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Achieving Universal Access to Water and Sanitation Services: The Role of Political Will in Implementation Practices, a Study of Pakistan and India

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Achieving Universal Access to Water and Sanitation Services: The Role of Political Will in Implementation Practices, a study of Pakistan and India

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Abstract

Adequate access to water and sanitation services (WSS) is a fundamental component of human development and has hugely positive effects on health, education, economic productivity, gender equity, and regional stability. Achieving universal access to WSS in a sustainable manner is not only a focus of the UN Millennium Development Goals framework, but it is also a key priority for the entire globe. This paper utilizes qualitative case studies of Pakistan and India to reveal how properly channeling political will is a crucial element to improving the implementation of public service delivery for WSS. Currently, both countries exhibit huge theory-practice gaps, resulting in an inability to provide adequate WSS. The findings illuminate the necessity for a commitment at all levels of the government to revamping existing WSS schemes, as well as to take a multi-stakeholder approach that is both demand-driven and community-led. Combining national planning, user ownership, and cross-sectoral collaboration is the best way to implement a new WSS framework in the current development environment. Furthermore, governments should seek to create a system that both incentivizes and enables beneficiaries and mobilizes political will for all actors (governmental and non-governmental) involved in WSS provision.
The test of our progress is not whether we add more to the abundance of those who have much; it is whether we provide enough for those who have too little.

- Franklin D. Roosevelt, 1937
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Introduction

2.5 billion people, which is about 35% of the global population, do not have access to hygienic sanitation facilities. Over 700 million people cannot get clean water on a regular basis. Everyday, 1,400 children die, and thousands of adults suffer from disease due to the lack of access to basic water and sanitation services (WSS) (Sanitation and Water for All, 2013). Adequate water and sanitation services are vital to the functioning of human society, and their lack of access is one of the most debilitating shortfalls of our species. A society’s economy will not have a favorable chance at prosperity if it does not have clean water and sanitation systems. A human cannot spend the day working to create a profit (whether it be money or tradable goods), if he doesn’t have a reliable source of drinking water, or a safe place to dispose of human waste. Instead, he must spend his valuable time seeking clean water for him and his family, or dealing with disease, as it so often strikes in circumstances of inadequate water and sanitation systems. Universal access would create colossal improvements in health conditions and health care programs, heighten levels of education for the impoverished (especially women), reduce gender inequality, and increase economic activity and stimulate local economies (AMCOW, 2011, 4). Not to mention, in its contribution to “healthy living conditions and gainful economic activity,” it would strengthen “regional and international security” by lending stability to regions of growing tension (Frederiksen, 2005, 667).

The provision of universal access to WSS would also improve overall human livelihood and development, for each human would be empowered to make their own economic choices, pursue entrepreneurial opportunities, and increase their individual efficiency, which would have an aggregated beneficial effect on the global economy. One UN WSS issue brief\(^1\) states, “the most recent estimates suggest that, globally, the benefits of achieving universal access to sanitation outweigh the costs by a factor of 5.5 to 1, whereas for universal access to drinking-water, the ratio is estimated at 2 to 1” (UNDP

\(^1\) UN Water and UNDP released a Technical Support Team (TST) WSS Issue Brief in 2014. “The Technical Support Team (TST) is co-chaired by the Department of Economic and Social Affairs and the United Nations Development Program. The preparation of this issues brief has been led by UN-Water. Contributors to this brief include: DESA, FAO, ILO, OHCHR, PBSO, UNCBD, UNCCD, UNDP, UNECE, UNECLAC, UNEP, UNESCAP, UNESCO, UNFPA, UNICEF, UNOOSA, UNU, UN-Women, WHO, World Bank, WTO, as well as numerous UN Water Partners” (UNDP and UN Water, 2014, 1).
Another 2014 study produced by Sanitation and Water for All (SWA)\(^2\), estimates that there is a $5 return for every $1 dollar invested in water and sanitation, and universal access to water and sanitation services would result in a possible $170 billion in annual economic gains. They also note that the lack of investment in WSS costs developing countries in Asia and Africa around 4-6% in GDP annually. Therefore, there is a strong urgency to achieve this goal of universal access.

In 1990, the UN Development Program began producing the annual Human Development Report in order to monitor the progression of human development, which is defined as “the process of enlarging people’s choices,” and that “the most critical ones are to lead a long and healthy life, to be educated, and enjoy a decent standard of living” (UNDP, 1990). In 2000, the UN community banded together to create the Millennium Development Goals, a set of ambitious, yet time-bound and measurable objectives targeted at reducing poverty, which include goals to improve access to adequate water and sanitation services. In 2010, through Resolution 64/292, the UN declared water and sanitation access a human right. So, after 24 years of affirming the necessity for these basic human services on an international scale, with full recognition of the loss of life, health, education, and economic productivity that its inaccessibility causes, why have we still not achieved universal access to water and sanitation services?

In this thesis I explore existing obstacles and arguments for why the world has yet to achieve universal access to WSS. I conduct case studies of the WSS systems in both Pakistan and India and highlight where the biggest problems lie, and how they affect the overall state of WSS in each country.

With ample attention from the international community and national-level policy makers, I explore why the developing world has not been able to successfully put the available technical expertise to use, and implement an improved WSS system globally. Across the board, it has become apparent that the one of the foremost issues in WSS provision is a lack of cross-sectoral and institutional collaboration, as well as an ineffective public investment structure. This collaboration and coordination problem is undeniably connected to a lack of political will for WSS improvement. If harnessed positively, political

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\(^2\) Sanitation and Water for All (SWA) is an effort that brings together over 90 different developing country governments, donors, civil society organizations and other development partners in order to advance progress in this sector.
will could fuel the collaboration effort, inform the creation of innovative ways to fund WSS implementation, and allow for real change to occur.

**Case Selection and Methods**

I conduct two case studies on the state of WSS because a comparative study allows for better illustration of the thesis. I chose to study Pakistan and India for a number of reasons. At first glance, one might assume the state of WSS in India would be significantly more developed than that of Pakistan’s, for India generally receives higher development rankings and reviews, and the current state of conflict and disarray in Pakistan has its effects on its governmental capacity. However, according to the WHO/UNICEF Joint Monitoring Program (JMP) for Water Supply and Sanitation: 2014 Progress Update Report\(^3\), Pakistan and India’s WSS coverage statistics are (oddly) quite similar. According to the JMP report, as of 2012, 91% of the Pakistani population has access to improved sources of drinking water, while 48% have access to improved sanitation facilities. In India, 93% of the population has access to improved drinking water sources, and 36% has access to improved sanitation facilities. So, there you have it: India’s access to drinking water is 2% higher than Pakistan’s, while Pakistan’s access to sanitation facilities is 12% higher than India. These numbers sparked my curiosity, as what I have learned thus far about the provision of WSS would have led me to assume India’s numbers in both water and sanitation would be higher than Pakistan’s, and with larger margins. However, as this is not the case, I have chosen to delve into the specifics of WSS in each country, to try and uncover some answers, or perhaps provide some rationale for these statistics.

Pakistan and India make for a good comparison because they share not only borders, and relatively high populations and population densities, but also some major historical similarities. Formerly both parts of British India, they each became independent from Britain in 1947, after which they each embarked on transitions to democracies. Their respective similarities diverge sharply at this point,

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\(^3\) The WHO/UNICEF’s Joint Monitoring Program (JMP) for Water Supply and Sanitation: 2014 Progress Update is a widely distributed report that compiles data on adequate access to water and sanitation in each country. This paper will refer to this report throughout as the JMP Report. Refer to the appendix for more information about statistical discrepancies in this report.
however. From established infrastructure, initial prosperity, and available natural resources to population diversity, natural geography and early leadership agendas, these formerly conjoined twins of Britain's crown jewel began their independent lives with wildly different opportunities and challenges.

I conduct a qualitative analysis on the status of WSS in each country, and then blend the findings together to identify the way in which political will can function for WSS provision. I utilize major reports from international organizations like WHO/UNICEF JMP Report, as well as large and small-scale case studies from international scholars in the field. I compile ample data on the history of policy and implementation as well as the birth and death of several WSS policy efforts in each country, ranging from 1990-2014. Through this research, I am able to compare and contrast approaches to WSS provision from both countries, as well as gain a better picture of the ground reality in both countries, for, often, statistics are severely misrepresentative.

**WSS Provision: Current Obstacles**

Before I delve into the cases, I will discuss current issues in relation to WSS provision, and various arguments that explain why the world is behind target.

Existing literature highlights several arguments related to WSS implementation failures and obstacles to achieving universal access. Some arguments premise the high cost of location-specific infrastructure, others advocate for a bottom-up community-led effort, many comment on a lack of trained personnel, others discuss the problems with inaccurate data collection, and some identify the lack of productive political prioritization as the root of the slow progress in the WSS sector. Yet, these failures are usually only assessed on a singular case-by-case basis, rather than in consideration of the entire globe. Thus, examining existing debates in order to find linkages among the identified obstacles can provide evidence on which obstacles are the most dominant in achieving universal access. The first of the problems to address is, of course, money.
The Expenses of Infrastructure

Perhaps the most daunting obstacle to achieving universal access to water and sanitation is the cost of infrastructure creation, refurbishment, and maintenance, especially in geographically variant areas. Many scholars studying this issue agree that the available funding for water and sanitation projects remains highly inadequate for the scope of the problem, which hinders successful outcomes. Harald D. Frederiksen4 (2005) hones in on the money issue, pointing out that most developing countries have the potential to realize the capacity for implementing WSS; “however, all lack adequate budgets” (p. 674). Michael Rouse5 (2014) highlights some major issues and specific observations regarding the factors that contribute to the refurbishment of deteriorating infrastructure, as well as what needs to happen in the creation of WSS infrastructure. He references, “It has been estimated that, worldwide, the required investment in infrastructure for water and wastewater exceeds that for energy and transport combined” (p. 20). He identifies two different types of needed infrastructure investment: funding to replenish deteriorated infrastructure, and funding for the development and extension of existent infrastructure to accommodate locations with growing populations (p. 20). Frederiksen (2005) also comments on the cost of infrastructure when he suggests, “Poor construction quality, usually linked to corruption and civil service deficiencies, is the most costly factor within the services sector (p. 673). Infrastructural development and improvement are crucial to the process of providing universal access to WSS. However, Rouse (2014) highlights that “decisions should not be driven by infrastructure considerations. Infrastructure is the means, not the end” (p. 21). He advocates “it is a matter not only of financing and building the infrastructure but also of the need for improved governance, capacity building and training to achieve effective operations and maintenance for sustainability” (p. 23). He urges the importance of planning in tackling the infrastructure delivery challenge (p. 24), which suggests working at a higher

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4 Harald Frederiksen is a consultant for Water Resources Managements projects all over the world. This paper features arguments from his 2005 article, “Addressing Water Crisis in Developing Countries.”

5 Michael Rouse is an international water industry scholar from the University of Oxford. His 2014 article, “The Worldwide Urban Water and Wastewater Infrastructure Challenge” includes content from a 2007 report published by Booze Allen Hamilton entitled, “Lights! Water! Motion!”
level, and goes onto declare that “even though the financial figures are daunting, the bigger challenge is in policy, planning, and delivery” (p. 26).

Regardless, the magnitude of the WSS infrastructure problem alone is extremely costly. However, evidence also reveals that the proposed benefits will outweigh the costs. Rouse agrees, stating that “the costs of not having access are greater than the investment required to achieve it, so it must be affordable” (p. 26). Therefore, although extreme deterioration of infrastructure is costly both in monetary capital and labor capital, the investment is advantageous – and necessary.

In addition, the consideration of infrastructure cost includes pricing of WSS services by network connection and monthly fees. One study\(^6\) explains that poverty is often used as an explanation for a lack of access to WSS. However, in reality, it is often the poorest of the poor who are the ones paying the most for such services because they must rely on highly informal methods of WSS access “such as tankers and cart vendors, [so] they pay prices ranging from 2 to 20 times more per liter of water as compared to households with water network connections”\(^7\). Jenna Davis et al.\(^8\) explain this phenomenon as a “mismatch of W&S service pricing and financial management in low-income households” citing that impoverished families often manage “funds on a day-to-day basis and would find it difficult to save money so as to pay a monthly or bi-monthly utility bill”\(^9\) (Davis, White, Damodaron, & Thorsten, 2008, 887). Further, “even more daunting is the prospect of amassing the capital needed to pay an initial network connection fee, which is often the equivalent of one or two month’s income for a household\(^10\)” (Davis, et al., 2008, 887). Thus, these sorts of urban-rural and rich-poor gaps need to be addressed during policy finance planning and service implementation processes.

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\(^6\) The 2008 study is titled, “Improving access to water supply and sanitation in urban India: Microfinance for water and sanitation infrastructure development” by Jenna Davis, Gary White, Said Damodaron and Rich Thorsten.

\(^7\) (As cited in Davis et al., (McPhail 1993; Kjellen 2000).

\(^8\) Jenna Davis is a scholar from Stanford University, and Gary White, Said Damodaron and Rich Thorsten, are analysts from Water Partners International (Kansas City, MO).

\(^9\) (As cited in Davis et al., (Whittington et al. 1999a).

