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Letter from the Editors

These are critical times for those who work to further the public interest. Across the globe, divisions and distrust erode the clarity required to tackle the great challenges of our day. Those who advocate for truth find themselves under attack from those who fear what they might lose if the status quo is changed. There is exceptional need today for powerful voices speaking on behalf of sound policy.

The 10 articles in this 29th edition of the Journal of Public and International Affairs all reflect a dogged determination among young policy professionals around the world to press ahead in spite of the headwinds. These pages contain fresh ideas on electrifying rural Myanmar, reforming the U.S. banking system, strengthening the Jordanian labor market, and preventing recidivism among convicted sex offenders in Texas, to name just a few. The JPIA was born from the conviction that graduate students have a unique and invaluable voice in key policy debates. The authors of these articles, together with the 45 editors from 13 graduate programs around the world who selected and reviewed them, will shape the future of economic, international, domestic, and development policy in the decades to come. We strive continually, especially at this moment, to amplify their voices.

We thank Princeton University and the Association of Professional Schools of International Affairs for their generous financial support, which makes this publication possible. We are grateful to Associate Director of Finance and Administration Jeffrey Oakman and the rest of the Woodrow Wilson School Graduate Program Office staff for their instrumental role in bringing this journal to fruition. Leona Rosso-Dzugan's masterful layout and design work has become a signature of the journal and we are thankful to be able to return to her year after year. Finally, we thank the incoming JPIA leadership team, Contributing Editors Margo Berends and Joelle Gamble and Managing Editor Varsha Gandikota, for the tireless work they put into this year's journal. We cannot have left the journal in safer hands.

Sam Kanson-Benanav and Andi Zhou
Editors-in-Chief

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Enhancing Policy Coordination to Expand Rural Electricity Access in Myanmar

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Introduction

Myanmar, the largest nation of mainland Southeast Asia, is undergoing a major political and economic transition that has much of the world watching. After over a half-century of military dictatorship, the 2015 national election catapulted Aung Sang Suu Kyi's National League for Democracy (NLD) party into power. This election ushered in a wave of optimism, both inside Myanmar and in the foreign community, that the nation would enter a new era of economic growth and political openness. Although the country's economy has indeed seen significant growth since this election, several areas of development within Myanmar still present substantial challenges that will require a concerted effort by stakeholders to overcome.

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One of these areas is the provision of electricity. Currently, just 30 percent of households in Myanmar are estimated to be connected to the national grid (Dobozi et al. 2016, 4). Moreover, the power supply is unstable, making blackouts a frequent occurrence. Although the government of Myanmar remains committed to increasing electricity access within the country (Nitta 2017), Myanmar's mountainous geography and low population density complicate expansion of the main electricity grid. For many villages in Myanmar, it costs more to build power infrastructure than the electric utility can make back in sales, prompting underinvestment in many rural communities. Even when the grid is relatively close by, the cost of connecting new households—a cost which is typically borne by the household's residents—is often prohibitive for many rural citizens in Myanmar living on tight incomes.

However, electricity access is also imperative for Myanmar's successful economic development. Recognizing this, Myanmar's government has prioritized upgrading and developing Myanmar's critical infrastructure, including the national power grid. In 2014, the government launched its National Electrification Plan (NEP), which set a goal of achieving 100 percent electrification by 2030 (Dobozi et al. 2016, 2). The plan proposes to use both traditional infrastructure expansion and off-grid technologies such as distributed solar and mini-grids to provide access to Myanmar's citizens as quickly as possible. The international development community is providing assistance, with the World Bank recently allocating $400 million USD in loans to help implement the NEP.

Despite this high-level focus and international support, there are still numerous challenges for Myanmar to achieve universal electricity access by its proposed deadline. The challenges that Myanmar faces are multifaceted, and exploring all of them in detail would require several articles of this length. Instead, this article will focus on particularly salient obstacles that were highlighted during a field study trip to Myanmar in January 2017. During this trip, the authors interviewed representatives from over 20 different stakeholders in Myanmar's electrification efforts from a number of different sectors, including the government, multilateral development institutions, civil society, and private-sector developers. These interviews, combined with background research and interviews with other experts in this area, brought three obstacles to the fore: coordination issues between government agencies, unclear regulations for investment, and policy uncertainty for off-grid electricity development.

This article first introduces the institutional and legislative structure of Myanmar's electricity sector to set the stage for further analysis. Then

it discusses each of the three obstacles in turn, explaining their significance and the components of the electrification process that they affect. Finally, it proposes several steps to address these obstacles and streamline the development process for Myanmar's power sector. It should be noted that these proposed solutions will not on their own solve the identified challenges; instead, they are envisioned as tools that Myanmar's government can consider adopting to help advance progress in its electrification efforts.

A Review of Recent Literature on Electricity Access

Ensuring access to affordable, reliable, sustainable, and modern energy for the global population by 2030 is the seventh Sustainable Development Goal (SDG) of the United Nations. According to the Sustainable Energy for All (SE4ALL) Global Tracking Framework, 15 percent of the world's population has (1.06 billion people) still have no access to electricity (*Global Tracking Framework* 2017, 2). Research has shown that electricity access opens the door to economic prosperity, improvement in social conditions, and human development. In particular, providing reliable electricity access has been shown to greatly enhance living conditions for women and children, create more educational opportunities, and improve medical conditions in rural areas (Alstone, Gershenson, and Kammen 2015, 305).

Although traditional grid infrastructure remains a key part of the solution, technological development in distributed renewable energy and batteries has become an increasingly important tool for bringing low-cost electricity to these 1.06 billion people in a short timeframe, particularly in rural areas. Rural areas in low-income countries often face geographic, economic, and political barriers to developing grid-access electricity, creating significant delays in getting electricity to these areas while simultaneously raising its price. SE4ALL estimates that, among the 27 percent of the global rural population that has no access to electricity, only 30 percent will be reached by electric grid, while 70 percent will be electrified through distributed energy sources, including solar home systems, mini-grids, and pico-solar products (Alstone, Gershenson, and Kammen 2015, 307).

According to the World Bank State of Electricity Access Report, Myanmar is among the top 20 countries worldwide with the highest access deficit in electricity (*State of Electricity Access* 2017, 19), as 22 million people in Myanmar still lack access to the electricity grid (*Energy Access Outlook* 2017, 52). The deficit is especially acute in rural areas; only 12.6 percent of Myanmar's rural population is electrified, compared to 84.5 percent in

urban areas (*An Analysis of Poverty in Myanmar* 2017, 93). Given Myanmar's rural electrification situation, multilateral development banks and international development donors believe that a combination of traditional grid expansion and distributed renewable energy deployment (e.g. solar home systems and mini-grids) is the best solution for Myanmar (Ross 2015, 2).

