts, the ministry opts in its Water Strategy for improved resource management, wastewater reuse, institutional restructuring, stakeholder participation, regional cooperation, raising public awareness, performance measurement, health standards, cost recovery, private sector participation and water research to address these challenges.<sup>115</sup>

Private sector participation is also encouraged by the World Bank, which has concluded from eight previous World Bank funded water supply projects in Jordan (with public sector operators) that public sector management had failed to improve service levels. Service levels rather had kept on declining in the

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<sup>109</sup> cf. Ben Salha, Edwige, 2003, p.54

<sup>110</sup> cf. Dieterich, Renate, 1999, p.382

<sup>111</sup> cf. Dieterich, Renate, 1999, p.123

<sup>112</sup> cf. Ben Salha, Edwige, 2003, p.55f

<sup>113</sup> cf. Ministry of Water and Irrigation, 1997

<sup>114</sup> cf. Al Baz, Ismail; De Florio, Loredana; Bethmann, Andreas, 2007, p.388

<sup>115</sup> cf. Ministry of Water and Irrigation, 1997

1990s.<sup>116</sup> The Amman Governorate includes 2.2 million customers who make up for 45% of Jordan's total drinking water consumption.<sup>117</sup> The responsible provider for this area had been the Amman Governorate Water Administration (AGWA). AGWA was set up as an autonomous unit,<sup>118</sup> but had de facto ended up centrally managed by the Water Authority of Jordan (WAJ).<sup>119</sup> Thus, until the introduction of the management contract the WAJ had been carrying full responsibility for water supply and sanitation along with the task of regulatory supervision in whole Jordan.<sup>120</sup> At the beginning of 1999 AGWA experienced losses of about 2.6 million Jordanian Dinar (approx. 3.1 mil. Euro, ROE of 01.01.99).<sup>121</sup> Unaccounted-for-water (UFW)<sup>122</sup> levels were with 54% excessively high and supply was intermittent with only eight hours per week in peak season.<sup>123</sup> The failure to improve service levels under public sector operation was one decisive factor that put pressure on the Jordanian government to involve the private sector. Another important reason was a case of water pollution in 1997 with one death, which created a strong call for action.<sup>124</sup> The Management Contract for Water and Wastewater Services in the Amman Governorate was the first PSP that the government implemented in the water sector.

### 6.3 The Management Contract for Water and Wastewater Services

The PSP option that the Jordanian Government chose to improve water supply and sanitation in the Amman Governorate was a performance-based management contract. The original duration of the contract was four years, but it was extended twice, thus making up for seven years and five months.<sup>125</sup> The main goals were to improve efficiency particularly through the reduction of unaccounted-for-water, to increase sales revenues, to extend the hours of water supply, to secure water quality and to operate an efficient customer service.<sup>126</sup> The competitive bid for the contract was won by a joint venture of Suez Lyonnaise Des Eaux and Montgomery Watson Arabtech Jardaneh (LEMA). With the signing of the contract between the Water Authority of Jordan (WAJ)

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<sup>116</sup> cf. World Bank, 2007, p.1

<sup>117</sup> cf. Suleiman, Rebhieh, 2002, p.16

<sup>118</sup> cf. Abu-Shams, Ibrahim; Rabadi, Akram, 2003, p.161

<sup>119</sup> Rothenberger, Dieter, 16.09.07/cf. Abu-Shams, Ibrahim; Rabadi, Akram, 2003, p.161

<sup>120</sup> cf. Meuss, Marina; Stoll, Uwe; Barmer, Nina, 2006, p. 2

<sup>121</sup> cf. Programme Management Unit, 2007

<sup>122</sup> "Unaccounted-for-water is the share of water system input that is unknown in quantity and in use, such as water leaked in the distribution system (technical losses), water stolen (as in illegal connections), imperfectly recorded (as in under-registering meters or through collusion between meter readers and consumers), poorly estimated in the commercial system (administrative losses)". (World Bank, 2007, p.19)

<sup>123</sup> cf. World Bank, 2007, p.iii

<sup>124</sup> Rothenberger, Dieter, 16.09.07

<sup>125</sup> Starting date: 31.07.1999; ending date 31.12.2006

<sup>126</sup> cf. Suleiman, Rebhieh, 2002, p.16

and LEMA, the private operator took full responsibility for technical operations and partial responsibility for administrative management, both in drinking water production and distribution as well as wastewater collection and treatment.<sup>127</sup> The tasks of the operator were to carry out and improve the operation and maintenance of the facilities (including UFW, constancy of supply and water quality) as well as the billing, collection and customer services (including accounts receivables), and to rehabilitate the facilities under an Operating Investment Fund.<sup>128</sup>

By transferring such tasks, a management contract is generally capable of improving technical and managerial capabilities as well as the operating efficiency.<sup>129</sup> Yet, this PSP arrangement brings no private investment into the infrastructure and the ownership remains fully public. The financing of both the operation and infrastructure investments, however, was provided externally by donors. The management contract was part of the Amman Water and Sanitation Management Project (AWSMP), which had four project components: the Management contract, an Operating Investment Fund (OIF), a Capital Investment Programme (CIP), and technical assistance. With a loan of US\$ 55 million, the World Bank fully financed the first two components while the Bank had assembled co-financiers for the latter two components, namely the European Investment Bank, Italian bilateral assistance, KfW (German financial cooperation), and USAID. The OIF financed short-term and operating investments that were not covered by LEMA's working capital. Money from the CIP was reserved for restructuring and rehabilitating the network as well as for upgrading and extending service coverage, whereas the implementation of the Capital Investment Programme remained in the responsibility of WAJ.<sup>130</sup>

The contract stipulated the compensation of LEMA through a fixed base fee and a variable performance incentive compensation (PIC) paid by WAJ. The latter was a function of three factors: revenue optimization, collection efficiency and cost control.<sup>131</sup> From the maximum annual PIC of 5%,<sup>132</sup> liquidated damages might be withdrawn by WAJ in the case that LEMA did not meet the performance targets. Through this kind of compensation the private operator did not rely on revenues for its reward (as in management contracts generally). Nevertheless, in a management contract some entrepreneurial risk is still prevalent,<sup>133</sup> but compared to other PSP options it is rather low.<sup>134</sup> The investments made by LEMA are confined to costs of informing, bargaining and setting up a business in Jordan. Even if these kinds of investments are hardly

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<sup>127</sup> cf. SUEZ, 2003, p.17

<sup>128</sup> cf. Bankworld Inc, 2007, p.i

<sup>129</sup> cf. Saghir, Jamal, 2000, p.26

<sup>130</sup> cf. World Bank, 2007, p.3

<sup>131</sup> cf. Suleiman, Rebhieh, 2002, p.22

<sup>132</sup> Percentage of the incremental improvement of cash flow (World Bank, 2007, p.14)

<sup>133</sup> cf. chapter 4.3

<sup>134</sup> cf. Ringskog, Klas; Hammond, Mary Ellen; Locussol, Alain, 2006, p.1

transferable, the total of those sunk investments is relatively small. Yet, besides material investments companies have also invested in their reputation, which is – as argued before – of particular importance in the water sector. Still, the contract type suggests that the potential by political and administrative actors to manipulate or exploit the contract is limited. Major opportunistic action, such as the refusal to pay the full fixed fee despite proper conduct by LEMA may simply make the operator discontinue its operations, which is not in the interest of the public contracting party. Minor breaches of the contract are, however, conceivable as the private operator has an interest in completing the contract successfully. Indeed, the bidding for the contract shows that the bidders were risk-averse even in this low-risk setting. The bidders had been allowed to bid on the share of the performance incentive compensation in relation to the fixed fee and LEMA bade the minimum percentage of 5%.<sup>135</sup> This is noteworthy as the management contract is already a governance structure with a minor risk. It may simply indicate that LEMA had expected not to be able to increase the financial performance considerably and thus not to profit much from the PIC. Another explanation for this risk-averse bid might be that the entity that is in charge of deciding about the amount of liquidated damages which may be withdrawn from the PIC is not an independent body, but the WAJ. The WAJ is advised by an independent auditor, but does not need to follow this advice. This opens up room for opportunism by the public contracting party. The bid therefore may suggest that LEMA, in anticipation of this potential for opportunism from its contracting partner, decided to minimize the effects that such behaviour could have on its compensation.

The governance structure of a management contract-type furthermore indicates that “a close and trustful co-operation with the public side is required”<sup>136</sup> as the operator can influence processes only to a very limited degree. The required political commitment may be adversely affected, if the political and administrative actors are not aware of what the chosen contract option is able to accomplish or if the PSP is to a significant part a result of pressure by donors. International development agencies noticed these two problems in Amman.<sup>137</sup>

The examination of the governance structure and the specific transaction situation of the Amman MC has shown which kind of incentive structure results from them. But the incentives and potential for opportunism of both contracting parties is – according to the author’s hypothesis – also abated and amplified by the institutional environment. The following chapter presents the findings and interpretations that were drawn from the field research.

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<sup>135</sup> cf. World Bank, 2007, p.14

<sup>136</sup> Rothenberger, Dieter, 2004, p.39

<sup>137</sup> cf. Rothenberger, Dieter, 2004, p.39/cf. Rothenberger, Dieter, 2006, p.8/Meuss, Marina, 01.11.07/cf. European Commission, 2006, p.11



## 7 Findings and Interpretations

This chapter presents the findings on the impact of institutional frameworks on private sector participation, based on the data that was gathered through desk studies and interviews carried out during the field research. The chapter is structured into four sections representing the independent, the intermediary and the dependent variable as well as a summary of the institutional framework in Jordan.

### 7.1 Independent Variable: Institutional Environment

#### 7.1.1 *Judicial Institutions in Jordan*

Two indicators have been identified to assess the *existence of rule of law*, namely the *independence of the judiciary* and the *protection of property rights*.

##### 7.1.1.1 *Independence of the Judiciary (J.1)*

The independence of the judiciary in Jordan is constitutionally guaranteed.<sup>138</sup> However, the formal institutions on a lower level and the informal system may deviate from constitutional institutions. The following assessments intend to further investigate the issue.

Firstly, one can identify the way by which judges are appointed and dismissed. These tasks are in the responsibility of Jordan's Higher Judicial Council, while its appointments and dismissals have to be approved by the king.<sup>139</sup> According to the Independence of the Judiciary law of 2001, the Minister of Justice can recommend to the council the appointment of a certain person to a judicial post or give advice against a person's appointment.<sup>140</sup> The council itself consists of the speaker of the Upper House (senate), three senators and five senior judges. The three senators are chosen by ballot within the Upper House, whereas the king designates the members of the Upper House. The five judges are selected from the highest civil court in order of seniority.<sup>141</sup> Freedom House reports that the "judicial appointments are consistently criticized as reflecting particularistic interests".<sup>142</sup> It can therefore be concluded that the executive has significant control over the appointment of judges, which could be used to put pressure on judges to make the desired rulings.