\(^10\) (As cited in Davis et al., (Davis, 2003).
User Ownership

Many scholars agree that lack of money impedes WSS implementation, but there are other challenges as well. Some argue that top-down, supply-driven implementation is doomed to fail. Rather, the implementation of WSS provision needs to be demand-driven and community-led. The value of user ownership has become recently accepted and promoted among the international development studies community. User ownership is cited as being critical for the success and sustainability of any development project. There are many exemplary studies that reveal the power held within community-led efforts in WSS programs. For example, in a 1998 case study titled, “Implementing a Demand-Driven Approach to Community Water Supply Planning: A Case Study of Lugazi, Uganda,” scholars11 identify the existence of a “new approach [which] holds that investment in the water and sanitation sector should be ‘demand-driven’…[:] beneficiaries must be involved in decisions regarding choice of service level and must understand the cost recovery implications of their choices” (Whittington, Davis, McClelland, 1998, 134). In this article, scholars comment on the tension between driving these programs from the people’s side and still maintaining the necessary level of technical expertise (p. 134). They also comment on the necessity to target the demand side now and in the future, in regards to long-term stability for the service delivery (p. 135). The scholars stress the need for cooperation between the technical specialists and the people receiving the services so that they can be prepared for changes in future demand, which depend on “socioeconomic, political, public health, and environmental” factors (p. 135). State governments can facilitate communities’ access to technical specialists, through partnerships with local NGO’s or other organizations that employ WSS experts. Dale Whittington et al.’s (1998) case study of Lugazi, Uganda utilized technical expertise in cooperation with the desires of the community and resulted in recommendations for a WSS system that are tailored to the needs and characteristics of the locality, as a service so geographically-intensive as WSS is highly circumstantial across sub-regions. The scholars highlight the need for flexibility in the planning of a demand-driven process, on the parts of all stakeholders, and underlined the importance of conducting dialogue with the recipients (p. 144).

11 Dale Whittington, Jennifer Davis, and Elizabeth McClelland are scholars from the University of North Carolina at Chapel Hill.
Another study\textsuperscript{12} examines community-based approaches in urban sites in Africa, Asia, and Latin America. The article echoes and adds to concerns that are similar to Rouse’s, in regard to the need for governments to appropriate the capacity to deal with population growth and WSS delivery. Like Whittington et al., this study also illuminated the importance of multi-stakeholder cooperation and flexibility (Luthi et al., 2009, 58). Further, Luthi et al. highlighted the necessity for educating the recipients: “To achieve genuine participation, it is important to empower local people by raising their skill-level and capacity for action” (p. 59). It is essential that the people receiving the services know \textit{why} they need these services. They must be aware of both the health risks and the economic and developmental setbacks involved with a lack of access to water and sanitation, so that they demand access: this is a bottom-up approach. In order to enable local communities to take ownership of their own scheme, it is important that NGOs, IGOs, and private firms are available to help them with the technical nature of the issue, so that a lack of knowledge on WSS infrastructure is not a cause for inaction. The bottom-up approach empowers users to become invested in the success and sustainability of the service project through the creation of user ownership.

Further, it is important to share information “from the outset of any project or program” (Luthi et al., 2009, 59), so that the recipients are comprehensively involved in the system. The Luthi et al. study (2009) concluded that water and sanitation projects should be implemented with a “combination of several methodologies and structured planning approaches,” stressing the need for multi-stakeholder responsibility, rather than solely community responsibility (p. 62).

Moreover, a different study\textsuperscript{13} strengthens the argument for a community-driven implementation effort: it chronicles the challenges, yet overall successes, of taking a demand-driven approach to creating a condominal water and sanitation system in a small Peruvian community. This study commented on the processes that occurred within the originally disorganized nature of the community, which resulted in

\textsuperscript{12} “Community-Based Approaches for Addressing the Urban Sanitation Challenges,” (2009) by Christoph Luthi, Jennifer McConville, and Elisabeth Kvarnstrom.

communal mobilization toward the goal and a successful outcome. The success enjoyed by this outcome empowered the community to organize themselves for other development projects besides WSS (Hubbard et al., 2011, 326), revealing an extension of the developmental capacities of the community.

**Training Personnel for a Multi-Disciplinary Approach**

In addition to funding for infrastructure and a lack of user ownership, many cite a lack of training for WSS personnel as a major obstacle in achieving WSS. The need for behavioral change and creation of good, hygienic habits is something that can only happen at the community level, and it is essential to the effectiveness of any water and sanitation system; implementers must be aware of this. Moreover, this sort of fundamental change is multi-disciplinary, involving political, geographic, economic, and social factors.

Changing WSS behavior means changing a person’s way of daily life. New hygiene habits are sometimes hard to get used to. Thus, improvements truly require a multi-disciplinary approach with strong leadership. It is not only a “dilemma of technology and poverty, but it is a social and institutional issue requiring the focus of the people” (Hueso & Bell, 2013, 1012). Often, implementation personnel do not recognize both the social *and* physical elements of WSS practices.

In both Pakistan and India a major component of the failed WSS policy is that WSS administrators are either inexperienced or unequipped to do the job in the way that the government intends. In Pakistan, along with many developing countries, WSS is seen as an engineering issue and not as a social or development issue. Personnel in government offices, who are tasked with WSS, are often engineers and are not trained in seeing the social and cultural components of service delivery. Also, the teams tasked with developing the national WSS policies did not “include members from any of the four provincial water supply and sanitation departments, (Nawab & Nyborg, 2009, 589). This is a serious misstep in planning. There is no way to build a realistic framework if no one on the drafting committee has knowledge of how the implementation actually plays out on the ground: “One policy implementer official cited the policies by saying that ‘the proposed policies are not based on any scientific situational analysis and are merely ambitious thoughts of a group of experts having very little idea of ground practices’” (Nawab & Nyborg, 2009, 589). Also, many of these employees are not trained to take in the
issues of access, and “believe that their prime responsibility is merely to provide water connections, irrespective of the quality for human consumption, quantity and frequency of the supplied water (Farooq et al., 2008, 340). One solution for the untrained personnel problem is to add technical experts, from large IGO’s or NGO’s that do have experts on the subject, to the policy-making group.

**Data Collection**

In addition to a lack of funding and trained personnel, and the use of supply-driven schemes, other compelling evidence suggests that inadequate data collection can lead to unsuccessful outcomes in WSS projects. Rouse (2014) argues that “resources necessary to obtain good baseline data should be built into early plans” because accurate data is essential to creating an effective system (p. 24). A UN statistical note\(^{14}\) underlines the need for accurate data on the WSS issue, and highlights a concern “about the availability and quality of water of data” (UN, 2014). The note continues on to detail intended actions to remedy the issue, signifying that this issue is on the radar of the greater international community. Another article\(^{15}\) analyzes the shift to decentralized service delivery modalities (which echoes the Whittington et al. (1998) article’s claim that community-led/decentralized approaches are proliferating), and stresses the importance of accurate data collection in making informed and effective decisions, which are vital to the functionality of the decentralized delivery method (Giné-Garriga, de Palencia, & Pérez-Foguet, 2013, 709). Thus, it seems that proper data collection, although seemingly small, is an essential part of the WSS implementation process because it allows resources to be accurately and efficiently allocated. In the creation of a comprehensive WSS implementation framework and an innovative public investment structure for WSS provision, as this paper proposes, routine data collection schedules and quality guidelines must be outlined. Further, WSS actors who conduct data collection must be properly trained to ensure accuracy, as well as positively incentivized to carry out and adhere to the proposed procedures.

\(^{14}\) From the (March 2014) Compendium of statistical notes for the Open Working Group on Sustainable Development Goals (OWG) Prepared by United Nations Statistics Division, in collaboration with the Friends of the Chair group on broader measures of progress, Statistical Note 6: Water and Sanitation (p. 43).

The Art of Service Delivery

In order to identify which of the above obstacles might be the biggest hindrance to a government’s provision of WSS, one can investigate service delivery pathways. Service delivery pathways are basically the frameworks through which a nation-state can implement the delivery of a public service. These ‘pathways’ pertain to a variety of public goods sectors including food, health services, and education. However, the nature of delivery for any public service remains highly circumstantial.

Exploring different methods for public service delivery allows one to look at implementation in terms of top-down and bottom-up; however, I argue that implementation must be generated from both directions, and the implementation framework must act as a mechanism to connect the whole system together. National level politicians and policy makers’ objectives needs to align with users’ demand. Improved WSS needs to be an objective for each level of the government apparatus. There must be a clear cut framework: one in which each actor in the provision of WSS is placed on a ‘ladder of implementation’ and is clear on which roles they hold, to whom they report, and who reports to them. Clarifying these roles can limit much of the coordination mishaps that occur today in both Pakistan and India, as well as around the globe, during the process of decentralizing service delivery. Not only should responsibilities be clear, but also the system should enforce a level of accountability. Creating a clear structure for service delivery like this will allow for the inclusion of feedback loops and data collection mechanisms, which can create much faster and more customized methods of adaptation to implementation efforts, ultimately maximizing successes across the developing world. Introducing a new service delivery system is not an easy task, and is one that must be adjusted to whichever circumstances or issues may arise during implementation. Further, the service delivery framework should seek to place the resources for delivery in the hands of its users. The framework should also incorporate the necessary components, which scholars have pointed out as being vital to the successful provision of WSS; for example, ensuring sustainable results by encouraging community ownership and including women in the implementation process.
In order to create such a framework, leaders at every level – national, provincial, regional, and local – need to be incentivized to collaborate with the offices above and below their post so that the intentions of the policy reflect the reality on the ground. Further, there must be willingness for such a high level of collaboration. This process cannot happen overnight, rather top level implementers must be committed to facilitate collaboration between their government, civil society, and technical experts. They must be willing to revamp the current WSS system in a way that highlights success, and makes the overall issue of WSS more attractive to political leaders and citizens alike. Ultimately, the goal is to achieve better results through faster adjustment times and less wastage of money and resources. Often times, as revealed through the case studies, government officials or WSS program implementers were often discouraged by misdirected incentives, a lack of knowledge and training on WSS issues, and slow, low visibility progress in WSS improvements. These factors often led WSS actors to push the issue of WSS off to the side and to focus on projects that had quicker, more gratifying results, in order to generate success in their careers. The WSS sector is one of the least “sexy” subsectors of a government because investments in WSS, which will indeed see returns, will not see those returns as directly or quickly as other more seemingly lucrative sectors might (such as energy or agriculture). Often times, other more highly lucrative sectors receive the money and attention of the decision makers, as the push and pull of politics will pressure high level officials to go where both the money and short term successes can be achieved (relating to the politics of reelection and personal career advancement). However, WSS is an issue that must not be pushed aside any longer. The international community has called for this issue to be prioritized, and national governments need to find ways to operationalize the idealistic policies into ground-level practices that can yield favorable results and lead to an overall improvement in national development.

Creating this disciplined framework can mobilize political will in a productive way that allows each WSS actor to lead in the best way possible – advancing their own career, at the same time as providing better services to their people. The WSS changes must be demand-driven, which requires that communities demand and own their own WSS systems. But this transition needs to be instigated and
informed by the central government, where the most power in budget and institutional allocation. Trickling these efforts down to the community level is the main goal, but this cannot be executed without a clear framework for how to move the policy through the bureaucracy. Yet, this does not imply augmenting the bureaucracies. Expanding and complexifying the existing bureaucracies could lead to institutional inefficiency: WSS directives and resources will get clogged and directed away from the main goals of WSS. Rather, WSS, as it is so often lumped as a sub-category into other sectors, needs to be seen as its own problem to tackle, and be seen as an issue that merits its own category and personnel. The framework should outline what offices and sectors are responsible for which tasks and when to solicit progress reports. Creating such a structure requires significant political will from government officials at all levels.

Currently, in both Pakistan and India, one of the largest issues is the theory-practice gap. Mobilizing political will in the form of a legitimate, incentivized framework that allows for a review of actions and progress can mend this theory-practice gap and yield results that can stimulate whole regions that currently lack access to proper water and sanitation services. It is ultimately the job of the state to seek out innovative methods that cultivate user responsibility and ownership, while at the same time providing those users with the resources (i.e. technical experts from local NGOs, or big organizations like WHO, UNICEF, and UNDP) to create a customized and viable plan for the implementation of WSS.

Specifically in WSS, there are a number of variables that affect the efficiency of delivery. Geography, climate, regime-type, and culture are just a few factors that play a role in the type of WSS for a specific locale. Thus, there is no “magic formula” when it comes to the efforts of implementing a countrywide service delivery program. Rather, implementation tends to differ on a case-by-case basis, which is adaptable and suitable to the circumstance. Yet, despite the highly variable nature of service delivery, especially in the WSS, there are certain international trends that are important to note when analyzing the best way to mobilize resources behind a cause.

Since the 1990’s, the world has entered into a new era of aid, which has set the stage for widespread changes in implementation practices. According to a consensus in the field of international
development, this new era reveals an apparent shift in aid modalities: a shift from donor-driven projects to country-led programmatic service delivery approaches (AMCOW, 2011, 4-5, 25; ODI, 2008,V; Killick, 2003, 1). This shift originates from the IMF and World Bank’s (WB) introduction of the Poverty Reduction Strategy Papers (PRSPs) and the World Health Organization’s (WHO) introduction of the Sector-Wide Approach papers (SWAp). The former papers were introduced in 1999 and declare,

Successful plans to fight poverty require country ownership and broad based support from the public in order to succeed. A PRSP contains an assessment of poverty and describes the macroeconomic, structural, and social policies and programs that a country will pursue over several years to promote growth and reduce poverty, as well external financing needs and the associated sources of financing. They are prepared by government in low-income countries through a participatory process involving domestic stakeholders and external development partners, including the IMF and the World Bank. (IMF, 2014)

These PRSPs require countries to submit thorough plans to the IMF/WB in order to obtain eligibility for debt relief or budget support plans. Therefore, this approach has altered the environment in which aid is conducted, for it has placed emphasis on national planning. This new emphasis has changed the flow of aid money from project-based approaches to domestic finance approaches, which requires strong leadership on the part of the recipient country. One of the greatest challenges in regard to this process is the states’ level of capacity in carrying out such a plan. Increasing capacity to deal with such an issue is a complex process; the government should focus on creating capacity at the community level, rather than at the bureaucratic level.

With this in mind, this paper argues that the call for state-level leadership and planning must be combined with the demand-driven, community-centered approach. High-level leadership is needed to instigate widespread community-led efforts. Leaders must be committed creating a national plan that inherently supports multi-level government and non-government collaboration, with a demand-oriented structure.