Structure of Myanmar's Power Sector and Legislative Framework

Myanmar's electricity grid is one of the least developed in Southeast Asia. Annual per capita electricity consumption is 20 times lower than the global average, with electricity primarily accessible only in major cities. This makes Myanmar an outlier in the region; most countries in Southeast Asia had achieved electrification rates of 80 to 90 percent by 2012 (Dobozi et al. 2016, 6). It is worth taking a moment to consider how this situation occurred, as Myanmar's large natural resource endowments and economically beneficial geographic position (it borders India, China, and Thailand, three of the region's largest economies) would not normally correspond to such a low level of development. Indeed, in the 1930s and early 1940s, Myanmar was a leading regional economy (Thein 2004, 2). Political events between that time and today significantly retarded the nation's economic growth; an underdeveloped power sector was just one outcome of this prolonged slump.

When Myanmar gained independence from British colonial rule in 1948, the democratic government embarked on a quasi-socialist reform process that nationalized several major industries in the country. This process was significantly accelerated after 1962, when a military coup made Myanmar a *de facto* authoritarian state. At this point, almost all industries in the country, from banks to mining to hospitals, were placed under government control. Agricultural price controls, coupled with an isolationist approach that hindered exports and general economic mismanagement by the military regime, caused severe stagnation in the economy. A slackening of economic controls in the 1980s improved the situation somewhat, but Myanmar's overall pace of development was much slower than that of its neighbors for most of the 20th century (Thein 2004, 3–5).

Economic development has picked up following Myanmar's political transition and corresponding policy changes. The upturn has translated into higher electricity demand; over the past 5 years, demand for electricity has increased by an average of 14 percent annually (Dobozi et al. 2016, 4). A major objective of the Myanmar government is to match this growth in demand with new

investment in electricity generation and infrastructure to bring electricity to the sizeable portion of the population that still lacks access.

The exact energy mix that will eventually supply power to Myanmar is still a matter of contention. Coal and hydropower, two traditionally low-cost energy resources that developing nations have historically turned to for cheap power generation, are controversial in Myanmar. Past hydropower projects in Myanmar were proposed by the military government with little public buy-in, and Myanmar citizens are still wary of any attempts to develop them today (Ives 2017). Coal plants also face local resistance because of pollution concerns. Although Myanmar does have significant gas resources, most of this is already committed for export to Myanmar's neighbors; changing this arrangement would have a detrimental impact on Myanmar's foreign currency reserves (Thiha 2017). Myanmar is also rich in solar and wind resources and is beginning to explore the potential of using them for energy production, but the government has been slow to embrace these resources because of their perceived higher costs (Nyein 2017). Although Myanmar's final energy mix is an important question, this paper will not address it directly; instead, it will focus on measures that can assist development of the sector regardless of the specific resources used.

The measures Myanmar adopts are intimately connected with the different agencies and stakeholders that influence its power sector, where Myanmar's legacy of heavy state influence in the economy continues to have a significant impact. The nation's transmission network is run by the Myanmar Electric Power Enterprise (MEPE), a ministerial department that buys power from a mix of publicly- and privately-owned generators and transfers it to one of three primary distribution service providers: the Yangon Electricity Supply Corporation (serving the city of Yangon), the Mandalay Electricity Supply Corporation (serving the city of Mandalay), and the Electricity Supply Enterprise (serving the rest of the country) (Nam, Cham, and Halili 2015, 7).

In 2015, the Yangon Electricity Supply Corporation (YESC, previously called the Yangon Electricity Supply Board) was made a state-owned company and is currently financially independent from the Myanmar government. The distribution network serving the centrally-located region of Mandalay was also corporatized around the same time (Thant 2015). However, the Electricity Supply Enterprise (ESE), the primary electric utility serving the country, is still a government entity and thus operates with a government budget (Nam, Cham, and Halili 2015, 7).

The government entity responsible for overall energy policy is the Min-

istry of Energy and Electricity (MOEE), which was established in April 2016 through the merger of the Ministry of Electric Power and the Ministry of Energy. This ministry and its sub-departments are responsible for almost all aspects of Myanmar's energy policy, including not just electricity but also oil, gas, and hydropower development. MEPE is a department under MOEE, as is the distribution entity ESE (Nam, Cham, and Halili 2015, 8). The two state-owned distribution corporations, YESC and the Mandalay Electricity Supply Corporation (MESC) also report to MOEE (Dobozi et. al. 2016, 6). Thus, state policy and Myanmar's power sector development are deeply intertwined, making effective government action especially important for the sector to develop.

Another ministry with an important position in Myanmar's electrification efforts is the Ministry of Agriculture, Livestock, and Irrigation (MOALI), which was created by merging the Ministry of Agriculture and Irrigation and the Ministry of Livestock, Fisheries, and Rural Development. MOALI has purview over the Department of Rural Development (DRD), which plays a key role in implementing Myanmar's rural electrification strategy by overseeing off-grid electrification projects utilizing technologies such as solar photovoltaic (PV) and micro-hydro (Dobozi et al. 2016, 7). To further help with coordination, the Myanmar government also established the National Energy Management Committee (NEMC) and Energy Development Committee (EDC) in 2013. The NEMC is a ministerial-level body tasked with formulating energy policy in coordination with other energy-related ministries; the EDC sits under the NEMC and is charged with implementing the policy set by the NEMC (Nam, Cham, and Halili 2015).

The legal framework governing Myanmar's power sector is structured around three primary pieces of legislation: the Electricity Law (passed in 2014), the Rural Electrification Law (a draft of which was developed in 2016), and the Myanmar Investment Law (passed in 2016). The Electricity Law established an Electricity Regulatory Commission (ERC) to assist with power sector development. However, unlike most other electricity markets where the regulatory commission is closely involved with setting pricing and policy in the sector, the ERC in Myanmar has a more muted role. For example, the ERC plays only an advisory role in tariff-setting, the process of determining prices for electricity (*Electricity Law* 2014).

The Rural Electrification Law was a piece of draft legislation developed to address rural electricity access specifically, and the Myanmar government provided the authors of this article access to a draft of the law for the purposes of this analysis. The government later decided that this draft

would not be introduced to Myanmar's Parliament and was eventually dropped as a legislative priority. Instead, the government is developing a set of high-level rules to govern rural electrification activity in Myanmar (Lee 2018). As a copy of these rules is not publicly available, the authors have decided to continue using the draft Rural Electrification Law for the purposes of this analysis, as it can be assumed the upcoming rules will attempt to address many of the same issues and could run into some of the same challenges as those identified in the Rural Electrification Law. This draft law addresses a number of elements of rural electrification, including issuing permits for off-grid projects and setting electricity tariff in rural areas. It would also create a Rural Energy Development Committee (REDC) that focuses on expanding electricity access in rural areas specifically (*Rural Electrification Law* 2017 draft).

