Public-private partnerships in small town piped water supply

The effectiveness and profitability of Ugandan private water operators

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Abstract

In this paper the Public-Private Partnership in the Ugandan small town water sector was studied. In this partnership private water operators are contracted by local governments to operate and maintain water systems in small towns. In such a partnership the potential is there to create public as well as private benefits; respectively profit for the private operator and safe water supply for the Ugandan population. It has been reported by private operators that they have a hard time reaching these private benefits. The question this paper wishes to answer is then: Under what circumstances could private operators in Ugandan small towns run an effective and profitable business in providing safe water delivery services? This paper argues it is the dynamic between the public and private actors that is distorting the proper functioning of the PPP in the Ugandan small town water supply sector and thus making it hard to achieve private and thus public benefits. Only when the government would treat the private operator as a development partner instead of a contracted entity, will the PPP function as intended. This research contributes empirical evidence to the wider debate on how Public-Private Partnership in developing countries can contribute to providing the world population with safe water.

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List of Abbreviations

APWO	Association of Private Water Operators
BPD	Building Partnerships for Development
COOPI	Cooperazioni Internationale
DWD	Directorate of Water Development
DWSDCG	District Water and Sanitation Development Conditional Grant
GDP	Gross Domestic Product
GPOBA	Global Partnership on Output-Based Aid
IDP	Internally Displaced People
IRC	International Water and Sanitation Centre
LC1	Local Council 1 (Village)
LC5	Local Council 5 (District)
MWE	Ministry of Water and Environment
NUWATER	Northern Uganda Water Supply Services Project
NWSC	National Water and Sewerage Company
OBA	Output-Based Aid
PPP	Public-Private Partnership
RGC	Rural Growth Centre
SNV	Netherlands Development Organization
SUWASA	Sustainable Water and Sanitation in Africa
SWAP	Sector-Wide Approach
TC	Town Council
UGX	Ugandan shilling
UNDP	United Nations Development Program
USAID	United Stated Agency for International Development
USD	United State's dollar
UWASNET	Uganda Water and Sanitation NGO Network

UWASRA	Uganda Water and Sewerage Regulatory Authority
UWSD	Urban Water and Sewerage Department
WASH	Water Sanitation and Hygiene
WHO	World Health Organization
WSDF	Water and Sanitation Development Facility
WSP	Water and Sanitation Program of the World Bank
WSSB	Water Supply and Sewerage Board

Chapter **1**

Introduction

Public-Private Partnerships (PPPs) are a step further in the process of trying to combine the best features of the public and the private sector. In such a partnership the potential is there to create public as well as private benefits. This potential has made Public-Private Partnership more and more popular in various sectors in the last 35 years.

PPPs also gained popularity in the water supply sector. Before the 1990s, the public utilities had proven to be ineffective in supplying water to the population in developing countries. Therefore, PPPs were put into place in several countries and still the amount of PPPs continues to grow. The population served by private water operators in developing and emerging countries through a PPP has continued to increase steadily from 94 million in 2000 to more than 160 million by the end of 2007 (Marin, 2009). It was hoped that these PPPs would turn around the sector by bringing new expertise, financial resources and a more commercial orientation. Marin (2009) states it is difficult to assess the overall contribution of PPP projects in water supply in developing countries due to the lack of data on the population served and on the quality of services provided. This research contributes to literature by trying to help close this gap that still remains in the empirical evidence on PPPs in the water supply sector in developing countries.

It does this by looking at the PPP in the Ugandan water sector in small towns. This research was conducted for the Dutch NGO SNV (Netherlands Development Organization). SNV Uganda has been active in the Ugandan water sector since 1989. SNV is looking for more insight into the small town water supply sector in Uganda in order to be better able to implement future capacity building programs. These towns fall under the urban water sector

and are known for their diversity because of the combination of rural and urban livelihoods. Increased urbanization and economic growth is bringing along an increased demand in higher level of water services in small towns (Adank, 2013). This was one of the reasons for the Ugandan government to put a PPP into place. In small towns, private water operators are contracted by the local government to operate and maintain the piped water systems for three years. In this PPP the public benefits would entail safe, affordable and accessible drinking water for the people of Uganda. The private benefits in this PPP would be effectiveness, efficiency and replicability for the private water operator to excel in its water service provision business. However, it has been reported by private operators that they have a hard time reaching these private benefits. Where treatment and distribution is expensive, it is impossible for private operators to break even (Koestler, 2008). The limited funds of the private operator affect the quality of the service and thus the public benefits of the PPP. The question this paper wishes to answer is then: Under what circumstances could private operators in Ugandan small towns run an effective and profitable business in providing safe water delivery services? So, under what circumstances could this PPP bring about the public benefits (safe water delivery) and private benefits (effectiveness and profitability of the operator)?

This research aims to answer this question by giving an overview of different perspectives of relevant stakeholders on the issues and opportunities of the Ugandan small town water supply sector in order to paint a picture on what still needs to be done to let the sector function effectively through the PPP between local governments and private water operators. This in turn contributes empirical evidence to the wider debate on how Public-Private Partnership in developing countries can contribute to providing the world population with safe water. The thesis is thus written for practitioners, policy makers and researchers that are particularly concerned with the development of the urban water sector through Public-Private Partnerships in Uganda or in developing countries in general.

Chapter 2

Public-Private Partnerships

This section will briefly look at the history of the Public-Private Partnership (PPP) and will show the debate surrounding this concept. Afterwards, we will zoom in on PPPs in the water sector in developing countries. It is important to first look at the history and debate of the approach in order to see on what side of the debate governments in developing countries stand and thus how they view and use the term PPP. By doing so it becomes clear what the government's intention is to involve the private sector in providing public goods. For now, let us start with defining a PPP.

2.1 Defining PPPs

Public-Private Partnerships (PPPs) are loosely defined as cooperative institutional arrangements between public and private actors (Hodge & Greve, 2007). Boivard (2004) defines PPPs as 'working arrangements based on a mutual commitment (over and above that implied in any contract) between a public sector organization with any organization outside the public sector.' PPPs have gained wide interest around the world but it remains disputed what a PPP actually is. Some see PPPs as the main alternative to contracting out and privatization through competitive tendering. It would then be a new governance tool for the private sector. It is then seen as a step forward in the process of combining the strong sides of the public sector and the private sector (Hodge & Greve, 2007). Linder (1999) describes the view on PPP as a new expression in the language of public management. The language is then to include older, established procedures of involvement of private organizations in the delivery of public services. Lastly there is the group of people that will use the terms 'contracting' and 'PPP' almost as the same concept (Hodge & Greve, 2007).

The definition of Boivard (2004) who defines PPPs as 'working arrangements based on a mutual commitment (over and above that implied in any contract) between a public sector organization with any organization outside the public sector', highlights that PPPs are more than just a cross-sectorial engagement. It is about shared dedication to achieve some kind of joint outcome and going 'over and above' the principal-agent dynamic of a contractual relationship (Brinkerhoff & Brinkerhoff, 2011). The PPP is thus a partnership in which the private sector as well as the public sector brings commitment and competence to the table. Instead of categorically determining what is or is not a partnership, Brinkerhoff (2002) analyses partnerships in a more nuanced way based on the two concepts of 'mutuality' and 'organizational identity'. A partnership is then a relative phenomenon in which a given PPP may show more or less of these partnership's defining elements (Brinkerhoff & Brinkerhoff, 2011).

Mutuality is then 'the commitment to a shared goal and the extent to which partners operate within the spirit of shared control and responsibility' (Brinkerhoff & Brinkerhoff, 2011). Easier said, mutuality refers to mutual dependence. This is captured by the rights and responsibilities that the two actors have towards each other. Mutuality also means that there is a joint commitment to the partnership's goals, that these goals are consistent with each partner organization's mission and objectives and that there is some degree of equality in decision-making, as opposed to domination of one of the partners (Brinkerhoff & Brinkerhoff, 2011). This means both partners can influence their shared goals, processes, outcomes and evaluation.

Organizational identity means 'selecting particular partners according to their distinctive competences, capitalizing on and maintaining them constitute the basis of partnership's value-added' (Brinkerhoff & Brinkerhoff, 2011). Organization identity is about the competences and capabilities of the partners. Often partnerships are formed in order to access key resources to reach ones objectives. These resources can entail the hard resources like money and materials but also soft resources such as managerial and technical skills, information, contacts and legitimacy. Based on the concepts mutuality and organizational identity, a partnership is then a relative phenomenon in which a given PPP may show more or less of partnership's defining elements. The ideal type would maximize mutuality and organizational identity; including equality of decision-making. However in practice, full equality may be unrealistic.

This means the partnership is a relative practice. But, according to Brinkerhoff and Brinkerhoff (2011) the following features represent the fullest expression of partnership:

- Jointly determined goals.
- Collaborative and consensus-based decision-making.
- Non-hierarchical and horizontal structures and processes.
- Trust-based and informal as well as formalized relationships.
- Synergistic interactions among partners.
- Shared accountability for outcomes and results

In reality, many PPPs do not succeed in bringing about the public benefits that were intended. This can be due to poor implementation or skewed incentives. These public benefits in general entail service provision to all, this means social inclusion and equality. In order for the private sector to participate in the partnership, it needs to hold private sector benefits such as reputation and profit. The private sector benefits are not always aligned with ultimate social goals for which the partnership was designed. Examples are that PPPs may restrict competition and choice, increase costs to consumers and limit access to innovation (Brinkerhoff & Brinkerhoff, 2011).

All PPPs will produce at least some public benefits in order to justify the public sector participation. However, in practice many PPPs do not succeed in bringing about the intended public benefits. The ideal situation would of course be if public as well as private sector benefits would be high. However, in reality this is often not the case. In Chapter 10 the amount of public and private benefits in the Ugandan small town water sector will be discussed and also how the benefits between the public and private sector are divided. By looking at this division it will give an interesting overview on how the relationship between the public and private party is balanced.

2.2 History of the PPP

The concept of PPPs originally became fashionable around the 1980s. Since then, the concept has been strongly contested (Boivard, 2004). Many people have become devoted to studying PPPs because it promises a new way of managing and governing organizations that produce public services (Hodge & Greve, 2007). PPPs are now found in the public domain in many countries around the world and their number has been increasing (Boivard, 2004). Although

PPPs became fashionable around 35 years ago, there has always been some degree of cooperation between the public and private sector (Wettenhall, 2003). Hodge and Greve (2007) give the examples of Matthew the private tax collector from the Bible, the private cleaning of public street lamps in 18th-century England or the private railways of the 19th century. Nowadays PPPs have become a central tenet of "third way" governments who try to reconcile right-wing and left-wing politics by advocating a combination of right-wing economic and left-wing social policies (Hodge & Greve, 2007; Bobbio & Cameron, 1997).

Boivard (2004) claims one of the reasons for the increased popularity of PPPs around 1980s were the fiscal problems of many states. We already saw that often partnerships are formed in order to access resources. Because of the fiscal problems of states the mobilization of private funding for public services had become critically important. This makes you think the partnerships between the public and private sector were not necessary based on mutual commitment but rather based on the public sector needing money from the private sector. This is shown by the fact that transactional contracting has dominated in most PPPs. It can be seen that these types of partnerships do not coincide with the features mentioned earlier that describe the fullest expression of partnership. These types of arrangements, therefore only partially deserve the label 'partnership' (Coulson, 1998).

2.3 Current debate

As said earlier, the concept of PPPs has been strongly contested. These objections were conceptual as well as practical in nature. Some say, from the perspective of the public sector, political control over decision-making is weakened because of these partnerships. From the perspective of the private sector you could say such partnerships undermine competition between potential providers. These are fears that are conceptual in nature. From the practical point of view, trade unions often fear that PPPs will reduce jobs and conditions of employment. From the end-user perspective you could be worried about having service providers that are driven by profit (Boivard, 2004). Löffler (1999) has suggested that a major problem in PPPs delivering public services is that it brings fragmentation of structures and processes, which in turn leads to blurring of responsibilities and of accountability. Each partner has given up some of its sovereignty when entering into the partnership. Although you could argue that the partnership could be the accountable body, there is often no direct mechanism by which these PPPs can be held accountable and thus be properly supervised.

When analysing a PPP it is important to keep these objections in mind to see how effective the partnership is in bringing about the intended results.

As briefly mentioned before, there is a debate going on between scholars who think PPPs are a tool for governance and those who think it is a language game (Teisman & Klijn, 2002). The first group believes that PPPs are financial models that enable the public sector to make use of private finance capital (Hodge & Greve, 2007). The second group believes that it is fair to say that a number of governments have spoken about partnership in order to avoid using the terms privatization and contracting out. According to Hodge and Greve (2007) this is part of a general trend within public management of needing to renew the buzzwords from time to time or that it reflects the practice of advancing the same policy but under a different and more catchy name. This would mean that researchers have to be careful about how they approach the empirical analysis of PPPs. Since this is exactly what this research entails, a great lesson can be learned from this literature. The researcher has to be aware that governments could deliberately change discourse in order to pursuit policy votes from more supporters (Clark & Newman, 1997). It is therefore key to be critical about the use of the term PPP when zooming in on PPPs in the water delivery sector in developing countries and for this research in particular in Uganda.

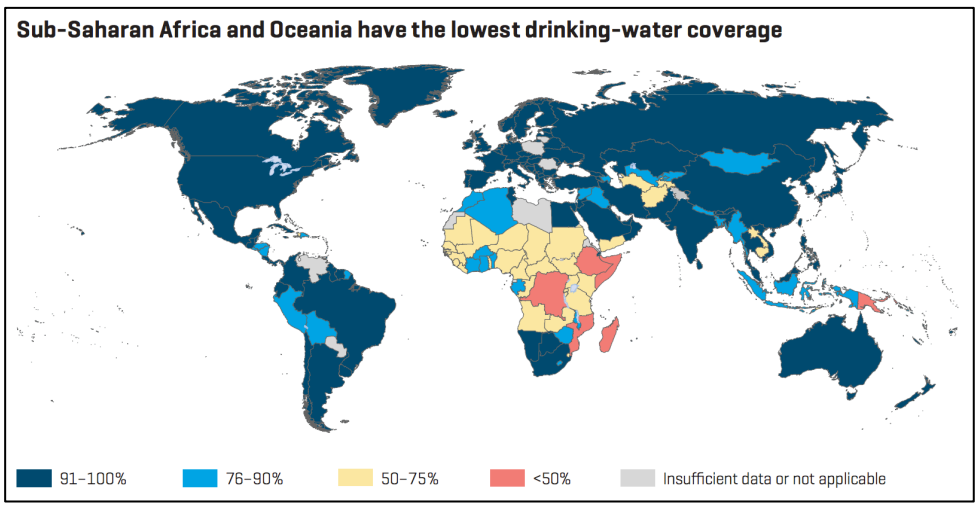
According to Marin (2009), the results of a PPP depend heavily on the development of a solid collaboration between the two partners. The features that were presented earlier in this chapter are all expressions of this collaboration. The government often has to move away from direct control and old habits of interfering in operations. Instead it should move to an arm's-length relationship based on contractual rule. Marin (2009) states that the most successful PPPs were always supported by a sustained commitment from the contracting government to make the partnership work. This means being flexible in adjusting conditions to let the private actor be able to do its job. From the literature above one can draw the hypothesis that a PPP will not work when there is no solid collaboration between the public and private partner meaning the partnership does not express the features presented in this chapter. In Chapter 10, the PPP researched in this paper will be discussed based on this literature. It will be compared to the features designed by Brinkerhoff and Brinkerhoff (2011) and the respective public and private benefits from this partnership will be discussed in order to get an overview on how the relationship within the PPP is balanced.

Chapter **3**

Water supply in the developing world

Water is one of life's most essential goods. Every person possesses a subconscious concern to maintain, preserve and defend the access to the water that they need for their own survival (Jack, 2009). In July 2010, the United Nations General Assembly recognized the right of every human being to have access to sufficient water, which must be safe, acceptable, affordable and accessible. Today, the world is on track to meet the Millennium Development Goal of halving the number of people without reasonable access to an improved water source by 2015 (De Carvalho et al., 2011). Even though this is true, lack of water supply is still a global problem. More than 884 million people do not have access to improved drinking water supply and over two billion people do not have access to safe water. Almost all of them are from developing regions (WHO, 2010). In figure 1 the proportion of the population using improved sources of drinking water in 2011 is shown. It is clear that Sub-Saharan Africa and Oceania have the lowest drinking water coverage.

Fig. 1 Proportion of the population using improved sources of drinking water in 2011



Source: WHO/Unicef (2013)

In most developing countries with large numbers of poor people, the government lacks the financial and organizational capacity to meet the need for improved water supplies from public resources. More countries look at the private sector to help meet their water needs (World Bank, 2013).

This chapter gives an overview of how the private sector is being increasingly involved in the water sector through PPPs. Since including the private sector in providing a human right is controversial, this chapter will also look at the debate surrounding private sector involvement in water. The aim of this chapter is to provide understanding on how PPPs came into the water sector and how it tries to combine the public goal of providing safe water to all with the profit-seeking efficiency of the private sector. This is a difficult balance and still more empirical evidence is needed in order to understand how these two forces can be combined.

3.1 Private sector involvement in water

The private sector is becoming more active in the water supply sector (Adank, 2013). There has been a lot of critique on this trend of involving the private sector in the delivery of water. This critique stems from the history of urban water systems in the Americas and Europe. In the 19th and 20th centuries, these urban water systems were financed, built, owned and operated by private firms (Marin, 2009). The monopolistic position that many of these private companies had were often abused. This happened in the form of restricting investments and disregarding service quality in order to make a bigger profit. Because of this abuse, water utilities almost everywhere were nationalized in order to prevent further exploitation.

There are also more recent examples of exploitation by involving the private sector in the water supply. In 2000 the Water War in Bolivia erupted because of the privatization of Chocabamba's water supply. This private company took it so far that even rainwater could not be harvested anymore without the company's approval. This resulted in a wave of demonstrations against the new water prices. In the end the tens of thousands protesters made the government reverse its decision to privatize Chocabamba's water supply.

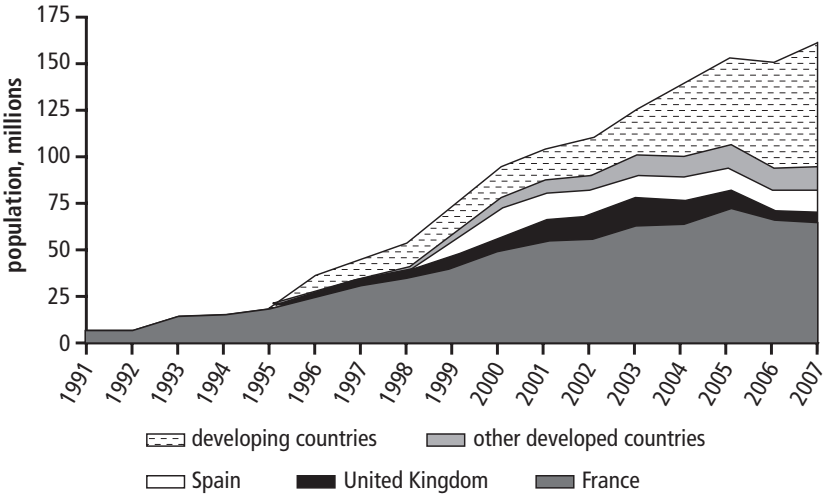
However, involving the private sector does not have to end like this. Over more than a century ago, an alternative way of involving private companies in water delivery emerged in France and Spain. It entailed a partnership in which the local government delegated the management of a water utility to a private operator. The responsibilities were shared but the local

government would retain the assets as public property. Different contractual forms were designed in which the levels of responsibilities and risk for the private partner would differ (Marin, 2009). This was thus the beginning of a PPP. In what is now the developing world, a similar movement occurred. Before the 20th century, the first urban water systems were often in the hands of the private sector through foreign investors. During the first half of the 20th century, also in these countries, a return to public management and control of water utilities was seen (Marin, 2009).

By the end of the 1980s this public management had proven to be unsustainable. Water supply systems in most cities of the developing world were facing growing problems of quality, reliability and coverage (Marin, 2009). In order to improve the systems, massive investments were needed which few public utilities had the means to carry out. Water rationing was becoming the norm. National budgets in developing countries grew tighter, which meant the traditional source of investment funds for the water sector was drying up. Due to the poor performance of the public utilities many governments decided in the 1990s to start a drastic reform in their urban water supply. That meant delegating the management of utilities to private operators under various contractual arrangements (Marin, 2009). These could hold different combinations of responsibilities like design, build, maintain or operate urban water systems (Triche, Requena & Kariuki, 2006). It was hoped that these PPPs would turn around the sector by bringing new expertise, financial resources and a more commercial orientation.