In addition to the PRSPs, in 2000, the WHO released their annual World Health Report, in which it introduced the Sector-Wide Approach (SWAp). The intention of the SWAp was to combat the criticism of “donor-driven projects (i.e., reflecting donor rather than country priorities)…[for] it was recognized that many individual projects posed unrealistic demands on developing countries’ limited economic and
human resources (WHO, 2014). SWAp “brings together government, donors, and other stakeholders within any sector” (WHO, 2000) and also underlines the necessity of government ownership and leadership.

WHO reports that the existence of the PRSPs “presents both a challenge and an opportunity for SWAps,” as it is vital that the international community find a way to utilize these resources in harmony with each other, reflecting the evolved nature of aid modalities (WHO, 2014). The values embedded in the SWAp are fueled by the underlying need to have a high level of collaboration and coordination among all WSS actors – whether they are governmental, private, or non-governmental.

With the existence of these tools\textsuperscript{16} and others, it is evident that the international community has made a clear commitment to the new course of aid channels and to tackling the challenge of increasing aid effectiveness through country ownership and multi-stakeholder cooperation.

Because of mechanisms like the PSRPs and SWAps, a large majority of funding is now going straight to finance ministries and then being administered to individual line ministries for proper budget allocation, rather than the money coming through independent, private projects that work outside of the government apparatus, and may or may not be committed to sustainability and the cultivation of user ownership. This shift creates both opportunities and challenges for governments, one of the greatest being the creation of a structure that ensures the investments reach its beneficiaries.

The Role of the State Government

Each country that falls short of universal water and sanitation access must create an individualized national plan in order to comprehensively bolster the capacity to support large and small-scale, demand-driven water and sanitation projects. Such a plan should be assessed on a community-by-community basis and tailored to the specific characteristics of that region, while at the same time

\textsuperscript{16} One study, “Fighting Poverty in Africa: are PRSPs making a difference?” (2003) by David Booth, a research fellow at the Overseas Development Institute, accepts and underlines the importance of country planning, but questions the PRSPs ability to actually create it (p. 45). As there are a multitude of existent variables that may or may not be able to prove correlation or causation, this thesis will not follow the further assertion that PRSPs are the best possible method in which to achieve implementation of public services, like WSS. Rather, this thesis will accept that the current environment and a large portion of funding for such projects is indeed dependent on this process – be it arbitrary or not – due to the sole fact that, currently, most large-scale debt relief and budget support plans (involving the IMF and World Bank) are contingent on the participation of such processes.
incentivizing each player from bottom-up and top-down to commit to the sustainability of the project. In the past, efforts from huge international institutions, developed countries with official development assistance, developing countries who allocate budget room to the WSS sector, and NGO’s who approach localities with small-scale improvements have all met both failures and successes – and at very inconsistent rates. The role of the central government is crucial to the sustainability of the universal provision of these services because, with the exception of extreme corruption, national leaders and organizations have both the authority and clout to partner with larger multilateral efforts and organizations, while at the same time reaching out to their own citizens: “timely execution of the expanded services program will require maximizing the use of existing government agencies, augmented with additional capacity and substantial help from the IC [(International Community)]” (Frederiksen, 2005, 674). The national institutions are the middlemen between this massive international effort, – which would see huge international gains upon successful execution – and the beneficiaries of this service. State governments should be the link between the IGO’s, NGO’s, private markets, and the public service users.

Further, “evidence suggests that when governments achieve this sort of collaboration, they attract further investments both from national investors and aid partners” (Sanitation and Water for All, 2013). Frederiksen (2005) references this issue of an inability to attract investments to the water sector, as it was raised at the Camdessus panel (conducted by the World Water Council) in 2003: “compared with other types of infrastructure, the water sector has been the least attractive to private investors, and the sums involved have been the smallest” (p. 670). Moreover, in Frederiksen’s discussion about costliness, he raises the point that, “as in the United States, political pressures can alter wise budget allocations,” which suggests that political prioritization and planning could close the budget gaps (Frederiksen, 2005, 673). But, as this paper proposes, the big-picture view of the program must be grounded enough to include a view for community-led change. It will take willingness from all WSS actors, whether they are politicians, bureaucrats, policy makers, governmental officials at state, regional, provincial, and local levels, NGOs, private firms, and informal local leadership to execute this type of WSS scheme.
Utilizing Existing Expertise

There is immense research on the ways in which different locales, regime-types, and societies can find an apt method for creating such a program. One example of this is the African Ministers’ Council on Water (AMCOW) Country Status Overview Regional Synthesis report titled “Pathways to Progress: Transitioning to Country-Led Service Delivery pathways to Meet Africa’s Water Supply and Sanitation Targets.” Although this report is specific to Africa, the content is valuable and applicable to all regions. In the AMCOW report, UNICEF, the World Bank and their Water and Sanitation Program (WSP), African Development Bank, and the WHO have collaborated with data and technical expertise to create a “scorecard” that provides countries with a step-by-step approach to implementing this sort of a WSS program. This report presents three key building blocks for the process: the enabling pillar, which includes policy, planning, and budget objectives; the developing pillar, which includes expenditure, equity, and output objectives; and the sustaining pillar, which includes maintenance, expansion, and usage objectives (AMCOW, 2011, 9). The goal of the report is to target high-level decision makers within WSS-lacking governments and provide them with the technical resources to help build capacity at low-levels of government to enable individual communities to implement a comprehensive and sustainable system.

The AMCOW report, in addition to the JMP reports, and hundreds of cases studies that reveal the technical success and failures of small-scale (typically community-based) implementation programs from regions all over the world, provide ample information on WSS provision.

The technical expertise and resources exist. Therefore, there is not a lack of know-how at the central level of government that can take blame for the faulty and incomplete implementation of WSS. The methods exist, and, not to mention, there are huge organizations dedicated to ironing out the logistical details in order to facilitate the process of implementation. So, the question remains, if the technical expertise and resources exists, and if options for frameworks, methods, and resources for WSS implementation exist, then why hasn’t the world come closer to achieving universal access to WSS? This
is where a key – and usually overlooked – element, political prioritization – or, rather, political will – comes into play

**Understanding Political Will**

Ever since USAID democracy fellow, Linn Hammergren, characterized political will as “the slipperiest concept in the policy lexicon” and considered it the “sine qua non of policy success which is never defined except by its absence,” in 1998, efforts to understand, operationalize, and standardize the term have proliferated (Post, Raile. A, &Raile. E, 2008, 654). Today, policy makers and critics often throw around the term “political will” as a vague factor to explain away policy and political failures. But, how can one blame an ambiguous concept without having the ability to define and measure its effect on policy change? The international community would benefit from more direct definition and engagement with this idea, for as this project will show, the political will of the populations in need of WSS can contribute greatly to the success of WSS implementation and maintenance.

**Defining and Measuring**

In the past 15 years, scholars have taken up the struggle to actualize the use of this term, in order to give it functional value. The ‘political will’ concept can be applied to any sort of political effort; however, there have been numerous studies on the effect of political will in human development issues. Scholars have been able to isolate political will by using certain parameters and indicators in order to best test its influence on food and nutrition, HIV/AIDS, education, and other human development sectors. They have conducted field studies with surveys that seek to gauge the level of political will for a certain issue, in a certain location. Many scholars have provided nuanced denotations of the term political will, and although wording may be different, many definitions incorporate the same themes. One useful definition follows: political will is

a sufficient set of decision makers with a common understanding of a particular problem on the formal agenda is committed to supporting a commonly perceived, potentially effective policy solution. (Post et al., 2008, 659).
The scholars behind this definition further explicate their denotation and apply it to real-life scenarios. They connect their denotation of political will to the Veto Players Theory. The Veto Players Theory “proposes that a crucial element in understanding policy change is determining the players whose agreement or indifference is necessary to change the status quo policy position” (Post et al., 2008, 661). However, one shortfall of this definition is that it lacks measurable qualitative and quantitative components.

Moving forward, the recent push in academia to evaluate the presence of political will has led other studies to reach a general consensus of three major domains by which political will can be observed.

**Three Pillars of Political Will**

Three dimensions that are useful in researching political will are: expressed commitment, institutional commitment, and budgetary commitment. Expressed commitment denotes “verbal declarations of support for an issue by high-level, influential political leaders”. Institutional commitment denotes “specific policies and organizational infrastructure in support of an issue,” meaning certain laws and declared frameworks for certain policy. Budgetary commitment, which is the most quantitatively measurable dimension, denotes “earmarked allocations of resources towards a specific issue relative to a particular benchmark” (Fox et al., 2014, 3). Ashley Fox et al.’s study makes an important distinction, stating that expressed commitment alone only constitutes a sort of “rhetorical commitment;” whereas,

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17 This definition was provided by the study, “Defining Political Will,” written by Yale University Scholar Lori Ann Post and North Dakota State University Scholars Amber Raile and Eric Raile. The purpose of their study is to “offer a concise yet comprehensive definition of political will that takes advantage of conceptual overlap in a sparse and disconnected literature” and then to “further elaborate on the essential definitional components of political will, including guidelines of operationalization and assessment targets” (p. 655). In the final pages of this article, the scholars include a case study of health care reform in the United States, in order to display the operational capacities of their definition and study of political will. The scholars clarify that “the approach is not a causal theory of the policy-making process but rather is a tool to make possible solid measurement and observation-based analysis” (Post et al., 2008, 655). Their study analyzes tens of different published studies on the challenge of defining political will, and creates a definition that comprehensively encompasses all of the established facets. The study then further elaborates upon the different elements of the definition.

18 This paper, authored by Ashley Fox, Yarlini Balarajan, Chloe Cheng, and Michael Reich, adopts language used in a study published in *Health Policy and Planning* 2014: 1-13 that was also released by the UN as an executive summary titled, “Measuring political commitment and opportunities to advance food and nutrition security: piloting a rapid assessment tool” (2014). This article outlines the three major domains for measuring political will, utilizing a “theory-based rapid assessment approach.” As the title denotes; however, this article is conducted in the context of food and nutrition security. Therefore, this thesis only adopts the theoretical elements of the work, but will utilize the certain inherent similarities between food security and water and sanitation security in order to adapt its framework to the WSS sector. (Note: political will and political commitment are synonymous for the purpose of this paper)
budgetary and policy commitments are more “tangible” and measurable and thus signal a ‘credible commitment’ from the government (p. 3).

These three pillars were also echoed, in different phrasing, in a few other studies. One article\(^{19}\) states three “domains or themes” for measuring political commitment: “policies and programs, legal frameworks, and public expenditures,” which connect to the ideas behind the ‘expressed, institutional, and budgetary commitments’, respectively. Another article, which operates within a different context (i.e. the HIV/AIDS epidemic),\(^{20}\) also highlights similar actions to indicate political will, using criteria that agree with the above ‘three pillars’. The value of this final source is held by its application to a different sector within the field of human development (i.e. the HIV/AIDS epidemic); and also by its ability to critically analyze the realistic and indicative nature of each of these ‘pillars’: this article declares budgetary commitment to be the absolute strongest of the three (The Policy Project, 2000, 3). However, as revealed through the case studies, more money is not the sole solution. The funds must be administered in a way that includes all of the values necessary for feasible implementation.

**Political Will in the Cases**

The actual strength or weakness of political will can be envisioned in terms of how many of these three pillars are present, or how many acts of behavior exemplify such commitment to a certain cause or to general good governance. In looking at the two case studies, Pakistan and India, a lack of political will is evident through the huge theory-practice gaps. The gap between what is theorized and what is practiced is the result of an insufficient commitment to diligent implementation and a faulty WSS scheme.

If WSS truly were a high priority, the WSS actors should be willing to seek out alternatives, compromises, and available options in order to tackle the issue. Moreover, efforts to improve the system should also have some level of visibility. However, often times, the WSS systems put up for

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\(^{19}\) A study published in the *Food Policy* 44 (2014) 115-128 journal, titled “Measuring the commitment to reduce hunger: a hunger reduction commitment index,” conducted by Dolf J.H. te Lintelo, Lawrence J. Haddad, Jennifer Leavy, and Rajith Lakshman. Again, this study is conducted within the context of hunger reduction; however, the theory behind their findings remains valid within the context of WSS due to inherent similarities by the health-related nature of the issue.

\(^{20}\) Rather than the food and hunger topic of the previous two studies, this article operates within the context of the HIV/AIDS epidemic.
implementation resulted in the actors’ tendency to use the system for their own benefit, rather than for the benefit of the initiative. This need not paint a negative picture of anti-altruistic leadership, but rather encourage the central government to take action that is both highly visible and efficient in order to promote the cause of WSS and allow it to align with officials’ goals for career advancement.

Further, because rural governance structures are often less formal than urban governance structures, the rural portions of developing countries are often the biggest challenges to create lasting change, and political will can be harder to directly pinpoint. Yet, there are ways to capitalize on existing leadership and governance structures (be they formal or informal) to instigate a shift in WSS infrastructure and behavior. Partnering with NGO’s and private companies to analyze best practices, and then apply them to existing circumstances is one option. Conditional cash transfer programs or guaranteed employment schemes, including the creation of WSS boards to formulate customized proposals for investment in their WSS system, are also useful (refer to ‘Conclusions’ section for more information on these types of programs). Also, restructuring existing offices and creating special committees within the central bureaucracy for the purpose of revamping the current system and approaching WSS, as its own issue could be a first step. That effort would signal both institutional and budgetary commitments, as it is a form of organizational infrastructure, and would need a special budget that is not at the mercy of a ‘general funds’ budget-line. A certain committee could delve deeply into the current system and remodel it under a clear layout and directive. A committee of government officials who were incentivized to truly fix the system and collaborate with all levels of actors could prove highly useful. The committee could address data issues by creating a new plan that determines to formally include information gathering and data collection standards (it could even be contracted out to private companies if done with oversight). Governments must have a set of regulations and standards that lay out exact contaminant and potable drinking water levels values, as well as define what is considered adequate for sanitation systems. Creating a strong data and information base will allow all arms of the process to communicate better with each other, and will allow for easier promotion of the topic because it will be easier to display the
detriment that having an insufficient WSS system causes. Not to mention, the issue will be easier to ‘sell’ if major progress is advertised as realistic and attainable.