The third piece of relevant legislation, the Myanmar Investment Law, addresses investment policy in several sectors, including electricity—an issue also touched on by both the Electricity Law and the Rural Electrification Law. It also established the Myanmar Investment Commission (MIC) to facilitate investment in Myanmar by issuing policy guidelines and coordinating with investors (*Myanmar Investment Law* 2016).

Although Myanmar has made significant progress in developing the administrative and legislative tools to move its power sector forward, there are still areas where ambiguity over the roles of different government laws and institutions threatens to hinder progress towards electrification. An extensive review of the sector's legal framework, combined with interviews with over two dozen stakeholders and experts, revealed several areas in which a lack of clarity may pose an obstacle for future progress. The following section identifies three key areas of potential conflict and discusses parts of the reform process where the jurisdiction of the laws and institutions discussed above could overlap.

Potential Conflict and Uncertainty in Myanmar's Administrative and Legislative Framework

1. Limited coordination and unclear division of responsibility between government agencies

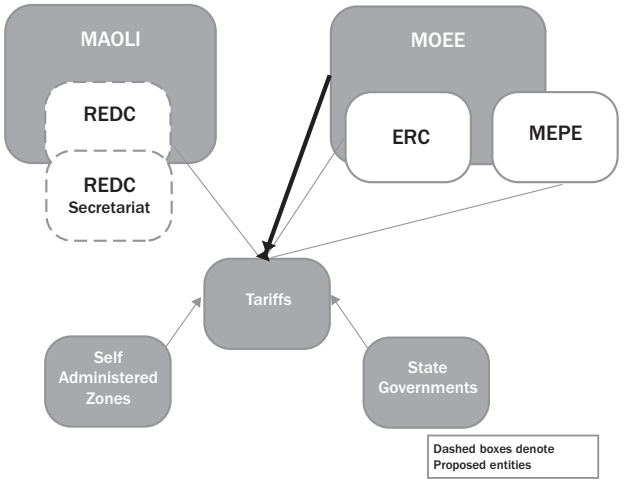
As Myanmar's new government works to increase electricity access among its citizens, it must strengthen coordination and collaboration among different government agencies. Unlike other countries that incorporated all components of rural electrification under a single government agency, Myanmar's electrification efforts involve several different government

ministries and departments, each with their own specializations and proficiencies (*Myanmar National Electricity Program* 2014, 44). This approach draws more skill and expertise into reforming the sector, but it also heightens the importance of coordination to ensure all departments are moving in the same direction.

The government has already begun taking steps toward this goal, as demonstrated by the merger of separate ministries into MOEE and MOALI and by the creation of the NEMC as a coordinating body. Integrating agencies allows the government to pool resources and share expertise. However, there are still areas where a clearer division of responsibility would be valuable. For example, it will be important to clearly delineate which responsibilities for rural electrification fall under the purview of the DRD and which fall under that of the MOEE. One important question is whether the expansion of the existing grid will fall under the DRD's responsibility for rural infrastructure, or within the MOEE's responsibility for provision of electricity.

There is also some uncertainty over which institutions will be in charge of setting electricity prices, a topic that is addressed in both the Electricity Law and the Rural Electrification Law. Each law allows for multiple government entities either to set tariffs or to give advice for tariff-setting. These entities include the ERC and the REDC, as well as certain sub-national government units (Figure 2). Coordination may be needed to streamline tariff-setting among different government institutions (*Electricity Law* 2014; *Rural Electrification Law* 2017 draft).

Figure 2: Entities involved in tariff-setting in Myanmar's power sector



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Improving coordination with stakeholders outside the government is another area that could be improved. NGOs that operate in rural areas have valuable contributions to make regarding national electrification policy because of their local knowledge of individual communities. This information-sharing would allow for greater satisfaction with the government's programs. In response, stakeholders would be more likely to support other government initiatives affecting their communities. Moreover, involving outside stakeholders in the process of developing policy bolsters the government's own planning processes.

2. Unclear regulatory environment for private sector involvement

The World Bank has estimated the total costs of expanding Myanmar's electricity grid over the NEP's 16-year timeline at $5.9 billion USD, not including additional investment in generation and low- and medium-voltage networks (*Myanmar National Electrification Program* 2014,[2]). Stakeholders we spoke with pointed out that, given the substantial amount of capital necessary to meet the goals put forth by Myanmar's NEP, relying only on public finance would place an unsustainable financial burden on the government (Pellmar 2017). Expanding the power sector in time to meet growing demand and bring electricity to the broader population will require the private sector to play a role in financing the necessary infrastructure.

Myanmar's government recognizes the importance of this issue as well and has taken steps to increase private sector involvement in its power sector. Myanmar's Directorate of Investment and Company Administration (DICA) lists the power sector as an area of opportunity for private-sector investors. According to DICA, the government's goal of reaching universal electricity access by 2030 will require generation and transmission capacity in the power sector to be expanded significantly; this is an area where the private sector could help the sector scale up (Directorate of Investment and Company Administration 2017). Developing an appropriate regulatory and legal framework will be key to attracting this type of investment.

However, there are still a number of regulatory, bureaucratic, and logistical barriers hindering investment from moving into this sector. For example, the current regulatory framework makes it unclear which government bodies should take the lead in promoting and handling investment from the private sector. The ERC and the MIC are both tasked with communicating and coordinating with investors (*Electricity Law* 2014; *Myanmar Investment Law* 2016), creating potential overlap in institutional responsibilities that may confuse private companies. These overlapping roles should be

clarified to ensure that the process for companies to invest in Myanmar's power sector is clear.

There is also some uncertainty regarding licensing requirements, which play an important role in determining an investment environment's convenience and cost-effectiveness. Currently, Myanmar's licensing process largely depends on the scale and the connectivity of the project. For all generation or distribution facilities connected to the national grid, regardless of their scale, MOEE has the authority to grant permits. However, the Investment Law also grants the MIC jurisdiction over permitting for major investments (*Myanmar Investment Law* 2016), while the Rural Electricity Law indicates that projects under a certain size can apply for permits from state and regional government authorities (*Rural Electrification Law* 2017 draft). Licensing and permitting are important components of any major investment, so it is important that the process for obtaining these permits is clear.