PPPs in the water sector have been controversial. It has been doubted whether this brings a sustainable solution to the water delivery problem. In 2009, about 7 per cent of the urban population in the developing world was being served by private operators. The population served by private water operators in developing and emerging countries has continued to increase steadily, from 94 million in 2000 to more than 160 million by the end of 2007 (Marin, 2007). This is depicted in figure 2. But still, with history in the back of our minds, the fear remains that the private sector could potentially exploit the poor because of its profit-driven motivation. This posed the debate on whether water is an economic good that should be sold or a human right that should be for free. PPPs try to strike a balance between these two elements by trying to achieve public as well as private benefits.

Fig. 2 Urban Populations Served by Private Water Supply Operators, 1991-2007



Source: Marin (2009)

3.2 Striking the balance: economic good or human right

Water has not always been a human right. During the Dublin conference, leading up to the world summit in Rio de Janeiro in 1992, water was even recognised as an economic good. During the 1990s, developing countries were severely pushed to privatise public services and infrastructure, especially by the World Bank. As said before, this was a result of government utilities having failed to deliver these public services and resulted in drastic sector reforms. Rural water supply went under the responsibility of the community while urban water supply became the responsibility of either national or international private enterprises (Koestler, 2008). This was followed by a lot of critique. The fact that water is necessary for life and is therefore a basic commodity, opens up the way for opportunistic behaviour of private water operators (Barungi, Kasaija, Obote, & Negussie, 2003).

Although there is a chance, as history has showed us, for allowing opportunistic behaviour of private water operators when involving the private sector in water supply, profit is also a powerful motivation to improve service delivery. The challenge lies in combining the strengths of both the public and private sector. Klein and Hadijmicheal (2003) phrase it as: 'tapping the entrepreneurial spirit through the profit motive while embedding that spirit in disciplines that can harness private initiatives for socially useful purposes'. This means introducing competition in public services, accompanied by a strong regulatory framework.

Through regulation and control, a competitive market is artificially created so that for-profit companies will compete and the social goals will be achieved more efficiently (Koestler, 2008). PPPs are then a step forward in this process of combining the strengths of both sectors (Hodge & Greve, 2007).

It is too easy to just say water is a human right and should be for free and too dangerous to say water is an economic good that should be sold. PPPs could offer a way to deliver safe water that is affordable for the poor since they will not pay for the water itself but for the service of cleaning it and letting it be delivered to their house. As one of the respondents explained: *"You want water? Fine, it is your right. If you want to go to Lake Victoria and get that water, no problem, no one will stop you in accessing that water. But if you want to have clean water, supplied to your home or neighbourhood? Then someone should pay for it, and you are the most favourable person to pay for it."*[1]

On paper, PPPs in the water delivery sector seems to be a viable option. However, the above literature has shown that the fear remains for opportunistic behaviour of the private operator. Furthermore, Marin (2009) states it is difficult to assess the overall contribution of PPP projects in water supply in developing countries because of the lack of data on the population served and on the quality of services provided. This research contributes by trying to help close the gap that still remains in the literature by providing empirical evidence on PPPs in the water supply sector in developing countries.

[1] Manager WSDF Central

Chapter 4

Methodology

This section elaborates on how the research was conducted. It will begin by discussing how the research questions were formed based on the research objectives. It will continue to explain the research questions by presenting the conceptual model that was used and by operationalizing some of the concepts in the sub-questions. Thirdly, this section describes how the research was designed and what methods were used to gather the data needed to answer the research question. This section concludes by briefly discussing how the data was analysed and what the different limitations were to doing this research.

4.1 Research Questions

As became apparent in the previous section, there is a need for more empirical understanding on how PPPs in the water supply sector in developing countries work in reality. This research was conducted for the Dutch NGO SNV (Netherlands Development Organization). SNV Uganda has been active in the Ugandan water sector since 1989. SNV is looking for more insight into the small town water supply sector in Uganda in order to be better able to implement future capacity building programs. These towns fall under the urban water sector and are known for its diversity because of the combination of rural and urban livelihoods. Increased urbanization and economic growth is bringing along an increased demand in higher level of water services in small towns (Adank, 2013). This was one of the reasons for the Ugandan government to put a PPP into place. In small towns, private water operators are contracted by the local government to operate and maintain the piped water systems for three years.

Chapter 2 talked about the fact that PPPs should ideally bring about public as well as private benefits. The PPP in Ugandan small towns is designed to bring about the public benefit of safe water delivery and the private benefit of effectiveness and profitability. However, it has been reported by private operators that they have a hard time becoming profitable and thus sustaining themselves. Where treatment and distribution is expensive, it is impossible for private operators to break even (Koestler, 2008). The limited funds of the private operator affect the quality of the service.

Because of the increasing involvement of private water operators in water provision in developing countries, the increased importance of supplying small towns with piped water and the notion that it is hard for private operators to become profitable, it is necessary to see what circumstances are needed for a private operator to be effective in distributing water and profitable in running his business when operating in a small town. This way this research can contribute in providing empirical evidence in the debate surrounding PPPs in the water sector in developing countries. This led to the main question of this research.

Main question:
Under what circumstances could private operators in Ugandan small towns run an effective and profitable business in providing safe water delivery services?

Phrased differently, this research describes under what circumstances this PPP could bring about the intended public benefits (safe water delivery) and the intended private benefits (effectiveness and profitability of the operator).

This research aims to answer this question by giving an overview of different perspectives of relevant stakeholders on the problems and opportunities of the Ugandan small town water supply sector in order to paint a picture on what still needs to be done to let the sector function effectively through the PPP between local governments and private water operators. In order to do this it is important to first understand the sector and how all the actors are interconnected. Secondly, the issues should be mapped and it should be understood what hinders the private operator in improving its service delivery. It is important to look at the behaviour of all the actors in the sector and see how they contribute to the issues and also what they could do to give room to the private operator. Lastly, it is interesting to see what the

possible opportunities are for the private operator himself to improve its service delivery. This results in the following sub-questions.

Sub-questions:

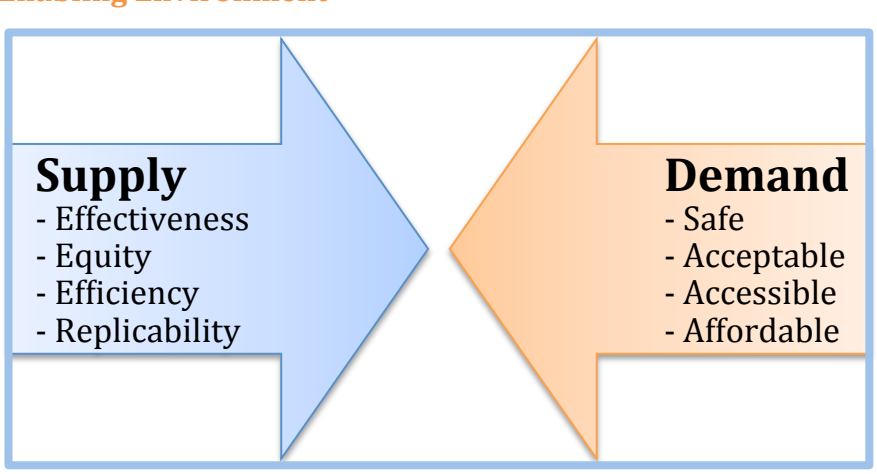
1. How is the small town drinking water sector in Uganda organized?
2. Who are the relevant actors, what is their interest and power and how are they interconnected?
3. What are the issues in the small town water supply sector and what hinders the private operators to improve their service delivery?
4. What role should the different actors play in creating opportunities for private operators to improve the existing situation?
5. What are possible opportunities and effective business solutions for private operators to improve their service delivery?

4.2 Conceptual Model

In the main research question, two elements occur. On the one hand this study researches how a private operator can be 'effective and profitable' and on the other hand it looks how it can do this while delivering 'safe water delivery services'. The effectiveness and profitability is mostly in the interest of the private operator himself and represent the private benefits of the PPP. The safe water delivery services are in the interest of the community and of the government since they aim to achieve the Millennium Development Goals of halving the number of people without reasonable access to an improved water source by 2015. This part thus represents the public benefits of the PPP. These two interests represent the supply and demand side. In the conceptual model (figure 3) this is depicted.

Per side, different terms are shown that are relevant for that side of the sector. On the left, 'effective and profitable' is represented by effectiveness, equity, efficiency and replicability. On the right 'safe water delivery services' is represented by safe, acceptable, accessible and affordable. Surrounding the supply and demand side is the enabling environment. An enabling environment is a set of interrelated conditions – such as legal, organisational, fiscal, informational, political, and cultural – that impact on the capacity of development actors to engage in development processes in a sustained and effective manner (Thindwa, 2001). Now, the terms on both sides will be briefly discussed.

Fig. 3: Supply and demand conceptual model



Source: Harvey and Reed (2004), United Nations General Assembly

4.2.1 Supply side

According to Harvey and Reed (2004), the terms effectiveness, equity, efficiency and replicability are most important for the supply side of the water supply sector.

Effectiveness

Effectiveness is the degree to which water services and interventions meet their objectives. This comprises the functionality of the water supply facility, issues around water quantity and quality, and associated benefits such as improved health, time saved and income generated. It is in the interest of the private operator to produce enough water so it will make enough revenue to break even or make a profit.

Efficiency

Efficiency represents the output produced per unit of resources. These include financial, human and physical resources for service delivery, operation and maintenance. Water services may operate successfully but overexploit natural resources (e.g. water), human effort or funds; these must be used efficiently if services can be said to be sustainable. This is also dependent on the willingness of the private operator to invest resources into the piped water scheme.

Equity

Equity is the degree to which water services reach all members of communities, including the poor and disadvantaged groups. Issues related to vulnerability, poverty and gender are of key importance to ensure that equity is achieved. There are several different connections the private operator uses to reach all segments of a town. Institutional connections are used by institutions like schools or prisons, the household connections are used by people who can afford a personal tap and who sometimes sell water from their house to their neighbours and finally public stand points are meant to serve the poorer segment of the community.

Replicability

Replicability is essential to ensure the expansion of water services and to increase sustainable access to safe drinking water. Private operators generally operate in more than one town. If they manage to share knowledge and other resources between towns, it can save them money and improve their service delivery.

4.2.2 Demand side

On the demand side the demands of the community are being represented. This research uses the terms the United Nations General Assembly used to describe water as a human right.

Safe

Safe means that water should be purified to such an extent that it is safe to drink. An important factor is the perception of the community. Although a water source might be safe to drink, the community might feel it is not safe and will resort to other, sometimes unsafe, options. This phenomenon is discussed in Chapter 6.

Acceptable

Acceptable refers to scientifically assessed acceptable levels of toxicity to either humans or aquatic organisms. Although the community in general will not be informed about these exact numbers, they are aware of water causing sickness. It is therefore the responsibility of the private operator to make sure the levels of toxicity are acceptable. This is of course closely related to the safety of the water.

Accessible

Accessible means being within 200 meters of an improved water source. In this study it was not measured how many metres respondents were living from a water source. However, the importance of distance was measured by asking people if they would move a further distance to access safe water.

Affordable

Affordable entails that water cost should not exceed 3 per cent of household income. In this study affordability was not measured by asking for these exact numbers but by inquiring into the perspective of the community. End users were asked what they pay for their water, what they would be willing to pay and what their ideal price for water would be.

Both the terms on the supply side and the supply side were processed into interview questions. For a topic list of these interviews, see Appendix B and C.

4.3 Operationalization of sub-questions

The second sub-question talks about power and interest. All respondents, excluding the end-users, were asked who according to them are the most and least powerful and respective interested in the small town water supply sector. Power being the ability to bring about the outcomes the stakeholder desires (Salancik & Pfeffer, 1974). Interest is defined as the aspirations and concerns of the stakeholder (Bryson, 2004), which is often the result of an issue or stakeholder affecting them. Stakeholder then try to mobilize, protect of enhance their interest and there is a conceptual link between interest and action (Rowley & Moldoveanu, 2003), which makes stakeholder's interests necessary to understand (Nasi, 1995 as mentioned in Rowley, 2003). It is crucial to figure out the interest, since only power mentions the ability to influence but there can be a lack of will to do so (Rowley & Moldoveanu, 2003). This means by figuring out the interest, it can be better explained why a stakeholder behaves the way he does and in that way be a possible contributor to problems or opportunities.

The last three research sub-questions revolve around the problems or issues, opportunities and possible business solutions in the small town water sector. In this research the definition of Atwood (1976) will be used. Problems are then the difference between the current state and

the goal state (Atwood, 1976). In interviews, the respondents were asked what a perfect small town water supply sector would look like. Most respondents described a situation where everything would go according to the policy concerning the small town water sector of the Ugandan government. The only difference would be improved and clear regulation to let the sector function more optimally. In the next chapter, this policy and regulation will be elaborated on. In Chapters 7 and 8 the 'real' situation will be presented. The problem is thus the difference between this real situation and the desired state as described by the respondents. The solution would then be the thing that decreases this difference and an opportunity a favourable or advantageous circumstance or combination of circumstance in which the solution of the problem can be reached (Atwood, 1976). These possible opportunities and solutions will be presented in Chapter 9.

4.4 Research Design

At the beginning of this chapter it was said that this research aims to give an overview of different perspectives of relevant stakeholders on the issues and opportunities of the Ugandan small town water supply sector in order to paint a picture on what still needs to be done to let the sector function effectively through the PPP. This in turn contributes empirical evidence to the wider debate on how public private partnership in developing countries can contribute to providing the world population with safe water. Since this research describes perspectives on the sector, which requires mostly qualitative data, the research could be described as descriptive research, (Kumar, 1996).

The research was conducted on two levels: on a sector level and on an individual town level. The sector level is represented by the semi-structures interviews with the key-informants. The town level is represented by the two case studies in which representatives from the Water Board, Water Authority, Private Operator, District Water Office and community were interviewed. Also a participatory meeting was held in both towns. By combining the general overview of the sector and the specific findings on the ground a well-rounded picture can be formed what is going on in the small town water sector in Uganda.

4.5 Methods

In this research the following methods were used to answer the main research question and sub-questions: literature review, informal / semi-structured interviews with key-informants,

case study interviews and two participatory meetings. The case study interviews consisted of semi-structured interviews with end-users, private operators, WSSB members, the District Water Office and town council members. For an overview of all respondents see Appendix A.

Below the different methods are discussed. When doing an interview, the respondent was presented with an information sheet, which can be found in Appendix B. End-users were given a verbal explanation.

4.5.1 Literature review

The literature review was mainly used to answer the first two sub-questions. Published literature was mainly accessed over the Internet and consisted of journalistic articles, sector reports, research reports and books. Other reports and documentation were given by respondents during interviews.

4.5.2 Semi-structured interviews with key-informants

Semi-structured interviews were chosen because it has much of the freewheeling quality of unstructured interviewing (Bernard, 2006) but at the same time it allows to talk about certain topics you wish to discuss. The semi-structured interviews with key-informants will be used to answer sub-question one to five. The key-informants are all experts in the Ugandan water sector and they represent important stakeholders in the field. In total 12 interviews were held of which 2 were informal in nature and 10 were semi-structured. Among these key-informants were representatives of active NGOs, the APWO, UWASNET, directors of private operators, the WSFD central, the Umbrella central, the NWSC and the Ministry of Water and Environment. The role and responsibilities of these actors will be discussed in the nex chapter.

Throughout these interviews it became clear who are the relevant actors in the sector and how they are interconnected. By using a power-interest matrix in these interviews, the different perspectives on what role different actors play in the sector became apparent. In some of the expert interviews the potential future role of the actors and possible business solutions for private operators were discussed. The interviews were mostly held in Kampala, the capital of Uganda and every interview lasted on average one hour. For each interview a slightly

different interview guide was made. See Appendix D for the topic list that was used to interview private operators.

4.5.3 Case study interviews

These interviews form the base of the two case studies that were conducted in this research. They were conducted while being in the field and will be used to answer question one to four. The two towns that were visited are Bweyale and Mpigi TC, which will be presented in Chapter 6. Per small town approximately the same schedule was executed. In both towns the researcher spent a week. The aim was to talk to at least one representative of the private operator, the WSSB, the District Water Office and the Town Council.

Both weeks started with going to the District Head Offices to ask for permission to conduct research in the particular town. In both towns interviews were held with the District Water Office and the District Health Office. After obtaining permission from the district, permission needed to be sought from the town council. In both towns interviews were held with the town clerk, the health inspector and other relevant town council members. The next step was to interview the private operator and request for a tour around the piped water scheme. In Mpigi TC also the water treatment plant was visited. Available water board members were also interviewed and the last days in both towns were spent talking to the community, the end-users of the water.

In total 28 interviews were held in Bweyale of which 20 were with end-users. In Mpigi TC 27 interviews were held of which 21 were with end-users. In Bweyale, the end-users interviewed were public standpipe users. This was chosen since these connections are used by the largest amount of people. Public standpipe users are in between two groups of people: the group of people that cannot afford to pay for water at all and is forced to use point water sources and the group of people than can afford their own private household connection. In Mpigi TC the public standpipes were funded and constructed by a former inhabitant of the town and were to be used exclusively by the elderly. Since the points in most cases were only used by a single elderly person that was living next to it, the researcher decided to interview household connection owners who also sell water to their surrounding neighbourhood. Also household connection users were interviewed. These respondents were identified by local chairmen (LC1 Chairmen). All non-end-user interviews were recorded and transcribed. All the end-user

interviews were transcribed by hand. At least half of the end-user interviews were held in Luganda and were translated by a research assistant. See Appendix C for the topic list of the end-user interviews.

4.5.4 Participatory meetings

In both small towns, a participatory meeting was organized. These meetings were used to validate the preliminary results that were found in the respective towns and to brainstorm about sub-question five. For both meetings around 8 to 10 people were invited, representing the town council, the WSSB, the private operator and the community. In both towns more people showed up than invited, in both cases mostly town council members. This could have caused a bias, which will be discussed in the limitations section later on. In the end, around 13 people attended the participatory meeting in both towns. In Bweyale the meeting had one part and in Mpigi TC there were two. The first part, which was executed in both towns, existed of introducing the subject and research and presenting the perspective of the community on the water supply and then the preliminary findings on the problems on the ground. The second part that was only held in Mpigi TC consisted of rating the different problems and then discussing possible solutions for this problem.

4.6 Data analysis

All the semi-structured interviews and the two participatory meetings were recorded and transcribed. All end-user interviews were written down and later on transcribed. All interviews were entered in Nvivo Analysis Software and were then coded. In total 26 main nodes and an extra of 15 sub-nodes were used to describe the reoccurring themes in the interviews. By running text search queries the main issues and opportunities in de water sector could be identified and later on described in Chapters 7 to 9. Also, more background information about the sector was given throughout the interviews, which helped to complement the existing literature and answer the remaining research sub-questions.

4.7 Limitations

Four limitations were found which could potentially have influenced the outcomes of this research.

4.7.1 Translation and additional Bias

For approximately half of the end-user interviews, a research assistant was used to translate. This assistant did have prior research experience but no official experience as a translator. He was asked to translate everything literally but it is possible some nuances got lost in translation. Also, this study used convenience sampling for interviewing end-users. This presents a possible bias since convenience sampling means interviewing whoever will stand still long enough to answer your questions (Bernard, 2006). The end-users interviewed were the ones that were available at the time the researcher was visiting the different connections.

4.7.2 Generalizability

Since there were only two case studies conducted it is not possible to generalize all findings that were found on the ground. Why the particular towns were chosen is described in Chapter 6. The majority of the data collected is qualitative and therefore very context-specific. It is interesting that in both towns similar problems were found which were confirmed during the preliminary findings presentation at SNV Uganda where several WASH experts attended (Appendix A). However, it cannot be said these results on the town-level apply to the entire country of Uganda.

4.7.3 Peer influence participatory meetings

As mentioned earlier, more people attended the participatory meetings in both towns than intended. Several actors were represented in these meetings, which can cause peer pressure to alter your answers. In Mpigi TC, the results of the participatory meeting did not coincide fully with the results of the individual interviews. The representative of the private operator gave slightly different answers than the Regional Manager that was interviewed a few weeks before about the same topics.

4.7.4 Disturbances and unexpected presence

The researcher always tried to select a quiet and neutral or comfortable location to have the interviews. However, this was not always possible and some interviews were interrupted a lot. Also, in some cases, end-users were interviewed in the presence of their family and neighbours, which could have caused them to alter their answers.