Another measurement of judicial independence is the extent of perceived corruption in the judiciary. However, finding literature on corruption specifically for the judicial sector in Jordan has been a difficult task. Information on public

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<sup>138</sup> cf. Maddex, Robert L., 1995, p.148

<sup>139</sup> Ali, Nabeel, 05.11.07

<sup>140</sup> cf. El Majali, Zuha' Farhan, 2006/7(?), p.2

<sup>141</sup> cf. Sakijha, Basem; Kilani, Sa'eda, 2001, p.12

<sup>142</sup> Freedom House, 2006

perceptions is mainly limited to statements, which find that the public does not have confidence in Jordan's judiciary.<sup>143</sup> Other sources conclude on the extent of corruption in the judiciary by looking into the legal system. Transparency International has recently published its Global Corruption Report 2007, which is dedicated to corruption in judicial systems. Although Jordan is not included in the country reports, it is still mentioned in this report among the international best practices with regard to legal schemes. It is stated that adversarial systems<sup>144</sup> usually are "associated with low levels of corruption"<sup>145</sup>. The Islamic legal traditions in Jordan are found to embody such kind of adversarial proceedings.<sup>146</sup>

A third indication of judicial independence may be the repeated occurrence of court's decisions against the government. The non-governmental organization National Democratic Institute could report several cases where the courts ruled against ministries and municipalities, in private cases as well as in business cases.<sup>147</sup>

Conclusively, it can be said that the results of the assessments of judicial independence are mixed. There is obviously no full independence, because the king has a direct control on the appointments and dismissals of judges as he has to approve them. Though not possessing this direct control, the Minister of Justice still has the possibility to influence appointments as he/she is allowed to give recommendations. If further political and administrative actors or the private operator can influence judges through other channels could not be verified through the mentioned measurements, as the available data on perceived corruption was marginal. The estimation of interview partners, however, has been that 'Wasta'<sup>148</sup> also makes its mark on the judiciary.<sup>149</sup> An incident that happened in 1995, moreover suggests that there are informal channels through which political actors at least try to exert pressure. That year 22 of the highest judges menaced to resign from office as they complained about the pressure of the government on the exercise of their office.<sup>150</sup>

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<sup>143</sup> cf. Sakijha, Basem; Kilani, Sa'eda, 2001, p.8

<sup>144</sup> In an adversarial system "the parties to a controversy develop and present their arguments, gather and submit evidence, call and question witnesses, and, within the confines of certain rules, control the process. The fact finder, usually a judge or jury, remains neutral and passive throughout the proceeding" (Legal dictionary, <http://legal-dictionary.thefreedictionary.com/Adversary+system>). The distinctive feature of this kind of systems is that they tend to "increase the capacity of all parties within a dispute to challenge the evidence or resolutions generated by a judge or prosecutor". (Buscaglia, Edgardo, 2007, p.72f)

<sup>145</sup> Buscaglia, Edgardo, 2007, p.72

<sup>146</sup> cf. Buscaglia, Edgardo, 2007, p.72f

<sup>147</sup> Ali, Nabeel, 05.11.07

<sup>148</sup> cf. chapter 6.1

<sup>149</sup> Bröning, Michael, 22.10.07/De Winter, Annemie, 05.11.07

<sup>150</sup> cf. Dieterich, Renate, 1999, p.104

### *7.1.1.2 Protection of Property Rights (J.2)*

The second indicator that may be used to assess the rule of law is the protection of property rights. Personal property is protected from expropriation through the constitution and the investment promotion law.<sup>151</sup> Legal exceptions are provided for the purpose of public utility, but in this case fair compensation has to be paid.<sup>152</sup> The assessment of research institutions is that the risk of expropriation in Jordan is very low.<sup>153</sup>

While the protection of property rights is obviously secured, the assessment of the independence of the judiciary has been mixed. Still, the overall evaluation from the perspective of international investors on the existence of rule of law is positive. Although the informal influence through corruption had been identified as one of the critical elements with regard to judicial independence, a survey found that business executives did not assess it as a prior impediment to investments. The weight they gave to "Corruption in the application of laws" was 18 percent, while "Multiplicity of laws and by-laws" and "Too many changes and amendments to laws" each received a weight of 27 percent.<sup>154</sup> Furthermore, Jordan ranks in the Global Competitiveness Index 2007 with regard to judicial independence on position 38 of 128 countries, thus belonging to the top third.<sup>155</sup> With the region as a benchmark, the rule of law in Jordan receives a score of 5 on a scale from 0-6 while lower scores indicate less rule of law.<sup>156</sup> To conclude, the existence of rule of law is from an economic perspective apparently satisfactory. Still, according to the first hypothesis, weak judicial institutions may be partly compensated through international institutions that create pressure to enforce substantive restraints and restraints on system changes.

### *7.1.2 Political Institutions in Jordan: Checks and Balances (Po.1)*

The discretion of the executive may be legally constrained by horizontal and vertical checks and balances, which make legislation and thus regulatory rules more stable. A basic constraint on the executive is the existence of a constitution. Jordan's constitution was established in 1952 and widely respected even in rough times, when martial law was imposed. Though not disregarding it, the extensive powers of the king instead allowed him to have the constitution amended by the parliament.<sup>157</sup> Since the lifting of martial law and the beginning of liberalization in 1989, however, the constitution has not been amended anymore.

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<sup>151</sup> cf. El-Sayed Radwan, Mohamed, 1999, p.18

<sup>152</sup> cf. Hourani, Hani; Abu Rumman, Hussein; Kamel Nasser Ahmad, 2004, p.19

<sup>153</sup> cf. Freedom House, 2006/El-Sayed Radwan, Mohamed, 1999

<sup>154</sup> Kanaan, Taher H., 1999, p.77

<sup>155</sup> cf. World Economic Forum, 2007, p.163

<sup>156</sup> cf. El-Sayed Radwan, Mohamed, 1999, p.20

<sup>157</sup> cf. Baaklini, Abdo; Denoeux, Guilain; Springborg, Robert, 1999, p.145ff.

Another constraint on the discretion of the executive may be the separation of the executive, the legislature and the judiciary. The Jordanian constitution provides for a division but not full separation of these powers. While the monarch's influence on the judiciary has already been outlined before, the relation between executive and legislature deserves further attention. The system of government is a parliamentary constitutional monarchy. The executive authority is vested in the king who exerts his power through his ministers. The king appoints the prime minister and the other ministers upon proposal of the prime minister and has the power to dissolve the government. The legislative power is vested in the national assembly, which consists of the Upper House (Senate) and a Lower House (House of Representatives). Members of the Senate are designated by the king, while the members of the Lower House are elected by the people by secret ballot in a general election.<sup>158</sup> The king has the authority to suspend elections, dissolve the parliament, withdraw single members of both houses<sup>159</sup> and to extend the parliament's regular 4-year-term for up to two years. Furthermore, the king has also legislative powers. In times when the parliament is not in session (parliament's sessions amount to five months annually<sup>160</sup>) or has been dissolved, the Cabinet may pass provisional laws if sanctioned by the king.<sup>161</sup> The monarch also possesses a veto against laws, which can only be overrun by a two-thirds vote in both chambers.<sup>162</sup> The government requires a vote of confidence by the House of Representatives and is accountable to it, while the king has immunity from any responsibility for the actions of his government.<sup>163</sup> The preceding summary of the division of powers has shown that the parliament and the judiciary may restrain the executive only to a small degree. Especially the legislature can "function only within the constitutional and political space granted and tolerated by the king".<sup>164</sup>

The Jordanian legislative is bicameral, but this does not constrain the executive, as the Upper House is not elected by the people and thus no political divisions are created. Legal constraints on the executive are also not produced by the electoral system in Jordan. This is valid independent of the question if it comprises first-past-the-post rule (which it does) or proportional representation.<sup>165</sup> This is firstly because parties play no major role in Jordan, as they had been banned for a long time and candidates are mainly elected based on their tribal association. Secondly, the political system does not give the largest parliamentary group the right to form the government.<sup>166</sup> Thus, it can

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<sup>158</sup> cf. Maddex, Robert L., 1995, p.146ff.

<sup>159</sup> cf. Hourani, Hani; Abu Rumman, Hussein; Kamel Nasser Ahmad, 2004, p.75

<sup>160</sup> cf. Baaklini, Abdo; Denoeux, Guilain; Springborg, Robert, 1999, p.165f.

<sup>161</sup> cf. Hourani, Hani; Abu Rumman, Hussein; Kamel Nasser Ahmad, 2004, p.24

<sup>162</sup> cf. Maddex, Robert L., 1995, p.148

<sup>163</sup> cf. Hourani, Hani; Abu Rumman, Hussein; Kamel Nasser Ahmad, 2004, p.14ff.

<sup>164</sup> Baaklini, Abdo; Denoeux, Guilain; Springborg, Robert, 1999, p.165

<sup>165</sup> cf. Hourani, Hani; Abu Rumman, Hussein; Kamel Nasser Ahmad, 2004, p.41

<sup>166</sup> cf. Dieterich, Renate, 1999, p.190f.

be said that there are no electoral checks and balances on the executive's discretion.

The last criterion to be assessed for the political institutions is whether the Jordanian system demands federalism and strong decentralization. This has to be denied, as Jordan is a unitary state and although a process of decentralisation started in 1989 the importance of the municipalities and governorates is still relatively low.<sup>167</sup> In the water sector, some results of the decentralization process can be seen with the Aqaba Water Company in the south, the management contract in Amman and the commercialization of the Northern Governorates, where the establishment of a public company is underway. The rest of the country's water administration is, however, still under central control and operation. This means that the executive discretion is also not considerably constrained by a vertical separation of powers.

The examination of political institutions in Jordan has shown that the executive is hardly constrained by political checks and balances. However, it is important to recognize that much of the executive discretion is limited to the king. Thus, on the one hand it can be assumed that with regard to the direction of the country's major policies, some reliable continuity is provided. On the other hand, the monarch relies on neopatrimonial mechanisms and is equipped with the power to put through and control elite rotation, which has resulted in frequent (often annual) changes of the ministers.<sup>168</sup> During the term of the management contract six different politicians have served as Ministers of Water and Irrigation, whereas one of them served an unusually long period of about four years (2001-2005). Attempts to change the regulatory system in the water sector are therefore more likely to occur than in systems where the cabinet regularly changes based on four- or five-year terms. Hence, it can be stated that the checks and balances are not sufficient to prevent legislative changes of the regulatory system. Yet, according to the second sub-hypothesis, sufficient commitment may instead be secured through non-legislative substantive constraints or international institutions.

### *7.1.3 Regulatory Institutions in the Jordanian Water Sector*

The discretion of both the public and private contracting party may be constrained by regulatory institutions that exist in the Jordanian water sector. These are administrative constraints (*Proper juridification of the water sector*), informal constraints (*Informal (civil) society monitoring*), process constraints (*Institutionalized consensual processes*), and *specific regulatory constraints*.

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<sup>167</sup> Bröning, Michael, 22.10.07/ Ali, Nabeel, 05.11.07

<sup>168</sup> cf. Loewe, Markus, 2007, p.148

#### *7.1.3.1 Proper Juridification of the Water Sector (S.1)*

To assess if the Jordanian water sector is properly juridificated, it is necessary to examine the structure of the water sector, the allocation of responsibilities and the degree of autonomy of the regulator.