Finally, legacies of Myanmar's recently-ended military rule still have an impact on the investment climate in the country. The military still owns a substantial amount of land in Myanmar, and one stakeholder consulted for this paper referred to instances where power projects that would otherwise have been built were shelved because the military refused to sign the land over to the current government (Energy Generation Infrastructure Developer 2017). This is reflective of a larger issue in Myanmar related to the military's continued presence in the background of government operations, one that is tragically also evident outside the economic sphere in the ethnic persecution of the Rohingya minority group on Myanmar's western border. Several stakeholders mentioned that although the military has officially ceded power to the NLD, there are no checks in place preventing it from wresting back control of the government in the future.

Although the stakeholders we spoke with did not expect such a military re-takeover to happen, political uncertainty is never a boon to investment decisions. Before the government transition, Myanmar's military regime signed several memoranda of understanding (MOUs) for new power projects whose fate is now ambiguous. Although many of these projects likely will not be developed now, uncertainty about which ones will be canceled has caused confusion among investors about how much new capacity will actually be needed in the country.

Meanwhile, lack of clarity and policy shifts from the top levels of Myanmar's new government have caused some recent MOUs for electricity generation projects to stall (Thiha 2017). This is compounded by the Myanmar government's refusal to grant sovereign guarantees to energy

projects (Energy Generation Infrastructure Developer 2017). Without such guarantees in place, it is particularly important for Myanmar to develop a stable policy environment to convince investors that any projects being developed will not be at risk from future policy shifts.

3. Uncertainty concerning plans for on- versus off-grid development

Although Myanmar's government has acknowledged the role that distributed renewable energy technologies will play in reaching 100 percent electricity access, there is currently a lack of communication regarding government plans to extend the national grid. This includes implementation plans identifying when different areas will be electrified. This presents a problem for off-grid project developers, who need to know where the grid will be extended in the near term so that they can focus their services on areas that will continue to be without grid access in the longer term.

In interviews, both potential investors and project developers noted that the lack of concrete timelines and implementation plans for Myanmar's grid expansion were an obstacle to moving forward on projects (Frederick 2017). Although implementation plans exist, they are not finalized and changes to them are not reliably communicated to stakeholders or to the public. This uncertainty disincentivizes investment in off-grid projects, as investors are concerned that grid extension will render their projects obsolete before they can realize a return on investment. Local communities may also be unwilling to pay for off-grid electricity services if they are under the impression that the grid will reach their village soon (Scandling 2017).

The legislative framework contains some worrying ambiguity over which government institutions are in charge of these expansion plans. Currently, both ERC and REDC have a mandate to plan and implement rural electrification. Advice given by the ERC on the systematic development of the electricity sector could overlap with the Annual National Rural Electrification Master Plan that is developed each year by the REDC. Furthermore, the ERC is coordinating with state governments through its local branches, which may overlap or conflict with the REDC's role in coordinating with state governments. In addition, it does not appear that representatives of the ERC are on the board of the proposed REDC (*Electricity Law* 2014; *Rural Electrification Law* 2017 draft).

There is also a lack of clarity regarding two key components of the regulatory framework that governs mini-grid systems: interconnection standards and compensation mechanisms for when off-grid projects become

grid-connected. Developers need to know that they will be adequately compensated for the electricity their systems provide not only while the mini-grid operates as a stand-alone grid, but also if and when it is eventually integrated into the expanded national grid. If the national grid fully absorbs the mini-grids, there needs to be a system in place to value the infrastructure investment and services the mini-grids provide, including the ability to operate in the case of national grid blackouts. Moreover, developers need clear guidance on what kinds of systems would or would not receive approval from the national government for interconnection with the national grid (Tiedemann 2017).

Resolving this issue will require further clarification regarding permitting procedures. The Rural Electrification Law and the Electricity Law both specify that generation or distribution facilities not connected to the national grid are authorized and managed by regional and state governments if they are medium-sized (between 10 and 30 megawatts) or small-sized (less than 10 megawatts) projects (*Rural Electrification Law* 2017 draft; *Electricity Law* 2014). Multiple levels of government—national, regional, and local—may issue permits to any local or foreign individual or organization wishing to invest in the power sector. Since no specific clauses on interconnection are presented under these laws, when projects of small or medium size are eventually connected to the national grid, the project owners may encounter different licensing criteria from different authorities, leading to confusion and added costs.

Recommendations for Streamlining Power Sector Expansion

The Myanmar government should work to clarify the potential conflicts identified above in order to streamline the development of its power sector. Adjustments to pending, and potentially to existing, legislation would be one effective way to smooth out ambiguities. Improving governing capacity is another important step; many of Myanmar's current officials were only recently elected and thus do not have substantial experience in government operations, a point that stakeholders from a number of different sectors emphasized. However, governing capacity is also a much larger issue that affects every aspect of governance in Myanmar, and finding a comprehensive solution to it is beyond the scope of this article.

Nevertheless, there are several operational tools available to the Myanmar government that could help mitigate the issues outlined above. Some of these tools have been employed successfully in other countries, while others are uniquely appropriate to Myanmar's situation. The following

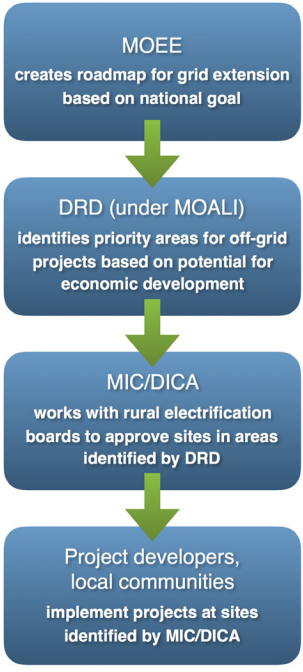
section proposes three operational tools that the Myanmar government could consider adopting to help streamline operations and increase the pace of the country's electrification. Each tool is meant to address more than one of the three challenges discussed in the previous section, making them particularly impactful (Figure 4).

1. Establish a process for drafting inter-agency memoranda of understanding

The government should establish a process for drafting memoranda of understanding (MOUs) among the key agencies and institutions involved in expanding electricity access. The intent of these MOUs is to cultivate communication both within the government and with external actors about current issues in electricity sector development. The drafting process will allow agencies to identify key challenges facing the sector and will highlight opportunities for collaboration among agencies and institutions. MOUs would also provide a window into the policymaking process for external actors, specifically private investors and community development organizations.

For example, an inter-agency MOU process could help to minimize the uncertainty related to grid expansion versus off-grid development by outlining the connections among all involved agencies and laying out their intentions. MOEE could start this process by describing the goals of the national Electricity Law that pertains to grid extension and rural electrification. This information would then be passed to MOALI, specifically DRD, which would use the plans to identify priority areas for off-grid projects. Guidance for the implementation of these off-grid projects would then be provided by the MIC/DICA and the proposed rural electrification boards (Figure 3). Ultimately, the MOU would paint a clear picture of how agencies plan to coordinate grid expansion

Figure 3: Example of MOU process flowchart



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and off-grid projects; making that picture available to the public would both solidify agencies' actions and allow non-governmental actors to plan around stated government priorities.