**Case Studies**

Before I delve into the specifics of each case, I would like to note that there are certain issues with the JMP report statistics; after thorough research, the JMP numbers do not appear to properly reflect the real situations in each country. For further explanation of this topic, please refer to the Appendix. Withal, I have used the JMP statistics to initiate my study of both countries. However, to provide a brief background on what these issues look like, one should note that a foremost issue in studying the level of WSS functionality and availability in the world today is that, in data and survey reporting and in implementation, the difference between *coverage* and *quality* has not been underlined strongly enough. There is a large disparity between the percentage of a population that has access to running water and the percentage of a population that has access to *potable* running water. The JMP report, in addition to other national and independent reports, fall victim to this problem. This sort of problem creates large discrepancies in the data that is used to show progress and to measure the level of effort needed to fix such a problem; the coverage numbers are much higher than the actual coverage numbers for areas with acceptable standards for drinking water. This discrepancy is problematic because it can paint a misleading picture that the WSS situation is better off than it actually is.

**Pakistan**

**Background**

Pakistan has a population of 196,174,380 people, with a wide variety of ethnicities, languages, and religions. Urban citizens make up 36.2% of the population. Pakistan has a total land area of 796,095 km², of which 3.17% is water, and 26.02% is arable land (CIA World Factbook: Pakistan, 2015)

As aforementioned, Pakistan became independent from Great Britain in 1947, although the 1947 Pakistan is much different that today’s Pakistan. Pakistan’s location makes it strategically important to the
geopolitical issues of South and Central Asia regions and the Muslim world. Tensions have been consistently high between India and Pakistan since their respective independences; conflict often occurs along the ethnic divisions that exist within such diverse populations. In addition to clashes between Pakistan and its Indian neighbor, the Pakistani government has struggled to function in the presence of radical domestic insurgents, many of whom have tribal roots and are considered to evolve from the Mujahedeen forces active during the Soviet invasion of Afghanistan (CIA World Factbook: Pakistan, 2015). This conflict is brutally important to the functioning of the Pakistani state today, as the aftermath has bourgeoned into ongoing domestic clashes and the undermining of the Pakistani government21.

History of WSS Institutions in Pakistan

To hone in on the state of WSS in Pakistan, the history of WSS provision in Pakistan must first be understood. The decade from 1981-1990 is considered the International Drinking Water Supply and Sanitation decade (WHO, WHA 34.25, 398), and for many countries, this was the decade in which the state began to prioritize water and sanitation coverage. International themes of population growth, heightened standards of living, and urbanization were all factors that both instigated and complicated the progression of providing access to WSS. Although Pakistan was not immune to any of these themes, the government was not quick to respond to the UN and IC’s urging to focus on WSS. In 1992, the Government of Pakistan launched a “Social Action Plan” that sought to involve communities in the provision, operation, and management of WSS, as well as the use of low-cost technology and hygiene education and promotion (Ahmad, 2005, 1). One of the first notable projects following the outlay of the Social Action Plan was in the “North West Frontier Province” (NWFP) and it aimed to improve sanitation by providing drainage systems and village latrines, took place in 1993, which remained, for the most part, unsuccessful (Nawab & Nyborg, 2009, 587). Other projects like this one took place across the country around this time.

21 Refer to the ‘Military Interruption of WSS Provision’ section of this paper for an expanded explanation.
Another important event in WSS development took place in 1997, with the Government of Pakistan’s (GoP) initiation of the Environmental Protection Act, which included a section on water quality and wastewater treatment (Nawab & Nyborg, 2009, 586). However, this act did not create substantial differences in WSS provision, and “is considered too punitive and does not provide for a sufficient enabling environment for its implementation” (Nawab & Nyborg, 2009, 586). There were no legislative mechanisms to encourage WSS improvements. Moving forward, in 2001, the GoP initiated a Local Government Ordinance (LGO), which created a three-tier government system (districts, tehsils, local governments, to be governed by Union Councils of Pakistan) and resulted in devolution of public service delivery responsibilities to the tehsil level, where the Tehsil Municipal Administrations (TMA) would take over the water and sanitation sector. Previously, the Public Health Engineering Departments of the provinces, as well as some Water and Sanitation Authorities (WASA) in larger cities, were responsible for WSS provision, but this LGO called for the TMAs to absorb such responsibilities, and for aspects of the PHED to be devolved to more local-level government departments.

This devolution of powers in 2001 presents an extremely important shift in WSS provision, and is perhaps a source of reason resulting in the current WSS inadequacies that exist today. The TMA and these organizations (WASA, PHED, MC) have not worked well together. The devolution of powers in 2001 was not only targeted to the WSS sector, but was actually the result of “large scale political reforms” (Padawangi, 2010, 9). The failure to coordinate duties suggests a need for a stronger commitment to decentralization.

In recent decades, decentralization has become a major theme in public service delivery provision. Both India and Pakistan instigated their own versions of decentralization for WSS provision. But, across the board, successful devolution of powers is cited as a key shortcoming leading to a lack of success in WSS changes. Transferring WSS responsibilities is evidently one of the most common obstacles, and it is, without a doubt, connected to political will. In Pakistan, the PHED strove to keep the “status quo of bureaucratic control rather than be under the control of local politicians” (Nawab & Nyborg, 2009, 586). This exemplifies a lack of political will to aim to create a better life for their citizens.
at the cost of their own political and career advancement. Further, there are numerous examples in Pakistan of the federal government not even communicating to local officials and lower levels of government that this transfer of power was a new priority, so the confusion fell on every part of the implementation ladder below the policy makers. New plans should feature a visible commitment to improving communication channels and a better plan for cross-sectoral collaboration.

More notable efforts, which intended to incorporate a community-driven approach, took place in the years following. In 2005, GoP initiated a “Drinking Water for All” project that yielded disappointing results. In 2006, a National Sanitation Policy focused on the Community-Led Total Sanitation (CLTS) approach, relied more heavily on promoting the elimination of open defecation and hygiene, rather than jumpstarting projects to secure sanitation infrastructure.

In 2009, a new and restructured National Drinking Water Policy was created, with focuses on prioritizing water for drinking purposes, creating equitable and affordable access, involving women in the provision and sustainability of services, capacity building within WSS sector administrations, sector-wide approach (SWAp, as aforementioned), private-public partnerships, research and development, public awareness, emergency preparedness and response, and more coordination in implementation planning. This policy was accompanied by other legislation that intended to create implementation and monitoring mechanisms. The policy promoted a cross-sectorial approach, which links national level policy and programs with that of the regional level, and to connect environment, housing, and water programs so as to create a collaborative institutional and financial framework across a variety of sectors. This is a large, notable effort put forth by the national government of Pakistan, exemplifying both an institutional and an expressed commitment. It determined to tighten up legislation for WSS provision and included banning several practices, like the discharging of untreated wastewater into water bodies (Nawab & Nyborg, 2009, 587). This 2009 approach is much more comprehensive and well rounded than the previous policies and efforts put forth by the Pakistani government. Some of the language in the policy directly mirrors rhetoric supplied by the UN and other IC actors in terms of WSS progress. This policy is the backbone of WSS provision in Pakistan; however, its goals for implementation have not been realized, and the reality on the
ground does not reflect the execution of the provisions outlined in this policy because it still has not created a structure that truly inspires community-led change.

Legally, WSS provision in Pakistan is a provincial responsibility. Each of the four provinces has the autonomy to create its own department for WSS and administer its own services. The administrative structures across provinces tend to be similar. Each province is obligated to assess the supply and demand and to choose which type of service, at which price, and at which quality they will implement. Typically, the Public Health Engineering Departments (PHED) administer rural WSS, and Municipal Corporations (MC) or Water and Sanitation Authority (WASA) administer urban WSS, despite the 2001 LGO ordinance to transfer responsibilities to the TMA’s.

Historically, WSS provision has taken on an informal nature, having been “mostly governed by implicit policy and tacit rules and regulations” (Padawangi, 2010, 9; Nawab & Nyborg, 2009, 586), which reflects a former lack of legitimate institutional commitment. However, due to the introduction of the 2009 National Drinking Water Policy, there has been a recent shift from implicit to explicit policies, as the need for a more demand-driven, devolved, and community-centered approach has been recognized.

Furthermore, it is important to keep WSS progress over time in mind. The improvement of WSS in the past few decades has been moderate, but consistent: according to JMP, Pakistan’s total water coverage jumped from 85% in 1990 to 88% in 2000 and then to 91% in 2012. Their total sanitation coverage increased from 27% in 1990 to 37% in 2000 and then to 48% in 2012. However, throughout my research I have seen large discrepancies in this data (addressed later in the Appendix). The GoP itself reports statistics of less than half of what the JMP is projecting. Yet, one can gain an overall sense of the progress that Pakistan has made, for it is steady and gradual, with no major jumps or falls.

**WSS in Pakistan Today**

**Quality**

Although the JMP reports that drinking water access in Pakistan is at 91%, and sanitation access is at 48%, there are numerous case studies, taking place in all different provinces in Pakistan, that reveal
these coverage statistics as inaccurate. Water quality has been cited as being one of the biggest problems in WSS provision in Pakistan. For example, in 2005, Pakistan’s Network for Consumer Protection reported that 60% of people in cities had access to municipal water; however, “much of the water piped into homes contained bacteria or chemicals that exceeded the government’s (voluntary) safety standards for tap water, reducing the estimated portion of the population with access to safe water to 20-30% (Street, 2010).

In addition to water quality, the concept of coverage still fails to consider aspects of WSS such as reliability and effective usage of facilities. Pakistan does not have a “regular monitoring program to assess the water quality” and only has very few “major water treatment plants which allow episodes of serious bacteriological contamination to go undetected” (Farooq, Hashmi, Qazi, Qaiser, & Rasheed, 2008, 339-340). Water treatment plants are just a part of the entire water supply apparatus, and instances of contamination and maltreatment can be found at every level.

Understanding the distinction between coverage and quality is essential to realizing the reality of the WSS situation on the ground in Pakistan. Areas where water does not meet contamination standards or is not tested to verify its cleanliness should not be considered ‘covered’. As mentioned above, Pakistan does not have a formal mechanism to test and ensure water cleanliness, nor have they declared official quantitative standards for such cleanliness. In some areas, groundwater wells are considered safe, and pit latrines are considered improved sanitation; however, both of those systems do not guarantee potable water or separation of human waste from runoff (Nawab & Nyborg, 2009, 586). Pit latrines are very difficult to successfully use in a manner that ensures proper sanitation, yet, as Nawab and Nyborg (2009) point out, “no research, prior to this study, has been conducted either by the government or any other research organization to look into the possibility of groundwater contamination due to widely used flush-pit-latrines” (Nawab & Nyborg, 2009, 588). Contamination can occur at almost every level of the WSS.

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process; there is a high level of vulnerability caused by insufficient physical infrastructure, and examples of this are prevalent worldwide. A common occurrence of contamination is when “stagnant grey-water” seeps into old and rusted drinking water pipes, for example. (Nawab & Nyborg, 2009, 590). The lack of formal standards by the Pakistani government is problematic, as high levels of contamination are present nation-wide. For instance, samples taken in 2008 found widespread contamination: in Islamabad, 76% of samples were contaminated, in Rawalpindi, 82%, in the Sindh province, almost 95% of samples, and the list goes on (Farooq et al., 2008, 340). At the very least, these areas need to be tested so that contamination and danger levels can be visibly acknowledged, for, currently, these areas are considered to have improved sanitation.

Effects of such high contamination do not go unnoticed. Some data support this claim by revealing the magnitude of people who are still getting sick from dirty water. UNICEF conducted a study revealing “20-40% of hospital beds in Pakistan are occupied by patients suffering from water-related diseases such as typhoid, cholera, dysentery, and hepatitis, which are responsible for one third of all deaths” (Farooq et al., 2008, 340). Clearly, WSS drinking water and sanitation facilities are as clean as reported.

Access

Another issue, unaddressed by coverage data established by the JMP report and official government reports, is consistency and sufficiency in accessibility. For an area to be considered “covered”, there should be a sufficient amount of water provided. Many localities in Pakistan report water only being available for a few hours a day or even only a few times a week. Not to mention, the water supply runs out and there is not enough for everyone. Specifically in urban areas, densification is increasing demand for water (Ahmed, 2009, 172). In Karachi, for example, only 5% of houses have twenty-four/seven access (Padawangi, 2010, 11). This is a major driver for the existence of the informal water sector. The absence of piped water supply is not the only circumstance in which communities resort to their own ‘alternative arrangements’; rather, “insufficient supply, disconnection of service, poor
quality water, unreliable frequency and unpredictable timing of supply” are all reported as major reasons for the necessity for informal approaches (i.e. approaches that fall outside of that which is provided by the municipality) (Padawangi, 2010, 11). But, informal approaches often do not always yield potable water. Further, the water supplied is often less than the water received due to leakage and theft, in some areas, 35% of water is lost due to these issues. (Ahmed, 2009, 174).

Access is not equitable across the population in Pakistan. There are cases of households using drinking water for other purposes (e.g. gardening). This practice leaves less drinking water available to other members in a supply area, and forces people to buy water at higher prices or travel longer distances to acquire it (Nawab & Nyborg, 2009, 588). Nawab and Nyborg report that the water supply department attributes these inequalities to their lack of legal power to monitor such behavior (p. 588). This finding justifies the need for a better WSS institution.