The Jordanian Ministry of Water and Irrigation (MWI) is entrusted with the tasks of monitoring, planning, management, the preparation of sector strategies and policies as well as water price regulation. The authority that carries nationwide responsibility for water supply and sanitation (WSS) and thus has operational as well as regulatory functions, is the Water Authority of Jordan (WAJ).<sup>169</sup> The WAJ was established as an autonomous body with financial and administrative independence and accordingly has the right to enter legal proceedings and sign contracts, as it did in the case of the contract with LEMA. The authority is lead by a Secretary-General and has a board of directors, which is chaired by the minister of the MWI.<sup>170</sup> The minister is authorized to issue instructions to the WAJ.<sup>171</sup> The Programme Management Unit (PMU) was set up in 1997 as a monitoring unit within WAJ through a financing agreement between the Jordanian government and the European Commission. However, the PMU did not start its full operations until 2000.<sup>172</sup> The unit has a board of executives, which is headed by the minister and includes the Secretary-Generals of WAJ and of MWI. PMU's tasks comprise the management of the Greater Amman Water Sector Improvement Programme (GAWSIP) as well as the monitoring of the Capital Investment Programme, the Amman MC and other PSP initiatives in the governorates.<sup>173</sup>

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<sup>169</sup> cf. Meuss, Marina; Stoll, Uwe; Barmeier, Nina, 2006, p.2

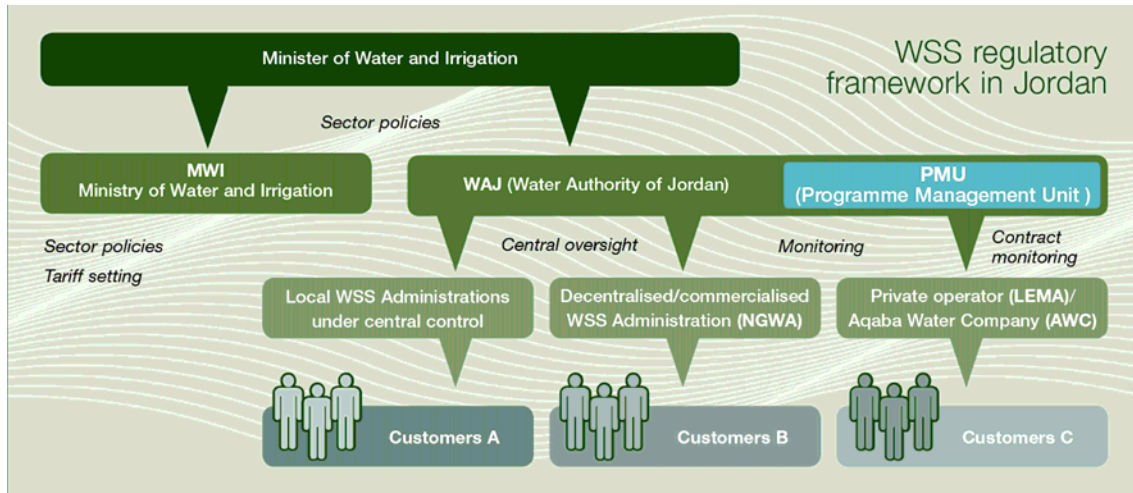
<sup>170</sup> cf. Al al-Bayt University; InWEnt, 2005, p.53f.

<sup>171</sup> Rothenberger, Dieter, 16.09.07

<sup>172</sup> Dahiyat, Iyad, 29.10.07

<sup>173</sup> cf. World Bank, 2007, p.5

**Figure 12: Regulatory Framework for Water Supply and Sanitation (WSS) in Jordan**



Source: Meuss, Marina; Stoll, Uwe; Barmeier, Nina, 2006, p.2

The problem of the described administrative structure is that the responsibilities of the three units are not clearly divided with regard to the tasks of regulation, supervision and operation.<sup>174</sup> This results partly from the fact that the WAJ had been set up long before the MWI was founded, and thus the hierarchical lines needed to be built around traditionally established ones.<sup>175</sup> Interviewees reported overlapping or unclear responsibilities, difficulties to differentiate and coordinate between the units, and incidents where WAJ left out the PMU to undertake direct negotiations with LEMA, e.g. on incentive payments.<sup>176</sup> Especially the PMU had problems to find its role as it was subject to different accountability lines, had only limited decision-making power, was to a major extent confined to making recommendations, and started its full operations late (about one year after the start of the management contract).<sup>177</sup> Furthermore, the European Commission on the one hand intended to build up the unit to a fully-fledged regulator (which raised expectations among PMU staff), while the Jordanian government did not have in mind to give extended regulatory competences to the PMU.<sup>178</sup> The effect of these unclear responsibilities within the administration has been that the de facto allocation of tasks and responsibilities was dependent on the strength of the leadership of each unit. Thus, the discretion of the units varied with the change of its top personnel. An example of such kind of irregularities were the endeavours of the

<sup>174</sup> cf. Meuss, Marina; Stoll, Uwe; Barmeier, Nina, 2006, p.2

<sup>175</sup> Rothenberger, Dieter, 16.09.07

<sup>176</sup> Oweis, Munir, 19.09.07/Dahiyat, Iyad, 29.10.07/Meuss, Marina, 01.11.07/Zoubi, Kamal, 17.09.07/Rothenberger, Dieter, 16.09.07

<sup>177</sup> Dahiyat, Iyad, 29.10.07

<sup>178</sup> Rothenberger, Dieter, 16.09.07

Secretary-General of the MWI to issue instructions to the WAJ though not formally being superior to it.<sup>179</sup>

With regard to the autonomy of WAJ, being the main regulator, it can be said that, although it was set up as an autonomous unit, it actually was not autonomous. Besides the mentioned formal (by the minister) and informal (by the Secretary-General MWI) influences, the authority was later subjected through by-laws to the provisions of the Civil Service Commission, the Audit Bureau, the Bureau of Supervision and Inspection and government procurement regulations.<sup>180</sup>

The assessment of the administrative structure of the water sector has shown that due to the unclear responsibility assignment and the lack of autonomy of the regulator, the discretion of the public and private contracting party was insufficiently constrained. Anyway, with regard to the public contracting party even a proper juridification of the water sector would not have provided sufficient constraints. This is because the weak checks and balances made the legislation and thus the regulatory rules instable. The described setting also increased the discretionary power of the private operator. The unclear assignment of responsibilities allowed the operator to use informal channels, to pass over certain authorities and to collaborate in a corrupt way with administrative and political actors.

#### *7.1.3.2 Informal (Civil) Society Monitoring (S.2)*

To find out if the society effectively constrained the discretion of political and administrative actors as well as the private operator, it will be investigated to which degree the society was organized, consulted and informed. Additionally, it will be checked if major malfunctions in the water sector led to resignations by politicians from office.

Although since 1989 the number of non-governmental organizations (NGOs) had greatly increased, they were profoundly restricted by authoritarian practices, namely “social control projected through a complex array of administrative procedures, legal codes, and informal regulative practices designed to constrain opposition without resorting to violence”.<sup>181</sup> In addition, NGOs have not been allowed to engage in any political activities, since this permission has been restricted to political parties.<sup>182</sup> Conclusively, the room for civil society participation in Jordan's public affairs was relatively limited.

This marginalization of civil society was mirrored in the water sector. The public as one if not *the* most important stakeholder of water and wastewater services was not permitted to participate in decision-making and was not consulted by

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<sup>179</sup> Meuss, Marina, 01.11.07

<sup>180</sup> cf. Al al-Bayt University; InWEnt, 2005, p.52/ Zoubi, Kamal, 17.09.07

<sup>181</sup> Wiktorowicz, Quintan, 2002, p.111

<sup>182</sup> cf. Wiktorowicz, Quintan, 2002, p.115



political or administrative actors.<sup>183</sup> The private operator on the other hand interacted with the society by undertaking customer satisfaction surveys and awareness campaigns, though not obligated to do so by contract.<sup>184</sup> However, no such campaigns were undertaken by the public awareness directorate of the WAJ.<sup>185</sup> Irrespective of the mentioned interaction with LEMA, the ability of the society or civil society to informally monitor the water sector was further constrained by a lack of transparency and access to information.<sup>186</sup> Press reports contained no details about the PSP, nor was the press a forum for discussion.<sup>187</sup> Both the public and the private contracting party confined the role of the press mainly to publishing their reactions in case of service delivery problems or unpopular system changes (like the change of the billing system).<sup>188</sup>

Two cases of major drinking-water-pollution-induced infections in Jordan in 1998 and the latest in 2007 (outside LEMA's service area) have shown that politicians were held accountable following such malfunctions. In the latter case the Minister of Water and Irrigation, the Secretary-General of WAJ and the Minister of Health resigned. The resignation can be seen as a way to avert a crisis, because with the utmost probability a non-resignation would have caused a violent uprising in the streets (like e.g. the downsizing of food subventions did).<sup>189</sup>

The preceding illustration of the role of society makes clear that the dominance of the state restricted the organization of society, prevented its participation and provided no information. Thus, civil society organizations were unable to informally monitor the sector and accordingly had no influence on the discretion of the public and private contracting party.<sup>190</sup> The power of the unorganized society limited the potential for opportunism only with regard to such kind of opportunistic behaviour which would have caused major malfunctions. And even then, as the pollution cases show, much of the society's power was of a retrospective nature and was limited to holding politicians and top-administrative actors accountable to some extent. Therefore, the society's role may barely be denoted as a 'monitoring' role and thus did not constrain the potential for opportunism by the public and private contracting party.

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<sup>183</sup> Ali, Nabeel, 05.11.07/ Dahiyat, Iyad, 29.10.07

<sup>184</sup> cf. Suleiman, Rebhieh, 2002, p.30

<sup>185</sup> Oweis, Munir, 19.09.07

<sup>186</sup> cf. Suleiman, Rebhieh, 2002, p.20

<sup>187</sup> Zoubi, Kamal, 17.09.07

<sup>188</sup> Dahiyat, Iyad, 29.10.07

<sup>189</sup> Ali, Nabeel, 05.11.07

<sup>190</sup> Zoubi, Kamal, 17.09.07

#### *7.1.3.3 Institutionalized Consensual Process (S.3)*

Constraints on the discretion of political and administrative actors may also be generated by an institutionalized process of argumentation and consensus formation. In the Jordanian water sector the stakeholders that were involved in decision-finding were limited to the water sector entities (MWI, WAJ, PMU), other ministries (e.g. Ministry of Planning), donors (esp. World Bank, KfW, USAID, European Investment Bank) and private sector representatives.<sup>191</sup> NGOs, consumers and local authorities were not engaged.<sup>192</sup> Interviewees reported that although discussions aimed at concerted decisions, the committees' structures were very hierarchical. Thus, positions that did not find the approval by the Minister of Water and Irrigation and the Secretary-Generals could not draw a consensus.<sup>193</sup> To conclude, the decision-finding process in water sector regulation did not abate the potential for opportunism by political and top-administrative actors.

#### *7.1.3.4 Specific Regulatory Constraints (S.4)*

The potential for opportunism by the public and private contracting party may further be legally confined by complex specific rules in the contract. It is important to notice that contract law unlike administrative law may not be legally altered without the sanction of the private contracting party. Thus, contract law is not affected by a potentially instable legislation through a lack of checks and balances.

The contract did not stipulate any specific price-setting procedures as prices are set by the cabinet.<sup>194</sup> However, this arrangement did not provide much room for opportunism from either party as the private operator in a management contract does not rely on the revenues for its compensation. A cut in prices indeed would have decreased the operational profit generated by LEMA and thus seemingly curtailed its achievements, but such kind of action was also not in the interest of the cabinet and WAJ rather targeted a price increase.<sup>195</sup>

For the settlement of disputes, the contract specified three procedures. If a dispute arises the parties shall first seek to resolve it by mutual consultation. If they fail to do so, the dispute shall then be referred to an Adjudicator. If either the WAJ or LEMA is dissatisfied with the Adjudicator's decision, then arbitration – with Amman as a location – shall be commenced. Each party may appoint one arbitrator, while the two jointly appoint a third arbitrator. The decision of a majority of arbitrators (or the third arbitrator) is final and shall be enforceable before any court.<sup>196</sup> The stipulations show that the procedures constrained the

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<sup>191</sup> Dahiyat, Iyad, 29.10.07

<sup>192</sup> cf. Meuss, Marina; Stoll, Uwe; Barmeier, Nina, 2006, p.3

<sup>193</sup> Rothenberger, Dieter, 16.09.07/Zoubi, Kamal, 17.09.07

<sup>194</sup> Oweis, Munir, 19.09.07

<sup>195</sup> Rothenberger, Dieter, 16.09.07

<sup>196</sup> cf. Water Authority of Jordan, 1999, General Conditions, p.9f.

potential for opportunism of both parties through clear rules for the resolution of disputes.