Chapter 5

Uganda: the context

This research focused on the water provision in small towns where private operators manage and maintain the water systems. This chapter will explain the context of this research by first giving an introduction of the country Uganda in general and then zooming in on the water sector and how the PPPs in small towns came into being. After having introduced the sector in general with its history, the small town water sector will be explained with all its actors and the legal framework and regulations surrounding it.

5.1 Country Profile

Uganda is a relatively small landlocked country in East Africa and borders with Kenya, Tanzania, South-Sudan, DR Congo and Rwanda. With its 241.000 square kilometres, Uganda is about the size of the UK and its population was estimated at 35,5 million people in 2013. Out of this population, 5.8 million (16.7%) live in urban areas and 29.7 million (83.7%) reside in rural areas (MWE, 2013). The current president Yoweri Museveni came into power in 1986, after the country had seen decades of political, social and economic instability under previous presidents Obote and Idi Amin. Museveni, backed by his party the National Resistance Movement (NRM), promoted a no-party system during the first two decades of his rule. He argued that Uganda was not ready for democracy due to the risk of tribalism and regionalism. However, in 2005 through a national referendum, multiparty democracy was accepted. Until 2006 there was substantial rebel activity in the North of the country. This displaced 1.5 million people that still mostly live in camps. Since 2006 the situation in the north has somehow stabilised and focus has shifted on from relief to development. With a GDP of USD 21,48 billion in 2013, the World Bank classified Uganda as a low-income

country. Uganda's GDP growth averaged 7% per year between 2000 and 2012, implying an increase in national income by a factor of 2,25. The key sectors of the economy are agriculture, forestry and fishing; industry and services (Ministry of Finance, Planning and Economic Development, 2013). Although Uganda is on its way in reaching the Millennium Development Goals (it has almost halved poverty since the 1990s) rising inequality has severely slowed down poverty reduction (UNDP, 2013). Uganda is ranked 161st in the list of 186 countries due to a human development index of 0,456, classifying Uganda as a country with low human development (UNDP, 2013).

5.2 Water sector reform

In Chapter 3 it was said that due to the poor performance of the public utilities many governments decided in the 1990s to start a drastic reform in their urban water supply. This meant delegating the management of utilities to private operators under various contractual arrangements (Marin, 2009).

In Uganda, before 1997, all formal water supply systems in small towns were run by the central government through the Directorate of Water Development (DWD). In this time there was little involvement of local authorities in the small town water supply (Azuba, Mugabi, & Mumssen, 2010). This approach was considered unsustainable because revenue from water sales had to be remitted to Kampala in the form of central government revenue. This meant that attempts at securing finance for local water supply became a slow process of requesting government funding (UNDP, 2011).

Following the sector reforms supported by the World Bank and other development partners meant improving the efficiency and quality of service delivery by separating asset ownership from operation. Thus in 1997, the water sector in Uganda went through some drastic changes. The reform process in general has been described a success and an example for other African countries. This was due to the fact that the government prioritized the water sector, financial resources were committed both by the government and by donors, and an institutional framework was created (Sinclair, 2004). Key elements of this reform were the Sector Wide Approach, Decentralisation and Privatization in the Ugandan water sector.

5.2.1 Sector Wide Approach (SWAP)

One of the main outcomes of the reforms was the Sector Wide Approach (SWAP). This SWAP is defined by the Ugandan government as: 'a mechanism whereby the government, civil society and development partners support a single policy, development plan and expenditure programme, which is under government leadership and follows a common approach' (MWE, 2007). This happened in response to the failure of the earlier accepted project approach, which caused for fragmentation in development. In 2002 the SWAP was formally implemented. The main characteristic of the SWAP is the 'basket fund'. This entails that major donors contribute to this fund and then the money is channelled to the districts through conditional grants. Koestler (2008) states that 80% of these conditional grants are used for the construction of new hardware; out of this part, 10% is used on rehabilitation of water sources. Of the total amount in conditional grants, 12% is allocated to software activities such as follow-up and hygiene and sanitation promotion activities, 4% is available for monitoring, supervision and reporting and the remaining 6% is for recurrent expenses.

The SWAP was a success because of the high level of trust by donors. Although the SWAP increased funding for districts and built local capacity, NGOs have claimed that a large part of the funds are lost in administration and taken by corrupt officials (Koestler, 2008). This was recognized in the sector performance report of the Ministry of Water and Environment (2013) that states one of the bigger challengers for small town water supply systems is that Water Authorities are diverting the conditional grants that are meant for the operation and maintenance of the water supply systems. This in in turn affects the functionality of the water supply systems. Even though there have been problems with the allocation of the funds, the SWAP process in Uganda has been widely praised and many other African countries have moved towards a SWAP system (Koestler, 2008).

5.2.2 Decentralisation

Along with the SWAP went the decentralisation process in which the central Ugandan government transferred its power to the local governments. It was defined as 'the transfer of legal, political, administrative and financial authority to plan, make decisions and manage public functions and services' (Ministry of Local Governments, 2003). Uganda's political and administrative system is based on five levels. It starts at the village level called Local Council 1 (LC1) and goes up to the District Level called Local Council 5 (LC5).

Decentralisation then aims to transfer the power of the central government to the district level and lower level governments and puts the control over services at the point where they are actually delivered (Koestler, 2008). Again, there have been some critiques on the functionality of this decentralisation process. NGOs point out that corruption in the central government has now been allowed to spread to lower levels, where it is even more difficult to contain (Sinclair 2004). Also, as will be shown in this paper, in the case of small towns it appears the central government still holds the most power in practice. This will be further discussed in Chapter 8.

5.2.3 Privatization

Due to the poor performance of public utilities in the water sector and the influence of World Bank, privatization in the Ugandan water sector was introduced in 1998 through the Privatization Policy. Because the reduction of the central Ugandan government and the decentralization process, the private sector was supposed to fill the created vacuum and start to play an important role in service delivery (Koestler, 2008). However it was feared that the private sector would not have enough capacity, support mechanisms and business development services to fulfil this task (Carter, et al., 2003). In 2001, PPPs were introduced in the management of water systems in small towns in Uganda. As the monitoring officer of the Urban Department of the Ministry of Water and Environment in Uganda said:
"It was important to separate the supervising and operational roles because government is not good at operations but it is good at supervising and making laws. So, we said, let us remain in our role of supervising and let the guy that is good at operations do that."

5.3 Uganda's water supply sector

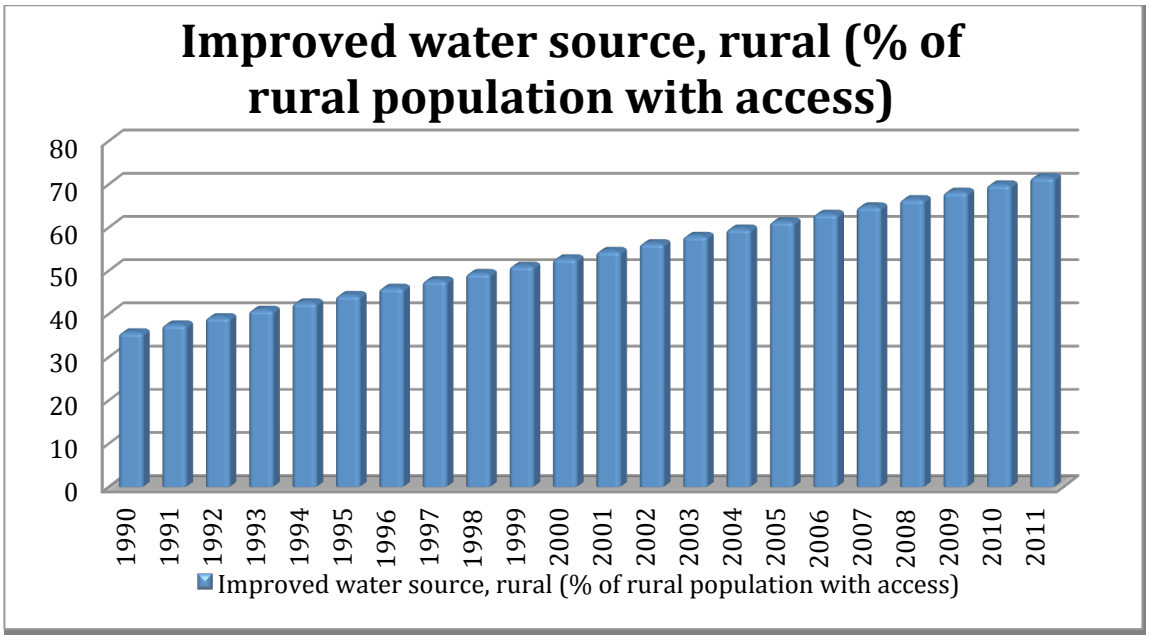
The policy for the water supply sector in Uganda is grouped into two different areas: rural and urban. The MWE of Uganda considers small towns as urban areas although in other countries small towns could be considered rural. Lets continue by briefly looking at an overview of the rural and urban water supply sector in Uganda.

5.3.1 Rural Water Supply

Rural Water supply provision covers communities or villages with scattered population settlements up to 1,500 and Rural Growth Centres (RGCs) with populations between 1,500

and 5,000. The major programmes, projects and initiatives under the rural water supply subsector are implemented by local governments and paid through the District Water and Sanitation Development Conditional Grant (DWSDCG). Spring protection, shallow wells, deep boreholes, piped water schemes, valley tanks and rainwater tanks are the main technology options that are used for water supply improvements in rural areas. Boreholes are the most widespread technology whereas valley tanks are the least implemented (MWE, 2013). Management for maintenance and operations of these boreholes is mostly handled by community-based organizations (SNV, 2012). Through the years there has been notable progress in the percentage of the rural population that has access to an improved water source. In 2011 almost 70 per cent of the rural population had access to an improved water source. This is depicted in figure 4.

Fig. 4 Percentages of rural population with access to an improved water source



Source: World Bank (2013)

5.3.2 Urban Water Supply

The MWE of Uganda defines the term 'urban' as all gazetted cities, municipalities and town councils. As at 30th June 2013, Uganda has 187 urban councils comprising of 1 city, 22 municipalities and 164 town councils. The urban councils are grouped into large towns and small towns. The large towns are 30 towns managed by the National Water and Sewerage Corporation (NWSC). NWSC is a government utility that provides water to the larger towns

in Uganda, for example the capital city Kampala. NWSC's mandate is to operate and provide water and sewerage services in areas entrusted to it on a sound commercial and viable basis (NWSC, 2013). The small towns which constitute the rest of the towns and are a responsibility of the MWE, through the Urban Water and Sewerage Department (UWSD) of the Directorate of Water Development (DWD). Of the 187 urban councils, 138 have operational piped water supply schemes; only 16 are connected to sewerage services while 49 still rely on point water sources (boreholes, wells and springs) (MWE, 2013).

The urban population in Uganda has increased rapidly: more than six-fold since 1980 (MWE, 2013), representing an annual urban population growth of 4.8%. This increase has mostly been attributed to the creation of new urban administrative units, in addition to other demographic factors such as fertility and migration. Considerable investments in urban infrastructure services are required to improve the access of water services at the current rate of urbanisation (MWE, 2013). The urban population in the 187 towns in Uganda is estimated at 6.45 million. These towns comprise 29 towns served by piped water by NWSC (population 3.84 million), and 158 Small Towns (109 of which are served with piped water), with a population of about 2.61million. In table 1 the percentage of the urban population, divided by large and small towns, that has access to an improved water source is shown.

Table 1 Access to improved water supply in urban Areas

Reporting Period		**2009/10**	**2010/11**	**2011/12**	**2012/13**
Large Towns	Total Population	3.108.339	3.239.370	3.377.240	3.838.004
	Population Served	2.285.193	2.426.502	2.614.090	2.986.773
	% Coverage	74%	75%	77%	77,8%
Small Towns	Total Population	1.593.934	2.378.544	2.492.714	2.612.364
	Population Served	842.890	1.284.405	1.423.340	1.518.982
	% Coverage	53%	54%	57%	58,1%
Total - Urban	Total Population	4.702.273	5.617914	5.869.954	6.450.368
	Population Served	3.128.083	3.710907	4.037.430	4.505.755
	% Coverage	67%	66%	69%	70%

Source: MWE (2013)

Officially, small towns are towns with a population between 5.000 and 15.000 people. These towns are under the responsibility of town councils and water supply is managed by private water operators. Large towns are towns with a population that exceed 15.000 people. The water facilities in large towns are managed by National Water and Sewerage Corporation (NWSC). When looking at figure 4 and table 1, it stands out that the percentage of coverage in small towns is much lower than in large towns or in the rural areas. In 2011, the percentage of coverage in rural areas was around 70%, in large towns it was 77%, but in small towns only 57% was covered. The reason for this lower percentage plus the reason for practical difficulties in differentiating between small and large towns are discussed next.

5.4 Small town water supply

5.4.1 Small towns defined

In Uganda, the theoretical definition of a small town is thus a town that has a population between 5.000 and 15.000 people (Tumusiime, 2003). In practice however, this definition is not as straightforward. The grey area between "rural" and "urban" is the domain of small towns, with the definition of what is "rural" and "urban" differing between countries (Adank, 2013). In this study, the definition of small towns in Uganda was discussed in various interviews. The above official theoretical definition was often not known by sector experts. Their answers ranged from a lower level in between 1.000 and 5.000 people and an upper level of 10.000 people to 25.000 people. They all agreed however that this is only the definition on paper; in practice there are other criteria that define a small town:

"So, this is what I said: on paper it is 1.000 to 20.000 [people] then everything bigger then that should be large towns. But now, the practical categorization is actually between National Water, owned by National Water as a utility and run by the local government supported by the Ministry. That is the practical categorization."[2]

We will go in depth into the division between towns that are under National Water and Sewerage Corporation (NWSC) and towns that are gazetted by local governments (Water Authorities) in Chapter 7. It was agreed upon by respondents that the practical difference between a small and a large town is based on who manages the town. This research will take on this practical definition and looks at small towns not in terms of population number but as

[2] Manager WSDF Central

towns that have been gazetted with a Water Authority by the Ministry of Water and Environment (MWE). Once a small town has a Water Authority it is allowed to contract a private operator through a competitive tendering process. A small town in this research is thus a town that is being operated on by a private water operator and has been gazetted by a Water Authority.

5.4.2 The difficulty of small towns

Water Aid/BPD (2010) also mentions that defining small towns based on their population size only, fails to adequately capture their dynamism and diversity, as we have seen in the previous section. All this makes it hard to really grasp the extent of a small town. Another factor in the diversity of small towns is the fact that they are a mix of rural and urban livelihoods. People in big houses that require piped water and people with a lesser income that require community-based hand pumps are living side by side (Adank, 2013). Therefore it is extremely difficult to find a water scheme that fits all.

There is increased demand in a higher level of water services in small towns because of increased urbanisation and economic growth. According to WSP (2010), governments in Africa, triggered by the realisation of the strategic importance of rural growth centres and small towns for economic and social development, have increasingly been building piped water schemes in small growth centres since 2000. In several countries, governments have committed to increasing coverage of piped water supply.

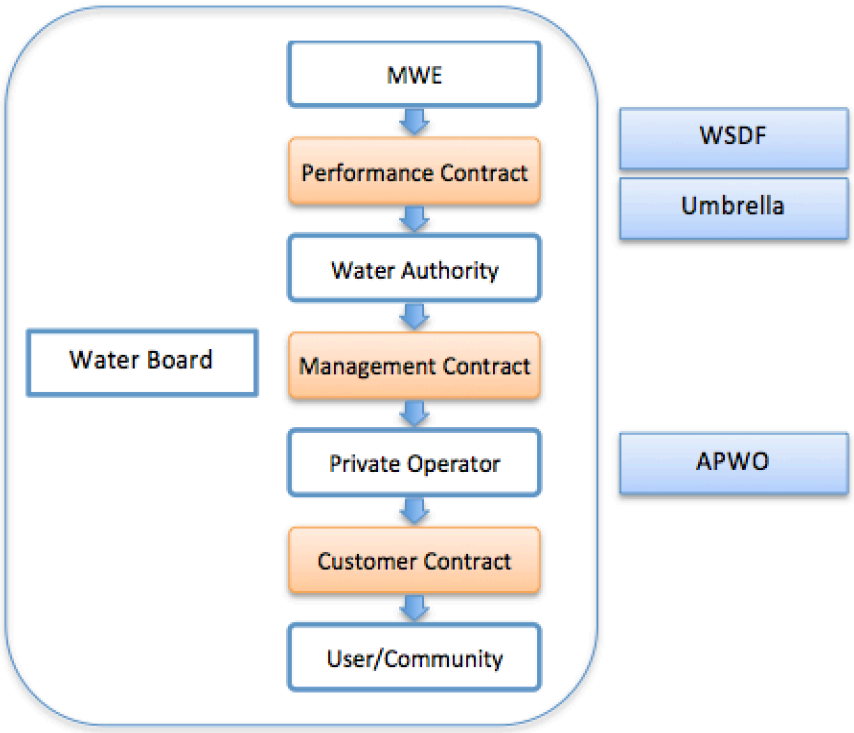
These small town pipe schemes provide a mix of basic services, through public standpipes, as well as high-level services, through household connections (Adank, 2013). Public standpipes are public pipes that are being used by the poorer segment of town. Household connections are being used by people that can afford a personal tap. In small towns, complementary services are often provided by hand-dug wells, boreholes with hand pumps and water kiosks.

It is generally believed that in the future, small towns will grow in number, population and importance. Improving understanding on how sustainable water services can be provided in small towns is therefore likely to remain high, or even rise on the water sector agenda in the years to come (Adank, 2013).

5.4.3 The small town PPP

As said before, the institutional framework in the Uganda small town water supply sector was changed from central control by the Ugandan government to a system of performance agreements between the Ministry of Water and Environment (MWE) and local authorities. These agreements are stipulated in a performance contract. These local authorities, the Water Authorities, delegated the management of the water systems to local private operators through three-year management contracts (Azuba et al., 2010). Private operators in turn have individual customer contracts with the end-users. In addition, there is a wider legal framework (Water Act Cap 152) which is the overarching law for regulation of water sector activities including water extraction, usage, waste water and sewerage disposal (UNDP, 2011). These contractual relationships are shown in figure 5.

Fig. 5 Small town water supply sector



Source: UNDP (2011)

Under the Performance Contract the Water Authority is obliged to constitute a five-member Water Supply and Sewerage Board (WSSB) to exercise management oversight functions including over operations sub-contracted to private sector operators (UNDP, 2011).

In the sector, there are three relevant supporting organizations. The first is the Water and Sanitation Development Facility (WSDF). There are four WSDFs (South-West, Central, East, and North) for different parts of the country and they are responsible for the planning and development of the water schemes in small towns. Thus they construct the piped water schemes. The WSDFs have been established as a facilitating mechanism to provide funding as well as supporting the water authorities with implementation management, capacity building and quality assurance for water supply and sanitation investments (MWE, 2013).

The second supporting entity is the Umbrella organization. They are supposed to support WSSB in small towns. A total of five Umbrella organisations (South-West, Mid-West, Central, East, and North) are registered in the country as non-profit making companies, limited by guarantee with a membership of selected small towns, rural growth centres and rural large gravity flow schemes. They ought to assist member schemes carry out operation and maintenance functions and share services that would otherwise be too costly for individual schemes (MWE, 2013).

Lastly, there is the Association of Private Water Operators. The Association of Private Water Operators (APWO) is an Umbrella Organisation that unites Private Water Operators (MWE, 2013). The APWO plays an important role in advocating and lobbying private operators' interests to the government (Koestler, 2008). The role of the APWO is further discussed in Chapter 7. Now, the different actors in the contractual chain will be discussed more in detail.

Ministry of Water and Environment (MWE)

The Ministry of Water and Environment (MWE) is the lead agency in the urban water sector. The MWE contains three directorates: the Directorate of Water Resources Management, the Directorate for Water Development (DWD) and the Directorate of Environmental Affairs (MWE, 2013). Under the DWD there are three departments: Rural Water Supply and Sanitation, Urban Water Supply and Sanitation and Water for Production. The contractual chain in figure 5 starts with the MWE through the DWD and falls under the Urban Water Supply and Sanitation department. The WSDF and the Umbrella organization both fall under the supervision of the DWD.