Another component hindering satisfactory drinking water and sanitation access to the Pakistani population is impractical pricing for WSS. According to Nawab in Nyborg (2009), in some rural areas, the price for WSS is about PKR 40 per house per month, yet in 2002, only 7% of rural households actually paid this money. With about one-third of the Pakistani population living below the poverty line, most houses cannot afford to pay even the most minimal water prices. The unrealistic pricing is further marginalizing the already marginalized “poorest of the poor,” and deepening the inequalities that exist in WSS provision, and there are no current propositions to elevate this group from their inadequate WSS circumstance (p. 588). Further, slum areas are especially subject to increased rates – sometimes three times higher than the rates found in planned areas (Padawangi, 2010, 11). Some scholars have argued that Pakistan should aim to create a ‘free basic amount of water’ standard, mirroring countries like South Africa, in an attempt to better target the lowest economic groups.

As mentioned above, these issues to access (quality, consistency, reliability, sufficient quantity, and price levels) perpetuate the informal water sector. Households and communities are compelled to seek other ways to acquire water. Sometimes this results in people using water sources that are not considered suitable by any standards, and sometimes this includes people resorting to the existing private
market for selling water. The existence of a private market can be extremely beneficial in alleviating some of the pressures placed on the public sector by provision of WSS; however, this cooperation only works when there are sufficient regulations and oversight. In certain urban centers, like Karachi, ‘water mafias’ have arisen. The water mafia apparatus looks something like this:

Private water sector consists of a network of transporters, who obtain water from one of the nine official or many unofficial filling points and move it in tankers to communities. From there, small-scale water carriers deliver water to households. These low-income households may pay up to 40 times more than those in higher income neighborhoods with municipal services (Street, 2010).

Without proper monitoring and regulation of such private markets, unfair circumstances arise, increasing the socio-economic inequalities in WSS provision.

Urban-Rural Gap

Studies of WSS provision in Pakistan also illuminate the urban-rural access and quality gaps. In rural areas, government policies and rules are not absorbed and recognized as well as “traditional norms and values” are (Nawab & Nyborg, 2009, 584). The areas that are less connected to the institutional framework of WSS provision see much less effective implementation results and are often the areas where the largest theory-practice gaps occur. Some rural areas with low literacy and education rates run into issues with their current hygiene habits and cultural practices, but research shows that a community-based approach is “an effective tool to break cultural barriers” (Padawangi, 2010, 22). Therefore, especially in rural areas, WSS actors should utilize a demand-driven scheme.

The Role of Women in WSS Provision

In addition, women’s access to and participation in WSS provision is a major issue in Pakistan, and across the developing world. Women’s involvement in community-based approaches is seen to be vital to the success of the program. Women are usually the ones who carry out all of the WSS activities like fetching water, cleaning water tanks and toilets, and making minor repairs to such apparatuses, which raises their incentive for a clean and efficient system. Their commitment to safe WSS is much higher than that of men’s because they have a higher level of responsibility and understanding of the importance of
WSS. Some more rural areas have stronger patriarchal based values and it is harder to stimulate female participation in the community effort. However, studies show that if this issue is tackled head on, and women’s participation is cited as a priority, then the issue is solvable. Some places found that simply building rapport with the households and male community and approaching women through their male relatives are first steps in integrating women into the decision-making and provisional process. This suggestion supports the need for a community-led method. On the other side of the issue, women’s involvement in these issues requires their education on the importance of hygiene and safe water practices for childcare and disease-prevention. Surveys in more rural areas revealed that men were often unaware of the importance of WSS or the intricate nature of its delivery and associated issues (Nawab & Nyborg, 2009, 591-2).

The Pakistani government has addressed, but not acted upon this issue of women’s participation: “the government often talks about giving a leading role to local people, especially women, and to involve the private sector, however, the policies do not have a detailed mechanism and action plan on how they will reach and involve the local people” (Nawab & Nyborg, 2009, 592). Creating a new WSS framework could involve the means to ensure that women are allowed and encouraged to actively take leadership in community-driven WSS provision, as it has been reported how much better localities that have women involved do, compared to those who ignore women.

Collaboration Shortfalls

Explaining the Decision to Devolve: Power in Community Involvement

The importance of community involvement for the purposes of ownership and sustainability has been highlighted throughout this paper. Community involvement is particularly important in Pakistan because central government influence and attention paid in rural areas, as well as overall confidence in government institutions, are both very low. Because the central authority is often unable to make notable changes at the rural level, it is essential to utilize local institutions that are in line with centralized goals (Nawab & Nyborg, 2009, 588). This provides a much more direct path to affecting the people and
becoming adopted into everyday life. This concept relates to the idea of putting the resources and decision-making power into the hands of the users.

Also, as a result of Pakistan’s current general level of state development, political interference in all aspects of government tasks is very high, and many times this interference is extremely corrupt (Padawangi, 2010, 6). These elements perpetuate the lack of collaboration between levels of government in Pakistan and reflect the low capacity of the Pakistani government, exposing major reasons for such large implementation shortfalls. It is essential that the efforts to decentralize WSS provision be supported by the government’s centralized mission in a way that rewards collaboration. One way for the centralized authority to support the decentralized authority is to offer support for major repairs when they cannot be afforded through cost recovery models (Padawangi, 2010, 24). The community-level actors are extremely important in changing WSS in areas, but still, all actors must be considered in order to properly target possible techniques for viable WSS provision. Decisions should be made at the local level, in coordination with technical experts, and under the supervision of a higher-level authority. The higher authority must be one who can appropriately represent the central mission and available resources, and the allocations won and progress made through this local ‘board’ must be upheld and supported by even the topmost government officials. It is important to note, as Padawangi23 articulates, a community centered approach is not purposed to replace or eliminate public sector involvement, rather that they should be determined to complement each other to improve the level of governance overall (p. 9).

Moreover, a lack of technical training for WSS is a huge obstacle in Pakistan. But, the government does not need to take on the entirety of this task by itself. It can utilize independent organizations that have expertise on WSS to help community and local leaders understand some of the more technical aspects. Contracting out training to separate organizations is an option that should be initiated at the central level and pursued at the provincial and district levels of government. But, implementation officers do need to be willing to seek out these types of partnerships, or to seek out

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training for themselves, and then to effectively apply those new skills. Also there should be strong political will from higher levels of government to oversee and ensure that these necessary transitional tasks are taking place. In Pakistan, the transfer of WSS duties to the TMAs is a good example. The 2001 LGO required that they expand their own abilities to be able to provide WSS for their constituencies. Yet, there was a major lack of willingness from the WASAs and PHEDs to devolve powers, and from the TMAs to accept those new powers. In some circumstances, coordination has been so weak that citizens are unaware of which organization they are supposed to apply to for new water connections or issues with WSS structures (Ahmed, 2009, 176). Thus, it is proposed that transferring WSS operation and management to the local level will prevent some of these repetitive obstacles, “with the assumption the civil society organizations would be more accountable and responsible” and the operation and management would be more direct (Padawangi, 2010, 3).

Military Interruption of WSS Provision

One element, specific to Pakistan, frequently came up in studies on WSS: the debilitating effect of unplanned military interventions in service delivery. In addition to its history of wars with India and other regional conflicts, Pakistan’s involvement in the Afghan war resulted in two major factors that matter in the provision of WSS today: the excessive strength of the Pakistani military, which has led to its problematic intervention in state affairs, including in public service delivery, as well as a steep increase in population, which has strained water resources and created complications in providing coverage, especially in areas where Islamic militant groups prevail and block the ability to install and create a system for public service infrastructure and delivery. 24 Military intervention in everyday governance is a

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24 During the Soviet invasion of Afghanistan, Pakistan became quickly involved as Soviet expansionism threatened Pakistani security. Its geographic location resulted in Pakistan being a front-liner in the war: the U.S. and many other countries used Pakistan as a means of delivering money and weapons to the opposition forces. In 1982, the Pakistani armed forces underwent a massive militarization build-up at the request of the U.S. and their initial $7.4 billion contribution to Pakistan for economic and military assistance (Hilali, 2002, 294). During this period, the military went through periods of modernization and expansion, at the backing of many Western states, which ultimately led them to become extremely powerful relative to the government of Pakistan. Also, the Mujahedeen set up many supply bases inside of Pakistan (Hilali, 2002, 296), which began the rooting of Jihadist militant groups in Pakistan near its border with Afghanistan. In addition to militarization and the U.S.-Pakistan alignment, Pakistan experienced critical changes due to the massive influx of Afghan refugees. In 1979, the largest
nuisance to the state’s ability to provide WSS for its citizens. Not to mention, many of the offices and branches of its polity are often rendered incompetent due to high levels of conflict and military involvement, specifically in the North. The state of India, although also highly ethnically diverse, is not as much at the mercy of these sorts of regional conflicts, and is considered to have overall higher functioning central and provincial governance structures.

Military interruption hinders progress by sidelining predetermined priorities, confuses responsibilities, hampers organization, and contradicts the idea of community ownership. Because of the instability of the Pakistani central government, officers are sometimes unable to maintain enough authority for civilian administration, because they cannot be “answerable to local people” (Nawab & Nyborg, 2009, 591). In Karachi, for example, military authorities make up portions of the Karachi Water and Sanitation Board (KWSB) (Ahmed, 2009, 173). Military representation in matters of public service delivery and investment schemes has also complicated decentralizations efforts:

[In Karachi,] staff believed that they would be spared from devolution because the KWSB was headed by a military officer, and indeed, military controlled areas (including residential locations with some civilian population) were not normally affected by devolution (Ahmed, 2009, 176).

The military meddling in WSS provision is unique to Pakistan, in comparison to India. Surely, this issue signals larger implications for the GoP, and its ability to govern.

Summary

Poor quality, inadequate access, urban-rural and gender gaps, weak collaboration, untrained implementers, and military interference are aspects that impede successful WSS provision in Pakistan. The need for a multi-disciplinary approach that unites the various stakeholders, including governmental and non-governmental actors, is apparent. In the face of various violent clashes, the Pakistani government

influx of Afghan refugees, about 307 million, which is almost 25% of the entire Afghani population, sought asylum in Pakistan (p. 297). These events had detrimental effects to not only the security of Pakistan, as their border areas became the targets of many violent attacks, but also on the “political, economic, social environmental and ecological problems” of Pakistan (Hilali, 2002, ab.).
must still put forth an effort to improve their approach to providing clean drinking water and sanitation for their people. Policy makers and bureaucrats must be encouraged to see both the engineering and the social components that contribute to a successful implementation scheme. Moreover, in light of major global obstacles like resource depletion and climate change, sustainable use of water must be placed at the forefront of a new WSS plan. Eliminating vulnerability by building up resilience to possible changes in climate or events of natural disaster is vital for regions across the world today. India has made a notable effort to prioritize sustainability, and the GoP should aim to do the same. Nawab and Nyborg (2009) call for “a single, powerful and autonomous water supply and sanitation authority might help avoid the overlapping roles and responsibilities as well as guarantee consistency in policy implementation” (p. 594). It is true that Pakistan should seek to create a channel for WSS provision that is separate from other sectors, so as to focus more attention the specifics of providing it as a service. An autonomous authority could clarify coordination and devolution conflicts, as well as provide a clearer framework for the consolidation of each actor’s responsibilities. However, one must be cautious of over-inflating the upper levels of bureaucracy. Often, policy makers in Pakistan are discouraged by the magnitude of the problem, and “do not feel they have the time and resources to bring all actors together and develop interdevelopmental coordination and formulate and execute realistic policy and to let people own the projects” (Nawab & Nyborg, 2009, 594). This lack of political will to try a different approach to WSS provision must be tackled head on. The current system is not working. Prioritizing WSS in a way that cultivates active user participation should be the GoP’s goal.

India

Background

India has a population of 1,236,344,631 people, with a wide variety of ethnicities, languages, and religions, like in Pakistan. Urban citizens make up 31.3% of the population. India has a total land area of 3,287,263 km², of which 9.55% is water, and 47.87% is arable land (CIA World Factbook: India, 2015)
India’s WSS situation looks similar to Pakistan’s in certain respects, but there are many differences as well. Researching the state of WSS provision in India proved to be more difficult because India’s system of government is less centralized than that of Pakistan’s: Indian provinces hold higher levels of autonomy in most prospects. Therefore, WSS varies substantially across the country, from province to province. However, because this thesis hones in on the importance of national planning, it is important to gain a sense of what the overall picture of WSS in India looks like. Using national policy documents, aggregating studies from many different regions, and synthesizing research that is related to India as a whole allows one to gauge the service delivery framework, specifically in water and sanitation.

Like in Pakistan, the Indian government officially acknowledges a citizen’s right to clean drinking water and sanitation. The constitutional responsibility for the provision of WSS falls into the hands of state governments. They exercise near complete autonomy in this regard, and the central state government only intervenes in matters of inter-state rivers (Cronin, Prakash, Priya, & Coates, 2014, 431). Similar to Pakistan, the water sector is regularly described as being informal: in both India and Pakistan, the water economy operates on “partial-public provisioning, but self-supply dominates” (Shah & Van Koppen, 2006, 3418). The informal nature of the water economy creates complications for the implementation of large-scale reforms and national plans targeted at formalizing and institutionalizing the water sector. There is a certain risk in implementing policies like Integrated Water Resource Management (IWRM) because trying to push a formal policy onto an informal operation might destroy “traditional institutional arrangements while replacing them by poorly functioning modern ones” (Shah & Van Koppen, 2006, 3419). This type of conflict detracts attention from the values of the policy, i.e. providing clean water and sanitation, and places emphasis on forcing strict frameworks to function atop of a system that is already in place. Therefore, the nature of this system merits careful consideration of user needs on a community-by-community basis.

Notwithstanding, studies reveal that economic growth is often accompanied by WSS formalization:
“In poorer states like Bihar and Uttar Pradesh, all or most rural households self-supply their domestic water, whereas in somewhat better-off states such as Haryana, Punjab and Goa, domestic water supply gets increasingly ‘formalized’, suggesting that even rural-households begin getting connected to some public water supply system as village economies grow, regardless of water resource endowments” (Shah & Van Koppen, 2006, 3416).