To address the information asymmetry between the regulator and the operator the contract demanded weekly and monthly meetings of the WAJ's and the operator's representatives. In addition, the operator had to issue monthly and annual reports, an annual budget, as well as additional reports upon request by WAJ.<sup>197</sup> The PMU as the monitoring unit tracked 15 key indicators (drawn from the performance indicator agreement of the contract) on a quarterly and annual basis. An additional annual financial and technical audit report was prepared by external auditors funded by USAID.<sup>198</sup> The reporting requirements therefore can be declared as significant constraints on the discretion of the private operator.

The contract further specified penalty provisions and performance incentives. At the end of each contract year an independent auditor issued a statement of operations on the performance of the private operator. The auditor was from an international firm that was selected and paid by WAJ. Based on the statement, the WAJ calculated the performance incentive compensation (PIC). In case the operator failed to meet the performance standards, the WAJ was allowed to withhold payments and to deduct liquidated damages either from the fixed fee or from the PIC.<sup>199</sup> The critical aspect of these contractual stipulations was that the independent auditor acted in a purely advisory function. The WAJ had the power to decide, if the non-achievement of the performance targets could be accredited to a failure of the operator or was due to other reasons. The power of WAJ to decide on this and to determine the amount of liquidated damages, provided the regulator with a significant scope for opportunism.<sup>200</sup>

The examination of regulatory institutions in Jordan has shown that neither the administrative structure of the water sector, nor civil society monitoring, nor an institutionalized consensual process were able to sufficiently constrain the discretion of the public and private contracting party. While the latter two did not even qualify as nameable constraints, the administrative structure of the water sector left too much scope for arbitrary decisions and allowed for corrupt collaboration of single political and administrative actors with the private operator. On condition that a country has functioning judicial institutions, complex specific rules do not leave much room for deviation by the contracting parties. In Jordan, the specific regulatory constraints can be expected to have effectively constrained the discretion of the contracting parties. This is because the degree to which the rule of law was established was satisfactory and consequently the rules were enforceable. Yet, the presentation of the rules has revealed that these rules may leave some scope for opportunism (as in the case of the penalty provisions). Moreover, contractual institutions may only confine

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<sup>197</sup> cf. Water Authority of Jordan, 1999, General Conditions, p.20ff.

<sup>198</sup> cf. World Bank, 2007, p.5

<sup>199</sup> cf. Water Authority of Jordan, 1999, General Conditions, p.40ff.

<sup>200</sup> Rothenberger, Dieter, 16.09.07

what they have actually stipulated. But, as it has been mentioned before, contracts are necessarily incomplete. Conclusively, the lack of political checks and balances was only partly compensated by the specific regulatory constraints. The following section will assess if international institutions put constraints on the contracting parties as well.

#### *7.1.4 International Institutions Affecting a PSP in the Water Sector*

##### *7.1.4.1 Submission to International Economic Institutions (I.1)*

Besides national institutions, also international institutions may put constraints on the discretion of the parties of a PSP. On 11<sup>th</sup> April 2000 Jordan was formally admitted as a member of the World Trade organization (WTO).<sup>201</sup> By its association with the WTO, being a “legal and institutional foundation of the multilateral trading system”, the country submitted to major agreements such as the General Agreement on Trade in Services (GATS).<sup>202</sup> The GATS puts obligations on its members regarding transparency, domestic regulations, business practices etc. Another function of the WTO is to set rules and procedures for the settlement of disputes among its members.<sup>203</sup> From 1989 onwards Jordan’s economic policies were strongly influenced by its request for financial support from the International Monetary Fund (IMF) of which Jordan is a member. Following the development of a structural adjustment programme, Jordan opened up capital markets, passed a new investment law, took steps towards privatization in the infrastructure sector, and modernized the transportation and communication infrastructure.<sup>204</sup> In 1998, a study assessed the ‘business friendliness’ of Middle Eastern countries and accredited Jordan the highest overall score (along with Lebanon).<sup>205</sup> While having avoided to reform also the administrative and political framework for investors in the 1990s, King Abdullah II, following his accession to the throne in 1999, eventually announced political and administrative reforms. An effective implementation of these reforms, however, remains to be seen.<sup>206</sup> Jordan’s strong interest in international trade and investment is further demonstrated by its engagement in the World Economic Forum (WEF), where Queen Rania of the Hashemite Kingdom of Jordan is a member of the foundation board. The regional initiative ‘WEF on the Middle East’ had its founding session in Jordan and more conferences by the WEF took place in Amman afterwards.<sup>207</sup>

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<sup>201</sup> cf. Day, Alan J., 2006, p.624

<sup>202</sup> Sweis, Rateb, 2002, p.298

<sup>203</sup> cf. Sweis, Rateb, 2002, p.299f.

<sup>204</sup> cf. Loewe, Markus, 2007, p.152/ Baaklini, Abdo; Denoeux, Guilain; Springborg, Robert, 1999, p.161

<sup>205</sup> cf. Kanaan, Taher H., 1999, p.80

<sup>206</sup> cf. Loewe, Markus, 2007, p.152ff.

<sup>207</sup> cf. <http://www.weforum.org>

Jordan's obvious efforts to open up its economy and to encourage investments are a clear evidence for the government's concern about its reputation with international investors. This concern and the legal liability of international economic institutions comprehensively constrained the potential for opportunism of political and administrative actors. The reason for this is that an exploitation of LEMA or other serious actions of opportunism would have diminished the willingness of international firms to invest in the country. Moreover, if along with the opportunistic action also international economic institutions would have been violated, the government might have been subject to penalties. The liability of international economic institutions was also true for the private contracting party and thus constrained its discretion as well, e.g. by stipulating dispute resolution procedures.

#### *7.1.4.2 International or Bilateral Monitoring (I.2)*

Restrictions on the discretion of the contracting parties may finally stem from formal or informal international monitoring. International organizations or other governments that are providing loans or financial assistance are most likely interested in how the money and assistance they provided is being used. Thus, they will engage in some kind of formal or informal monitoring. The Amman MC was – as mentioned before – financed by a World Bank loan and was embedded in the Amman Water and Sanitation Management Project (AWSMP) that involved further donors (USAID, KfW, EIB, Italy). In the project agreement on the AWSMP between the World Bank and the WAJ, the Bank laid down that WAJ shall “afford the Bank a reasonable opportunity to exchange views” on progress of project and WAJ performance and shall “promptly inform the Bank of any condition which interferes or threatens to interfere with the progress of the project”.<sup>208</sup> In addition, copies of reports, work programs and budgets had to be furnished to the Bank. Similar mechanisms applied with regard to the other donors of the AWSMP. Besides loans, financial assistance was also provided in the form of grants. The European Union (EU) financed the set-up and operation of the Programme Management Unit (PMU). One EU representative was sitting in the Executive Management Board of the PMU and was thus involved in the decision-making process and the approval of annual operational plans.<sup>209</sup> The finance agreement between the two parties determined that the responsibility of the EU was to monitor and audit the unit's performance.<sup>210</sup> Finally, the GTZ (German technical cooperation) had provided technical assistance for the preparation of the contract. However, the agency was not involved into the implementation of the contract and thus did not have noticeable effect on the room for opportunism of the contracting parties.

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<sup>208</sup> World Bank, 1999, p.2

<sup>209</sup> Dahiyat, Iyad, 01.11.07

<sup>210</sup> Oweis, Munir, 19.09.07

The donors that were involved in the transaction through financial assistance obviously monitored the performance of the contracting parties, but monitoring agreements existed only for the performance of the public side. Interviewees rated the influence of donors on the discretion of political and administrative actors as high. It was stated that if LEMA had encountered serious problems through opportunistic behaviour by its public partner, the firm could have turned to the World Bank. Furthermore, the view was advanced that donor pressure was a corner stone that was prevented arbitrary interference into the water sector. Without this kind of control, it was voiced, employees would not have been able to achieve their goals.<sup>211</sup>

To conclude, Jordan's status as a semi-rentier economy par excellence and its resulting strong dependence on international investments and rents generated significant commitment of political and administrative actors to the contract.<sup>212</sup> Hence, international institutions considerably reduced the incentives and potential for opportunistic behaviour and made it very likely that the public partner was willing to cooperate with the private partner.<sup>213</sup> The discretion of the latter was also constrained by international institutions, yet to a minor extent than the public side. The constraints that influenced the private operator were on the one hand international economic institutions like the WTO regulations. On the other hand, the international awareness of the contract and of the performance of each party made it desirable for the private firm to show commitment in order to maintain a good international reputation.

#### *7.1.5 The Institutional Framework in Jordan*

The examination of the institutional framework in Jordan has firstly revealed that the degree of the rule of law was satisfactory for the requirements of the case under observation. This confinement has to be made as the author assessed the rule of law partly from the perspective of international investors. This study did not investigate if rule of law was also satisfactory from the perspective of the country's citizens or local businesses. Moreover, weak judicial institutions may be supplemented by international institutions, which enhance the enforcement of specific constraints. It can therefore be stated that judicial institutions were capable of enforcing both substantive restraints and restraints on system changes and that international institutions further enhanced the enforcement of specific constraints. That means that mechanism (c) was established.<sup>214</sup>

With regard to the political institutions in Jordan it was found that political checks and balances were insufficient to stabilize the legislation for the water sector. In other words, formal or informal restraints on changing the regulatory

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<sup>211</sup> Interviewee, anonymous

<sup>212</sup> Meuss, Marina, 01.11.07

<sup>213</sup> Bröning, Michael, 22.10.07

<sup>214</sup> cf. chapter 4.2

system were missing (mechanism (b)). This lack may be compensated by non-legislative constraints. However, neither civil society monitoring nor an institutionalized consensual process were circumscribing the discretion of the contracting parties. Of the regulatory institutions (mechanism (a)), only the specific rules fixed by contract law were able to put constraints on the discretion of the contracting parties. The regulatory competence in the Jordanian water sector therefore can be seen as weak.

Important constraints that were capable of safeguarding the PSP came from outside the country in the form of international economic institutions and international monitoring. However, this shows that opportunistic action is primarily constrained in situations, where it becomes visible for international organizations. This is the case when it is either observable through monitoring or when opportunistic action prompts one of the parties to voice its complaints through arbitration or other means that make it public. It is assumed that the latter occurs whenever the opportunistic action is of a significant degree.

Before summing up the concrete potential for opportunism of each party, first the relationship between the two parties will be recalled. The regulator in a management contract is generally in a stronger position than the operator, since the regulator has the power – no matter if justified or not – to withhold payments or to deduct liquidated damages. To obtain its right in case of unjustified penalties, the operator would need to go to arbitration or file a suit, which brings about costs. These costs include also costs for damages of the operator's reputation, as legal disputes of a firm with a government may decrease the willingness of other governments to contract it, even when the firm wins the dispute. It is therefore likely that the operator will not take legal measures if the costs are higher than those that arise from the opportunistic action by the public party.

With regard to the incentives and potential for opportunism of *the private operator*, the following could therefore be projected: The contractual rules put strong constraints on the operator, as these rules were likely to be enforced, due to the potential of the operator to penalize breaches of these rules, the existence of the rule of law and international constraints. Room for opportunism of the private operator remained, where the contract made no stipulations or where opportunism was not observable to the public party due to an information asymmetry.