The coordination challenge between different ministries working on electricity access is not unique to Myanmar, but Myanmar's government is uniquely positioned to address it through the MOU process because of the consistency of intent across agencies. Each agency has a particular strength or competence, but each agency also has a commitment to meeting Myanmar's electricity access goals by 2030 (*Myanmar National Electricity Program* 2014, 44). Creating a single entity to take charge of the entire process can be ineffective if that entity's goals are not openly aligned with other stakeholders' or if the entity does not adequately understand its partners' intent. Other developing countries have not yet adopted a process similar to the one proposed here, which affords Myanmar an opportunity to model the benefits of open inter-agency communication to the rest of the developing world.

The main challenge is that this recommendation relies heavily on coordination among disparate agencies, which can be a difficult process. In addition, publicly releasing a definitive statement of goals and intentions will naturally lock each participating agency into its stated objectives. Although creating consistency for each agency's goals is one of the benefits of MOUs, the system should still maintain enough flexibility that agencies can adjust their roles and objectives if conditions on the ground change. Striking the right balance between consistency and flexibility can be a challenge, especially for relatively new governments. However, the benefit of allowing each agency or institution to maintain its core competency while expressing its commitment to meeting national goals stands to outweigh these potential difficulties.

2. Utilize the Myanmar Investment Commission (MIC) as a "one-stop shop" for the electricity sector

One-stop shops, or one-stop services, are centralized institutions that consolidate required procedures for investment or business operation while also providing a variety of services to meet these objectives. These services can include processing approvals, business registrations, and information and data services. When effective, one-stop services can lessen the transaction costs of doing business. Overall, countries that institute one-stop shop services show fewer procedures, shorter waiting periods, and higher performance on the Doing Business Index (*How Many Stops In A One-Stop Shop?* 2017). This was the case in Egypt, where the establishment of a

one-stop shop entity streamlined investment and corresponded to increases in foreign direct investment and economic growth (Stone 2006, 9).

In Myanmar, the MIC would be the natural entity to take on this role. The MIC is tasked with coordinating with potential investors, streamlining the proposal process, and ensuring that investments meet certain standards. As part of their efforts to accomplish this task, the MIC is developing the idea of offering one-stop services; the Myanmar Investment Rules, released by the Ministry of Planning and Finance in 2017, identify one-stop services as a function of the MIC. These one-stop services primarily include responding to information requests, accepting applications and submissions as may be applicable, providing guidance to investors, supporting the Investment Monitoring Committee, and assisting investors. These services are to be carried out by several different departments under the direction of the MIC, rather than by the MIC specifically; any information requests submitted to the MIC will be forwarded to the relevant government ministry, who then responds within 15 days (Myanmar Investment Rules 2017).

This is a sensible approach to streamlining investment, but issues can arise if the exact role of the MIC's one-stop service as it relates to other government departments and agencies is not kept clear. Especially in the context of the Myanmar government's capacity challenges, a one-stop shop runs the risk of becoming an additional institutional and regulatory impediment, particularly when clear lines of authority are not drawn and respected. Therefore, several recommendations can be drawn to assist the MIC's aim to become a true one-stop shop that stimulates investment into Myanmar's electricity and power sectors:

- Having appropriate representation from departments and ministries working on electrification on the MIC would be crucial to ensuring that the MIC would effectively support investment into the electricity sector and would reconfirm the government's commitment to provide electricity services to rural areas.
- There need to be clear distinctions between the roles, duties, and authorities of institutions (both within and outside of the MIC) that are involved with the investment promotion process. In particular, the relationship between the Investor Assistance Committee—a new committee created by the Myanmar Investor Rules as a resource for investors—and the MIC one-stop services should be clarified to avoid institutional overlap and to ensure their respective responsibilities are met.

- Data should be entered into a centralized electronic database that is accessible to all relevant authorities. When the one-stop service sends requests to ministries, they should be able to access project and investment documents to facilitate quicker decision-making.
- The MIC staff interfaces with companies, and their work should be recognized through performance incentives including merit-based promotions, uniforms, and skill-building courses.

3. Create standardized contracts for investment in the power sector

Lack of standardized power purchase agreements (PPAs) is another obstacle to power-sector development that is directly linked to the challenge of incentivizing private investment. This slows down the development of Myanmar's power sector by requiring each generation project to negotiate a new contract from scratch, a time-consuming process that hinders private sector participation. Streamlining this process with standardized PPAs would minimize transaction costs and thus promote additional private investment.

The use of standardized PPAs has many precedents, and there are numerous examples of PPA templates available for reference (World Bank Group, 2017). Myanmar has also recently developed a potential PPA model with the signing of the Myingyan independent power project (IPP), a 225-megawatt combined cycle gas plant to be developed by MOEE and Sembcorp Industries (*Myanmar IPP* 2016). Several stakeholders expressed hope that this project could serve as a new standard agreement that future IPPs could be based on, with some adjustments for different power sources.

However, even if the Myingyan PPA is established as a benchmark, there is value in creating additional standardized PPAs for different types of projects, particularly small power projects (i.e. small-power PPAs, or SPPAs)[2]. Since small power projects generally have smaller environmental and social impacts than larger IPPs, creating a separate "tier" of contracts for small power projects would allow these projects to move forward more quickly

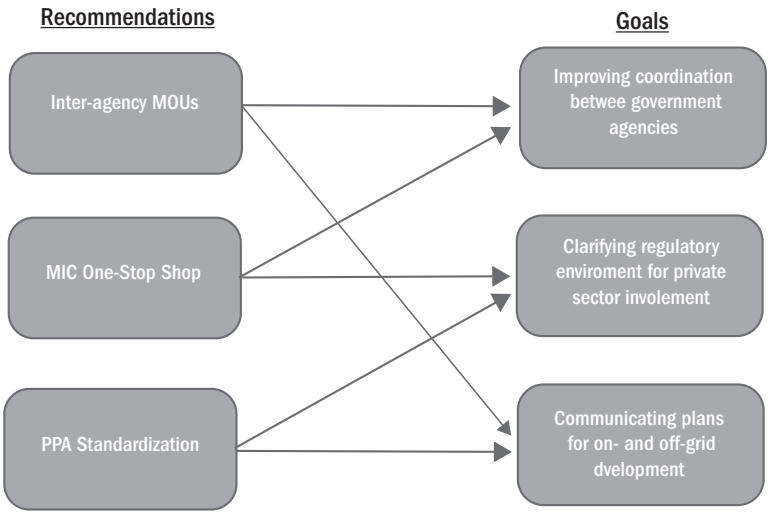
Potential Tiers for Standardized PPAs

Tier 1: Large Projects (separated into coal, natural gas, large hydro, etc.)
Tier 2: On-grid Small Projects (e.g. mini-hydro, distributed solar, biomass)
Tier 3: Off-grid Small Projects (e.g. mini-hydro, solar micro-grids)

than if they were required to meet the same conditions as a project like Myingyan. In addition, small power producers often have fewer resources than larger ones and thus would gain more from the reduced transaction costs provided by a standardized contract.