The Ministry leads the Joint Annual Sector Review process. In this process donors, civil society, organizations and government players come together and evaluate the performance of the water sector. This results in a Sector Performance Report each year (Koestler & Jangeyanga, 2012). This reports states that the DWD is responsible for regulation of provision of water supply and sanitation and the provision of capacity development and other support services to local governments, private operators and other service providers (MWE, 2013). The DWD, through the Urban Water Supply and Sanitation Department, also collects data from the districts and Umbrellas for this annual Sector Performance Report. It is also supposed to receive monthly and quarterly reports from small towns and RGCs through the Umbrella organizations (Koestler & Jangeyanga, 2012). It monitors the performance of small towns through these reports, through management audits and Contract Performance Score Cards. The monthly reporting formats have indicators divided in 8 categories: (1) Physical assests data, (2) Water volume data, (3) Customer data, (4) Operational data, (5) Financial data, (6) Personal, (7) Quality of service and (8) Conditional Grant Expenses (Koestler & Jangeyanga, 2012). The terms and conditions of this reporting are all captured in the performance contract between the MWE and the Water Authority.

Water Authority and Water Supply and Sewerage Board (WSSB)

When the WSDF has built a water scheme in a particular town and it is decided the scheme will not go to the NWSC, the MWE 'gazettes' a small town. This gazetting process is a legal step and means that the town council of that particular town is declared a Water Authority. Only when you have been gazetted, you can contract a private operator through a competitive tendering process. The Water Authority signs a performance contract with the MWE and a management contract with a private water operator (Koestler, 2008). Under the performance contract with the MWE, the Water Authority is obliged to constitute a five-member Water Supply and Sewerage Board (WSSB) (UNDP, 2011).

Also the composition of this WSSB is specified in the performance contract. The WSSB consists of the town clerk, the chairperson of the relevant local government committee responsible for water and sewerage services, and three other members who are representatives of the different categories of water users. These three members represent the institutional, commercial, industrial and household users. One of these three members has to be female. The members of the WSSB serve for a renewable term of three years. The Water Board gets

5% of total collections as a sitting fee (UNDP, 2011). The Water Authority often gets 10% of total collections.

Thus, the performance contract empowers the Water Authority to sub-contract the operations and maintenance of the water supply system to a private water operator. The management contract is an agreement between the Water Authority and the private operator that authorizes the private operator to manage the water supply system for an agreed period. This is often a three-year contract. The Water Authority remains the owner of the assets of the water supply system since this ownership was entrusted to the Water Authority by the central government. It is the Water Board's responsibility to sit in quarterly meetings and oversee the operations of the private operator. In case of breakdowns or problems, which need funding, the Water Authority is responsible for major repairs. These are repairs that require both the operators' professional expertise and additional funds to rectify. The minor repairs, which are defined as repairs that do not require additional funds beyond the professional expertise of the operator, are the responsibility of the private operator (MWE, 2008).

Private Operator

Private operators are private companies that manage the piped water supply systems in part of the small towns in Uganda. The Water Authority enters in a management contract with a private operator. In June 2013, there were 58 management contracts with private operators (MWE, 2013).

A private operator is a registered, tax compliant company who is elected through public competitive tendering. Directors of private operator companies are often people who used to work in construction or for NWSC and then decided to start their own water delivery company. The private operator is responsible for day-to-day operation and minor repairs of the water system. This is paid out of the management fee the operator receives at the end of every month. The management fee is a percentage of the revenue, which is often 85%. This fee must cover all overhead costs like staff salaries, office, vehicle running costs as well as the minor repairs (Koestler & Jangeyanga, 2012). Under the management contract, the private operator is obliged to submit monthly and quarterly reports to the WSSB and the DWD. It depends per town how well the community knows the staff of the private operator, this is further discussed in the case of the two case studies in Chapter 7 under 'non-revenue water'.

At this moment there are 17 private operators member of the APWO. According to the Secretary General of the APWO still 3 private operators are not a member. Private operators normally operate in more than one small town. The have a portfolio of small towns that often differ in size and location. In June 2013 there were 58 management contracts (MWE, 2013) in 2010 there were 79 management contracts (UNDP, 2011). In table 2 you see the market concentration of private operators in small towns in 2010.

Table 2 Market concentration of private water operators in small towns in 2010

	Number of Contracts	% of total small towns supplied	% of total small town connections
Trandint ltd.	15	25	26
Jowa ltd.	14	22	22
George & Co.	3	11	7
Kagulu ltd.	10	8	7
WSS ltd.	4	6	6
Other (each fewer than 5%)	19	17	22
Town councils	14	11	10
Total	**79**	**100**	**100**

Source: UNDP (2011)

Private operators often operate in more than one town because otherwise their service area is too small in order to deliver economically efficient services. They argue that it is very difficult for them to manage isolated towns in an economic manner due to the high costs this generates in terms of support staff and transport of materials (USAID, 2013). This is one of the reasons why private operators often try to operate in small towns that are close to each other. Some operators cross-subsidize between towns to ensure the viability of those services. This cross-subsidization means that the resources (money or staff) in one town makes up for a lack of resources in another town in their portfolio.

Community

The community in small towns is very diverse because of the mix of rural and urban livelihoods. People in big houses that require piped water and people with a lesser income that require community-based hand pumps are living side by side (Adank, 2013). Therefore it is extremely difficult to find a water scheme that fits all. The private operator provides different

connections: institutional, household and public standpipe connections. Public standpipes are public pipes that are being used by the poorer segment of town. Household connections are being used by people that can afford a personal tap. In small towns, complementary services are often provided by hand-dug wells, boreholes with hand pumps and water kiosks. The increasingly commercial outlook of private water operators carries a risk for the poorer people in small towns. Poorer residents are often unable or unwilling to pay for services, though in reality they may actually end up paying more for their water than the more affluent citizens (SNV, 2012).

5.5 Legal Framework and Regulation

In the previous chapter it was said that the enabling environment is important since it comprises a set of interrelated conditions – such as legal, organisational, fiscal, informational, political, and cultural – that impact on the capacity of development actors to engage in development processes in a sustained and effective manner (Thindwa, 2001). Therefore it is important to understand the legal framework and regulation that is surrounding the water sector in Uganda. Here, only the laws and regulation that concerns water supply in small towns is discussed.

5.3.1 Legal Framework

The National Water and Sewerage Corporation Act, Cap 317, 1995

This act promotes a new integrated approach to water management to guide the allocation of water and associated investments. It establishes and governs the legal status, mandate, powers and functions of the National Water and Sewerage Corporation (NWSC). It constitutes NWSC as a Water Authority to provide water and sewerage services in areas entrusted to it under the Water Act. One of NWSC's functions is to develop the water and sewerage systems in urban centres and bug national institutions throughout the country. This act is relevant to this research since NWSC and private operators sometimes compete to operate in the same small towns, as will be further discussed in Chapter 7.

The Local Governments Act, 1997

This act implements the government's policy of decentralization and devolution of powers and services delivery to district councils and other lower governments. Among the responsibilities of the town council is the provision and maintenance of water supplies in liaison with the Ministry of Water and Environment. This act is relevant to this research because it states the different responsibilities of the several actors involved in the water supply in small towns. How this works exactly will be discussed further in this chapter.

The Water Act. Cap 152, 1997

This is the main law guiding the water sector. All institutional structures, working documents and policies in the sector are based on this law. This act places all rights to control, protect and manage water in Uganda for any use in the Minister. One of the objectives of the Water Act is to coordinate public and private activities that affect the quantity, quality, distribution, use or management of water resources. It thus explains the roles and responsibilities of the different actors in the PPP.

5.3.2 Regulation

Regulation can be seen as a mechanism to balance different stakeholders' objectives. In the case of the water sector it can enable the public sector to carry out its long-term policy objectives, such as expanding services to people who are currently without access. At the same time regulation can protect the private water operators from politically driven decisions and keep potential political interference under check (IRC, 2013).

Within the Ministry of Water and Environment (MWE) there is the Directorate of Water Development (DWD. Within the DWD, the Water Authority Division is responsible for monitoring contract compliance and overall performance. A Regulation Unit was formed within the MWE and became operational in 2009. The Regulation Unit mostly handles control over the application of existing rules. The unit is not yet a formally adopted structure within the Ministry but rather a selected group of five officers within the DWD performing the regulatory duties (USAID, 2013). The Regulation Unit gathers and organizes information on the performance of Water Authorities through different tools. Examples are the Contract Compliance Scorecard and the Compliance Checklist. The main purpose of these two tools is to assess the technical, commercial, financial and management performance and reporting

requirements of Water Authorities. The Compliance Checklist can also be used by Water Authorities to better monitor the performance of the private water operators.

Appendix E shows how the allocation of economic regulation functions is divided in small towns. Economic regulation consists of setting, monitoring and enforcing tariff and service quality levels to be provided by water service providers. Groom, Halpern, and Ehrhardt (2006) define it as: 'economic regulation refers to the rules and institutions that set, control and modify the maximum authorised tariffs and ensure they are applied and the minimum agreed service standards for water service operators'. This means economic regulation can be broken down into four functions: tariff regulation, service quality regulations, and competition regulation and consumer protection. Trémolet and Binder (2010) developed a framework that USAID (2013) used to describe the allocation of economic regulation functions in Ugandan small towns. This framework can be found in Appendix E.

5.6 Output-Based Aid (OBA)

So far in this chapter we have discussed how the small town water sector normally operates. Even though the sector was improved by putting in place all these discussed entities, not everyone could benefit form these improvements. Due to rising investment costs combined with affordability problems there was limited expansion of services to poorer segments of the population. In this time it was said that Uganda needed to develop a more sophisticated PPP arrangement that would allow greater transfer of risk to the private sector, unlocking innovation and efficiency and increase accountability (Azuba et al., 2010). Based on this recommendation the Ugandan government started an output-based aid (OBA) pilot project in 2008 to test a new form of risk transfer mechanism that leverages private sector finance and expertise in system design, construction and operation within the existing institutional framework. World Bank supported this program.

The aim of the OBA program was to provide affordable safe water to new customers among poorer groups while promoting effective implementation, value for money, and private participation. The initial scheme consisted of 10 subprojects, 4 in rural growth centres and 6 in small towns (Azuba et al., 2010). In each one, a private company was selected on a competitive basis to implement a predefined investment program for improving the water supply system and to operate the extended system. In small towns the goal is to expand access

by increasing active connections and extending the distribution networks and, where necessary, to increase the capacity for production, storage, or both.

All of this was supported by the Global Partnership on Output-Based Aid (GPOBA). The GPOBA is a partnership of donors and international organizations working together to support OBA approaches. The OBA program targeted an initial group of six small towns and four RGCs, which did not previously have a piped water system. The private operator received a reimbursement of its investments in the form of a subsidy only when it has been confirmed that the planned number of connections have in fact been installed and are fully operational. The Monitoring Officer of the MWE explained it like this:
"Now, the idea is to try and do one of two things. One, tap more on the competences of the private sector. And competences mostly in their ability to finance and deliver a certain agreed upon output. So for it, the idea is that we agree on output. Say we want a tank, we want 200 connections and we want maybe an extension of one kilometre, we agree on these outputs so the private sector will operate in this case, and please go ahead and do it. As soon as you and we come and verify that you, the work has been done, he [the private operator] is paid 80% back. He is refunded 80%. Now, the balance of the 20% is agreed that it is recovered from the tariff [the private operator makes]. And that is how this arrangement works."

The small-towns OBA scheme in Uganda built on a decade-long history of formal private sector involvement in the delivery of water in the country's small towns. These improvements have been achieved at a lower government subsidy level. But there has been considerable diversity of outcomes across towns. In addition, the contract structure has been altered. The private operators, for example, now receive a higher percentage of the revenue collected (UNDP, 2011).

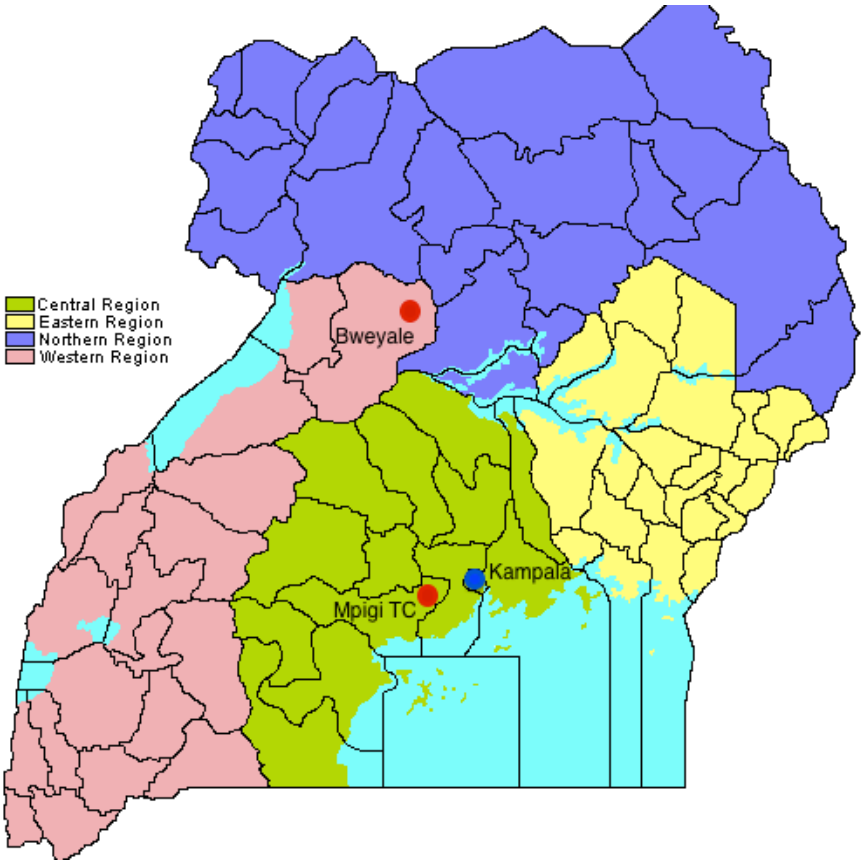
One of the case studies, Mpigi TC, still performs under such an OBA contract. The contracts that were signed under the pilot program have almost all reached its end. The one in Mpigi TC, is one of the lasts ones to be under the OBA program. Although World Bank has stopped its pilot program and has not expressed any intention to continue with it in Uganda in the future, there is still a lot to be learned from this program. This will be further discussed in Chapter 9. This chapter has shown how the small town water sector in Uganda is supposed to work in theory; let us now turn to the practice. In the next chapter the two case studies of this research will be presented: Bweyale and Mpigi TC.

Chapter **6**

Case Studies

This research is based on two case studies. Both cases are small towns in Uganda that are operated on by a private operator and are gazetted by a Water Authority. The two cases are the towns of Bweyale situated in Kiryandongo district, Western Uganda and Mpigi Town Council, situated in Mpigi district, central Uganda. Their position on the map of Uganda is depicted below.

Fig. 6 Map of Uganda



6.1 Bweyale

Bweyale is the home to around 15.000 people. Since it lies next to a refugee camp, it is hard to know the exact number, because people are always moving in and out. The town was chosen because SNV, at the time of the research, expressed an interest in looking into opportunities in capacity building programs in this particular town since SNV was considering becoming more active in Western Uganda. Bweyale is situated in Western Uganda in an area with low water potential. This means, during dry season, it is hard to access ground water.

At the time of the research it had a water scheme with 126 water connections of which 7 are public standpipes for the poorer segment of the community. The piped network is 24 kilometres long. Bweyale uses boreholes to access groundwater, which is pumped through the piped water scheme to the different connections. Since groundwater is said to be relatively safe, Bweyale does not have a treatment plant but uses chlorine in case of contamination.

Before 2012, Bweyale was not yet a town council but fell under the sub-county. Since 2007 a scheme operator managed the water system because the scheme was so small it could not attract a private operator. In 2010 Bweyale became a town council and in 2011 the private operator Jowa Engineering Service ltd. was contracted. Jowa Engineering Services ltd. is one of the biggest private operators in Uganda (see table 2) and decided to operate in Bweyale since it was already managing the water scheme in Kigumba, a town close by.

This transitional phase was not easy. The scheme operator apparently had caused a lot of problems. So when Jowa Engineering Services ltd. came into Bweyale, the community refused at first to cooperate. The regional manager explained that by trying to be transparent about what you do as a private operator and by always interacting with the community, they slowly came on board and understood why they have to pay for the water they were receiving. At the same time, since the town council was very new, it was quite difficult to get the chain of command in place as described in policy. This resulted in the fact that the private operator has not submitted reports to the WSSB and the DWD since July 2012.

On the ground, Jowa Engineering Services ltd. only employs two people in Bweyale: an operational-manager and a plumber. Personnel of Kigumba will sometimes support the operation and maintenance in Bweyale. At the time of the research the town was in the process of being taken over by NWSC, the national utility that operates in the large towns of

Uganda. According to the Principal Planning and Development Engineer of the NWSC this was because Bweyale was performing very poorly. This process will be described in more detail in Chapter 7.

In Bweyale, 20 end-users were interviewed. In Chapter 5 it was explained how these community members were chosen. All end-user respondents were asked on several occasions in the interview how they experienced the water provision in Bweyale (see Appendix C). Most respondents complained that 'the water is never on'. Also at the time of the research water had not been flowing for a few weeks because the water crash tank was getting replaced. Secondly, because water is being pumped from deep under de ground, the end-users complained that the water is hard and will not form soap to wash their clothes. There were also instances that end-users thought the piped water had given them typhoid and was not safe. One woman told the story of having found a dead rotting bird in one of the reservoirs. Also, people complained that the public standpipes were only distributed along the main road. Leaving the more distant wards without this option for water. Lastly, some end-users still think the point water sources are better than the piped water since it can have a 'funny taste'.

These findings were also presented in the participatory meeting in Bweyale. The participants recognized the claim that water was scarce. Chapter 7 will elaborate on why that is. Concerning the claim that piped water would not be safe and point water sources would be better, the participants disagreed. They said because piped water is scarce, people are forces to use the point water sources and are then at risk to get typhoid. Then, the community member will blame the piped water. Here you see the importance of the community's perspective. The town council has trouble sensitizing the community since its composition changes very fast due to the refugee camp. However, the end-users said that they would take any water they would get their hands on, since water was so scarce in the area of Bweyale.

6.2 Mpigi Town Council (TC)

Mpigi TC has a population of around 40.000 people and lies 37 kilometres outside Kampala. This town was is operated on by another large private operator Trandint ltd. (see table 2). Unlike Bweyale, Mpigi TC has a high water potential which means it is easy for the population to access ground water. The town was chosen because it is easy to reach by public transport and it is one of the only towns that still operates under an OBA contract.

At the time of the research Mpigi TC has 1580 water connections of which 8 are public standpipes. The piped network is 44 kilometres long. The water is being pumped from a swamp. Since this is surface water, the risk of contamination is much bigger then in the case of Bweyale with its borehole water which is deep in the ground. Therefore there is a water treatment plant just outside the town's centre. The water is being tested twice a month on several physical and chemical characteristics of the water. Water is then tested as raw water and treated water. Also the water flowing from the taps was tested in different locations. This results in a quality report each month like the one in table 3.

Table 3 Water quality results for February 2014

Parameter	Units	Raw H_2O	Treated H_2O	Standards
pH	NTU	7,6	6,8	6.5-8.5
Turbidity	Mg/l Ptlo	75	<5	0-5
Colour	Mg/l	71	5	15
Free chlorine	Mg/l	0	0,4	0.5-1.0
Iron	M/l	11,3	0,3	0,3
Nitrites	M/l	<4.4	<4.4	0-4.4
Bacterialogical coliforms (total)	CFU/100ml	28	0	0
Feacal coliforms	CFU/100ml	26	0	0

In 2008, after the construction of the water scheme was finished, Trandint ltd. was contracted by Mpigi TC's Water Authority. This entailed a 'normal' 3-year contract. Yet, in 2011 the contract was renewed but this time under the OBA-program. This meant that this contract would last for 5 years and the private operator would get more responsibilities in operating and maintaining the system. How this OBA contract has influenced the performance of Trandint ltd. in Mpigi TC will be discussed in Chapter 9.

Trandint ltd. has more people on the ground in Mpigi TC: a total of 14 staff members. It has an area operational manager, a commercial manager, an office clerk, meter readers, a water technician, three plumbers, a lab attendant and two pump attendants.