With regard to the incentives and potential for opportunism of *political and administrative actors*, the following could be projected from the institutional framework: The discretion of political and administrative actors was mainly constrained by contractual rules, the existence of rule of law and international institutions. The irregularities in administrative law principally left much discretion to political and administrative actors, especially on a top-management level. Hence, in this setting, room for opportunism remained, where no rules were stipulated and where the breach of contractual rules did not become visible to international agencies and did not prompt the operator to take measures that made the opportunistic action public.

The following chapter investigates to which extent opportunistic action actually occurred and if administrative capabilities were sufficient so that monitoring and enforcement mechanisms could be effective.

## **7.2 Intermediary Variable: Regulatory regime/Transaction situation**

The previous examination of the institutional framework has shown that the incentives and potential for opportunistic behaviour were not fully constrained. The projections that were made based on the information about the institutional environment, will now be tested by scrutinizing the degree of occurrence of opportunistic behaviour of both parties and the effectiveness of monitoring and enforcement mechanisms.

### *7.2.1 Degree of Occurrence of Opportunistic Behaviour by Political/Administrative Actors and the Private Operator (R.1)*

One incidence of opportunistic action may be a renegotiation of the contract that is pushed through by one of the contracting parties but is to the detriment of the other. Yet, some degree of renegotiation is desirable, as not all eventualities may be foreseen at the time of the set-up of the contract. Therefore, if renegotiations have occurred it is necessary to investigate their quality and impetus to find out if they are a matter of flexible adaptations or opportunistic renegotiations.<sup>215</sup> In the case of the Amman MC after the audit of the first contract year, the parties recorded in a memorandum of understanding that “factors external to the contract [...] may have had an impact on the ability of LEMA to achieve certain contractual performance standards”.<sup>216</sup> It was fixed that it should be investigated if these external factors could be addressed or if targets should be redefined. In a subsequent memorandum of understanding the PMU acknowledged that due to an inadequate net supply capacity of bulk water to the utility, the potential of LEMA to reduce the unaccounted-for-water and to improve the constancy of supply had been limited.<sup>217</sup> Thus, it was amicably agreed to adjust the performance targets. This amendment can therefore be seen as a flexible adaptation to unexpected external problems and highly demanding performance standards.<sup>218</sup> Other amendments to the contract stipulated its extension from four years to the final period of seven years and five months and additional tasks for LEMA with regard to the implementation of the Capital Investment Programme. But these two amendments also cannot be delineated as opportunistic renegotiations as LEMA received additional

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<sup>215</sup> cf. Rothenberger, Dieter, 2004, p.24/36

<sup>216</sup> Programme Management Unit, 2001, p.2

<sup>217</sup> cf. Programme Management Unit, 2002, p.1

<sup>218</sup> cf. Rothenberger, Dieter, 2006, p.8



compensation for its extended efforts. No further amendments or unilateral changes have been attempted.<sup>219</sup>

With regard to contractual violations, it was found that no party sought arbitration or went to court. Still, one clear infringement of the contract occurred in connection with the seconded personnel that was released from its work at WAJ to work for LEMA. The contract had stipulated that LEMA was allowed to transfer 50% of this inherited personnel back to WAJ. Yet, after the first contract year when LEMA had returned 20% of it, WAJ refused further staff transfers. Thus, the operator was prevented from exercising its right, but nevertheless did not go to arbitration on this issue. In the following LEMA reduced its personnel mainly through retirement.<sup>220</sup> One interviewee uttered the estimation that due to the problem that 'Wasta' and 'clientelism' were inherent to Jordanian's bureaucracy, LEMA presumably had experienced further problems in terms of personnel decisions.<sup>221</sup> This assumption was confirmed by another interviewee, who was informed about an incident, in which one minister put pressure on LEMA to hire a sizable amount of the minister's clients. It was said that subsequent to this move the minister overruled a decision by WAJ to deduct liquidated damages from LEMA's compensation.<sup>222</sup> From the side of the private operator no infringements of the contract were reported. The operator made the input that it was obliged to make and reported according to the regulations to the PMU.<sup>223</sup>

An incident that was no clear breach of the contract but nevertheless induced a disagreement between the contracting parties was the delay of the capital investment programme (CIP). The contract envisaged that the programme for the rehabilitation and restructuring of the network ought to be finalized within the second contract year, but this stipulation was not binding.<sup>224</sup> The same applied to the delivery of a customer information system. LEMA complained that the delay of these programmes affected its ability to achieve the contractual targets, such as the unaccounted-for-water target and the accounts receivable target, as for example some rehabilitation was done in the network while LEMA was operating it.<sup>225</sup> The delay itself actually did not constitute a form of opportunism by the public party, as it was not to its own advantage. However, the WAJ did not acknowledge that the operator's performance was negatively affected by this time lag. In the before-mentioned memorandum of understanding on the revision of performance standards for the third contract year, it solely admitted a detrimental effect by an inadequate net supply capacity.<sup>226</sup> In this connexion, the institutional arrangement that furnished the

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<sup>219</sup> Rothenberger, Dieter, 16.09.07

<sup>220</sup> cf. Abu-Shams, Ibrahim; Rabadi, Akram, 2003, p.168f./ Interviewee, anonymous

<sup>221</sup> Interviewee, anonymous

<sup>222</sup> Interviewee, anonymous/cf. Suleiman, Rebhieh, 2002, p.33

<sup>223</sup> Rothenberger, Dieter, 16.09.07

<sup>224</sup> cf. Water Authority of Jordan, 1999, Appendix 16, p.3

<sup>225</sup> cf. Suleiman, Rebhieh, 2002, p.30/45

<sup>226</sup> cf. Programme Management Unit, 2002, p.1f.

WAJ with the authority to calculate the performance incentive compensation (upon recommendation of an independent auditor) proved problematic. The power of WAJ to determine the reasons for the non-achievement of targets and the amount of liquidated damages, provided it with a significant discretion.<sup>227</sup> Correspondingly, the partiality of WAJ in setting the liquidated damages gave rise to frictions.<sup>228</sup>

Reportedly, especially in the first years of the contract various other frictions occurred at those points, where the operator was dependent on the cooperation of the regulator, such as personnel and procurement.<sup>229</sup> LEMA complained about the government's mentality as well as long and tedious procedures in the cooperation with the public party.<sup>230</sup> Interviewees related the regulator's initial opposition to the contract to its unawareness of what the chosen contract option was able to deliver and to the fact that not the government but donors had initiated the PSP.<sup>231</sup> The opposition to the contract by some employees, which feared to lose from this arrangement, combined with an insufficiently constrained discretion of political and administrative actors, thus resulted in opportunistic behaviour, like the delay of approvals to billings handed in by LEMA. Repeated replacements by LEMA of its own top-management may also indicate a problematic relationship with WAJ. However, this situation improved after some time, when the PMU had taken up its work, regular meetings had been established, and LEMA had delivered the first improvements.<sup>232</sup>

### *7.2.2 (In-) Effective Monitoring and Enforcement Mechanisms (R.2)*

The contract provided for ample monitoring and reporting requirements,<sup>233</sup> which were perceived not only as sufficient, but were increasingly recognized as excessive and time-consuming obligations.<sup>234</sup> Notwithstanding this, interviewees reported that the monitoring procedure was not satisfactory in terms of the collection ratio, as the meter readers possessed an information monopoly. The information was important because the collection ratio partly determined the performance incentive compensation for the operator. However, the problem was solved through an increased automation in meter-reading through handheld-units.<sup>235</sup> The described lack of transparency might have provided potential for opportunism by the private operator. Another opportunity for

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<sup>227</sup> Rothenberger, Dieter, 16.09.07

<sup>228</sup> Rothenberger, Dieter, 16.09.07

<sup>229</sup> Meuss, Marina, 01.11.07

<sup>230</sup> cf. Suleiman, Rebhieh, 2002, p.30

<sup>231</sup> Meuss, Marina, 01.11.07/ Rothenberger, Dieter 16.09.07/Dahiyat, Iyad, 29.10.07

<sup>232</sup> Rothenberger, Dieter, 16.09.07/Oweis, Munir, 19.09.07/Dahiyat, Iyad, 29.10.07

<sup>233</sup> cf. chapter 7.1.3, S.4

<sup>234</sup> Meuss, Marina, 01.11.07/Dahiyat, Iyad, 29.10.07

<sup>235</sup> cf. Rothenberger, Dieter, 2004, p.36/Rothenberger, Dieter, 16.09.07/Oweis, Munir, 19.09.07/ Meuss, Marina, 01.11.07

opportunism was given to LEMA in the first year of the contract, when the PMU had not yet started its full operations and thus no monitoring took place.<sup>236</sup> However, in both these cases – due to the nature of the setting – it could not be verified, if the operator also exploited this situation.

The administrative capabilities of the PMU as the monitoring unit were at some points weak as the unit had been newly set up and as its personnel had little experience with respect to the required tasks. However, this initial lack was mostly outweighed by the engagement of external auditors for the annual review of the operator's performance. Thus, no major imbalance came about between the regulator and the operator.<sup>237</sup> The enforcement of the contract has been effective as the incentive payments and penalties were sufficient instruments to achieve compliance by LEMA.<sup>238</sup>

Conclusively, it has to be conceded that the reported incidents of opportunism give only an idea of the degree of opportunistic behaviour that has actually taken place during the contract period. The causes for this lie within the nature of the forms of opportunistic behaviour that were insufficiently constrained by the institutional framework. It was projected that opportunism by the operator was likely especially in those areas, where the public party could not observe it. This lack of transparency occurred with regard to the first contract year and to the collection ratio. However, due to its unobservability by the operator and just as well to international organizations, no information about incidents of opportunism by LEMA could be obtained. With regard to opportunistic behaviour by the public side, the state of information was better. It was projected from the institutional framework that opportunistic action by the public party could occur, when it was not visible to international organizations and was not of a degree upon which LEMA would decide to take measures that make it public. This assumption was confirmed by the reported incidents of opportunism. One clear infringement of the contract concerning the transfer of personnel did not prompt LEMA to go to arbitration, for unknown reasons. Another incident, the far-reaching clientelism by one minister, was apparently reciprocated by the cancellation of liquidated damages. Further concrete opportunistic action could not be named, yet it was stated that in the first contract years, WAJ was not cooperative and the relation between the contracting parties was affected by frictions, especially regarding the incentive payments. However, the mentioned serious incidents of opportunism – of which most interview partners were not aware of – make it quite likely that more of this kind of action had occurred.

In summary, opportunistic behaviour in the Amman Management Contract was of a hidden nature. This is coherent with what was predicted from the institutional framework: namely, that no widely observable opportunistic action would arise, but that the weak regulatory framework had still left significant

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<sup>236</sup> Dahiyat, Iyad, 29.10.07

<sup>237</sup> Rothenberger, Dieter, 16.09.07

<sup>238</sup> Zoubi, Kamal 17.09.07/Dahiyat, Iyad, 29.10.07

room for opportunism to political and administrative actors. The following chapter evaluates the performance of the private operator upon which the thesis will be summarized and the validity of the asserted hypotheses will be checked.

### **7.3 Dependent Variable: Performance of the Privately Operated Water Utility**

The Programme Management Unit tracked 15 indicators as key targets, drawn from the more comprehensive performance indicator agreement of the contract including 55 performance targets. The 15 key indicators are explained in the following (marked with \*), supplemented by some additional information.