This insight proves useful in assessing the formality of a water sector. Perhaps, it is more appropriate to time the implementation of a formal water institution with the expansion of an economy because at that point the general capacity of a locality will be better developed. However, this idea is in conflict with the assertion that adequate provision of WSS can lead to further economic growth. They are not mutually exclusive, and perhaps public service delivery and economic expansion can concurrently bolster each other.

The Asian Development Bank has voiced concerns in regard to the Indian government’s WSS priorities, noting that they are investing a lot of money into poorly designed systems that “may reinforce existing inequities and exacerbate social injustice” (Cronin et al., 2014, 435). They are also urging the Indian government to emphasize sustainability (with regard to water scarcity) and demand responsiveness in their WSS planning (Cronin et al., 2014, 435). These issues intensify the need to take an innovative approach to public investments in WSS.

**History of WSS Institutions in India**

Looking back into the history of WSS provision in India, one can observe methods that were intensely supply side focused from the 1970’s to the 1990’s. The introduction of the International Drinking Water and Sanitation decade from 1981-1990 illuminated many of the shortfalls created by this type of system. Post-1990s, there is a notable shift towards demand-side incentives (Shah & Van Koppen, 2006, 3414). Joel Ruet, Marie Zerah, and V.S. Saravanan 25 (2009) point out that the 73rd and 74th Amendment of the Indian Constitution are “important landmarks for the sector...” for their “recognition of municipalities as fully representative institutions vital for planning economic development and poverty alleviation, the need for greater flexibility in fiscal management and the need for greater involvement of

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25 Ruet, Zerah, and Saravanan are the authors of The Water And Sanitation Scenario in Indian Metropolitan Cities: Resources and Management In Delhi, Calcutta, Chennai, Mumbai, which is a 2009 publication of the French Research Institutes in India.
people and private sector in urban water provision” (p. 7). So, India has recognized the importance of multi-stakeholder collaboration and user ownership for quite some time. This initial understanding alone should have set India on a trajectory to outperform Pakistan in provision of WSS, and raises questions as to why the two countries’ statistics are so similar.

As aforementioned, responsibility for WSS provisions falls into state hands, but central government reserves some powers in dealing with inter-state rivers. States have their own institutional infrastructure through which they execute public service deliveries. In WSS, it is often Public Health Engineering Departments (PHED) (like in Pakistan), the Public Works Departments (PWD), Urban Development Departments, and Department of Local Self Governments that facilitate WSS provision “through their divisional and district offices” (Ruet et al., 2009, 6). India has also set out to devolve service delivery responsibilities in response to international trends of success by such methods of decentralization.

Furthermore, because sanitation in India is so far behind reported drinking water coverage, the Government of India (GoI) has designated efforts specific to improving sanitation. The majority of Pakistan’s efforts are aimed at both drinking water supply and sanitation. But, India’s most recent efforts have been mainly focused on improving sanitation, revealing a difference in priorities between the two governments. Most of Pakistan’s large and notable programs are purposed to tackle the water and sanitation issue, and similar programs can be seen throughout India’s history as well. But in the past decade or so, WSS programs in India have strongly emphasized sanitation. One could argue that this suggests the drinking water coverage is actually as high as the JMP reports, so the GoI now focuses its resources on fixing the sanitation issue. However, research reveals that a 93% coverage estimate seems to be too high for the actual situation.

In order to target the issue of rural sanitation, the GoI adopted the Central Rural Sanitation Program (CRSP) 1986. A lack of progress led the GoI to shift approaches, and in 1999, it implemented the Total Sanitation Campaign (TSC), which was led by the Department of Drinking Water and Sanitation (DDWS). This effort was considered an innovative approach at the time, and aimed to emphasize
incentivized community participation that was demand-driven, rather than supply-driven (Hueso & Bell, 2013, 1002). TSC was committed to creating ‘open defecation free’ areas (ODF). It was widely more of a campaign to promote against open defecation, shame those who practiced it, and reward who sought more sanitary alternatives. The TSC effort was less focused on ramping up infrastructure than previous approaches, but still has not seen satisfactory success.

**Subsidization of WSS**

One of the biggest distinctions between the Indian provision of WSS and the Pakistani provision of WSS is India’s incorporation of incentive-based methods. In 2004, the Nirmal Gram Puraskar (NGP) program was introduced as a part of TSC; it was a “clean village award scheme in which high-level authorities distributed cash to Gram Panchayats (GPs) for achieving total sanitation” and ODF (Hueso & Bell, 2013, 1002). However, this incentive system was not as effective as planned. Awards were often given prematurely or undeservingly. The monitoring system was also highly inaccurate (Hueso & Bell, 2013, 1012). Andrés Hueso and Brain Bell comment on the execution of the NGP incentive system, saying it “became a double-edged sword. On one hand, it boosted the interest in sanitation at all levels and impelled village leaders to motivate villagers to achieve ODF in the four states. On the other hand, it contributed to a rushed supply-led and unsustainable implementation of the TSC” (Hueso & Bell, 2013, 1009). Thus, because the NGP system was abused, it often had a negative effect on progression of sanitation. The TSC program overall had some success stories, which were predominantly cases of high community participation and “uncommon, high-quality government facilitation and village leadership” (Hueso & Bell, 2013, 1006). These success stories illuminate that the political will and leadership for WSS do exist, so it is a matter of capitalizing on and promoting the existing best practices in order create widespread change.

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26 Andrés Hueso is a scholar from the Group of Studies in Development, Cooperation, and Ethics at the Universitat Politècnica de València in Valencia, Spain. Brain Bell is a scholar from the Department of Civil Engineering at the University of Minnesota College of Science and Engineering.
But, overall TSC was not making as much progress as the GoI had hoped. In 2011, the Indian Minister of DDWS stated that TSC ‘has been a failure’; in 2012, DDWS introduced a new policy Nirmal Bharat Abhiyan (NBA) with hopes of completely revamping the sanitation apparatus nation-wide. Various scholars, like Hueso and Bell, have predicted that the new NBA is not different enough from the TSC, major issues have not been addressed, and so it will not yield much more success than TSC did (Hueso & Bell, 2013, 1003).

The GoI heavily has heavily subsidized water connection and sanitation infrastructure constructions. Frequently, incentives, like rewards from the 2004 NGP scheme, are abused and disbursed inappropriately upfront or without merit. Subsidies had no effect on changes in behavior. One government official stated, ‘The current subsidy approach (...) does not result in behavior changes desired. Subsidy is an enormous waste of money. The money is literally being thrown down the loo.’ (Hueso & Bell, 2013, 1007). The scheme deflates, rather than stokes, the engines of political will, making the implementation of WSS into a personal goal for monetary or other valuable gain, rather than a consensus driven priority set by key WSS actors. Also, when higher levels of government have the power to disburse subsidies, the occurrence of coordination and collaboration problems increased.

The subsidization has had many negative effects: instances of half-built, un-sustained, and unused latrines were plentiful. Some types of incentives ‘were employed as disincentives to open defecation. Sanctions include withholding of subsidized food benefits, agricultural assistance, and other aid given to households;’ other localities threatened people with fines ‘if they did not provide at least a basic pit toilet for their laborers’ (O’Reilly & Louis, 2014, 47). Incentivizing users to adopt WSS practices is essential; however, studies reveal that incentivizing users through infrastructure subsidies distributed by government officials is not effective. One way to solve this subsidy problem is to make WSS investments available through a competitive bidding process, in which the communities that create the most viable implementation plans can solicit funds.

Currently, there is a huge issue of misdirected accountability with the WSS hierarchy. Misdirected accountability directly involves political will. Efforts to create a system that incentivizes
leaders to prioritize and keep up with implementation of WSS changes are not prevalent enough. Actually, often times, the system in place in both India and Pakistan encourages WSS leaders in counterproductive ways, which create detriments to overall progress of WSS in their areas. Hueso and Bell report an example of misdirected accountability in an Indian province:

Government officers knew they would be evaluated based on funds distributed and toilet numbers accrued. Hence, they focused on spending and construction, which resulted in subsidy-driven, infrastructure-centered, and supply-led implementation. For instance, the officer pioneering a no-subsidy implementation in Budni block in MP [Madhya Pradesh] was questioned by superiors for not spending the funds allocated for sanitation infrastructure. Similarly, in Panipat District, Haryana, the state forced the release of subsidy funds or else face negative evaluation of district offices (Hueso & Bell, 2013, 1011).

This misdirected accountability is a direct result of not having an effective subsidy scheme in place. In no way should an officer be pressured to waste resources arbitrarily, by fear of a negative review.

Often times, in implementing changes to WSS, district and local level officers were incentivized against focusing on sanitation. Sanitation is a slow progression, slow reward service, and so with “frequent post transfers officers preferred to invest efforts in programs they knew could be successful,” or in programs that had much larger budgets, in effort to further the success of their careers (Hueso & Bell, 2013, 1011). Also, the pressure from the inaccurate and undisciplined subsidy system led officers to over-reporting and hasty construction. Often times these constructions projects would be quickly abandoned simply so the officers could get more money for new constructions projects. Specifically in Pakistan, the PHED “are more inclined towards initiating new projects to get the not-so-hidden commission rather than investing in repairing or rehabilitating older projects” (Nawab & Nyborg, 2009, 594). This leaves a whole slew of unmonitored, unmaintained, and ineffective WSS facilities, which community members see as a waste of their time and money, which cab be observed in both countries. Communities lose faith in government-backed WSS altogether, and are pushed closer to their own informal methods.

The choices politicians make for political survival are largely unavoidable in an electorate-governing regime. The push and pull of politics is inherent in such a system. However, it is possible to use a framework that properly guides the politicians to maintain their commitments to provide fundamental human needs like WSS, rather than to operate half-functioning subsidy mechanisms that are largely
supply-driven and intensify the uncertainties related to political career climbing. Possible policy adjustments to can include the incorporation of conditional cash transfers or guaranteed employment programs. Again, these options are discussed further in the ‘Conclusions’ of this paper.

**Shock and Shame Methods**

Subsidizing infrastructure was not the only component of TSC. Another aspect, called Community-Led Total Sanitation (CLTS) (often used interchangeably with TSC, but CLTS refers to the community empowerment aspect specifically) has had both positive and negative results. CLTS was reliant on “feelings of shock and shame. When communities are shocked into learning the impact of open defecation on their own and their neighbors’ health, a realization dawns that practices of individuals affect communities as a whole” (O’Reilly & Louis, 2014, 45). Methods of shaming varied from community to community. In areas where it is not considered too extreme, implementers photograph open defecators and post them in a public location (p. 47). The shock and shame method, in combination with a misguided incentive system, is a classic example of a stick without a carrot. Further, certain scholars have characterized these practices as human rights infringements. Existing arguments follow that although this approach may produce desirable results, it is based off of negative encouragement. Some scholars say that the shock and shame methods further marginalize groups that are already marginalized and may not lead to health habit improvement (O’Reilly & Louis, 2014, 45). Perhaps shock and shame can be effective for the initiation of change, but a government should not solely depend on the imposition of negative consequences to foster economic or social development.

**Water as an Industry**

Another notable difference regarding WSS in India versus WSS in Pakistan, is that, almost always, the Indian study of water for drinking and sanitation use is accompanied by the study of the water industry as a whole: its business and private uses as well as conflicts over water resources are integrated into the analysis. There is a primary focus on water usage in industries, rather than human water usage,
and this suggests certain priorities of the GoI. In reviewing the WSS provision in Pakistan, the ‘business of water’ was mentioned much less. This practice is not necessarily hurtful to the progression of water and sanitation, for it is very centered around the concept of sustainability, which is vital in a world of scarce resources. One of the first times this priority became visible was in 2001. The National Water Policy set in 1987 was heavily focused on planning and development. However, the 2001 National Water Policy was focused on water resources management efforts (Ruet et al., 2009, 6). The discussions regarding water and sanitation policy evolved from project-based and community-centered infrastructure efforts for river basin management (Shah & Van Koppen, 2006, 3414). This shift is indicative that water supply was not the key priority at the time; rather, the key priority was managing water resources for industrial and commercial use, in light of rapid economic growth and urbanization. The 21st century shift in approach was imperative, as India’s growing population and shrinking water supply set the stage for urgent problems in the very near future. However, it is important to analyze such a shift in regard to the basic human right of the provision of water and sanitation. Still, there is not 100% coverage in either water or sanitation, so it must remain a priority to reach those areas that lack coverage.

This business-minded approach exhibits a possible inherent contradiction when it comes to pricing water services. As Shah and Van Koppen 27 point out, “Water should be priced to reflect its scarcity value,” in order to achieve sustainability; yet, at the same time, it must be affordable for those families below and near the poverty line. This dilemma raises a question about what really is the target pricing, and how does a WSS service remain sustainable and available to everyone? Such a question creates obstacles to the planning and implementation water and sanitation service delivery.

**WSS in India Today**

Generally, WSS provision in India has been characterized as exhibiting an unfortunate theory-practice gap. This idea is neither new to WSS provision, nor to Indian politics. The idea that the policies

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and programs are not properly executed and do not function the way they were intended, is problematic when trying to achieve universal WSS access. Both India and Pakistan exhibit signs of large theory-practice gaps, and this is one of the reasons that the IC has so strongly promoted national planning in tandem with community ownership and involvement.

There are many factors that contribute to the faulty implementation of WSS plans in India. However, it is important to notice that many localities conduct their WSS informally, and this practice needs to be taken into consideration when governments are trying to impose plans from the top down. Formal policies will not automatically register or be absorbed once imposed by the higher level of government. Therefore, as this paper recommends, the GoI should actualize its intentions to adopt a multi-stakeholder approach, and utilize NGO’s and private firms to bridge the formal and the informal by providing expertise and experience, while at the same time addressing and embracing existing cultures.