In Mpigi TC, 21 end-users were interviewed (Chapter 5). Also here, respondents were asked how they experienced the water provision in Mpigi TC. It was said again, that water was almost never on. Also it was mentioned that it takes the private operator a long time to respond to problems. Furthermore the end-users complained about the yellow colour of the

water at times and thought it was therefore not always safe to drink. The reasons for these claims are discussed in Chapter 7. They also complained the pipes and taps are not of good quality and would therefore break, letting water be spilled on the ground. However, the private operator claimed that the community-members could choose their own type of tap. So they can choose between the cheap, poor quality tap with a higher risk of breaking and the more expensive, good quality tap. Also here, there were some end-users that claimed that water from point water sources is better and more natural than piped water.

According to the participatory meeting participants this has to do with the perception of the community. Once water has different taste, they will not drink it. But it can be that the taste is caused by the treatment of the water and that is even the thing that makes it safe. It is very hard to let the community change its perspective concerning this.

In table 4 some information of both towns is depicted that was given in interviews. More information on the towns will become apparent when discussing the found issues in Chapter 7.

Table 4 Characteristics Case Study Towns

Description	Bweyale	Mpigi TC
Population	15000	39367
No Connections • Institutional • Household • PSP	126 8 111 7	1580 112 1460 8
Network (km)	24	44
Revenues (UGX)	2.000.000	17.300.000
Management Fee (85%, 90%)	1.700.000	15.570.000
Design Capacity (m3/hour)	8	50
Actual Pumping (hours/day)	12	8
Power Cost (UGX)	1.500.000	5.000.000

Chapter 7

Issues

Based on the expert interviews and the two case studies, it appeared that still many issues remain in the small town water sector as well as issues that private operators are facing on the ground. This section discusses both levels and shows that the different problems found are interlinked and together form the reason why it is hard for a private water operator in the Ugandan small town water sector to be profitable and effective in its water delivery services.

7.1 Issues in the sector

First, three problems will be discussed that fall under regulatory issues. These issues fall under the enabling environment as seen in the conceptual model earlier presented in the methodology chapter. Good regulation should enable the private operator to deliver high quality services to the community. Secondly, the roles of the NWSC, the Umbrella Organizations and the APWO will be discussed by looking at their part in hindering or being hindered to help the private operator improve its service delivery.

7.1.1 Regulatory issues

When asked what the biggest problem is in de small town water sector, the Monitoring Officer of the MWE replied: *"We really think the answer is regulation. We think that is the big animal in the room."*

That regulation forms a problem in the water sector was confirmed by 70% of the sector experts that were interviewed. In Chapter 5, the policy and legal framework concerning Ugandan water supply were discussed. The legal framework showed different regulations

including the water regulations and the Water Act, Cap 152. Also, the 'allocation of economic regulation functions' (Appendix E) was discussed. There is still much to improve when it comes to regulation in the Ugandan water sector. In October last year, the U.S. Agency for International Development (USAID), through its regional program Sustainable Water and Sanitation in Africa (SUWASA) published the report 'Establishment of an Autonomous Regulatory Agency for Urban Water and Sewerage Service in Uganda'. This report presents findings from the analysis of the country's existing policy and the water supply and sanitation sector's legal and regulatory framework. The report also presents recommendations for the establishment of the Uganda Water and Sewerage Regulatory Authority (UWASRA). The MWE thinks this regulator should be in place in 2017. This section will now continue by discussing some of the major weaknesses found in regulation in the water sector, based on the USAID report and the data gathered in this research.

Under-capacity of the Regulation Unit

In the overview of the 'allocation of economic regulation functions' (Appendix E) in small towns we saw that the Regulation Unit mostly handles control over the application of existing rules. This unit was formed within the MWE and became operational in November 2009. The unit is not yet a formally adopted structure within the Ministry but rather a selected group of five officers within the DWD performing the regulatory duties (USAID, 2013). The Regulation Unit gathers and organizes information on the performance of Water Authorities through the different tools discussed in Chapter 5. This information is not systematically reported and analysed in reports that are made available to a broader audience (USAID, 2013). Although there is good grasp and knowledge on how small town schemes have operated so far, it is a challenge for the Regulation Unit to adequately process the information and support the WSSB due to staff limitations. This problem was also mentioned by the Manager of the Umbrella Organization Central:

"Right now, it is the ministry doing it [regulation]. Through a unit. It is a small unit within the ministry but it is understaffed. It does not have the resources to move to all these towns and ensure that these private operators are performing as per the contract signed."

When it is hard to monitor the performance of the private operator, it becomes difficult to ensure good quality service.

Another problem lies with the enforcement of rules. In case the regulation unit is able to monitor a water scheme properly, and there seems to be a problem with the private operator, the Regulation Unit has no legal basis and no enforcement powers (USAID, 2013). This forms a problem when you want the private operator to improve its services. It is possible for the Ministry however to withdraw conditional grants. In the future though, with the autonomous regulator, this should be solved through working with a licensing system:

"So when we have that regulator what is being proposed, it is engaging these operators based on licensing. So if are you not able to meet certain minimum requirements, the license would be withdrawn. Ideally that is what would happen. But in the current arrangement it actually is one of our biggest challenges because you know, taking them to test, there is a card that we keep behind that we keep playing once every while and that is the card of conditional grant support. There is some support that we give which basically helps these guys in the O&M and all that. So basically we say we will not give you support if you are not doing this, this, this. But that, sometimes you find that is not fair. Because you think you are punishing the operator but actually the one you are punishing is the user. So sometimes we think it is not fair to play that card, but there are times that you know that it gets so bad that you have to play that card."[3]

With the new autonomous regulator that will impose the licensing system, the MWE would have more power over the private operator to ensure the quality of service.

Contract Duration

In Chapter 5 it was explained that normally a three-year management contract is signed between the private operator and the Water Authority. This is usually too short for the private operator to achieve significant improvements in his service delivery. Because a private operator is never sure whether its contract will get renewed, financial viability is not ensured. Thus the incentive for the private operator to invest in the scheme is very low. Private operators agree that it would help their performance if the contracts would be longer:

"It will give insurance, giving a private operator a 10 year contract or even a 6 year contract that he will be willing to invest because then you will get some return. But if you give him

[3] Monitoring Officer MWE

three years and he is not even sure whether it will be renewed after three years, then it will fear to go for these big big investments."[4]

One of the characteristics of OBA is they try to deal with this problem by offering five-year contracts. This phenomenon and how it affected the performance of the private operator on the ground is discussed in Chapter 9 through the case study of Mpigi TC. But let us now first turn to another regulatory problem: tariff approval.

Tariff Approval

Private operators complain the tariff approval takes too long. The operator cannot apply a water tariff without permission from the WSSB, once the board has approved the tariff it still needs to be approved by the Minister himself. This is to ensure that the private operator will not exploit the community by asking a tariff that is too high. Every year the private operator needs to hand in a proposition about the water tariff that will be used in the next financial year. This tariff approval process has been slow and some tariff applications have not been processed for more than a year (USAID, 2013). When tariffs are not approved in time, the private operator is forced to work with a lower tariff then the appropriate tariff for the system. This means the private operator is receiving lower revenues than it needs to in order to break even, especially in periods where fuel and electricity costs have been rising. This in turn is harmful for the operation and maintenance of the system and in the end for the safe water service provision to the community.

7.1.2 NWSC is taking over small towns

The second issue that was found in the sector has to do with NWSC taking over small towns. As briefly mentioned before, the NWSC is a government utility that provides water to the larger towns in Uganda, for example the capital city Kampala. Over the years, it has happened that small town supply systems managed by private operators have been de-gazetted from the local Water Authority to NWSC. In this case the ownership of assets vested in the central government is not entrusted to the Water Authority but to NWSC. NWSC's mandate is to operate and provide water and sewerage services in areas entrusted to it on a sound commercial and viable basis (NWSC, 2013). In its five-year strategic direction of 2013-2018, NWSC announced that they consider expanding their mandate to cover all major urban

[4] Regional Manager Jowa Engineering Services ltd. Bweyale

centres within Uganda in an attempt to ensure accelerated service delivery in the urban centres. This is translated into one of the 10 strategic goals and targets, which is about geographical coverage. This means NWSC wants to increase services to more small towns. Practically this means NWSC is seeking to ensure their services are extended from a level of 28 towns in 2013 to at least 80 towns in Uganda in 2018 (NWSC, 2013). Private operators fear this new direction.

Why take over?

NWSC normally relies on development partners for large investments. Examples of development partners are the German government, the French government, the European Union and the African Development Bank. The government of Uganda plays a big part in channelling these investments. If the money from development partners comes in the form of a grant, it is directly channelled to NWSC. If the money comes in the form of a loan, they are taken over by the government of Uganda and then the government channels that money to NWSC in the form of a grant under some conditions. One condition is that once the money is invested, all the money NWSC makes at the end of the day should be ploughed back into the water systems. But, this is not the only condition that comes with accepting this money:
"Actually their [the Ugandan government's] drive of taking on new towns is one of the conditions of some of the moneys that we have been receiving. The government of Uganda said: 'we want to mobilize and get you funds but in time you must take over these towns, invest in them, make sure you improve the efficiency, you improve the operations and off course provide to the communities there'."[5]

From this interview with the Principal Planning and Development Engineer of NWSC and NWSC's five-year strategic direction report, it seems NWSC is mostly taking over towns because the Ugandan government asks them to do so. From the perspective of NWSC, ad hoc gazetting of small towns forms a strain on the financial and operational performance of the company. In the NWSC Corporate Plan of 2006-2009 it states that towns with underdeveloped infrastructure create a financial burden to the corporation since they cannot raise enough funds to finance their operations (NWSC, 2006). But why would the Ugandan government want NWSC to take over so many small towns? The DWD gives the following explanation:

[5] Principal Planning and Development Engineer NWSC

"*While both NWSC and Private Operators are necessary in order to efficiently and effectively achieve urban sub-sector water supply and sanitation/sewerage objectives, each comes with different capacity strengths and challenges. These strengths and challenges are suited to and serve different contexts and towns better but cannot be deemed best for all situations. This context makes it inevitable to gazette towns from Local Water Authorities to NWSC, and depending on the sector evolution and redefinition in the future, require towns to be de-gazetted from NWSC."(DWD, 2012)*

Translated into practical language, this quote means that in general the size of the water scheme will determine how it will be managed. An individual scheme operator will manage a town with only a few connections. When there are only a few connections, it does not make sense to contract a company since the overhead costs will be very high. Once a town has about a few hundred connections it makes more sense that the private operator will step in. But once a town exceeds around 1000 connections, the Ugandan government would like to see NWSC to take over management of the urban water facility in the small town. The Monitoring Officer of the MWE explains it like this:
"So now, anything in between there, and I should also say that it is many times subjective, yeah but really anything in between 100 and 500 connections that is normally the case where you have these private water operators but I should also say that along the way as they are managing this they also grow too big, so then we say now we think National Water should be taking over here, because National Water can maybe make them bigger because they have resources to invest, they have, you know, more expertise and all that so I think sometimes that is when it should be transferred, also what can I say, there are certain towns which we think has become, the inefficiency of the operators has become too much and we think in such cases it would be good to bring in National Water."

This in itself gives the operator a disincentive. If the operator performs poorly, that is a reason for NWSC to take over. If it performs well and lets the scheme grow, it is also a reason for NWSC to take over. Private operators have argued that it becomes a waste to invest in human, financial and technical capacity to bring small towns to commercial viability since commercial viability becomes the reason for gazetting the towns to NWSC. From this perspective it may be an incentive for private operators to keep the towns that are under their management unviable for gazetting. This causes a potential threat to the private operator's efficiency improvement (DWD, 2012). As a director of Jowa Engineering Services ltd. said:

"It is because we have been in the water sector for a long time. But if we were not, I think we would virtually have given up already and would go on doing other things, engineering things. Because it is not an incentive to get the town and you manage to let it grow and let it become big and then you know it will be handed over. You get a disincentive."

Two years ago, the MWE already recognized the problems caused by letting NWSC take over small towns. In January 2012 the DWD published 'Guidelines and Procedures for Gazetting Towns to NWSC' in which they recognize that the ad hoc and haphazard transfer of towns to NWSC jurisdiction has created misunderstandings and disharmony within the sector. The new guidelines are said to take into consideration private operators' interest and are supposed to be in line with the 'overall strategic direction'. Lets turn to these guidelines.

Guidelines

The DWD differentiates between the 'standard gazetting procedure' and the 'fast track gazetting procedure'. The gazetting procedure in this case means small town supply systems managed by private operators that are being de-gazetted from the local Water Authority to NWSC.

The 'standard gazetting procedure' is depicted in Appendix F. This gazetting procedure begins two years before the intended date of gazetting. This is to provide for 'Water Authorities to retire their contractual obligations with Private operators, settle outstanding obligations with different parties so that NWSC is not bogged down by debts and liabilities incurred through operations of the preceding operators'. Secondly, it gives the MWE and NWSC the time to carry out feasibility studies in the town so it becomes clear how much investment is still needed. Then there is still enough time to possibly submit investment proposals and get possible grants allocated. Lastly it gives enough time to perform contractual due diligence and submit compensation claims to the MWE. After two years, the town is handed over to NWSC and from then on will be a NWSC town (DWD, 2012).

The 'fast track procedure' is designed for exceptional cases when it is not practically possible to follow the standard procedure. This is the case when a small town is either already sharing the NWSC piped network or when it is so close to the network that investment in a separate water system is unnecessary. This is often the case in areas around bigger cities, for example

Kampala. Another exception is based on the technical complexity of the infrastructure. When substantial infrastructural investments have been made or are underway and it is clear that the Water Authority and the respective WSSB do not have the capacity to manage and oversee the water system anymore, the town will be subject to the 'fast track procedure' after completion of the investments. In case of the 'fast track procedure', it is possible the contract between the private operator and the Water Authority will be eliminated before the end-date.

Consequences for private operators

As said before, the private operator is generally offered a three-year contract to operate in a small town. Normally, when the contract expires, the private operator has to participate in the new bidding process. This means the operator is never sure whether he will get the contract renewed, but in case he performed well there is a good chance. In case of the 'standard gazetting procedure' NWSC will take over a small town after the contract with the private operator has expired. In the short term, this will not harm the private operator since it was not sure to begin with whether the contract would be renewed. On the long term however the chance of renewal is being taken away if the private operator manages to make the town commercially viable since it then becomes subject for NWSC. This causes the earlier mentioned problem of creating an incentive for private operators to keep the towns that are under their management unviable for gazetting. However, in case of the 'fast track procedure' more problems arise. This affects the private operator in the short-term since they loose future revenue and they are being put out of business. Besides this there are three more problems that private operators face due to NWSC taking over small towns.

Unable to cross subsidize

Since NWSC will mostly take over small towns that are profitable for the private operator, this causes problems. The private operator generally operates in more than one town. In its portfolio of towns, the operator has smaller small towns and larger small towns. Generally, the larger small towns have more connections, thus more collections, thus more revenues. These larger small towns are often the only towns in which the private operator manages to make some profit. The private operators will use this money to make up for the losses in other towns. This juggling with money, which is called cross subsidization, should in the end try to make sure the private operator does not make losses in its total portfolio. When the bigger towns are being given to NWSC, it becomes impossible for the operator to cross subsidize.

Directors of Trandint ltd. and Jowa Engineering Services ltd. explain:
"So that is how we have been working. We had about 14 towns, 5 of which who were big, so we were really sure if we had a crisis or we were waiting for funding for example from the local government, you are able to borrow money from one town, you go subsidize another as you wait for this money. But currently we can't. So I wouldn't say that currently we are making a profit. We are not."

"As a private operator off course one problem is loosing our big towns, that is the biggest problem we have."

Loss of qualified personnel

Another problem that arises when a town is being given to NWSC is that NWSC often employs the personnel that was already working in the town on behalf of the private operator. One of the Directors of Trandint ltd. says:
"All our staff of Trandint, we had over and above a 100 people in Trandint as staff, and we trained about 90% in non-revenue water control, water quality, financial management, customer care, but we have lost all of this staff. Right now we have a staff turn over for the reason of National Water taking over."

This is a problem for all private operators. Bweyale was, at the time of the research, in the process of being taken over. The only two staff members working for Jowa Engineering Services ltd. said the following:
"*For us whatever is there… we want to work. We need to work. (…) We know National Water is coming officially, they are coming to take over, they told us that we will continue working with them so we want to work"*

The Monitoring Officer of the Ministry of Water and Environment responded to this by saying this is a positive thing for the employees. This way people are not loosing jobs, as long as they have the qualifications. Many of them have gotten career advancement and some were even brought to the headquarters of national water. According to him it is not fair to say the private operators are complaining about NWSC taking over, it is about the directors being unhappy that they are loosing business and personnel. The government tries to make up for these losses in business and personnel by giving private operators monetary compensations.

Insufficient compensation

The 'Guidelines and Procedures for Gazetting Towns to NWSC' of the DWD (2012) state when it is considered to be absolutely necessary to terminate an on-going contract then compensation should be given. This is either computed as the Average Management Fee multiplied by six or the number of months left on the contract, whichever is smaller. When asked how the private operators might feel when NWSC takes over, the Principal Planning and Development Engineer of NWSC said:

"Off course they don't feel happy, that is a fact. They are always not happy (...) they are supposed to be compensated by the government of Uganda for, if you had a running contract, for the loss of revenue. Something of compensation. And in most cases that compensation takes long. So it ends up to be a frustrating process for this private operator. Then two, the fact that they are being put out of business, they have to look for alternative ways of surviving and making it."

The private operators claim they have no rights to do anything about their contract being ended early. The APWO has tried to complain on behalf of the private operator at the MWE but they say it does not help the private operators since there is no legal ground on which they can fight this. When asked if the private operators are involved in the decision making process of gazetting towns to NWSC, the Monitoring Officer of the MWE reacted:

"haha well unfortunately no, they are not haha this is like a government policy where we think we do what is best for the sector. Though, it would be good to consult I should say but unfortunately that has not been done."

Although respondents agree that the private operators are not treated fairly, most respondents also agree that NWSC taking over small towns is a positive thing for the sector since they have more capacity to first extend the pumping capacity of the system and then connect more people so a larger percentage of the community has access to safe, affordable water. One of the organizations that are supposed to build capacity in a scheme with a private operator is the Umbrella organization. However, it has been said throughout several interviews in this research that Umbrella organizations are biased towards Rural Growth Centres.

7.1.3 Umbrella organization biased towards RGCs

As said before, Umbrella organizations support WSSBs in small towns and scheme operators in Rural Growth Centres. In several interviews it was mentioned that the presence and support of Umbrella organizations is not very apparent in small towns and that they tend to focus more on RGCs. The manager of the WSDF Central explains this by saying that the support an individual needs and the support a small private company needs, are two different things.

The private operator normally operates in more than one town that are often also closely situated. If for example someone in Bweyale has a problem he cannot handle, he can call someone who is working for the same private operator in Kigumba. Earlier, cross subsidization was discussed in terms of money, but it can also work for staff. If there is an employee who is temporarily unable to work; this can be taken on by employees that work in towns nearby. Then a private operator can continue to run the water scheme without a problem. But in case of an individual scheme operator, if he falls sick, then the whole system will stand still. These are the kind of problems where the Umbrella Organization will step in and support the scheme. One of the Directors of Jowa Engineering Services ltd. recognizes this on the ground:

"They [the Umbrella organization] wants our water supplies to be members of the Umbrella, and then make some contributions to the Umbrella, so that if there is an unforeseeable breakdown, maybe they can come in and help. Yeah, although in the towns we are running we have not felt a lot of impact of the Umbrella because the Umbrella started in the South-West and in the West but now it has moved all over the place. But in towns I am running I have not felt a lot of effects of the Umbrella but what I know they are more beneficial to very small schemes which are run by single people."

In Mpigi TC the Town Engineer who is the head of the technical department of the town council under which the urban water supply system falls, had no idea what the Umbrella Organization is supposed to do. The private operator in Mpigi TC however did say the Umbrella checks in regularly to check the quality of the water:

"We have this water Umbrella organization that always comes and takes samples. They check the quality, they give us advice here and there and make their recommendations."

It was therefore interesting to talk to the manager of the Umbrella Central and see what he could tell about what the problems were in Bweyale and Mpigi TC. The manager did not know before the interview which towns were visited for the research. It turned out he could tell in detail what was going on in both towns, which suggests the Umbrella Organization at least visits the schemes that are a member of the Umbrella. The manager of the Umbrella Organization Central explained how the Umbrella supports its water scheme members. When the Umbrella Organization visits the water scheme, it allocates a whole day to that particular system. The Umbrella interacts with the town clerk and the operator to find out what the challenges are the scheme is facing. After this, the Umbrella looks at the board minutes of the meetings with the WSSB to find out if there are issues and how the issues were addressed. Finally the Umbrella inspects the infrastructure of the scheme and assesses in what state it is in:

"So what we do is we visit our schemes routinely and that is on a quarterly basis, after every three months. We visit our systems and identify the challenges these systems are facing. Then we come back and plan how to support them, then we all the activities we do them routinely, we plan to do them routinely on a quarterly basis. Then we also support them through, if they press a demand, then we respond to their demands or emergencies so the support is either responsive or as a preventive measure routinely.