The constancy of supply was increased from 8 hours on average per week to 36 hours per week in peak season and 48 hours in off-peak season, thus fulfilling the revised performance target.\* This increase was achieved despite the influx of a large number of refugees from Iraq and an insubstantial increase in bulk supplies.<sup>239</sup> A clear delivery schedule, moreover, produced certainty for the customers.<sup>240</sup> The water quality was improved from a good quality to a very high standard and remained stable on a level exceeding the MWI's quality standards.<sup>241</sup>

To improve inefficient customer services and public information, the operator established and operated a state-of-the-art computerized customer call centre,\* which was widely praised.<sup>242</sup> The operator set up three regional repair and maintenance shops with a 24-hour service.<sup>243</sup> This enabled LEMA to reduce the response time for repairs of water and sewerage malfunctions to 1,6 hours, while the target merely had been a reduction to 6 hours.\*<sup>244</sup>

The staff productivity was increased from 5.6 to 3.4 staff per thousand water accounts (target was just 4.0).\* The network was digitally mapped to 100%,\* a hydraulic computer model was developed and staff trained in its use,\* and a computerized information system was developed and operated.\* Operating and maintenance procedures were improved to international standards\* and 250,000 water meters were renewed (target was 200,000).\* A digitally-based leak detection and repair program was implemented and well run,\* and a preventive maintenance programme completed\*.<sup>245</sup>

Assessment problems occurred with regard to two targets. Concerning the energy consumption, an energy management plan was submitted as obliged,

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<sup>239</sup> cf. World Bank, 2007, p.7

<sup>240</sup> Rothenberger, Dieter, 16.09.07

<sup>241</sup> cf. Rothenberger, Dieter, 2006, p.9/cf. Bankworld Inc, 2007, p.50

<sup>242</sup> Oweis, Munir, 19.09.07/Zoubi, Kamal, 17.09.07/Meuss, Marina, 01.11.07

<sup>243</sup> cf. Bankworld Inc, 2007, p.54f.

<sup>244</sup> cf. World Bank, 2007, p.7

<sup>245</sup> cf. World Bank, 2007, p.7f./cf. Bankworld Inc, 2007,p.48f.

but the reduction of power consumption could not be meaningfully measured due to external reasons.\* The evaluation of the reduction in the number of breakdown repairs in the water network was also not feasible as the indicator was fine-tuned later and received a different base year.\* Moreover, the target can be questioned, as it was likely that repairs would increase in the short- and medium-term because of an improved constancy of supply and “in a situation where improved customer service and public information campaigns [encouraged] customers to report leaks and malfunctions”.<sup>246</sup>

The operator failed to achieve one of the primary targets, a reduction in the percentage of unaccounted-for-water (UFW). This was originally supposed to be reduced from 54% to 29%. In a memorandum of understanding the target was revised to 40%, but LEMA accomplished only a reduction to 42% on average.\* However, to LEMA's defence it should be said that in those districts where the network and metering had been upgraded a reduction to 35% was achieved, and in some pilot districts where continuous water supply was realized, the UFW was reduced to 23%.<sup>247</sup> The operator further failed to achieve the target for the collection of accounts receivables (in terms of days of average daily billing) from 269 days to 73 days<sup>248</sup> as it achieved only a reduction to 217 days.\* This failure was partly due to a number of extremely old accounts, which according to Jordanian law may not be written off even though the chance of ever collecting them is small.<sup>249</sup>

To conclude, at the end of the contract LEMA complied substantially with 11 of 15 key performance targets, whereas two targets could not be meaningfully assessed. Distinct improvements were achieved in commercial and administrative respects. Also the technical operations have been improved to some extent. The targets for the reduction of UFW and accounts receivables were missed, but one can argue that they had been set based on questionable estimates, as the inability of the government to guarantee sufficient bulk supply made water supply intermittent and extremely old accounts could not be written off. Apart from that, the operator fulfilled all its obligations and was successful in achieving the goal of the contract, which aimed at an increase in efficiency in terms of increased profitability. The incentive for an efficiency increase was set through the performance incentive compensation (PIC), which was contingent on revenue optimization, improved collection efficiency and cost control. LEMA managed to increase the operational profit from annual losses of approx. 2.7 million Jordanian Dinar (JD)<sup>250</sup> before the implementation of the PSP to an annual profit of about 13.7 million JD.<sup>251</sup> The operator received PICs

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<sup>246</sup> World Bank, 2007, p.8

<sup>247</sup> cf. World Bank, 2007, p.6

<sup>248</sup> The target of 269 days was revised in a later memorandum of understanding, but no reliable information could be obtained on the new target.

<sup>249</sup> cf. World Bank, 2007, p.8

<sup>250</sup> Currency equivalents (effective 12.02.2007): JD 1.00 = US\$ 1.41; US\$ 1.00 = JD 0.71 (World Bank, 2007, p.1)

<sup>251</sup> cf. Programme Management Unit, 2007

for each year of the contract. The overall judgement on LEMA's performance therefore may be rated as good. The following chapter gives a summary of this study, concludes on the validity of the hypothesis and the explanatory power of the theoretical framework and provides some final considerations of the contemplated issues.

## 8 Summary, Conclusions and Final Considerations

This study aimed at investigating the impact of institutional frameworks on private sector participation in water supply and sanitation. For this purpose it was firstly outlined how the concept of institutions is related to water governance and development. It was found that institutions form the framework by which authority is exercised in a country and that this framework is linked to governance outcomes. The demonstrated positive externalities of a sufficient, reliable and safe water supply made clear how important it is for the social and economic development of a country that governments address the shortcomings in water governance. The default to improve water supply and sanitation (WSS) under public service provision led to the promotion of private sector participation. The recent development shows that the mixed experience with private provision has brought about an increase of low-risk PSP arrangements.

In the course of this work, an overview was given on the research that is enquiring the determinants of performance of PSP in infrastructure. Four levels of analysis could be identified: the level of resource allocation and employment, the level of governance, the level of the institutional environment, and the level of institutional embeddedness. As the level of neoclassical economics and the agency theory had been found incapable of explaining the experienced malfunctions of PSP arrangements and the institutional embeddedness is often taken as given (as norms and traditions can hardly be shaped deliberately), the focus was on the middle two levels. On the third level, the transaction cost approach by Williamson points out that the performance of a PSP in terms of its transaction cost efficiency depends on the degree of a (mis)fit between the characteristics of a transaction and its chosen governance structure. The approaches that were introduced for the second level included political economy theory as well as the new institutional economics. Baietti, Kingdom and Ginneken find that a significant degree of autonomy and balanced accountabilities of a utility are important conditions for good performance. Rufin and Romero identify both political and institutional factors as determinants of performance, namely resources, capabilities, as well as institutional structures and the problem of 'time inconsistency in public policy'. The NIE theories of the second level which are based on the transaction cost economics have shifted the focus from the 'play of the game' to the 'rules of the game'. They find that the institutional environment of a transaction has an impact on its cost and performance. The overview of the existing literature showed a lack of research regarding the role of the institutional environment in general and PSP in the water sector specifically and moreover was biased towards approaches explaining mainly the performance of high-risk arrangements. To contribute to filling this gap the derived research question was in how far the institutional environment in a country affects the performance of a privately operated water utility. The NIE approach that was best suited for the methods and scope of this study and with minor changes allowed to be applied to all kind of PSP options was the approach by Levy and Spiller.

Having introduced the concept of institutions, Levy and Spillers framework was presented in detail. They find that three complementary mechanisms are necessary to restrain opportunism by the public side: (a) substantive restraints on regulatory discretion, (b) formal or informal restraints on changing the regulatory system and (c) institutions that enforce both substantive restraints and restraints on system changes. As this view inadequately narrowed the analysis on contractual distortions initiated by the public contracting partner, the framework was adapted to also take into account the impact of institutions on the potential for opportunism by the private partner. Furthermore the approach was expanded to include not only national judicial, political and regulatory institutions, but also international institutions. Thereafter the hypothesis and sub-hypotheses were introduced, which suggested that the performance of a privately operated water utility will be negatively affected, if the discretion of the contracting parties is not sufficiently constrained by the institutional environment.

In a next step the chosen case study of the management contract in Amman, Jordan was justified. The research methodology was presented, setting out the research questions for the case study, data needs and indicators for the independent, intermediary and dependent variable as well as the methods of data collection and data processing. The overview on Jordan's political, economic and social situation, the Jordanian water sector and the pre-privatization situation along with the Amman Management Contract provided the background information for the following findings and interpretations. The section on the management contract moreover explained what kind of incentive structure resulted from the chosen governance structure and the specific transaction situation. The examination of the institutional framework revealed that mainly judicial and international institutions and specific contract rules were constraining the discretion of the contracting parties. Political checks and balances were insufficiently established and the remaining regulatory institutions were leaving room for opportunism. From the assessment of the institutional framework it was thus projected that opportunistic action of the private operator could occur in areas for which the contract made no stipulations or where such behaviour was not observable to the public party due to an information asymmetry. With regard to the public party it was projected that opportunism could occur in areas where no contractual rules were stipulated, where the breach of contractual rules would not become visible to international agencies and would not prompt the operator to take measures that make the opportunistic action public. These projections were confirmed by the assessment of the occurrence of opportunistic behaviour and the effectiveness of monitoring and enforcement mechanisms. No opportunistically motivated renegotiation took place, nor did any contractual violations occur that induced one party to seek arbitration or to go to court. Still, clear incidents of opportunism by political and administrative actors were reported with regard to personnel decisions, but these were not made public and thus were not known to most interview partners. Furthermore, the institutional framework gave rise to frictions on the working level as in the case of the calculation of the PIC by



WAJ and the non-cooperation of the public side in the first contract years. If the room for opportunism for the private partner was also exploited by it, could not be verified as no sources or interview partners were available that could have reported such incidents. The assessment of the dependent variable showed that the performance of the privately operated water utility was good, as eleven of fifteen key targets were fulfilled, whereas two targets could not be meaningfully assessed. The goal to increase the efficiency and the operational profit was also attained. LEMA failed to comply with the target of UFW and accounts receivables. Notwithstanding this clear failure to achieve the targets, it can be argued that they had been set on questionable estimates and their achievement was among other things hampered by an insufficient bulk supply and the legal prescription that prohibits old accounts to be written off. These obstacles along with the non-cooperation of the public side in the first years and the delay of the capital investment programme and the customer information system may also justify that the contract was prolonged without setting more-demanding targets.

Based on the findings of the previous chapter it shall be reviewed now, if the assumptions of the hypotheses could be verified by the case of the Management Contract for Water and Wastewater Services in the Amman Governorate. The sub-hypothesis 1 does not apply to the case, as judicial institutions have been found to sufficiently constrain substantive restraints and restraints on system changes from the perspective of international investors. In addition, international institutions are able to limit the discretion of the actors. The sub-hypothesis 2 does not apply as the lack of checks and balances was found to be (at least regarding major and visible opportunistic action) compensated by the contract and international institutions. The sub-hypothesis 3 also does not apply as one precondition, namely "sufficient checks and balances", was found to be insufficient. The non-applicability of these sub-hypotheses explains why no weak performance has arisen from the institutional framework in Jordan. Still, the concrete hypothesis projected that an improper establishment of the three mechanisms (a), (b) and (c)<sup>252</sup> would leave potential for opportunism by the contracting parties, which could negatively affect the performance of the utility. It was also assumed that a lack in some institutions may be compensated by other constraints better if a number of them are established. In Jordan, especially a lack of checks and balances was discovered. This lack was neither constrained by informal constraints nor an institutionalized consensual process. The only institutions that were putting constraints on the resulting discretion of political and administrative actors were the contract and international institutions. But what is important to realize is that the problem in Jordan was not only the instability of regulation that resulted from the lack of checks and balances. The regulation in the water sector itself, i.e. its administrative structure, was already improperly established. The unclear

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<sup>252</sup> (a) substantive restraints on regulatory discretion, (b) formal or informal restraints on changing the regulatory system, (c) institutions that enforce both the substantive restraints and restraints on system changes

allocation of responsibilities left significant discretion to individual actors especially at the top level. That this discretion was used in an opportunistic way, defined earlier as the 'pursuit of self-interests by one transaction partner with the aid of cunning', was indicated by the reported incidents. To be precise, in Jordan, the 'pursuit of self-interest' did not occur in terms of a joint opportunism by the personnel of a water sector entity to the advantage of the entity or the sector or the country as a whole, which in general may be the case. Opportunistic action was rather of a corrupt nature and pursued by single actors to their own advantage. As such kind of opportunism needs to be pursued in a more or less hidden way, the actors needed to make sure that it was not made public by the partner. This may have been reached, as in one of the cases outlined, by compensating the partner for effects on its performance. But even if in the end both parties profit from opportunism, this can have a detrimental effect on the performance of the PSP. In the case of the Amman MC it is likely that the refusal to allow staff to be transferred back and the employment of a significant number of staff independent of its qualification have negatively affected the quality of the human resources of the private operator. The possibility that the private operator has learned the rules of this game may be one of the reasons why the relation between the public and the private side has improved over the period of the contract.