Shah and Van Koppen (2006) point out that the informality “has nothing to do with their water scarcity or abundance but has everything to do with their being at earlier of overall economic development” (p. 3415). The scholars refer to economic historian Douglass North’s phrase “modern transaction sector” to explain that the incorporation of informal economies into the governance structure “occurs gradually as part of overall processes of economic growth” (Shah & Van Koppen, 2006, 3415). One can observe similar phenomena issue in Pakistan, although it has not had as high of an economic growth rate as India the past decade. One distinction, despite variable growth rates, could be that the Indian government updates its WSS practices in a much more visible manner, utilizing public campaigns and celebrity sponsorships; whereas, the GoP seems to be tackling WSS much more internally, and without much of an effort to reach the eyes and ears of the public.

The theory-practice gap was especially apparent with the TSC campaign. Poor planning in the structure of public investments led to subpar implementation, poor practice, insufficient outcomes, and exaggerated progress reports (Hueso & Bell, 2013, 1002). The reality on the ground was being skewed as feedback moved back up the system to the policy makers. The new system was not yielding new results, but it took GoI over 13 years to recognize this. This lack of accuracy in not only implementing, but also
reporting progress, is dangerous because it disallows governments to adjust their methods in a timely matter. Without an active effort to mold an improved version of the WSS system to the current system, the cycle of lack of WSS is perpetuated, poverty is worsened, and dependence on informal economies is increased.

One of the foremost problems in WSS today, exhibited by both Pakistan and India, is a lack of capacity of governing bodies to implement WSS changes, including untrained personnel. Partnerships with NGO’s and experts from UNICEF, WHO, and UNDP can mitigate this training shortage. Often times, these non-governmental parties are also more socially minded, and have successful approaches for developing community leadership and participation.

Training and resource problems manifest themselves as barriers to access and quality. In light of all of the focus on water resource management in India, certain thresholds are important to consider: for example, “water availability per capita is around 1,170 m$^3$ per person per year, emphasizing that India is only just above the water-stressed criteria of 1,000 m$^3$ per person” (Cronin et al., 2014, 426). This statistic paints a picture of the delicacy of water resources in India, as a result of rapid population growth and the deteriorating global environment. WSS provision must be sensitive to these themes and sustainability must continue to be prioritized. The observed political will for sustainable approaches is encouraging: it must be extended towards tackling WSS provision in the most marginalized groups of India, as the end-goal is universal access.

In both cases, and especially with TSC in India, many government officers that were tasked with leading WSS changes were over-worked, under-paid, and had minimal motivation to act on the directives assigned to them. Government officials at the district and block levels were juggling a variety of programs, and lacked sufficient training to do so. No matter how much money is thrown at the issue, this will not result in success. Government officials will strive to keep funding channels open and resort to over-reporting or neglecting the worst areas to create false images of success. For example, in India, the DDWS reported over 90% of rural houses had latrines, but the census found that only 22% had latrines
(Hueso & Bell, 2013, 1006). One can recognize how numbers from GoI/P or JMP are so different from genuine field statistics with a system like this.

Quality

WSS policies in India should better address quality, similar to the shortfalls of WSS policies in Pakistan. Because coverage goals do not incorporate standards for quality or contamination levels, the numbers reported are sometimes 40% higher than actual ground data (Godfrey, Labhasetwar, Wate, & Pimpalkar, 2011, 562). Current institutions do not consider quality or supply in defining adequate water access. Recent (2014) statistics state that almost 70% of India’s surface water is biologically, chemically, organically, inorganically, or toxically contaminated by pollutants and other elements (Cronin et al., 2014, 430). Some examples of contaminants include arsenic, fluoride, iron, nitrate, and microbiological pollutants (Godfrey et al., 2011, 562). This number is extremely concerning as some 60% of the “environmental health burden in India” is related to water and sanitation inadequacies (Cronin et al., 2014, 430). In 2005, a protocol for water quality monitoring was initiated by the Ministry of Water resources, but has failed to yield significant influence on the policy making process. This protocol is an example of an unsuccessful oversight mechanism. The principle approach to tackling water contamination was to improve sanitation. By improving sanitation, there would be less human waste to pollute fresh water sources. This is another way in which India has shifted focus of WSS to directly sanitation. In Pakistan, contamination is often found in water supply systems as well, and so it is not primarily a sanitation issue.

Access

Many places in India – rural and urban – do not have twenty-four/seven water service. Often times, people who only have intermittent or inconsistent access end up wasting larger amounts of water because they store excess amounts in preparation for emergency or a stop of supply. They have to dispose
of excess water in order to clean out storage tubs to avoid contamination (Zawahri, Sowers, and Weinthal, 2011, 1165). The lack of reliability on water supply and sanitary waste facilities exists despite the GoI’s large investments and subsidies to ramp up construction and infrastructure. With India as a prime example, “many now agree that supply driven interventions – large scale interventions and subsidies that focus on subsidized latrine construction – have not helped with MDG targets” (O’Reilly & Louis, 2014, 43).

In observing sanitation adoption on its own, scholars strongly advocate for deeper cultural and social engagement. In 2011, the Indian WASH Forum\(^\text{28}\) proposed, “‘If the toilet construction is not as per the choice of and need of the community, if it is done as a contracted out process, not just the technology, but the desirability, location, and several other factors leading to usage will be compromised.’\(^\text{29}\) Merely putting toilets in communities does not solve open defecation. Behavior and hygienic habits must be changed. Therefore, a socially minded approach is merited.

Also, some areas displayed that improved everyday access to water supply helped facilitate sanitation adoption (O’Reilly & Louis, 2014, 49). So, perhaps the two sides of WSS can strengthen each other. Regardless, the biggest realization is that throwing money at infrastructure and construction-based incentives is ineffective. Further, public investments should also consider launching education campaigns to spread knowledge of associated health and hygiene concerns, as well as the benefits from adoption of new WSS practices. Promoting the social component aligns institutional and budgetary commitments with expressed commitments. In their case studies, Hueso and Bell (2012) found that the focus on infrastructure excluded awareness raising practices (p. 1009).

The concept of community-led and ownership-based WSS reform is targeted at increasing ‘demand’ for WSS. However, as seen by the policy shift toward water resource management, water supply is a concern in India. This exacerbates the gap between supply and demand. India has faced

\(^\text{28}\) The India WASH Forum is an effort put forth by the Water Supply and Sanitation Collaborative Council’s India WASH Coalition. WSS organizations, NGO’s, and civil society members comprise the coalition. Its aim is to bring “together all major initiatives by organizations and networks in India in the spirit of transparency, sharing and learning” (WSSCC website, 2012).

\(^\text{29}\) (Quotation from the WASH News and Policy Update, Issue #18, 2011, p. 3)
intense population growth pressures in the past decades. Climate change is affecting the availability of fresh water around the world. These factors increase water scarcity. 71% of fresh water resources in India are held within only 36% of the land area (Cronin et al., 2014, 427). Considering the nature of this problem is transverse, and states hold a high level of autonomy in WSS provision, scarcity problems fall on the central government. Engineers and scientists have proposed the diversion of water from surplus regions to deficit regions, but have found that this is neither sustainable, nor affordable, as it can create large dry areas and adverse effects that would outweigh the benefits. So, “new ways of looking at water availability are needed, and these must incorporate the massive spatial and temporal variations in the distribution of water resources in India” (Cronin et al., 2014, 427). This issue was not as evident in the research on Pakistan’s water supply, but it is relevant to both countries. The delicacy of the situation with such a dense yet dispersed population is difficult to tackle in trying to stimulate demand for WSS changes. If supply cannot keep up, existing obstacles may worsen and new ones may arise.

As seen in Pakistan, often times the WSS system exacerbates access gaps between the rich and the poor in India. An article from Water Policy30 points out one example: in one part of Delhi, 92% of the water supplied goes to 20% of the population; and the remaining 80% of the population gets 8% of the total piped water supply (Cronin et al., 2014, 431). The article argues that the poor are often at a disadvantage because “power relations in Indian society govern access to water resources” (Cronin et al., 2014, 435). The current system has weak spots when it comes to inclusiveness, and the use of BPL cards for allocating funds is a prime example. BPL cards (Below Poverty Line) are administered to qualifying households and allow them to receive subsidies and help with basic services. However, often times the poorest households do not receive BPL cards because of eligibility restraints, and are thus excluded from receiving WSS subsidies, further expanding the gap between the poorest of the poor and the rest (Cronin et al., 2014, 431). Government officials are so focused on receiving additional money and good reports, that they become highly construction focused and hard-ware oriented, so much that they neglect the

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30 The 2014 article is entitled, “Water in India: situation and prospects,” and written by Aidan Cronin, Anjal Prakash, Satya Priya, and Sue Coates. Cronin and Coates are representatives for UNICEF’s WASH program, Prakash is from the South Asia Consortium for Interdisciplinary Water Resources Studies in Hyderabad, India, and Priya is from the Food and Agricultural Organization.
“human dimensions” of the campaign. Often, “leaders excluded households without BPL [Below Poverty Line] cards from any involvement (including awareness raising activities) because only BPL households were eligible for hardware subsidies. The non-eligible, non-BPL households were sometimes the poorest in the village, while better-off households sometimes had BPL cards” (Hueso & Bell, 2013, 1008). The current system increases inequalities, and this is a huge red flag.

**Informal Markets**

As a result of limited access, Indian citizens have resorted to alternate methods to achieve better quality and reliability of WSS. This is the informal part of the WSS economy. The informal economy arises as a result of supply-demand gap. One example in which the informal economy manifests is through private sector markets. Private markets can surely have a positive effect in service provision and delivery. They can supplement and complement public provisions, be a source of technical expertise, reduce costs and improve efficiency through competitive processes, as well as provide more premium options for those who can afford it. Also, private markets take on an important role in contributing to the research and development aspects of provision (Cronin et al., 2014, 432). Public-Private Partnerships (PPP) play a role in public service delivery apparatuses and should definitely be considered in national planning, along with NGO partnerships. India’s strong NGO community is a welcome component to WSS implementation, and can be an area for improvement in Pakistan.

Another example of informal markets, unique to India, is the excessive use of bottled water. According to Cronin, the bottled water industry is one of the fastest growing industrial sectors in India, and the country is ranked as the 10th largest consumer of bottled water in the world. Unchecked expansion of this industry has adverse repercussions for water security in many areas where groundwater is the only source of freshwater. With liberalization and increased awareness of water quality, hundreds of bottled water brands have entered the market. This USD 250 million bottled water market is growing at the rate of 75-80% (Cronin et al., 2014, 429). The expansion of this industry has detrimental effects on the environment. The entry of private players into the WSS market and PPPs can be beneficial, but bottled
water is not one of the viable alternatives. The bottled water industry has become so large that it is draining water supply for public service uses. Urban middle and upper class are the primary buyers of bottled water; this strains the availability of water for the lower classes, and intensifies access inequities (Ruet et al., 2009, 7).

**The Role of Women in WSS Provision**

The access disparity includes a gender-inequity component, like in Pakistan. As aforementioned, women play an integral role in the functioning and upkeep of WSS systems, “yet women across India do not have control over decisions concerning the planning, implementation and operation of water supply schemes” (Cronin et al., 2014, 430). GoI has recognized the need for women’s participation and leadership and have created guidelines that state, “village water and sanitation committee membership should be inclusive, with 50% being women, especially those belonging to scheduled caste, scheduled tribe and other backward classes” (Cronin et al., 2014, 430). This is an important institutional commitment to increasing women’s participation and access. Yet, like in Pakistan, although this statute is in place, it often does not work, as there is no way to monitor or enforce such a rule. Moreover, there is another critical reason adequate WSS is important for women: they are exposed to higher rates of violence and sexual assault when forced to travel far from their household to collect water or openly defecate. One startling statistic illustrates this argument: “Police reports in the State of Bihar estimate that over 40% of the incidents of rape in the state happen while women walk to defecate in the open” (Cronin et al., 2014, 431). Numerous cases reveal women’s involvement as a main driver for success, so WSS actors must be committed to expanding their role.

**Summary**

Overall, the WSS system in India is more attentive to sustainable approaches, multi-stakeholder involvement, community responsibility, and incentivization efforts than the system in Pakistan. However, India still suffers from massive issues in water and sanitation quality and accessibility. Their subsidy
frameworks foster misdirected accountability and waste public investments. But, policy makers have recognized the value of PPPs and NGO partnerships, and success stories are visible. From the research, it is apparent that India has a more advanced WSS scheme than Pakistan. But, India needs to focus on implementation that does not further marginalize the poorest of the poor, and does not overlook concerns specific to rural localities. India, with its sights on furthering its rapid economic expansion, should continue to look into sustainable and effective water resource management, but not at the cost of universal access. Political will for WSS is present in India. But, the current policies do not capitalize on politicians’, organizations’, and communities’ willingness to improve a system. Generating a national plan that: is both acceptable and adaptable by provinces, revamps the subsidy system, determines to involve women, integrates sustainable approaches, and commits to a demand-driven approach should be on the forefront of policy-makers’ minds. Challenges with such a large, dense, and growing population are inevitable. However, with proper collaboration and will, India can reach universal access.

**Conclusions**

Political will is often cited as an ‘invisible key’ to success in a variety of areas related to human development and policy implementation. This claim holds substantial worth in relation to WSS. Without the will to prioritize the specific issue, money and efforts are easily directed toward other sectors, and WSS gets overlooked. WSS are fundamental to human life. WSS implementation addresses key issues of health, violence, poverty, social mobility, and employment; therefore, it deserves a place at the table when addressing the priorities of the state. A state should see to the provision of WSS for all of its citizens; whether it is via private, public, nongovernmental, or other provisional methods. In the cases, of which there are too many, where these services are not provided to the large majority of a state’s population, efforts to achieve universal access should be highly visible and active. However, in examining both Pakistan and India, they are not visible enough.

Political will can be denoted in many ways, but one can consider it as “the will to govern,” in its most basic definition (O’Reilly & Louis, 2014, 46). So, in application to the topic of this paper, political
will is the will to demand and then provide basic WSS. Through the research, much of my findings and
many assertions from scholars point to an overall lack of political will for the WSS sector. However,
‘lack’ of political will does not properly characterize the issue at hand. Rather, misdirected political will
often results in detrimental effects to program implementation. Thus, it is the goal of all WSS actors to
seek innovative ways to foster and mobilize political will towards successful WSS provision – and this
need not only include the political will of politicians and policy makers, but also the will of the people to
participate in this issue for their own benefit. Further, the central government is not the only actor
responsible for channeling will. Organizations, individuals, and business alike can all play a role in
making WSS an issue that the public is interested in.