SPPAs for off-grid projects have the same benefits as on-grid SPPAs in their ability to create stable investment landscapes by establishing set standards and tariff levels, often by establishing a methodology by which tariffs would be calculated. This is usually based on the avoided cost from replacing other off-grid fuels like diesel or biomass[3] (Mwenechanya 2013). Some off-grid SPPAs pioneered in other countries also aided on- and off-grid integration by specifying the conditions and process by which these off-grid projects could be connected to the grid (Mwenehanya 2013). In short, standardized SPPAs (and standardized PPAs more generally) have proved an effective step in facilitating rural electrification and are a tool that could help Myanmar's National Electrification Plan succeed.

Figure 4: Overview of challenges targeted by recommendations



Source: Original content

Conclusion

Myanmar's 2015 election was accompanied by a wave of optimism both domestically and abroad, representing a new chapter in the country's political and economic development. Expanding electricity access will be one of the fundamental ways that Myanmar's National League of Democracy can demonstrate progress toward its development goals. Providing the entire population with electricity services will foster immediate improvement in quality of life for Myanmar's citizens and facilitate economic growth that is both comprehensive and inclusive. It will also create a foundation for further investment in Myanmar's economy.

The government's decision to adopt a 100 percent electrification goal in its National Electrification Plan signals its commitment to this task. However, it is an ambitious target that will require a focused and coordinated effort to achieve. Through background research and in-country interviews, this article's authors sought to elucidate several of the more pressing obstacles to success and outline possible steps to address these obstacles. Specifically, we identified inter-governmental coordination, private sector investment, and the integration of on- and off-grid electrification measures as areas of particular importance for the effective roll-out of Myanmar's electrification goals.

Our analysis of Myanmar's existing policy framework and proposed plans relevant to the electricity sector revealed a wealth of legislation and plans designed to address these issues, but it also brought to light areas of overlapping responsibilities that could be streamlined to facilitate implementation. Roles connected to rural electrification, tariff-setting, private-sector involvement, interconnection policy, and licensing and permitting all suffered a certain degree of overlap or ambiguity within Myanmar's institutional framework; clarifying each government department's relationship to these areas will be beneficial to the development of Myanmar's electricity sector as a whole.

In addition, these recommendations to Myanmar's power sector can potentially be adopted by other countries lacking universal access, such as in sub-Saharan Africa. According to the International Energy Agency, sub-Saharan Africa faces more challenges in achieving universal access by 2030 (IEA, 2017) than any other region in the world. Due to low population density and lack of government capacity—issues very similar to those encountered in Myanmar—off-grid solutions are being proposed as critical components of least-cost electrification plans for sub-Saharan African countries. In countries like Kenya and Ethiopia, where the government

also lacks sufficient capacity and experience in managing private sector participants (USAID, 2016), establishing one-stop shops and implementing standardized PPAs could not only help better coordinate on- and off-grid electrification development strategies, but also establish a sustainable business environment to accelerate progress towards universal access to electricity.

The recommendations put forth in this report are meant to provide further support toward the Myanmar government's electrification goals. Our proposed measures—establishing a process for inter-agency MoUs, implementing one-stop shop services to support investment, and creating standardized contracts in the electricity sector—each address at least one of the three challenges we identified. Although these are not the only steps the Myanmar government will need to take to ensure the success of the National Electrification Project, we believe they will make national solutions easier to identify and implement. Achieving universal electricity access in Myanmar will require careful planning and the implementation of supportive policies, and we believe the conclusions and measures outlined in this report can assist in this effort.

Notes

[1] Contributing authors on this paper were Kerry Read, Samantha Power, Tisura Gamage, Fujia Zhang, Lisa Jenkins, Sara Eisemann, Ashley Thomson, Grace Hearty, and Keji Mao.

[2] Standards for what qualify as a "small power project" are flexible and tend to vary by country. Currently, Myanmar's defines medium-sized projects as 10-30 MW and small projects as under 10 MW.

[3] One prerequisite for the development of this type of tariff would be greater transparency in how electricity prices are calculated in rural areas, in order to determine a true avoided cost on which to base tariffs.

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2

Revolutionizing Integrated Solid Waste Management in Punjab, Pakistan

Amn Nasir, Sameer Anwar, Saim Rashid, and Muqueet Shahzad

Introduction

In Punjab, Pakistan, approximately 16.43 million tons of waste are generated each year.[1] As the population grows and urbanization increases, Pakistan, like most developing countries, must address the unavoidable challenge of managing increasing municipal solid waste (Foo 1997). The term "municipal solid waste" is used to describe waste generated from households, commercial areas, and institutional activities (Tchobanoglous and Keith 2002).[2] Solid Waste Management (SWM) refers to the aggregation, collection, packing, transport, storage, and final disposal of solid waste.

Outdated SWM systems can lead to myriad public health issues. Rainwater that passes through piles of waste dumped along roads, railway tracks, and canals can seep into the water table, contaminating drinking water (Asian Productivity Organization 2007). Moreover, illegal dumping of

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waste creates breeding grounds for mosquitoes and leads to vector-borne diseases.

Various countries across the developed and developing world are now addressing this issue by adopting integrated solid waste management (ISWM) strategies, which entail "sustainable management of solid wastes covering all sources and all aspects, covering generation, segregation, transfer, sorting, treatment, recovery and disposal … with an emphasis on maximizing resource use efficiency" (International Environmental Technology Centre 2009, 3).

In recent years, the influx of low-cost technological devices has allowed the Punjab provincial government to implement Information and Communications Technology (ICT)-based interventions to improve SWM. For instance, a Chinese android phone used for marking sanitary worker attendance can cost as little as $150 USD, while a Global Positioning System (GPS) device can be utilized for tracking waste collection vehicles for under $300 USD per vehicle. More recently, Radio Frequency Identification (RFID) devices have been employed for characterization of waste and identification of waste collection resources, in order to generate granular data on waste collection (Rada, Ragazzi and Fedrizzi 2013) (Anagnostopoulos, et al. 2015).