I therefore come to the conclusion that the general hypothesis could neither be denied nor clearly confirmed by the case study. This is because the performance of the privately operated water utility was good, and there was no evidence which suggested that the two targets that were not reached would have been achieved without the incidents of opportunism. Despite this lack of empirical evidence in form of direct links, it is likely that the opportunism regarding the operator's human resources had a negative effect on its performance as some personnel was not as qualified as it could have been if it had been recruited competitively from the market. Also some frictions could have been avoided by assigning the authority for the calculation and definition of the PIC to an independent auditor. Finally, the projections made from the assessment of the institutional framework have been confirmed by the actual incidents of opportunism. This suggests that the general hypothesis contains some truth. A large-scale research with several case studies could be a solution here by providing some counter-checks.

However, with regard to the explanatory power of the theoretical framework some limitations need to be acknowledged. Two aspects that were found to have a detrimental effect on the PSP arrangement could not be adequately analyzed by the new institutional economics theories. The non-cooperation of administrative actors with the private operator in the first years was attributed to the unawareness of the administrative actors what the chosen contract option is able to accomplish and the fact that the PSP was to a significant part a result of pressure by donors. Thus, opportunistic behaviour in form of non-cooperation (e.g. by unnecessarily slowing down administrative processes) did neither originate from an insufficiently constrained discretion, nor could this

behaviour have been adequately constrained by institutions. At such points the political economy theories are better suited to provide explanations and solutions for factors that have a detrimental effect on PSP arrangements.

Also with respect to the transferability of the findings of the case study to other PSPs and countries some limitations remain. International institutions have played an extremely important role in Jordan, which cannot be presumed offhand for other developing countries. Due to its lack of national resources and a weak economy, Jordan is highly dependent on international rents and investments and cannot risk putting off donors and international investors. This means, that even if a country is submitted to comparable international economic institutions and the PSP under observation is financed internationally, this does not necessarily mean that these institutions have a similar constraining effect on the discretion of the contracting parties. Moreover it needs to be acknowledged that in Jordan despite an insufficient separation of powers and a lack of political checks and balances much of the unrestrained discretion was limited to the king. Consequently, this setting provided some stability, as the king's policies regarding international rents and investments are unlikely to change as long as the country has the status of a semi-rentier economy. This means e.g. that whenever the judiciary of a country is found not to be independent, it is still important to assess which and how many actors may influence it and how these may be deployed and replaced. But not only is the transferability of the findings to other *countries* limited. Also with regard to other PSP arrangements in Jordan that are not involving international companies and are not financed internationally, the institutional framework looks already very different. Without the impact of international institutions on the discretion of the actors the administrative structure and proceedings may prove to cause a significant commitment problem by the public side. These examples show that the concrete findings are not easily transferable, but rather that for each transaction the specific situation of a country and the particular institutional framework needs to be assessed. Moreover does the chosen PSP option make a difference. In high-risk arrangements the incentives for opportunism are higher and the lock-in of the contracting parties is stronger so that the discretion of the actors needs to be more thoroughly restrained. For Jordan under the outlined institutional framework it can be doubted that a higher-risk arrangement like a concession would have shown a good performance. This can be assumed because of the weak regulatory framework and the opportunities for political interference into the sector. Likewise it can be doubted that Jordan in general is able to attract such investments under the present institutional environment. This assumption is further supported by the behaviour that bidders showed in the case of the Amman Management Contract. Although a management contract already possesses a limited potential for opportunistic action and although the fixed fee and the PIC was financed by the World Bank (thus adding to the security of the compensation), the bidders decided to bid for a very low if not the minimum PIC. Another indication for the risk aversion of private operators in Jordan is that a tendered management contract for the Northern Governorates received only one bid.

After being replaced by a Management Consultant Contract, for which the risk tends to zero, the contract received many bids.<sup>253</sup>

While the presented theoretical framework was designed to be applicable to various countries and PSP arrangements, the case study suggests that the specific findings (like the role of international institutions) cannot be transferred easily to other countries. This is because the institutions may not be seen as independent building blocks but rather form a network which is likely to be unique for each country. The application of the framework to other countries and PSP arrangements therefore demands each time a complex assessment of the respective institutional environment. But the case study gives one important insight which may be generalized: regulatory credibility may be developed even in unpropitious environments.<sup>254</sup> In Jordan a good performance was achieved despite the incomplete independence of the judiciary, despite a lack of checks and balances and despite a weak regulatory framework. To be able to increase the chance for the good performance of a planned arrangement, it is advantageous for governments to be aware of the strengths and weaknesses of their own institutional environment. When governments are aware of these aspects they are able to choose either a PSP option for which the institutional framework brings about sufficient constraints or to adapt the institutional environment in a way that it may sufficiently restrain the desired PSP option.

According to these insights the decision of the government to transfer the operation of the water supply and sanitation in Amman after the end of the LEMA contract to a public company seems risky. While the government's argument that its inability to guarantee bulk water supply would indicate a necessary reversal from the path towards higher-risk PSP may be justified, also the resulting changes of the institutional framework need to be rethought. For the public company 'Miyahuna' the strong constraining effect of international institutions may cease to apply. If a Jordanian water company, which operates on a commercial basis and is provided with a more transparent governance structure, can protect itself against the influences of 'Wasta' and clientelism remains an open question. 'Wasta' as a structural feature of Jordan's political, social and economic system is a key obstacle to regulatory credibility in Jordan since with the aid of 'wasta' institutions may be bypassed and legal frameworks may be influenced.<sup>255</sup> But the "reliance on personal relationships is less a reflection of tradition than it is a result of the novelty and instability of formal, impersonal institutions and relations".<sup>256</sup> Thus, 'wasta' should not be regarded as a feature that is inherent to the Jordanian culture, but rather as a vestige of a society that has been organized a different way. Making institutions reliable and stable is the responsibility of politics, whereas the royal court itself hampers this development by allowing e.g. elite rotation to manifest its power. This

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<sup>253</sup> Dahiyat, Iyad, 29.10.07

<sup>254</sup> cf. Levy, Brian; Spiller, Pablo T., 1994, p.201

<sup>255</sup> cf. Loewe, Markus, 2007, p.146

<sup>256</sup> Dieterich, Renate, 1999, p.132

brings the regime into a dilemma as the conservation of its power through the sustainment of the loyalty of politically influential groups is opposed to the economic and social development of the country.<sup>257</sup>

From a developmental perspective the Management Contract for Water and Wastewater Services in the Amman Governorate can be rated as a success. The total amount of PICs combined with the total amount of fixed fees paid to the operator was less than 15 million JD. This means, that the profit created by the contract was many times over its costs, whereas additional finance was provided for the rehabilitation of the network. But also with regard to the whole Amman Water and Sanitation Management project, which included the Capital Investment Programme, the World Bank rates the efficiency of the project as high.<sup>258</sup> The financial burden on the government was reduced as the cost-recovery was significantly improved. The impact of the project on the poor was also positive. The rise in water connections from about 90% to practically 100% especially concerns the poor as these are usually "the last to be connected to piped water".<sup>259</sup> The same applied for sewer connections which increased from 69% to 80% of the population.<sup>260</sup> The increase of the hours of supply is also of relevance for the poor as these can afford only smaller water tanks to store water when the supply is intermittent.<sup>261</sup> The increase in the quality of drinking water reduces the health risk of the population, but again disproportionately benefits the poor as these have less economic means to pay for alternative and safer drinking water sources. However, in terms of the sustainability of the project the success has to be rated as lower. This is because the water supply and sanitation systems in Amman remain dependent on foreign financing of its investments.<sup>262</sup> Furthermore, "urban water demand is projected to almost double by 2020".<sup>263</sup> The demographic development will be a big challenge for a country where scarce water resources allow already only for an unsatisfactory bulk supply capacity.

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<sup>257</sup> cf. Loewe, Markus, 2007, p.142

<sup>258</sup> World Bank, 2007, p.9

<sup>259</sup> Ringskog, Klas; Hammond, Mary Ellen; Locussol, Alain, 2006, p.2

<sup>260</sup> World Bank, 2007, p.9

<sup>261</sup> Rothenberger, Dieter, 16.09.07

<sup>262</sup> World Bank, 2007, p.18

<sup>263</sup> Meuss, Marina; Stoll, Uwe; Barmeier, Nina, 2006, p. 4

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## Annexes

### Annex I: Variables, Indicators and Measurements

TABLE 1: INDICATORS AND MEASUREMENTS FOR THE INDEPENDENT VARIABLE "INSTITUTIONAL ENVIRONMENT"

Independent variable		Indicators	Measurements
Judicial institutions	Existence of rule of law	J.1 Independence of the judiciary	<ul style="list-style-type: none"> <li>Appointment of judges does not lie in the sole responsibility of the executive</li> <li>Extent of perceived corruption in the judiciary</li> <li>Occurrence of former courts' decisions against the government</li> </ul>
		J.2 Protection of property rights	<ul style="list-style-type: none"> <li>Tradition of efficiently upholding property rights</li> </ul>
Political institutions	Legal constraints on the discretion of the executive	Po.1 Checks and Balances	<ul style="list-style-type: none"> <li>Existence of a constitution</li> <li>Full separation of powers</li> <li>Two legislative houses elected under different voting rules</li> <li>Electoral system with proportional representation</li> <li>Federalism with strong decentralization</li> </ul>
Regulatory institutions	Administrative constraints on the discretion of public and private contracting parties	S.1 Proper juridification of the water sector	<ul style="list-style-type: none"> <li>Existence of specialized government agencies for the regulation of the water sector</li> <li>Clear responsibility assignment among regulating agencies in the water sector</li> <li>Autonomy of the regulator</li> </ul>
	Informal constraints on the discretion of public and private contracting parties	S.2 Informal (civil) society monitoring	<ul style="list-style-type: none"> <li>Degree to which the civil society is organized</li> <li>Degree to which the civil society is consulted as a stakeholder</li> <li>Coverage and discussion of water sector policies and outcomes in the press</li> <li>Realization of public awareness campaigns by public or private contracting party</li> <li>Resignations of politicians from office as a consequence to malfunctions in the water sector in the past</li> </ul>
	Process constraints on the discretion of the public contracting party	S.3 Institutionalized consensual processes	<ul style="list-style-type: none"> <li>Institutionalized process of argumentation and consensus formation in the water sector regulation</li> </ul>
	Specific regulatory constraints on the discretion of public and private contracting parties	S.4 Specific regulatory constraints	<ul style="list-style-type: none"> <li>Complex specific rules for the water sector (price-setting procedures, conflict resolution procedures, arbitration mechanisms, monitoring systems, penalty provisions, performance incentives)</li> </ul>
International institutions	International constraints on the discretion of the public and private contracting party	I.1 Submission to international economic institutions	<ul style="list-style-type: none"> <li>Application for, or membership in international economic organizations</li> <li>Policies favouring foreign investment and trade</li> </ul>
		I.2 International or bilateral monitoring	<ul style="list-style-type: none"> <li>Loans from development organizations for the transaction which involve monitoring</li> <li>Other international/ bilateral involvement in the transaction which entails (in)formal monitoring (such as technical assistance)</li> </ul>