Yet, because it is considered ‘political’ will, politicians surely play a huge role, for they are the
representative leaders of a country. In Pakistan, water and electricity are the two main services by which
politicians secure votes, but they otherwise do not pay much attention to the issues, outside of election
season. Also, politicians’ interests do not consistently align with a transparent, accountable, and demand-
sided approach (Nawab & Nyborg, 2009, 595). Politicians have interfered with project selections and
budget allocations, seeking to favor their own voters, and not properly linking their efforts to the larger
scale of the province and the country and to the smaller scale of their constituencies.

Furthermore, often, politicians take up water supply projects simply because they believe it is
‘catchy’ (Nawab & Nyborg, 2009, 593) and could attract attention at a grass roots level. The flip side to
this, however, is that sanitation, toilets, and hygiene is not as ‘catchy’ of a topic, and so in this
circumstance, the promotion of sanitation requires political will, regardless of its popularity factor. In
India, for instance, “government officers and engineers, tasked with leading water and sanitation projects,
neglected sanitation in favor of more stimulating and costly water projects,” and sanitation is often
neglected because it is a “seldom expressed priority for village leaders and households, likely due to the
taboo surrounding feces” (Hueso & Bell, 2013, 1010). The will of the WSS actors must cut through these
perceptions for the sake of furthering progress.
Both Pakistan and India exhibited similar examples of political interference and project favoritism. Politicians and government officials would often exclude citizens from subsidies or implementation programs due to their caste or political alliances (Hueso & Bell, 2013, 1008). Often times this exacerbated the rich-poor, semi-rural and rural, and gender access gaps. Thus, political will here is misdirected, for the will to implement existed, but the will to implement equitably and fairly, did not.

A lack of political will for capacity development can take different forms. Often times, the huge discrepancy between that which is proposed (i.e. institutional commitment) and that which is executed in implementation and capacity building practices is one way to identify an absence of political will. Nawab & Nyborg (2009) point out, “Developing countries, including Pakistan, have until now focused more on policy formulation and legislation” (p. 583), revealing an emphasis placed on institutional commitment. However, institutional commitment is not enough to bring WSS improvements to fruition. There must be vigilant and serious oversight from that policy formulation level all the way down through the bureaucracy and to the grassroots level. If the central initiative is properly planned, explained, and conveyed to local leaders, then the community-driven aspect can be successful. It is not taking away from communal ownership to have a high level of government involvement in initial implementation. Rather it is necessary to utilize government influence to spread the technical and systematic expertise so that communities can embark on this process in a way that will truly show results and encourage them to maintain and rely on the new WSS systems. Rather than government-led, WSS should be government-initiated and supported, and community-driven and operated.

The debates of top-down and bottom-up policy methods are something the international development community has assessed for decades. I would qualify that bottom-up is valid in the actual functioning of a public service. The community needs to want to use (demand) and be incentivized to maintain the system. This comes from their ownership. But, many communities in the developing world simply do not have the capacity, resources, or mechanical know-how to change their water and sanitation from the way that they have been operating it for decades. Thus, the top levels of government in every country need to make it a priority and then actually see their efforts trickle down to the community level.
So, this paper offers that the WSS problem needs to be attacked from both angles: top-to-bottom and bottom-to-top. The way to ensure this high level of collaboration is the creation of a better framework that clarifies the roles of each WSS actor. Moreover, a better oversight mechanism and disciplined data standards, in addition to the political will of every official involved, could fix the theory-practice gap, and could lend a new element of collaboration to public service delivery and governance to the state as a whole, if executed successfully.

These practices can be found in both India and Pakistan, but, regardless of circumstances, they both lack political will for WSS at the federal level. The case of India provides a useful mechanism to observe political will because they used government-driven incentives for consumers and leaders, in order to encourage consumers to adopt new practices. The existence of a subsidy mechanism is an encouraging prospect; however, its abuse has led to a lack of progress. Regardless, it was much easier to track political will in India because they had created some sort of legitimate mechanism of accountability for leaders and users. This mechanism is missing from Pakistan altogether. But, the one in India does not function well, and so it calls for an overhaul of the current system.

Further, more obviously, political will needs to link expressed commitment with budgetary commitment. Budgets are often laid out and declared, but not allocated accordingly. For example, in Pakistan, the actual spending for the hygiene education program and ‘SUPER’ (Social Uplift and Poverty Eradication Program) is “significantly lower than the appraisal estimates” (Nawab & Nyborg, 2009, 586). The gap between written allocations and real allocations is surely a display of insufficient political will to prioritize WSS.

As WSS stands, the current methods of implementation are inadequate. Both the cases of India and Pakistan reveal this. This is especially seen through the case of India. With all the conflict and domestic and regional challenges that Pakistan currently faces, India should be able to outperform Pakistan in the provision of WSS, and with bigger margins. The current public investment scheme in India is inefficient and ineffective. There must be a change in the way governments invest in WSS – a change to the status quo. The resources should be in the hands of the beneficiaries; they should be
empowered to determine the way in which the WSS operates in their locality, based on their geographical, socioeconomic, and cultural circumstances. The government should facilitate this process. One method for ensuring that the users are taking ownership of WSS in their community, is by facilitating meetings with WHO and UNICEF experts, or local NGOs with water and sanitation expertise, to help determine which devices and systems for safe water and sanitation access are available as options. Then the leaders in the community can meet and decide what fits best for them. The government can provide incentives at the higher level to encourage provincial and district leaders to help organize this process in each of the villages. Then, each community can create a ‘multi-stakeholder board,’ in which they have community leaders and members (including women) meet with technical experts as well as a government representative with the authority to designate funds and resources. Together, the local ‘water and sanitation board’ can create a plan that keeps in mind certain objectives like sustainability and inclusiveness. If community members are directly involved in planning how they are going to implement such services, the plan will be much more likely to succeed for two reason. First, with the combined knowledge of the community members on cultural practices and hygiene habits, as well as familiarity with the lay of the land, the expertise from technical advisors on WSS infrastructure, and the guidance from a government official on which projects can realistically succeed with the resources that are available, the plan is likely to be well-fit for and accepted by the recipient community members. The creation of these WSS boards and the process of customizing a WSS plan on a community-by-community basis can combine the values of user ownership with the higher directives of the central and provincial governments, while avoiding bureaucratic swelling. The government can initiate and help facilitate the process; however, ultimately, the WSS users dictate it. The technical advisors, government officials, or other experts on the board are present in a helpful capacity in order to guide the plan so that it is set up for success.

One form of this community-by-community approach that has worked in other public service sectors is the conditional-cash-transfer programs and guaranteed employment opportunities. One example of a project that has yielded great success with such schemes is the Mahatma Gandhi National Rural
Employment Guarantee Act of India (2005), founded on the value of the ‘right to work’, which although ambitious, has in just a few years provided jobs “to a little bit more than 50 million rural households,” and counting (Zepeda & Alarcón, 2010, 5). Additionally, examples of successful cash transfer programs can be found across Brazil and Mexico (Zepeda & Alarcón, 2010, 6). Without a doubt, these lessons and best practice examples can be applied to WSS provision.

Conditional-cash-transfer programs can be set up to guarantee employment and income for rural community members who successfully collaborate with NGOs and other actors to formulate a plan to tackle the WSS delivery issue in their locality. The plan can set time-bound and measurable goals, so that progress can be monitored and reported. Then, if the plan is viable, they can submit it to whichever government office holds the authority to delve out resources. The designation of funds can be based on a competitive bidding process, in which those communities that create and propose the strongest plans, win the available funds as an investment in their community’s WSS scheme. One may argue that it is the communities with the highest need for WSS improvements, those who are the ‘poorest of the poor,’ who would have the least capacity to create such a plan and win the bid. However, this is where the actions of the state government come in to collaborate with civil society and provide the technical expertise of WHO, UNICEF, or UNDP experts, or pair them with NGOs that have the capacity to guide the process for the community. Upon approval, the government then invests in the community’s project by paying household members to work on infrastructure and execute the plan. This method has been shown to cultivate user ownership, as it is dependent on the users’ effort, and is, by nature, demand-driven. This type of program calls for a high level of collaboration between users, government, and NGOs or other organizations with expertise, which is a vital factor in the provision of services.

With these alternatives in mind, one can see how actors outside of the central government can mobilize political will, as well. NGOs and private firms can offer ways to channel political will toward WSS. They can coordinate with the government to create ways to effectively and efficiently channel available funds for WSS, and at the same time, can help equip communities to absorb and utilize such funds in ways that are accurate to the nature of WSS delivery, by supplying expertise and guidance.
Rather than pressure from the top, the pressure comes from the horizontal angle, through non-government actors. So, political will need not only be looked at through the state government lens.

Further, a similar type of investment program in communities could be useful for government officials as well. To create a will for politicians to prioritize WSS, subsidies could be awarded to those leaders who thoroughly support their constituencies in these efforts. Those officials who are able to coordinate with their community to successfully incorporate adequate WSS can be rewarded with subsidies and investments to extend and support the programs. This would create an example of success for surrounding communities and create a notion of progress with WSS provision, ultimately leading other politicians to see WSS as a way to increase success in their own careers as leaders, and will encourage them to look at WSS as a way to advance their agenda at the same time as improving the livelihood of their community. In India specifically, one can observe large-scale subsidy and public investment schemes that have failed to show progress in most cases. Throwing money at the problem and hoping it trickles down to the right hands and people is not an option; there are too many levels of bureaucracy and too many opportunities for political will to stray from WSS. The central government, if it is truly committed to improving provision of WSS, needs to find more innovative ways to spend public funds in a productive manner. Allowing a pot of money to trickle from the central government all the way down to communities for the purpose of WSS improvement is not effective. The majority of places that the money must go through will often have different uses and needs for the money, for the purpose of short-term gains and at the mercy of re-election politics. WSS can easily get pushed aside as the funds move down the ladder, which will lead to an ineffective WSS implementation directive. Thus, it is best for the government to create a framework that allows for resources to be in the hands of the users, in a responsible, accountable, and transparent manner. Creating schemes like the conditional-cash-transfer, or the creation of WSS boards on a community-by-community basis, is something that requires all levels of WSS actors to collaborate and take initiative for the success of the program. Further, rewarding and promoting the examples of success through these methods can spread the notion of WSS improvement as an attractive issue to allocate time and resources to. With sufficient will to execute these necessary
adjustments to implementation practice, the world can move closer to lasting change and universal access to water and sanitation services.
Appendix: Addressing the Data Issues

Coverage v. Quality: The JMP Report

In delving into the specifics of the country, reviewing a wide array of sources, and gathering information about the way in which water and sanitation access functions in both Pakistan and India, I began to question the numbers provided by the WHO/UNICEF JMP Report. There is a large discrepancy in the data that has been published on these topics, and scholars have disputed JMP statistics. Naturally, the JMP’s numbers favor progress. But, they only seek to identify coverage rather than quality. Its statistics do not take into account quality of the water and wastewater. Moreover, importantly, the JMP’s definition of coverage is not twenty-four hours a day, seven days a week. Many reports claim inconsistent and intermittent water supply in each of the villages, and many more claim the quality of the water are not up to health and sanitation standards.

To provide an example, Nawab and Nyborg (2009) declare, based on field studies, that 65% of the total Pakistani population have access to clean drinking water, and about 42% has access to sanitation (p. 584). Clearly, this differs from the JMP’s proposed 91% water coverage and 48% sanitation coverage. Thinking back to the high percentages of water contamination – above 90% in some areas – in both India and Pakistan, it becomes clear that 93% of the Indian population, and 91% of the Pakistani population do not have access to potable water. Further, Padawangi (2010) points out a discrepancy even among UN-supported organizations:

“UNEP, however, reported in 2002 that 36% - or 5-10 million people – of Pakistan’s urban population did not have access to safe drinking water (Ahmed 2008) which is much higher than WHO numbers... [and] “in Pakistan, 96% of the urban population may have ‘improved’ water supply, but descriptions of conditions in Karachi and Faisalabad suggest that a much lower proportion has safe, sufficient provision” (p. 11).31

The JMP addresses discrepancies between its numbers and official national government numbers, stating that their data sources and definitions of ‘adequate’ differ from that of the governments’ (WHO/UNICEF,

2014, 40). It is not far-fetched to question the legitimacy of data provided by the JMP and official government reports, as both entities fall under enormous pressure from the Millennium Development Goals framework. However, other independent field data, albeit free from bias, can provide a different perspective on the state of WSS in countries. In consideration of all the data, it seems one must take caution in using JMP statistics as an indication of how much work for WSS improvements in both countries remains.

**Gap between Water and Sanitation**

Further, I would like to address the large gap between water and sanitation statistics in both Pakistan and India. To recap, JMP’s report has Pakistan at 91% coverage for water, and only 48% coverage for sanitation. Meanwhile, India is slotted at 93% water coverage and only 36% sanitation coverage for its total population. When looking at these statistics, concerns can be raised as to how these countries have managed to provide water supply coverage above the 90th percentile in both countries, yet both remain below the 50th percentile in sanitation coverage? There is an important distinction that can explain this curious gap. The JMP report allows for water coverage to be community based – existence of a water supply system in the community indicates that those community members are covered. But, for sanitation, it must be household-by-household, rather than by shared facility. Whether it is correct to say that all of the benefits of sufficient sanitation can be achieved, even with shared facilities (say, that, there’s enough facilities so as to be available to everyone who needs to use the vicinity), that is for another study. However, one can already see how there could be such a large gap between water and sanitation coverage statistics, as water is only dealing on a community-by-community basis; whereas, sanitation is counted per household.
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