This paper analyzes the impact of similar low-cost technologies in monitoring various parts of the SWM process and increasing the efficiency and quality of SWM. We present the results of retina scan-based attendance of field staff, GPS and RFID-based monitoring of waste collection trucks, and implementations of an android-based cleanliness scorecard in the seven largest cities in Pakistan's Punjab province.

Literature Review

As technology becomes more pervasive, many governments have begun to use e-governance mechanisms. Technological tools that increase the efficiency of monitoring, data collection, and the collection of citizen feedback improve public service delivery. Local governments, in particular, are using digital and mobile technologies such as tablets, smartphones, and sensors to "fundamentally change service delivery" in a range of city services (Greenberg 2015, 11). New York City, for example, has automated data analytics for its fire department, using an algorithm to determine buildings that are at highest risk of catching fire (Heaton 2015). Seattle uses online crime mapping to identify and respond to hotspots of crime through its "SeaStat" mapping tool (GCN 2014).

Developing countries are also using ICT to streamline city services.

Many cities in the Global South use technology for "easy information flow," which allows for "quicker and cheaper provision of goods and services, faster and better decision-making processes, and unplugged paper bottlenecks" (Ndou 2004, 10). In São Paulo, Brazil and Ahmedabad, India, computerized tracking provides a single platform for accessing multiple city services, such as vehicle registration and acquisition of drivers' licenses (Rinne et al. 2011; Bhatnagar and Singh 2010). In Khajane, India, computerization of treasuries ensures smoother and more transparent cash flows, reducing corruption (Bhatnagar and Singh 2010).

When it comes to municipal solid waste collection and management, tremendous potential exists to automate and streamline processes through the use of technology. Existing literature demonstrates that a range of technologies, such as geographic information systems (GIS) and RFID, have proven successful in improving municipal waste management.

Governments across the world also use geospatial analysis for policy implementation (Malczewski 1999). GIS allows users to combine spatial data with other quantitative and qualitative data on a certain locality. In Pondicherry, India and Lemnos, Greece, this technology has been used to select optimal landfill sites and minimize economic, environmental, health, and social costs (Sumathi, Natesan, and Sarkar 2008; Kontos, Komilis, and Halvadakis 2005; Siddiqui, Everett, and Vieux 1996). The same technology has also been used to reduce SWM fuel and transportation costs by determining the most cost-efficient routes for waste collection vehicles in India (Ghose, Dikshit, and Sharma 2006), Praia, Cape Verde (Tavares et al. 2009) and Pudong, China (Zhu et al. 2009).

RFID is also used across the developed world to automate processes in SWM. RFID chips use electromagnetic fields to automatically identify and track tags containing electronically stored information and attached to objects. This device can help identify, separate, and dispose of hazardous material and electronic waste in an environment friendly manner (Abdoli 2009). In Germany, RFID-enabled waste storage bins for households allow the collection vehicle to tag the household, weigh the bin, and charge the household accordingly (Case Studies: Botek 2003).

Integrating both GIS and RFID technologies can revolutionize solid waste management. Faccio et al. (2011) use a model that collects static inputs from waste collection bins attached with sensors and RFID combined with dynamic inputs from vehicles through their GIS systems in order to find out when waste collection bins have reached maximum capacity. Hannan et al. (2011) build a similar model, replacing the sensor with a camera on the vehicle to determine how filled a container is. Anagnostopoulos et

al. (2015) use real-time data from St. Petersburg, Russia to demonstrate how an integrated model of sensor-enabled bins, tracked vehicles, and coordination with drivers via smartphones can help to serve the highest-priority areas.

While existing literature shows simulations and pilots of how technology can be used in integrated SWM systems, no study demonstrates the large-scale applicability of this technology for monitoring service delivery. We extend this body of literature by demonstrating the impact of ICT in monitoring each process within municipal SWM: inputs (such as workforce attendance and vehicle activity), outputs (in the form of total waste brought to dumpsites), and final outcomes (such as citizen satisfaction and street cleanliness). This use of ICT in monitoring creates greater accountability of on-the-ground staff and establishes feedback loops for managers. We use panel data from October 2016 to February 2018 to show trends in waste collection efficiency and street cleanliness as a result of rolling out these technological interventions in 698 Union Councils across 7 cities of Punjab, impacting approximately 16 million citizens.

Solid Waste Management in Punjab

Background

Punjab is Pakistan's most populous province with an estimated urban population of around 32 million (Bureau of Statistics, Punjab 2015) out of which more than 50 percent resides in 7 cities: Lahore, Faisalabad, Rawalpindi, Multan, Gujranwala, Sialkot, and Bahawalpur.

Historically, municipalities have maintained responsibility for waste management. Between 2011 and 2014, the waste management function of the municipalities in the seven largest cities in Punjab was transferred to newly formed and publicly run waste management companies (WMCs). The transfer included sanitary workers, waste collection vehicles, and allocated budgets (including staff salaries).

According to the Urban Unit, the amount of waste generated by each citizen of Punjab increases by 1.5 percent each year (Urban Unit 2012), which translates into 4.69 million tons of waste generated by these seven cities by 2020, as shown in Table 1.

Table 1: Projected yearly waste generation (in million tons) in seven cities of Punjab by 2020

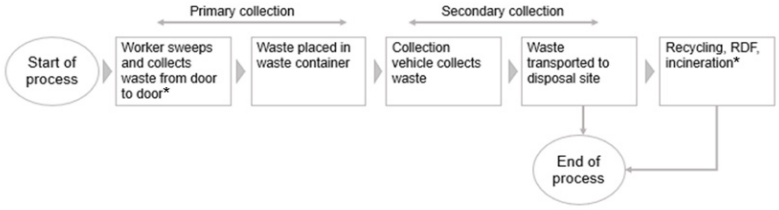
	2017	2018	2019	2020
Yearly waste generated in Punjab (million tons)	4.25	4.44	4.56	4.69

Source: Urban Unit (2012)

Solid Waste Management Process

The solid waste management process in WMCs in Punjab is divided into three sections: primary collection, secondary collection, and disposal, as shown in Figure 1.

Figure 1: Solid Waste Management process in Punjab. Asterisk denotes that the process may vary across cities.



Primary Collection

During primary waste collection, sanitary workers with brooms and handcarts sweep streets to collect solid waste at the start of the day. These workers are divided into groups of 10 to 30 and they report to sanitary supervisors. They are permanently assigned areas or beats which they cover every day. In some areas, door-to-door collection from houses is also carried out. Sanitary workers create piles that are transferred to strategically placed containers through the use of handcarts.