TABLE 2: INDICATORS AND MEASUREMENTS FOR THE INTERMEDIARY VARIABLE "REGULATORY REGIME (TRANSACTION SITUATION)"

Intermediary variable		Indicators	Measurements
Regulatory regime/ Transaction situation	Incentives and potential of political/administrative actors and the private operator to manipulate or exploit the contract	R.1 Degree of occurrence of opportunistic behaviour by political/administrative actors and the private operator	<ul style="list-style-type: none"> <li>• (No) Push for renegotiation of the contract by either side</li> <li>• (No) Unilateral changes of the contract by political/administrative actors</li> <li>• (No) Attempts by political/administrative actors to unilaterally change the contract</li> <li>• (No) Contractual violations by either side</li> <li>• (No) Failure by private operator to report regularly and properly to the regulator</li> <li>• Quality of disagreements between political/admin. actors and the private operator</li> </ul>
		R.2 (In-) Effective monitoring and enforcement	<ul style="list-style-type: none"> <li>• (In-)Sufficient mechanisms to overcome information asymmetries</li> <li>• (In-)Sufficient administrative capabilities to properly monitor the operator and to apply stipulated enforcement mechanisms</li> </ul>

TABLE 3: INDICATORS AND MEASUREMENTS FOR THE DEPENDENT VARIABLE "PERFORMANCE OF THE PRIVATELY OPERATED WATER UTILITY"

Dependent variable		Indicators	Measurements
Performance of the privately operated utility	Operator's success/ failure to fulfil obligations and to attain goals and targets set in the contract	Pf.1 (Non-) Compliance of results with contractual obligations, goals and targets at the end of the contract	<ul style="list-style-type: none"> <li>• Comparison of obligations/ goals/ targets stated in the contract with output/ outcome of the transaction</li> </ul>

## **Annex II: Interview Partners**

**Ali**, Nabeel B.

National Democratic Institute, Jordan office, Resident Programme Assistant

05 November 2007

**Bröning**, Michael

Friedrich Ebert Foundation, Resident Representative

22 October 2007

**Dahiyat**, Iyad Eng.

Programme Management Unit (PMU), Governorate Support Manager

29 October 2007, 01 November 2007

**De Winter**, Annemie

Friedrich Naumann Foundation, Director

05 November 2007

**Meuss**, Marina

GTZ (German technical cooperation), Interim Programme Manager

Water Programme, Ministry of Water and Irrigation

01 November 2007

**Oweis**, Munir

Programme Management Unit (PMU), Director

(Former employee of LEMA)-

19 September 2007

**Rothenberger**, Dieter

GTZ (German technical cooperation), Programme Manager

Operations Management Support for the Middle Governorates, Water Authority of Jordan

16 September 2007

**Zoubi**, Kamal Eng.

Miyahuna, Jordan Water Company, Chief Executive Officer

(Public Water Company – successor of LEMA)

17 September 2007



## **Annex III: Interview Questions Addressed to Political Foundations and NGOs**

### **The Impact of Institutional Frameworks on Private Sector Participation**

- The Case of the Management Contract for  
Water and Wastewater Services in the Amman Governorate, Jordan –

**Research Question:** In how far does the institutional framework in a country, composed of its political, judicial, international and regulatory institutions, affect the performance of a privately operated water utility?

### **INDEPENDENT VARIABLE: INSTITUTIONAL ENVIRONMENT**

#### **Judicial Institutions: Existence of rule of law**

##### *J.1 Independence of the judiciary*

1. What are the mechanisms for appointing judges?
2. What is the extent of perceived corruption in the judiciary?
3. Have the courts repeatedly decided against the government?
4. Would you regard the judiciary as being independent?

##### *J.2 Protection of property rights*

1. Is there a tradition of efficiently upholding property rights?

#### **Political Institutions: Legal constraints on the discretion of the executive**

##### *Po.1 Checks and balances*

1. Does a constitution exist?
2. Are the legislative, executive and judicial powers fully separated?
3. Is the legislative bicameral, and if yes have the two legislative houses been elected under different voting rules?
4. Does the electoral system demand proportional representation or a first-past-the-post rule?
5. Is the state federally structured and strongly decentralized?
6. Would you regard the checks and balances as constraining factors for legislative changes of the regulatory system in the water sector?

#### **International Institutions: International constraints on the discretion of the public contracting party**

##### *I.1 Submission to international economic institutions*

1. Has Jordan applied for, or is member in international economic organizations?
2. Are economic policies favouring or restricting foreign investment and trade?
3. Would you regard international economic institutions as constraining factors upon the potential of political and administrative actors to behave opportunistically in interactions with private business? Do you think it also constrains the discretion of the private contracting party?

## **Annex IV: Interview Questions Addressed to Water and Privatization Experts and the Relevant Personnel in the Government**

### **The Impact of Institutional Frameworks on Private Sector Participation**

- The Case of the Management Contract for Water and Wastewater Services  
in the Amman Governorate, Jordan –

**Research Question:** In how far does the institutional framework in a country, composed of its political, judicial, international and regulatory institutions, affect the performance of a privately operated water utility?

### **INDEPENDENT VARIABLE: INSTITUTIONAL ENVIRONMENT**

#### **Regulatory institutions:**

#### **Substantive constraints on the discretion of public and private contracting parties:**

##### *S.1 Administrative constraints: Proper juridification of the water sector*

1. Which specialized government agencies are involved in the regulation of the water sector?
2. Are responsibilities clearly assigned among them?
3. Is the regulator autonomous?
4. Do you consider the water sector as properly juridified, i.e. are regulatory mechanisms sufficient and effective? If not, which improvements would you recommend?
5. Do you think that the mentioned constraints abate the potential for opportunism of public and/ or private contracting party?

##### *S.2 Informal constraints: Informal (civil) society monitoring*

1. What was the degree of public interest in the quality of water and wastewater services?
2. To which degree was the civil society organized?
3. Has the civil society been consulted as a stakeholder?
4. Have water sector policies and outcomes been covered and discussed in the press?
5. Have public awareness campaigns on the developments in the water sector been realized by the public and/ or private contracting party?
6. Have politicians in the past resigned from office as a consequence to malfunctions in the water sector?
7. Do you think that informal (civil) society monitoring abates the potential for opportunism of public and/ or private contracting party?

##### *S.3 Process constraints: Institutionalized consensual process*

1. Is there an institutionalized process of argumentation and consensus formation in the water sector regulation? If yes, do you think that it abates the potential for opportunism of the public contracting party?

*S.4 Specific regulatory constraints: Complex specific rules*

1. Which complex rules do exist for the regulation of the water sector (e.g. price-setting procedures, conflict resolution procedures, arbitration mechanisms, monitoring systems, penalty provisions, performance incentives)?
2. Do you think that any regulations, that should have been established, are lacking?
3. Do you think that these rules abate the potential for opportunism of public and/ or private contracting party?
- 4.

**International institutions:**

**International constraints on the discretion of the public contracting party**

*I.2 International or bilateral monitoring*

1. Are loans from development organizations provided for the transaction, which involve monitoring?
2. Is there any other international or bilateral involvement in the transaction that entails formal or informal monitoring?
3. Do you think the international involvement constrains the discretion of political and administrative actors and/ or of the private operator?

**INTERMEDIARY VARIABLE: REGULATORY REGIME/ TRANSACTION SITUATION**

**Regulatory regime: Incentives and potential of the political/administrative actors**

**and the private operator to manipulate or exploit the contract**

*R.1 Degree of occurrence of opportunistic behaviour by political and administrative actors and the private operator*

1. Have political or administrative actors or the private operator triggered a renegotiation of the contract?
2. Has the contract during its implementation been changed unilaterally by the government?
3. Have political or administrative actors attempted to unilaterally change the contract?
4. Have political/administrative actors or the private operator disregarded contractual rules and obligations?
5. Has the operator regularly and properly reported to the regulator?
6. Have disagreements emerged between political or administrative actors on the one side and the private operator on the other? What was their quality?

*R.2 (In-) Effective monitoring and enforcement*

1. Have the administrative capabilities been sufficient to monitor the operator and to apply the stipulated enforcement mechanisms?

**DEPENDENT VARIABLE:  
PERFORMANCE OF THE PRIVATELY OPERATED WATER UTILITY**

**Operator's success/failure to fulfil obligations and to attain goals and targets set in the contract**

*Pf.1 (Non-) Compliance of results with contractual obligations, goals and targets at the end of the contract*

1. Has the operator fulfilled its obligations and attained the goals and targets set in the contract? (Please give figures/ percentages if possible!)
  - a. Has the quality of services (water quality, constancy of supply, water/ wastewater facilities breakdowns) improved for customers?
  - b. Has the financial situation (cost reduction, increased turnover) improved?
  - c. Has the technical efficiency (water losses, leak detection programme, unaccounted-for-water) improved?
  - d. Has the operational efficiency (billing, collecting, unaccounted-for-water, accounts non-receivable) improved?
  - e. Has the (operation) investment capital been used efficiently and effectively? (maintenance, repair, replacement of 50.000 water meters per year, GIS based information management system)
  - f. Has a Customer Service Office been established? What has been its impact? (response time for leaks repair)
  - g. Has staff been trained and further qualified?
2. Has the operator received the performance-based bonus? How often and what was its amount?
3. How do you judge the overall performance of the water utility while being operated by LEMA?





## **Abstract**

This research examines the impact of institutional frameworks on the performance of a private sector participation (PSP) arrangement in the water sector. The research takes place within the context of a development debate and practice, which identifies water as a key poverty issue in a substantial part of the developing countries, which advocates private sector participation as a remedy to inadequate water management and which acknowledges good governance as a crucial requirement for development. Nevertheless, few studies have scrutinized the impact of governance and institutions on the outcome of PSP arrangements in the water sector. Most research on the performance of PSP arrangements has examined exogenous and endogenous determinants, such as the price mechanism and the property rights allocation, but these factors proved unsatisfactory as explaining variables in the context of natural resource management.

To contribute to filling a gap in research this study aims at evaluating the impact of institutional frameworks on the outcome of private sector participation in water supply and sanitation through a case study of the Management Contract for Water and Wastewater Service in the Amman Governorate, Jordan. The research takes into account the specific institutional framework for the mentioned arrangement in Amman, which is comprised of the national judicial and political institutions, the specific regulatory institutions as well as relevant international institutions. The specific objective of this study is to show how the institutional framework of a transaction affects regulatory processes by abating and amplifying the potential for opportunistic behavior of the contracting parties, and thereby affecting the performance of a privately operated water utility.

The examination of the institutional framework of the Amman Management Contract revealed that mainly judicial and international institutions and specific contract rules were constraining the discretion of the contracting parties. Political checks and balances were insufficiently established and the regulatory institutions of the water sector were set up in an improper way. The field study discovered that the resulting discretionary power of certain actors was used opportunistically, which had a detrimental effect on the outcome of the PSP arrangement. Nevertheless the overall performance of the arrangement was good from which the general insight was drawn that regulatory credibility may be developed even in unpropitious environments.