The Umbrella is supported directly by the government and indirectly by donors. Also, the Umbrella has a small fund from the water supply systems: the local fund. This is generated from the subscription fee (100.000UGX) and the membership fee (50.000UGX), which is paid on a monthly basis. Besides the local fund, the Umbrella has the emergency fund. This is the fund that private operators can loan money from in case of a sudden breakdown. The operator is then allowed to repay the money in 'friendly instalments'. This way the fund keeps revolving. It could be true that the Umbrella Organizations are biased towards Rural Growth Centres but it is for sure the Umbrella Organizations are at least involved in the monitoring of the water schemes.

7.1.4 APWO has no real power over private operators

The association of private water operators is supposed to support the private operators but also unite them to form a front and give the private operators a common voice to for example lobby at the Ministry. Also the APWO receives international support, which they use to

support their members. Private operators complain that the ministry has not come out and recognized APWO as a development partner. The opinions differ on how effective the support of APWO to the private operator is. One of the directors of Trandint ltd. says:
"They [the MWE] believe in individual companies and not an institution as a whole. So they have not recognized APWO as a partner in development, no. And I believe we have done much, so as a result as this we have been undermined. As much as we have brought in an issue of to run the water supply system you have to be a member of APWO but the reason it has not come out to support this, so you find some individuals that are running systems, so you don't even have mandate over them. They really run these systems unprofessionally and at the end of the day we are all called private operators even if we don't have mandate over some of them. So the Ministry has not come out to support us."

APWO complains that it will hurt the reputation of the private operators if APWO will not gain mandate to do something about poor quality operators. An example was given of a private operator, a member of the APWO, who misused the funds that were given to him. When APWO found out they blacklisted this particular private operator. But then, when a new scheme came out, the Ministry decided to give this new scheme to the private operator who had misused the funds. According to the Project Officer of the NGO NETWAS, this has to do with the Ministry favouring working with Umbrella organizations over APWO:
"Now, what is happening, because the Ministry is, I think, thinking more in line with Umbrellas. APWO will remain as their [the private operators'] umbrella, yes, but in terms of coordination the Ministry feels let us work through the umbrellas because they [private operators] are still also members of these Umbrellas."

According to APWO it is not just that the MWE prefers to work with the Umbrella Organizations, it has also to do with the Ministry not wanting the private operators to unite and that way be strong, for example to stand up against NWSC taking over small towns:
"So people think after a while, why should we be a member of APWO? You can't buy it, even if something has happened. So that is the lack of relationship of APWO and the Ministry and it is really affecting us because the quality of the private operator goes down. This is the reason that when National Water is taking over, we can't really come out as APWO, they kill us as a team. You cannot come up as APWO and handle it. It is, actually they are developing us as individuals instead as a team."

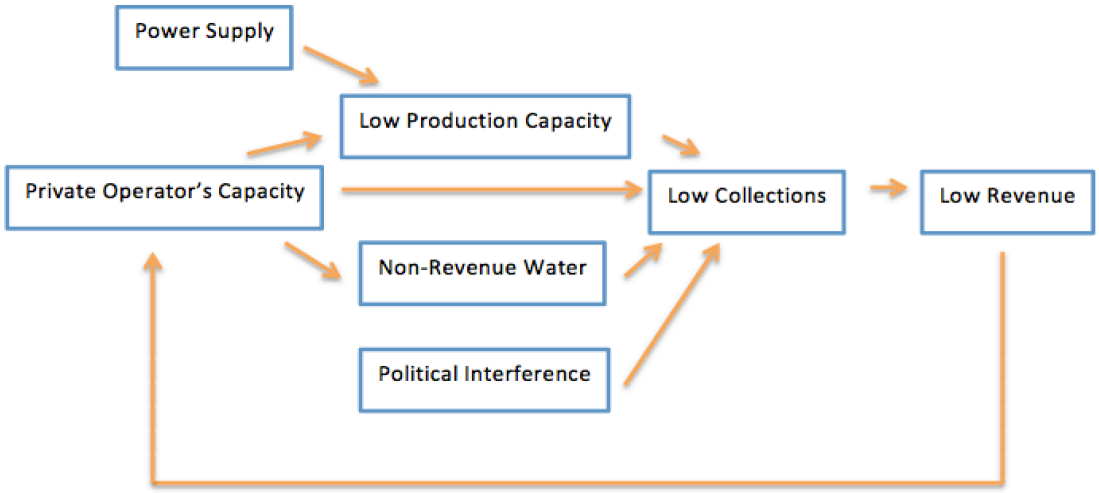
The Monitoring Officer of the MWE responded to this by saying:
"Actually, I know that APWO has been pushing for that [more mandate] for quit some time, for them to be stronger, but now, what would be the benefit, the direct benefits of the membership of that association apart from… because when you look at some of the members, they are not paying because they don't feel that it is of any consequence. Their association as in, they are not really benefitting much from their association. That is what they feel. But that is also because I think the association does not have, in terms of resources it is a bit of a challenge. Now you find that when we advertise for a town to be taken on someone will bring their certificate that he is a member of the association and someone will just come and say I am not a member of the association but I have experience in running. So for us we do not weigh it any different. For us, so long you have the competence, financial and technical, we weigh you guys the same. But for them they were saying that ok if I have this certificate with the association I should be given you know more consideration. But in actual performance out there, this does not really come out."

The Ministry thus does not see the impact on private operators when they are members of the APWO. The Secretary General of the APWO off course does not agree and says the Association has indeed affected the performance of private operators. They try to for example focus on customer care. After having received trainings from the APWO some private operators started working with complaint books in which the community can write down its complaints in order to lower the threshold to approach the private operator. This difference in perspective will be further discussed in Chapter 8.

7.2 Issues on the ground

Based on the two case studies and the expert-interviews, seven interrelated issues on the ground were defined. These problems are all interrelated and together form a vicious cycle that is causing difficulty for the private operator to be effective and profitable in its water provision services. The seven issues that will be presented do not stand on their own. They are interrelated and together they form a vicious cycle, which is depicted in figure 7. This chapter builds on the information given in table 4.

Fig. 7 Issues on the ground



Source: Brouwer (2014)

7.2.1 Power supply

In both towns, one of the biggest problems mentioned was the power supply of the piped water scheme. In Bweyale they use a generator to pump the water and in Mpigi TC they use an electrical grid. When using the generator the problem is that fuel is very expensive. The prices of the fuel have gone up while, in combination with the delay in tariff approval, the prices of water have been relatively stable. This causes the private operator not to pay the bills in time or not at all. In Bweyale the cost of fuel accounts for 88% (1,5 million /1,7 million) of the private operator's budget. In Mpigi TC the problem is not fuel but irregular power supply. Although the price of electricity is a bit cheaper, it still makes up for 32% (5 million / 15,57 million) of the private operator's budget. The big difference in percentage is caused by the difference in management fee and the pumping capacity.

7.2.2 Private Operator's Capacity

Capacity means the monetary as well as the human resources a private operator has available to operate the system. The monetary capacity of the private operator consists of the management fee. In Bweyale the management fee is 85% of total revenues. In Mpigi TC, due to the OBA contract, this is 90%. In Bweyale most of the management fee is being spend on fuel, leaving little capacity for the private operator to manage the system. For example, the private operator has no transport available. In cases of cuts or bursts, the private operator's

employee needs to walk to the source of the problem, which can take a long time. It was often said in expert interviews that private operators want to save money on staff so they hire cheaper but less qualified staff. On the long term this can compromise the performance of the system. This was the case in Bweyale. The regional manager of Bweyale even takes himself as an example:

"Like me, my job should have been an engineer. It should have been someone with a degree in civil engineering and I have not. I think that should be the case, but because they cannot pay that person they will always look for somebody else and another example is that man that is working as a plumber; he is just a high school leaver."

In Mpigi TC the management fee is enough to maintain the system but not enough to expand it in a sustainable way. The regional manager in Mpigi TC says:

"We still have some people that are not connected. Around 120 people who had paid but they are not connected. Those ones are actually still in areas that we have not reached. The pipes have not gone (...) because of resources. Our internal resources."

The monetary capacity of the private operator is based on the amount of revenue the private operator makes. It is also dependent on the support of the supporting organs like the APWO and the Umbrella organization. The quality of the trainings APWO is giving and the financial support for major break downs of the Umbrella will influence the way the private operator is able to manage the water system.

7.2.3 Low production capacity

Because of irregular power supply, the pumps in both towns are not pumping for 24 hours. This means that there is often not enough water to serve the entire population of a small town.

In Mpigi TC, the design capacity of the pumps is $50m^3$ per hour, resulting in a potential production of $1200m^3$ of water every day. However, because of irregular power supply, the pumps only pump for 8 hours a day, resulting in $400m^3$ of water being produced every day. In Mpigi TC this meant sometimes choices have to be made to first serve a number of wards on one side of towns and then to switch the water to other pipes and then serve to the other remaining wards. This means some wards are only getting water for a few hours a day or not having water for a longer period of time.

In Bweyale, the design capacity of the pumps is $8m^3$ per hour, resulting in $192m^3$ of water produced a day. It was said that the pumps pump for 12 hours a day, which means $96m^3$ of water is produced a day. This is not enough to serve the community. Respondents from the community where complaining about the shortage of water. Especially at the time of the research, since Bweyale was in the process of being taken over by NWSC. Because they were reconstructing the system, the town had not received water for already a month. When the researcher came back a month later, the town was still without piped water. In both towns people are forced to use the point water sources again when the piped water supply is off. Because these point water sources are often poorly maintained it therefore causes people to drink water that is not safe.

There is a way to go around the problem of irregular power supply: buy pumps with a higher production capacity. The Regional Manager in Mpigi TC explains how that has worked in other small towns: *"So that is another problem. We need some bigger pumps with a high production capacity. In other areas were we have been operating in Mityana our pumps were 100m3. So you find that in one hour you can produce 100m3. Even if you pump for 4 hours it is enough to supply for a whole day. But here, the fact that the production capacity is so small, it also has an implication and the power consumptions, because you will consume so much power when running the machines for 24 hours. If somebody would just fix the machines, we could pump for 4 hours."*

The problem however has again to do with limited capacity on the side of the private operator. To replace one pump it costs 50 million UGX. Since the system in Mpigi has 6 pumps, that would mean an investment of 300 million UGX. But this is not the only investment needed. If you increase the pumping capacity, the pipe ratings will have to change. This means changing all the pipes in the entire distribution network. Because of the short contract duration and the limited monetary resources, the private operator has no incentive to make these big investments in the system.

7.2.4 Non-Revenue Water

Non-revenue water is water that is not paid for. Water can flow freely because of bursts, cuts, overflow and or theft. Because water is just flowing freely the private operator cannot collect money for this water and thus the money is lost.

In Mpigi TC there were cases of road constructions where the pipes were getting cut. We saw in Chapter 6 that in Mpigi TC, the end-users complained of poor quality materials. In Mpigi TC the end-users themselves can choose which material tap they want to buy. However, key-respondents have complained that some private operators will install poor quality pipes and taps in order to lower their costs. This in turn increases non-revenue water. Another consequence of cuts and bursts is not just that water is being lost. It can also contaminate the water since dirt can flow back into the system. This is why end-users in Mpigi TC were complaining about the sometimes-yellow colour of the water (Chapter 6). The private operator's capacity influences how quickly the problem of water flowing freely is being solved.

In Bweyale there were also cases of public standpipe attendants that would collect the money of the community and then run away without paying the private operator. In Bweyale, most community respondents were not even aware that there was a private operator providing them with water, they thought it was the Town Council doing that. This lowers the transparency between the community and the private operator and causes that problems are reported on more slowly to the private operator.

In Mpigi TC however almost everyone was aware that the 'water people from the water office', being Trandint ltd., were providing them with water from the taps. Therefore people knew whom to call in case of any problem. This caused a quick response of the private operator to cuts and leakages. The private operator in Mpigi claims it normally attends to leakages within a week. When it takes longer it is often due to the delay in reporting on the community's side. In the monthly reports from July-December 2013 it seemed on average 78%[6] of all reported leakages were attended to within seven days. Still, non-revenue water in Mpigi TC accounted for 17,5% of total water produced in the period of July-December. In Bweyale, as said before, there is no recent documentation. However, during the period of July 2011 – June 2012 non-revenue water accounted for 18% of total water produced. In this period, no written complaints were received, which probably has to do with the fact most people in Bweyale did not know who was providing them with the water.

[6] based on author's own calculations

7.2.5 Political Interference

In both towns there is a issue of institutions not paying their bills in time. Sometimes this can take up to a year. On a three-year contract, this is quite a long. Also politicians can, in order to gain votes, convince the community that they should get the water for free. This causes the private operator problems because it gets harder to collect money from the end-users. By saying water should be for free, the politicians are indirectly encouraging the community to use the point water sources instead of the piped water supply. Also, the politicians can refuse themselves to pay for the water. This sets a bad example for the community members.

In general the community was said to have more trust in politicians than in the technical staff of the private operator. This is because politicians are often people from the area with whom the community grew up with and the technical staffs are often outsiders to the community. This was more the case in Bweyale than in Mpigi TC. However, even if politicians decide that having the private operator managing the system is a positive thing, they can still cause trouble. The Principal Planning and Development Engineer of NWSC even thinks this is the biggest problem for the private operator. A problem NWSC does not have to deal with:
"First and far most political interference, there is a lot that goes down. The district leadership, the councillors, everyone wants to manage the system the way they feel it should be managed. They want to bring in their ideas. There are a lot of ways the private operator is not free to manage the system as is expected."

7.2.6 Low Collections

The issues above cause low collections. With low collections it is meant that not all money has been collected that potentially could have been collected. This can either be because not the whole community is served or low collection efficiency.

As we have seen before, a lot of potential collections are lost because of low production capacity. This causes people to divert to point water sources. This makes a big difference on how much water can be billed, as the regional manager of Bweyale explains it:
"*I would look at 24 hours water service for consumers. And by doing so I know my billing would grow. My billing would even be more than double because some of these alternative [point water] sources, why they are existing, because there is no regular supply."*

A big part in the private operator's collections and potential collections is the relationship with the community. The market of the private operator is dependent on the willingness of the community to pay. Not all people are able or willing to pay the bill every month. This causes low collection efficiency. In Mpigi TC however the collection efficiency is on average 91% since on average 19 million UGX is being billed and 17,3 million UGX is collected. Although the collection efficiency in Mpigi TC was quite high, the earlier mentioned problems still cause problems in the amount of money being collected compared to how much could have been collected if the problems would not have been there.

7.2.7 Low Revenue

All the earlier discussed issues in the end result in low revenue. Revenue is off course dependent on the tariff being charged to the community. Low revenue has thus to do with the earlier discussed problem of slow tariff approval on the side of the Ministry. Low revenue in turn causes limited capacity of the private operator since the absolute management fee amount will be low. This research suggests private water operators in Uganda are trapped in a vicious cycle comprising of these seven interrelated problems.

Chapter **8**

Role of different actors

From the former it becomes clear that private operators are facing many challenges in the sector as well on the ground that could prevent them from being profitable and effective in their service provision. In these issues different actors play a role, as in every problem. We already discussed the desired roles of the different actors as described in policy in Chapter 5. In the previous section the current roles of the actors in the issues were discussed. But why do these actors behave like they do? This paper argues it is partly due to a difference in interest and thus perspective on the sector. As mentioned before in the methodology section, interest is defined as the aspirations and concerns of the stakeholder (Bryson, 2004), which is often the result of an issue or stakeholder affecting them. Stakeholder then try to mobilize, protect of enhance their interest and there is a conceptual link between interest and action (Rowley & Moldoveanu, 2003). This means by figuring out the interest, it can be better explained why a stakeholder behaves the way he does and in that way be a possible contributor to problems or opportunities. This action that is related to interest, is dependent on power. Power being the ability to bring about the outcomes the stakeholder desires (Salancik & Pfeffer, 1974).

Table 5 Power and Interest in the Ugandan small town water sector

Most Powerful		**Least Powerful**		**Most Interested**		**Least Interested**	
MWE	74%	Community	53%	Community	82%	Equal interest	61%
Town Council	16%	Private Operator	21%	MWE	12%	NGOs	15%
Private Operator	5%	NGOs	16%	Private Operator	6%	MWE	8%
Shared Powers	5%	Water Board	5%			Town Council	8%
		Shared powers	5%			Private Operator	8%

Throughout the research all respondents, excluding the end-users, were asked who according to them has the most and least power and respective interest in the sector. The results are shown in table 5. The percentages represent the percentage of respondents who chose that particular actor.

There are a couple interesting things to learn from this data. First, although we saw in the Chapter 5 that power is supposed to be decentralized, still most respondents think the power in the small towns water supply sector lies within central government through the MWE. This paper argues this is due to the perception the Ministry has of the private operators. The MWE sees private operators as a commercial entity whose only concern is making money. Since that is supposedly their only concern, it is believed that private operators would leave a town if it cannot be financially viable. The APWO however disagrees and feels demotivated by said perception:

"If you talk to the ministry officials and other people in the sector they tell you that: if you are not making money then why are still there? I find it very disturbing. I am trying to contribute to this country by providing a service which is needed, which you have failed to provide, so instead of appreciating, you are saying why don't you go away if you are not making the money (...) some of us go in because we feel this country deserves more in terms of service delivery."[7]

The Monitoring Officer of the Ministry was aware that the policy of the MWE as discussed before could be demotivating for the private operators. He said that people take as much responsibility as you give them and in the past the Ministry has not given much responsibility to the private operators. This lack of responsibility coincides with the 21% of respondents that think the private operator has the least power in the sector, second after the generally thought of community.

"Because his [the private operator's] work is to ensure that he delivers according to the policy guidelines. He does not have any kind of say to do certain things beyond that (...) he is just an implementer. Actually he is working on behalf of all these people [the town council] because we feel that if these people are occupied with other works then he has to do the day-to-day running of the activities because these people are occupied with the other works of the

[7] Secretary General APWO / Director Amazing ltd.

council. So to me he is just there as a person who is implementing the activities of somebody else. He does not have a lot of freedom on his own, he is controlled by some things"[8]

The government has promised to provide everyone in Uganda with safe water. It seems the MWE is afraid of giving the private operators too much power and would rather work with the government's entity that has already proven to be effective. The private operator is then a temporarily solution to bring a town from a few connections to a few hundred. Through regulation it is then allowed to take away the town from the private operator for the reason of it not being profitable and it being too big and thus profitable. This would also explain the earlier discussed feeling of the APWO that the MWE only recognises private operators as individual companies and not as a developing partner in the water sector. We also saw that the long-term goal of the MWE is to let NWSC operate the whole country. In order to be effective and profitable, we saw in the conceptual model in the methodology section that the enabling environment has to be right. The enabling environment is a set of interrelated conditions – such as legal, organisational, fiscal, informational, political, and cultural – that impact on the capacity of development actors to engage in development processes in a sustained and effective manner (Thindwa, 2001). From the former it can be said that the legal and political environment are not optimal for the private operator to work in and that the balance between the public and private actors in the PPP is distorted. But what then are still possible opportunities for private operators to improve their service delivery?

[8] Assistant Engineering Officer DWO Kiryandongo District

Chapter 9

Possible Business Opportunities

Before, the issues in the sector and on the ground were discussed. As said before, problems are the difference between the current state and the goal state (Atwood, 1976). The solution would then be the thing that decreases this difference and an opportunity a favourable or advantageous circumstance or combination of circumstance in which the solution of the problem can be reached (Atwood, 1976).

In this section three of those opportunities that were discussed in interviews are presented. The first opportunity for a private operator being to partner with a NGO on an OBA like basis. The second opportunity is in seeking for an alternative power source: solar pumping. The last opportunity is about the private operator diversifying its business.

9.1 Partnership NGO and private operator

One of the reasons for conducting this research was so SNV Uganda could see how it best can support the small town water sector in the future. A possible way is looking at a new business opportunity: forming a partnership between a NGO and a private water operator. This partnership is then based on lessons learned from the OBA program and the strategy of NWSC. Such a partnership was piloted by USAID in the towns Kitgum and Pader. Let us first turn to the lessons learned from this research in terms of the OBA program and NWSC. Finally, the lessons learned from the program of USAID will be briefly discussed as to discover how such a partnership could work effectively.

9.1.1 OBA

Within the OBA program the private operator is given responsibility beyond operation and maintenance of the water system. If it manages to expand the system according to the agreed upon targets, it will get 80 per cent of its expenditures back in the form of a subsidy. The remaining 20 per cent is supposed to be covered by the revenues the operator gets from the collections made. In Chapter 5 the concept of OBA was explained. In the previous section the only difference between a non-OBA scheme and an OBA scheme was the percentage of the management fee. However, the differences are much bigger. This section will show private operators were very positive about the potential of the OBA program, although there were also some limitation to this program that was piloted by the World Bank. The contracts that were signed under the pilot program have almost all reached its end. The one in Mpigi TC, is among the last ones to be under the OBA program. So, why research it? Although World Bank has stopped its pilot program and has not expressed any intention to continue with it in Uganda in the future, there is still an interesting option to explore concerning the OBA program: this is the partnership between a private operator and a NGO based on the OBA concept. This has been done before by USAID and could be a potential option for SNV Uganda to explore. Let us first start by looking at the strengths and weaknesses of the World Bank program by looking at the case of Mpigi TC. Secondly, lets see if we can use this knowledge in looking at options for a possible partnership between a NGO and a private water operator in Uganda.

Strengths OBA

The biggest strength of OBA is that it gives more responsibility to the private operator. Under OBA, the private operator is responsible for doing major as well as small repairs to the system. In the old situation, the private operator was only responsible for the small repairs. Under OBA the private operator's management fee is 90% of total revenues, compare to the 85% of a normal contract. Because the contract duration is increased, the private operator has more incentive to invest in the water scheme. After working under OBA, a private operator could potentially get enough revenue to get a bank loan. This could provide private operators with enough capital to also expand to other sectors. For example one of the directors of Trandint ltd. said: *"After OBA we were able to borrow money. Before, we were not known by these banks, they do not know anything about private operators. But when we got there, we actually got a loan twice and also when we were doing Busembatia. So, immediately in*

Busembatia we felt our business had grown so now we had to go into construction. We currently have a contract with the Ministry of Education constructing school facilities and we are currently constructing toilet facilities in 5 towns. (…) So it was after OBA that we actually went full blast with the construction. Because our cash flow had somehow grown and we felt like we had now confidence that you go to a bank and borrow money. So currently we are doing construction as well, alongside water management."

Another strength of OBA is that it navigates around some of the bureaucracy within the Town Council. Before OBA, the private operator was supposed to report major breakdowns to the Town Council and then wait on funds to attend to the problem. But in case the town clerk would not be there, this could take up to a week. Now, with OBA, the private operator is supposed to take care of all breakdowns himself so he can respond quicker in case problems are reported.

Weaknesses OBA

However, there are still some major weaknesses in the OBA concept as piloted by World Bank. One of them being that the concept mainly focused on getting more people connected without thinking of the production capacity of the system. The Manager of the WSDF Central explains by giving the example of Wakiso Town: "*So as I said on paper it is a good model (...) it sound perfect. Who wouldn't accept that? But then you had problems, which again we are talking about, the problems of capacity. It was largely capacity of these operators you are dealing with, now everybody got so excited about this subsidy and they want to take this money, so in Wakiso for example the problem that came on was yes ok how do I get this money? I have to do investments I have to do connections (…) So, Jowa went on and did connections everywhere, connected, connected after doing the connections then they thought: 'oops wait a minute where do we get the water to reach these connections'. So, then you have a system here with no water into it and a lot of connections made. So you have a lot of dry areas which are connected, the pipes are there in the ground, the taps are there but there is no water so then they started looking: where is the water? Then the cost of drilling a borehole is now beyond what the investment requires. So there were a lot of problems in that aspect"*

This was also the problem in Mpigi TC. The initial design of the system was made for 4 wards but now Mpigi TC, because of a merger with another sub-county, has grown into 11

wards. Through the OBA contract, it is true that more people got connected but that does not mean they have access to regular water supply. This limited design capacity is caused by the limited capacity of the Ministry. The WSDF is the entity that constructs water schemes for the Ugandan government. In doing this, they follow the sector guidelines on productive costs for operation. To build a water supply system in Uganda, it costs around 200 dollars per person to construct the scheme. When NWSC is building their schemes they do around 250-300 per capita investments. But when the Ministry is constructing a scheme, the investments made are limited: between 80 and 120 US dollars per capita. Because of this, the WSDF is forced to make budget decisions, which decrease the life span of the scheme. This is becoming a major issue in Uganda and will not be solved by just connecting more people.

Another weakness of OBA in Mpigi TC was that external funding by the government was stopped. Because the government assumed the Private Operator would now have enough funds to manage the system by its own, the government stopped all subsidies. This can cause the system to stress since it now is completely dependent on the revenues it produces.

NWSC

There are five things to be learned from NWSC. First, NWSC has defined very clear performance indicators that are in line with the target of the Government of Uganda. All the towns of NWSC are held against the same indicators no matter what the circumstances are. Secondly, the NWSC towns are being monitored and evaluated each month to see how the town is performing according to the performance indicators. Third, based on this monitoring and evaluation, bonuses and penalties are being handed out. Managers and staff of a particular NWSC town are being paid more or paid less according to their performance according to the performance indicators. This keeps the staff motivated to work hard. Lastly, the tariff of NWSC is not the same for each type of connection (Appendix G). The institutions pay the highest tariff and the community that uses the public taps the lowest. This is part of its pro-poor policy. The private operators however charge the same tariff for all connections.

NGO-Private Operator Partnership

Based on these lessons learned, USAID developed the Northern Uganda Water Supply Services Project (NUWATER). ‘NUWATER was a three-year (10th June 2008 – 6th June 2011), $3 million USAID/Uganda-funded program created to increase access to water in

Kitgum and Pader towns by improving the urban water supply systems using private service providers for operation and maintenance of the water systems. Specifically, NUWATER was responsible for improving the quality of services such that more customers would have access to clean water and that the incentive-based system would have moved significantly toward financial sustainability, if not full financial sustainability. Further, it was expected that local institutions would be capable of sustaining the operating contract model beyond the life of NUWATER.' (Popkin, 2011) This project was evaluated in 2011 by an Evaluation Team.

One of the members of this evaluation team, the Chairperson of the board of Fontes Uganda, was interviewed about this project:
"USAID had this great idea that if they would sort of help the private operators for the first two years of the contract by paying parts of the utility bills like power especially and then in addition to that they would give a subsidy like sort of like output-based aid subsidy for each new connection."

USAID hired consultants of NWSC to come every month and look at the financial reporting and train the staff to do this kind of financial and technical reporting. This was supposed to let the local staff run the scheme more effectively so in the end it could be financially viable.
"And they also had in that contract that is they were doing well, if they would increase connections and increase revenues by a certain percentage then they would get like a bonus payment."

But what happened is similar to why the OBA program of World Bank did not work adequately: lack of capacity. The boreholes did not produce enough water to provide the population with water although they were now connected. *"So, that project, if it had just included 200.000 dollars in the beginning to fix those few hardware things like drills, two or three new boreholes, change some pumps, increase the storage you know. And fix some pipes then maybe it would have worked. But the problem is that they realized that very late in the project so at the end of the project they decided to drill like three new boreholes. But then off course this was already to late."*

Again, the importance of having enough production capacity for the entire town is very important to let a water scheme succeed. When wanting to get involved in a small town as a NGO that should be the starting point.

9.2 Solar power

From the participatory meetings it became clear that irregular power supply is one of the biggest challenges private operators face. One option would be looking for alternative sources of power like solar power. It was interesting to see that when asked, most respondent did not think solar power would be a viable option. Reasons that were given included:
"I think the drought in central and western don't last long enough so that solar energy is not enough. Sometime back in 2008/09 we run Kitgum water supply system. And some Italian company had supplied solar system, but it failed to generate enough power to run."[9]

"Yes solar power that would be an idea but the problem with solar power is that one the investment cost is high and two their operational cost would be guarding the solar power because they are prone to theft. People like stealing them so you have to guard them."[10]

However, according to Short and Thompsen (2001) solar powered water pumping has the potential to bring sustainable supplies of potable water to millions of people in developing countries. In Uganda, COOPI (Cooperazione Internazionale) together with ISP, an Italian NGO, were the first to propose installing solar pumping systems. They did this in the North of Ugandan in IDP (internally displaced people) camps in 2003. There was strong scepticism as to whether solar pumping could provide the solution to this problem. However COOPI claims that it has been proven that Solar Water Pumps are ideal for this application:
"The way solar water pumping systems impact on the local community of the IDP camps is terrific", said Mr Ferloni from COOPI. "The Mono Solar Systems are more effective than diesel pumps and they require very little maintenance, whilst the diesel power ones require daily care. This results in regular provision of water for the communities." Although the private operators were sceptic about this approach, it would be worth looking into the options of solar pumping.

9.3 Diversifying

As we saw, under the OBA concept, some private operators were thus able to diversify into other businesses and this way become more profitable. Also without OBA it is a good option

[9] Director of Trandint ltd
[10] Manager Umbrella Organization Central

for private operators to gain some more revenue in order to provide better water provision services to small towns. This is the case for Jowa Engineering Services ltd.:
"Yeah in other towns, you know we take advantage at times. I mean we are an engineering firm so if say we are in a district and they put out advertisements for any contracts we normally put in our bids and if we are successful we also do that work. Because these other contracts have been three-year contracts. So if you get it you know that it will be three years that you will be in a town. But since there is also very little money, because there is very little profit in water and in water service. If you get another contract it helps you to get some more money"

In interviews with representatives from the Ministry of Water and Environment and the NWSC, it was said that in the long term goal is for the NWSC to take over all the small towns in Uganda. Uganda then will be divided in NWSC-zones. Every zone will have its own management reporting to the headquarters in Kampala. All small towns and rural growth centers that fall under a particular zone should then be provided with water by NWSC. When asked what the future of the private operator will hold in this scenario, the answer was that private operators should be flexible and bid for the advertisement the NWSC gives out for supplying materials for the water scheme, labour, waste water treatment or technical support in extending systems.

Chapter **10**

Conclusions and Discussion

This paper started by looking at the theory on PPPs. It was said that PPPs are not just the working together of the public and private sector, it is a working arrangement based on a mutual commitment (over and above that implied in any contract) between a public sector organization with any organization outside the public sector (Boivard, 2004). This definition implies that both actors have a shared dedication to achieve some kind of joint outcome and going 'over and above' the normal dynamic of a contractual relationship (Brinkerhoff & Brinkerhoff, 2011). In the PPP in Ugandan small towns the overarching goal is providing safe water to all the people of Uganda.

10.1 PPP in Uganda: success or failure

This paper argues it is the dynamic between the public and private actors that is distorting the proper functioning of the PPP in the Ugandan small town water supply sector and thus making it hard to achieve private and thus public benefits. Due to the fear for opportunistic behaviour of the private operator the Ugandan government pulls the strings too tight in the form of creating conditions, which make it hard for the private operator to be effective and profitable in its service delivery.

In every PPP public as well as private benefits are formed. In the conceptual model in Chapter 4 these benefits were defined for the Ugandan small town water supply PPP based on theory. The public benefits would entail water supply that can be specified in water that is safe, acceptable, accessible and affordable. The private benefits would be profitability that can be specified in effectiveness, equity, efficiency and replicability. The private benefit derived

from this ‘partnership’ is the profitability of the private water operator. We saw in Chapter 7 that the private operator’s capacity affects all the other issues found on the ground. Thus, when a private operator does not have enough monetary recourses, it will not invest in good personnel and in the quality of the system, thus compromising the quality of the service provision. The private benefits thus influence the level of public benefits, which is safe water provision to the Ugandan population. Since private operators have a hard time being profitable, this results in bad water supply provision. This in turn results in low private and thus public benefits.

Surrounding this is the enabling environment: a set of interrelated conditions – such as legal, organisational, fiscal, informational, political, and cultural – that impact on the capacity of development actors to engage in development processes in a sustained and effective manner (Thindwa, 2001). This enabling environment should make sure the private operator is not able to exploit the community. In Chapter 3 this fear for opportunistic behaviour as described in literature was discussed. However, in this PPP, the enabling environment is even constraining the private water operators to perform their job effectively.

We saw that regulation states a ‘normal’ contract with a private water operator is often three years. This contract only makes the private operator responsible for the operation and maintenance of the water system in a small town. Because of this short contract duration, and the responsibility that only extends to operation and maintenance of the system, the private operator has no incentive to make investments in the system for example in the form of large repairs. He even gets a disincentive to perform its normal operation and maintenance duties since it is never sure whether he will keep the contract of running the water scheme. This is because the threat of NWSC gazetting the small town. This proposes problems for the private operator since he looses business and profits and is often not fairly compensated for that. Also, he will not be able to cross subsidize anymore between larger and smaller small towns in terms of money and staff. Furthermore, NWSC often takes on the private operator’s staff in the town that is being taken over. This is causing a high staff turnover in which all the resources that were invested in educating these staff members is lost. At the same time, the private operator cannot undertake legal action against any of this. Private operators have tried to join forces by forming the APWO. But, as we have seen in Chapter 7, APWO has no real power and can only lobby at the MWE. The above issues trickle down into issues on the ground.

As we saw in Chapters 5 and 7, the private operator is subject to interferences of the Water Authority, the WSSB, local politicians and the community. NWSC does not have any of these interferences. The private operator is hindered by the government because of the slow process in tariff approval. Also outside forces like irregular power supply and non-revenue water make it hard for the private operator to run a water scheme with regular water supply. We also saw in Chapter 7 that the systems, due to lack of government's monetary capacity, were designed for only 10 years. This period has run out and now all systems are in need of big investments.

Not all, but part of these issues can be explained by the dynamics in the PPP between the private sector and the public sector, in this case the private operators and the MWE. In Chapter 5 we saw that power should be decentralized in the water sector, however in reality much of the power and ability to make decisions still lies with central government as we have seen in Chapter 8. Private operators are often subject to the will of the government.

So let us look at the features that represent the fullest expression of partnership which were presented in Chapter 2. According to Brinkerhoff and Brinkerhoff (2011) these features include:

- Jointly determined goals.
- Collaborative and consensus-based decision-making.
- Non-hierarchical and horizontal structures and processes.
- Trust-based and informal as well as formalized relationships.
- Synergistic interactions among partners.

In Chapter 8 it was mentioned that the Secretary General of the APWO said the following: *"If you talk to the ministry officials and other people in the sector they tell you that: if you are not making money then why are still there? I find it very disturbing. I am trying to contribute to this country by providing a service which is needed, which you have failed to provide, so instead of appreciating, you are saying why don't you go away if you are not making the money (...) some of us go in because we feel this country deserves more in terms of service delivery."*

This quote shows that in principle the private operator and the MWE have one shared goal: providing water to the people of Uganda. However, this goal was not necessarily determined in collaboration of the two actors. Also, we have seen in the previous chapters that the private operator does not have a lot of responsibility and freedom in decision making since it is only contracted for operation and maintenance of the water systems for a limited time of three years. Also, as we have seen in the contractual relationship in figure 5 in Chapter 5, the contractual relationships are mostly hierarchical in nature and not horizontal. There is only a formal relationship between the MWE and the private operator, although there have been private operators who said to have a very good relationship with the local government in the form of WSSB members and the Water Authority.

In Chapter 2 it was said that a PPP entails mutuality and organizational identity between the partners. Mutuality meant amongst others that there is some degree of equality in decision-making, as opposed to domination of one of the partners. This paper argues that this equality is not the case in the PPP in Ugandan small towns. Organizational identity is about the competences and capabilities of the partners. Often partnerships are formed in order to access key resources to reach ones objectives. The partnership in the Ugandan small town water sector does have signs of organizational identity. This is best expressed in the quote of the Monitoring Officer of the MWE:
"It was important to separate the supervising and operational roles because government is not good at operations but it is good at supervising and making laws. So, we said, let us remain in our role of supervising and let the guy that is good at operations do that."

The private operator was thus contracted because it would have the technical and managerial skills to operate the water systems in small towns. More so than the government. Brinkerhoff and Brinkerhoff (2011) showed us that a partnership is a relative phenomenon in which a given PPP may show more or less of the partnership's defining elements of mutuality and organizational identity. The PPP in the small town water sector does have some organizational identity since the public sector provides money, regulation and guidance and the private sector provides managerial and technical skills. However in terms of mutuality the PPP does not show a lot of this concept.

In Chapter 2 it was mentioned that a number of governments have spoken about partnership in order to avoid using the terms privatization and contracting out. According to Hodge and

Greve (2007) this is part of a general trend within public management of needing to renew the buzzwords from time to time or that is reflects the practice of advancing the same policy but under a different and more catchy name. This could be the case as well in the Uganda small town water sector. Hodge and Greve (2007) also said that there is still a group of people that will use the terms contracting and PPP almost as the same concept. It then does not fully coincide with the earlier mentioned features of a partnership. These types of arrangements, therefore only partially deserve the label 'partnership' (Coulson, 1998).
This paper argues that the term PPP is not fully appropriate for the situation in Ugandan small towns. The government through the MWE still has too much power and is too dominant to talk about mutuality between the two partners. Thus it is likely that it wants to avoid the term privatization and contracting out and goes along with the general trend in the water supply sector in the developing world to talk about PPPs.

10.2 The future of the sector

Although we have established that the term PPP is maybe not the most appropriate for the situation in the water sector in Ugandan small towns, that does not mean that this construction does not have the potential to achieve public as well as private benefits in Uganda. It is still about finding the balance described in Chapter 3: 'tapping the entrepreneurial spirit through the profit motive while embedding that spirit in disciplines that can harness private initiatives for socially useful purposes' (Klein and Hadjimicheal, 2003).

The government is planning on letting NWSC take over all small towns in the long run. However, until that time, there are still many RGC that need to be expanded to the level of a small town with enough connections to be profitable. The government has been using the private operators to do this. Once the town was big enough to be profitable, NWSC would take over. This in essence is not a bad idea, however, there are a few things that need to change in order to give a private operator a fair chance in operating a system and protecting his contractual rights. It should be given a longer contract with more responsibilities as we have seen in the OBA contract. However, instead of assuming that the private operator will now have enough capacity to also expand the system, the government should still be responsible in increasing the pumping capacity by renewing the water schemes. It seems that now, the government views the private operator as a contracted entity instead of a development partner. They should thus give the private operator more room to do its job but

at the same time make sure it is supported in the places the resources of the operator fall short. The relationship thus should be more collaborative and the private operator should be seen and treated as a full development partner. It is also necessary to provide clear regulation about the transition of a town from private operators to NWSC in which the private operator has the chance to fight the decision. It is summarized is what the Monitoring Officer of the MWE said:

"People take as much responsibility as you give them and in the past the Ministry has not given much responsibility to the private operators."

At the same time, the private operator should be creative and also look for ways to support himself. When the contract would be longer, incentive based contract could be drafted with NGOs that seek to get involved in the small town water sector. Also, a private operator could diversify its business into for example construction in order to gain more capital to support its water business. Also, if the contacts would be longer, the private operator could ask for a short-term loan at local banks in order to get the starting capital to do investments in the system in order to gain more revenues in the future. This is what Trandint ltd. did in Busembatia under the OBA-contract. Furthermore it could then invest in for example solar power in order to keep the power costs low in the future. The future of the private operator will thus depend on the changes made by the government in policy and regulation and its own creativity in looking for alternative ways to make some extra money and get extra funding from external actors.

10.3 Conclusions

This paper has argued that the term PPP might not be appropriate for the partnership between private operators and the government in the small town water supply sector. It has shown where the issues lay in the small town water sector in general and more specifically on the ground at the town level. It has given insight into perceptions of these various issues and it has argued that some changes need to be made in order to let the private operator perform its water delivery services in an effective and profitable way. This in turn will influence the level of public benefits derived from this partnership. Surrounding this all is the need for a clear and strong regulatory framework in which the roles and responsibilities of all the different actors are clearly stipulated.

This research is not representative for every PPP in the water sector in developing countries since every PPP uses a slightly different approach (Triche, Requena & Kariuki, 2006) and can thus not be generalized. However, some lessons can be learned that might be applicable in other developing countries as well. These lessons are about the balance between the public and private actor in the partnership and how their relationship can influence the issues that are in the sector. This paper confirms the earlier posed hypothesis (Chapter 2) that a PPP will not work when there is no solid collaboration between the public and private partner meaning the partnership does not express the features as described by Brinkerhoff and Brinkerhoff (2011). By going in-depth into this particular partnership this paper has contributed to the empirical evidence on how a PPP in water supply in developing countries can work and what still needs to be done in order to let it function more effectively.

References

Adank, M. (2013). Small town water services: Trends, challenges and models. (Thematic Overview Paper 27). The Hague: IRC International Water and Sanitation Centre.
http://www.irc.nl/top27
Used: July 17th 2014

Atwood, M. E., & Polson, P. G. (1976). A process model for water jug problems. Cognitive Psychology. (8) 191-216, in Anderson, 208-211.

Azuba, C., Mugabi, J., & Mumssen, Y. (2010). Output-Based Aid for Water Supply in Uganda: Increasing Access in Small Towns OBA Approaches. Note Number 35.

Barungi, A., Kasaija, J., Obote, P. & Negussie, A. (2003). New rules, new roles – does PSP benefit the poor? Case studies of private sector participation in water and sanitation in 10 countries. WaterAid and Tearfund, London, UK.

Bernard, H.R. (2006). *Research methods in anthropology: qualitative and quantitative approaches (4th edition)*. Lanham, MD: AltaMiraPress.

Bobbio, N., & Cameron, A. (1997). Left and right: the significance of a political distinction. University of Chicago Press.

Boivard, T. (2004). Public-Private Partnerships: from Contested Concepts to Prevalent Practice. International Review of Administrative Sciences, 70 (199).

Brinkerhoff, D.W., & Brinkerhoff, J.M. (2011). Public-Private Partnerships: Perspectives in purposes, publicness, and good governance, Public Administration and Development, 31 2-14.

Brinkerhoff J.M. (2002). Government-NGO partnership: a defining framework. Public Administration and Development 22 (1) 19–30.

Bryson, J.M. (2004). What to do when stakeholder matter: Stakeholder Identification and Analysis Techniques. Public Management Review 6 (1) 21-53.

Carter, R., & Danert, K. (2003). Development of a strategy for support to private sector participants participating in rural water and sanitation programmes in Uganda, Final report, Ministry of Water, Lands and Environment, Directorate of Water Development, Luzira, Uganda

Clark, J., & Newman, J. (1997). *The Managerial State: Power, Politics and Ideology in the Remaking of Social Welfare*. London: Sage Publications.

Coulson, A. (1998). *Trust and Contracts: Relationships in Local Government, Health and Public Services*. Bristol: Policy Press.

De Carvalho, A., Graf, J., Kayser, O., & Vousvouras, C. (2011). Access to safe water for the base of the pyramid: Lessons learned from 15 case studies. Paris: Hystra Hybrid strategies consulting.

DWD. (2012). Guidelines and Procedures for Gazetting Towns to NWSC. January 2012. Unpublished.

Groom, E., Halpern, J., & Ehrhardt, D. (2006). Explanatory notes on Key Topics in the Regulation of Water and Sanitation Services. In Water Supply and Sanitation Sector Board Discussion Series (Paper no. 6). Washington D.c.: The World Bank.

Harvey, P. A., & Reed, R. A. (2004). *Rural Water Supply in Africa: Building Blocks for Handpump Sustainability*. WEDC, Loughborough University, UK.

Hodge, G.A., & Greve, C. (2007). Public-Private partnerships: an international performance review. Public Administration review, Wiley Online Library.

IRC. (2013). Regulation in rural areas. Briefing note no. 7.
http://warrington.ufl.edu/centers/purc/docs/report_Tremolot2013_7_BN_RegulationRural.pdf
Used: July 17th 2014

Jack, M. (2009). Water ethics and business. Water Ethics. 241-269. Taylor & Francis.

Klein, M.U., & Hadjimichael, B. (2003). The Private Sector in Development – Entrepreneurship, regulation and competitive disciplines,, World Bank, Washington DC, USA.

Koestler, L. (2008) Private Sector Involvement in Rural Water Supply – Case Studies from Uganda. Water Engineering and Development Centre, Loughborough University, UK.

Koestler, L., & Jangeyanga, P. (2012). Development of Service Delivery Indicators for the Water Supply and Sanitation Boards (WSSB) Service Delivery Model, Tripple-S Uganda, Fontes Uganda.

Kumar, R. (1996). *Research methodology - a step-by-step guide for beginners*. SAGE Publications, London, UK.

Linder, S., (1999). Coming to Terms with the Public–Private Partnership: A Grammar of Multiple Meanings. *American Behavioral Scientist* 43 (1) 35–51.

Löffler, E. (1999). *Accountability Management in Intergovernmental Partnerships*. Paris: OECD.

Marin, P. (2009). *Public-Private Partnerships for Urban Water Utilities*. The World Bank.

Ministry of Finance, Planning and Economic Development. (2013). Millenium Development Goals Report for Uganda 2013. Special Theme: Drivers of MDG Progress in Uganda and Implications for the post-2015 Development Agenda. The Republic of Uganda.

Ministry of Local Governments. (2003). Civil society participants and public private sector partnerships – participants' handbook for lower local governments, Ministry of Local Government, Kampala, Uganda.

MWE. (2007). Water and sanitation sector performance report 2007, Government of Uganda, Ministry of Water and Environment, Uganda.

MWE. (2008). Water Supply and Sewerage Board Handbook. Republic of Uganda.
http://www.ruwas.co.ug/reports/WSSBs%20Handbook-Final.pdf
Used: July 17th 2014

Ministry of Water and Environment. (2013). Water and Environment Sector Performance Report 2013.
http://www.mwe.go.ug/index.php?option=com_docman&task=cat_view&Itemid=223&gid=15
Used: July 17th 2014

NWSC. (2006). NWSC Corporate Plan, 2006 – 2009.

NWSC. (2013). NWSC Five Year Strategic Direction, 1-32.

Popkin, B.P., Koestler, L., & Jangeyanga, P. (2011). NORTHERN UGANDA WATER (NUWATER) END-OF-PROJECT EVALUATION OF THE NORTHERN UGANDA WATER Prepared for United States Agency for International Development USAID / UGANDA, (617).

Rowley, T., & Moldoveanu, M. (2003). 'When Will Stakeholder Groups Act? An Interest- and Identity-Based Model of Stakeholder Group Mobilization'. Academy of Manaaement Review, 28 (2) 204-19.

Salancik, G.R., & Pfeffer, J. (1974). "The bases and use of power in organizational decision-making: the case of universities". *Aministrative Sciense Quarterly,* (19) 453-73.

Short, T. D., & Thompson, P. (2001). Breaking The Mould : Solar Water Pumping – the Challenges and the Reality, 1421–1430. ISES 2001 Solar World Congress.

Sinclair, P. (2004). Scaling-up rural water supply coverage in Uganda – can the ambitious targets be achieved? Case Study, IRC International Water and Sanitation Centre, Delft,The Netherlands.

SNV. (2012). Sustainable Water Services and the Poor in Small Towns, (3) 1–8. http://www.snvworld.org/en/countries/uganda/publications?filter=water-sanitation-hygiene Used: July 17th 2013.

Teisman, G., & Klijn, E.H. (2002). Partnership Arrangements: Governmental Rhetoric or Governance Scheme? *Public Administration Review.* 62 (2) 197–205.

Thindwa, J. (2001). Enabling environment for Civil Society in CDD Projects, Washington, DC: World Bank, Social Development Family, CDD Learning Module, 2001.

Trémolet, S., & Binder, D. (2010). The Regulation of Water and Sanitation Services in DCs. Paris : agence Française de Développement.

Triche, T., Requena, S., & Kariuki, M. (2006). Water Supply & Sanitation Working Notes: Engaging Local Private Operators in Water Supply and Sanitation Services. Initital Lessons from emerging Experience in Cambodia, Colombia, The Philippines, and Uganda. *Water Supply and Sanitation Sector Board, World Bank Group*, (12).

Tumusiime, C. (2003). Performance of management contracts in small towns water supply services in Uganda, Msc Project, WEDC, Loughborough University, UK.

UNDP. (2011). Output-based contracts in small-town water supply in Uganda: Challenges and opportunities. Poverty Reduction and Environment and Energy. New York: United Nations Development Program.

UNDP. (2013). Human Development Report 2013; The rise of the south: human progress in a diverse world. New York: United Nations Development Programme.

USAID. (2013). Establishment of an Autonomous Regulatory Agency for Urban Water Supply and Sewerage Services in Uganda, SUWASA Nairobi, Kenya

WaterAid & BPD - Building Partnerships for Development. (2010). Small town water and sanitation delivery. Taking a wider view. London: WaterAid.

Wettenhall, R. (2003). The Rhetoric and Reality of Public–private Partnerships. *Public*

*Organisation Review: A Global Journal. (*3) 77–107.

WHO. (2010). Global Water Supply and Sanitation Assessment Report 2010. Geneva: World Health Organization and the United Nations Children's Fund Publishing.

WHO/Unicef. (2013). Progress on sanitation and drinking-water, 2013 update.
http://apps.who.int/iris/bitstream/10665/81245/1/9789241505390_eng.pdf
Used: July 17th 2014

World Bank. (2013). Tapping the market: opportunities for domestic investments in water for the poor. Washington DC: World Bank.

World Bank. (2014). Indicators.
http://data.worldbank.org/indicator
Used: July 17st 2014

WSP-Water and Sanitation Program of the World Bank. (2010). Public-private partnerships for small piped water schemes: A review of process in seven African countries. (Field note) Nairobi: WSP.

Appendix **A**

Respondents and Attendants List

Respondents

Key-Informants

Name	Function	Organization
Chemisto Satyo Ali	WASH Consultant	SNV
Dennis Taremwa Kamugisha	Principal Planning and Development Engineer	NWSC
Felix Twinomucunguzi	Branch Manager	WSDF Central
Lucrezia Biteete (Koestler)	Chairperson of the board	Fontes
Makowka Krischan	Technical Advisor	UWASNET
Moses Bujure	Manager	Umbrella Central
Moses Rwaheru Mwesigwa	Secretary General / Director	APWO / Amazing ltd.
Phiona Kukundakwe	Treasurer / Director	APWO / Trandint ltd.
Rinus van Klinken	Sector Lead WASH	SNV
Ronald Nyakana	Monitoring Officer	MWE
Sekuma Simon Peter	Project Officer	NETWAS
Vally Wabwire	Director	Jowa Eng. Services ltd.

Case Study Interviews: Bweyale

Name	Function	Organization
Akoit Lawrence	Branch Manager	Jowa Eng. Services ltd.
Augustine Muliko	Health Inspector	Town Council
Byakagaba Edward Dyengo	Chairperson LC3	Town Council
Candia Joseph	Assistant Engineering Officer	District Water Office
Kato John & Justin	Operational Manager & Plumber	Jowa Eng. Services ltd.
Ocheing John	Member / Vice-Chairman	WSSB
Samual Robbert Okwir	Town Clerk	Town Council / WSSB
Samuel Muhunuza	District Water Officer	District Water Office
End-users (20x)		

Case Study Interviews: Mpigi TC

Name	Function	Organization
Bwanika Mathias	Town Clerk	Town Council / WSSB
Kalaali Minsach	Area Manager	Trandint ltd.
Kigonya Paul	Member	WSSB
Ssendikwanawa Francis	District Health Officer	District Health Office
Ssekalegga Joseph	District Water Officer	District Water Office
Vvuuma Benedict Cyrus	Town Engineer	Town Council
End-users (21x)		

Final Presentation Attendants

Name	Function	Organization
Bernard Conilh de Beyssac	Agriculture Advisor	SNV
Bernard Eyadu	WASH Consultant	SNV
Chemisto Satya Ali	WASH Consultant	SNV
Dorah Egunyu	Communications Officer	SNV
Jeanette de Regt	Country Director	SNV
Job Mutyaba	Renewable Energy Consultant	SNV
Joyce DeMucci	Sector Lead Renewable Energy	SNV
Lillian Nabasirye	WASH Consultant	SNV
Richard Wahkoli	WASH Consultant	SNV
Rinus van Klinken	Sector Lead WASH	SNV
Wilbrord Turimaso	WASH Consultant	SNV

Appendix **B**

Information Sheet

Information

Small Town Water Supply Research

Researcher

Name:	Lotte-Marie Brouwer
Date of Birth:	04-10-1991
Nationality:	Dutch
University:	Utrecht University, The Netherlands
Organization:	Netherlands Development Organisation (SNV) http://www.snvworld.org/en/countries/uganda
Email:	lottemarieb@gmail.com
Telephone:	+256 751 650 897

Aim of Research

This research is one of the requirements to be awarded with the degree of Master of Science International Development Studies at Utrecht University in the Netherlands. It is conducted for the Dutch NGO Netherlands Development Organisation (SNV). SNV has been active in the Ugandan water sector since 1989. SNV is looking for more insight into the small town water supply sector in Uganda in order to be better able to implement future capacity building programs.

This research aims to describe the current situation in Ugandan small towns with the problems private operators are facing to run an effective water supply business and tries to identify the root causes for these problems. It furthermore tries to identify business opportunities for the private operators to improve their service delivery in small towns.

Purpose of Interview

This interview will be used to show the perspective of the respondent on the water supply sector in Ugandan small towns. It will be used as a source for the researcher's thesis and for the final report written for SNV. The respondent is not obliged to answer all questions and can withdraw from the interview at any time without having to give a reason. The researcher will not use direct quotes from the interview nor will she use the respondent's name without his/her permission. The interview will be recorded only if the respondent voluntarily agrees. At any point during the interview the respondent can ask questions about the research.

Appendix **C**

Topic List End-User

General Information

- Area
- Time of day
- Water source information
- Sex of respondent
- Age of respondent

Purpose of water

- Ask for who will use the water
- Ask for what will the water be used

Water provision and use

- Ask how often does respondent use the source
- Ask who is providing the water
- Discuss satisfaction with the provision
- Discuss amount of water used
- Discuss what influences water usage
- Discuss whether respondent always use this source
- Alternative sources
- Ask how long respondent has been using this source
- Difference in water provision

Safety of water

- Discuss what safe water is according to respondent
- Discuss whether respondent considers this source to provide safe water
- Ask if this water is always safe/not safe
- Ask whether respondent would recommend this water to a neighbour
- Ask whether respondent would move a further distance to access safe water
- Ask whether respondent would pay more to get safe water

Financial

- Price of water
- Money spent on water every day
- Willingness to pay
- Ideal price

Private connection

- Ownership of private connection
- Discuss why (not) does respondent have a private connection

Problems

- Problems in the sector
- Discuss who should be responsible for solving

Water a right or a good

Appendix **D**

Topic List Private Operator

General Questions Company and Respondent
- The beginning of the company
- Amount of towns
- Discuss function of respondent

Discuss obtaining the small town
- How did it start in respective town
- Choice of town
- Bidding process
- Competition
- Situation in small town upon arrival
- Who decides whether national water or private operator

OBA
- Ask for explanation of OBA
- Decision of becoming under OBA
- Difference before and after OBA
- Opinion about OBA

Current situation in town
- Customers of private operator
- Alternative water sources
- Other product supply
- Treatment and quality of water
- Amount and types of connections
- Length of network
- Population being served
- Hours of service

Employees
- Amount of employees and different functions
- Optimal amount of employees

Revenues and tariffs
- Revenues per type of connection
- Design capacity
- Actual capacity
- Amount of water being sold

- Factors influencing demand
- Tariff being determined
- Price/m3
- Revenues
- Discuss OBA affecting revenues

Costs and investment
- Different costs
- Importance of the different costs
- Total costs
- Discuss OBA affecting costs
- Investments in the last few years
- Choice and motivation of investments
- Discuss OBA affecting investments

Problems in the sector
- Discuss the perfect small town sector
- Compare current situation
- Discuss what is hindering the sector to move in this desired state

Actors
- Discuss the different actors
- Relationship with WSSB
- Relationship with community
- Most and least powerful actors in the sector
- Most and least interested actors in the sector

Role of actors
- Discuss how different actors should behave to improve existing situation

Water a right or a good

Appendix **E**

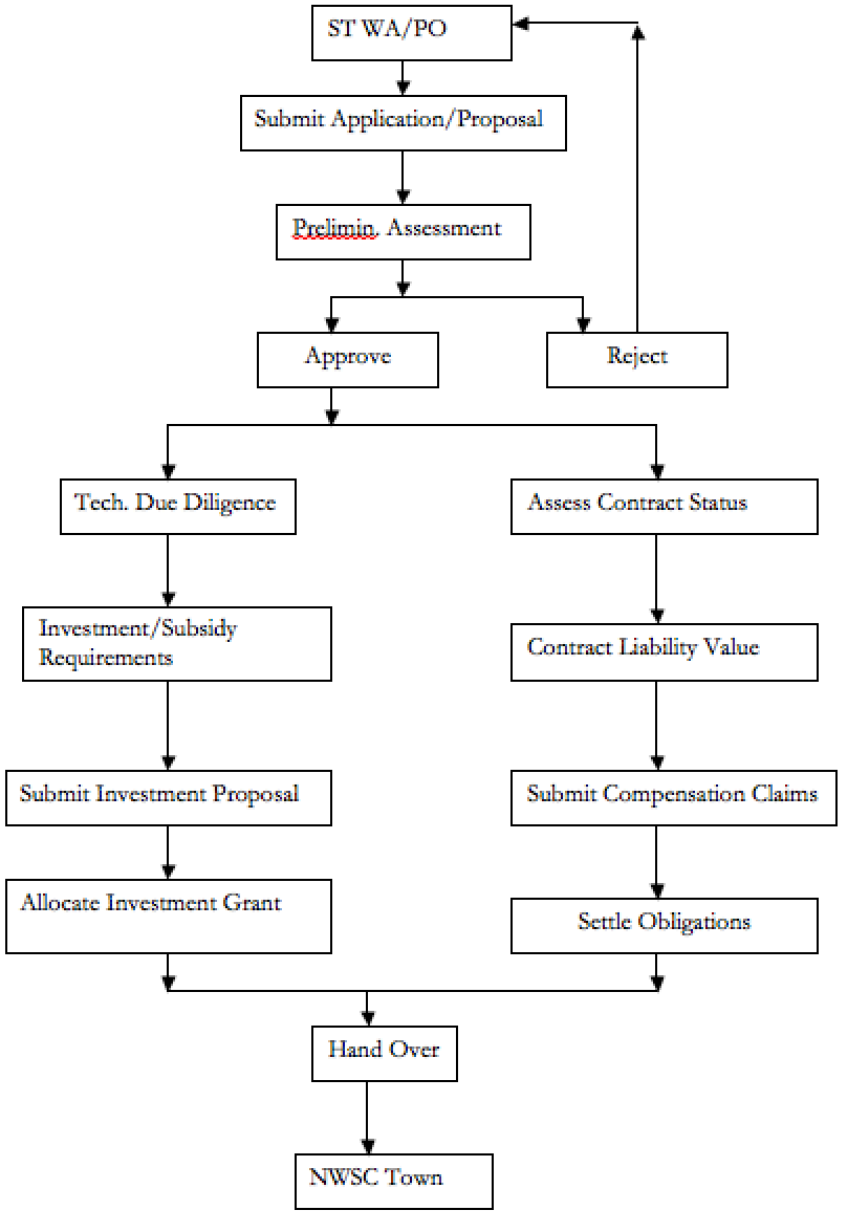
Allocation of economic regulation functions

Small towns (Source: USAID (2013))

Functions ➔ Tasks ⬇	**Tariff regulation**	**Service quality regulation**	**Competition regulation**	**Consumer protection**
Collect information and data				
	• Private Operator	• Private operator • Information submitted to the Minister by Water Authority	• Regulation Unit	• Not explicitly addressed
Control the application of existing rules				
	• Regulation Unit	• Regulation Unit • Performance Contract Review Committee (PCRC)	• Not explicitly addressed	• Not explicitly addressed
Define new rules				
	• MWE	• PCRC for the resetting of targets • Minister for the definition of new performance standard	• Minister defines service areas	• Not explicitly addressed
Resolve conflicts				
	• Water Policy Committee • Arbitration and Conciliation	• Water Policy Committee • Arbitration and Conciliation	• Not explicitly addressed	• Not explicitly addressed

Appendix **F**

Standard Gazetting Process



Appendix **G**

Tariff Setting NWSC

NWSC Tariff Structure for FY 2012/13 (without VAT) (source MWE 2013)

Customer Category	Water Tariff 2012/13 [UGX/m^3]
Public Standpipe	1236
Domestic	1912
Institution / Government	2353
Commercial < 500m^3/month	2887
Commercial 500m^3-1500m^3/month	2887
Commercial > 1500m^3/month	2462
Weighted Water tariff	2290