Secondary Collection

During secondary collection processes, routes are defined for waste collection vehicles (WCVs) to pick up waste from these containers. WCVs then transfer waste to disposal sites.

In larger cities like Lahore, Multan, Gujranwala, and Rawalpindi, temporary storage points (TSP) for waste are created within the city. The purpose of these points is to maximize the time WCVs spend collecting

waste from containers and minimize the time transporting waste to disposal sites. WCVs collect waste and transfer it to one of the TSPs. Specific vehicles with large carrying capacities are used to transfer waste from the TSP to disposal sites.

Disposal

Disposal methods vary in the seven cities of Punjab. Lahore has a built-for-purpose landfill while the other six cities dispose of waste at temporary dumping sites. The exception is Multan city, which, in addition to its landfill sites, sells approximately 500 tons per day to a cement manufacturer for refuse-derived fuel.

Integrated Solid Waste Interventions

In November 2016, the chief minister of Punjab launched the Solid Waste Management roadmap. The theory of change that motivated this initiative was that monitoring waste management would create greater accountability of field staff, and allow service providers to solve problems, course-correct, and track progress towards pre-determined goals.

Prior to this roadmap, the waste collection process was riddled with inefficiencies. Anecdotal evidence was utilized for accountability with regards to sanitary workers. Their attendance was manually marked by supervisors and was often inflated due to collusion between sanitary workers and the supervisor.

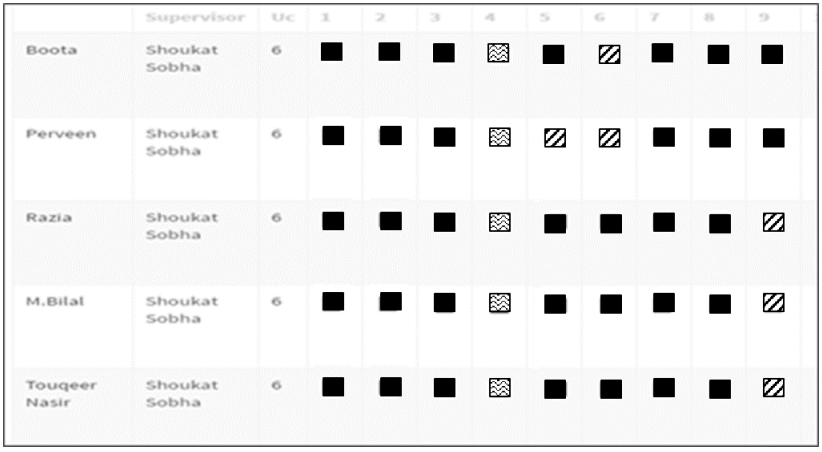
Secondary waste collection was also performing below targets due to fuel pilferage and vehicle inactivity. Fuel was allocated to each vehicle based on its traditional route and recorded manually. However, there was limited monitoring carried out to ensure that WCVs completed their routes every day. In addition, vehicle downtime in workshops was not monitored regularly. As a result, functional vehicles were often left sitting unused for long stretches of time.

To address these issues, the provincial government introduced technology-based interventions at each stage in the waste collection and disposal process, ensuring that inputs, outputs, and outcomes were accounted for. These interventions monitored a) worker attendance through android phones, b) vehicle activity through GPS trackers, c) waste collection through weighbridges, and d) street cleanliness and citizen perceptions by way of a scorecard.

a) Android Based Attendance

As part of monitoring worker attendance, the sanitary supervisor is given a low-cost android phone with an application developed to monitor workers' attendance using a hand-held retina scanner. Each morning the sanitary workers assemble at designated spots for attendance and the supervisor marks their attendance using the scanner. The time and geolocation of each entry are stored and sent wirelessly using general packet radio service to an online server. The collective entries from all six cities can be viewed on a dashboard (see Figure 2).

Figure 2: Dashboard displaying attendance of sanitary workers. Boxes with diagonal lines signify absence; solid boxes mean present; boxes with waves denote a holiday.



Android-based attendance reduces the chances for collusion between the workers and supervisors. For attendance to be marked, workers must be present at the assigned location at least twice a day (at the start and end of a shift). Secondly, attendance can only be taken during specific timeslots, as a time check is placed on the attendance application. This ensures that attendance is taken and operations begin at the assigned times.

b) Vehicle Tracking

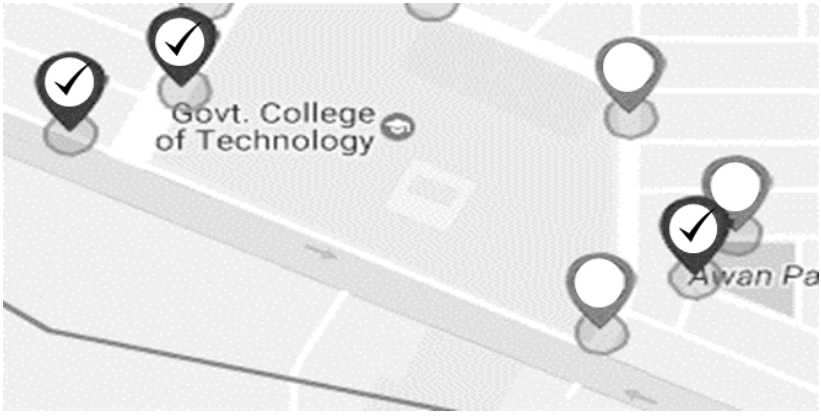
Vehicle tracking entails installing GPS devices or trackers on each WCV to monitor its route, speed, and other measurements. The route taken by the vehicle and the distances covered are recorded with the GPS trackers. As a result, vehicles that have not carried out trips throughout the week can be identified, and managers can stay abreast of vehicle downtimes. In Multan, the tracking data is triangulated with fuel issued to WCVs to

limit fuel pilferage.

All waste containers have also been geotagged to monitor vehicle trips to each container. A polygon of radius 20 meters is drawn around each waste container (see Figure 3). A waste container is marked 'emptied' when a WCV has spent two minutes (the average time it takes for waste trucks to empty a container) within the polygon around the container. At the end of each week, the percentage of containers collected is calculated as follows:

$$Waste\ containers\ collected\ (\%) = \frac{Containers\ emptied}{Total\ waste\ containers}$$

Figure 3: Dashboard displaying container monitoring polygons. Tick marks signify that the container was emptied in a particular week while empty circles signify that the container was not emptied that week.



c) Weighbridges and RFID

A weighbridge is a weighing device used to monitor the weight of WCVs. The weight of the WCV transporting waste is taken, and the empty weight of the WCV is subtracted to calculate the net weight of the waste collected.

RFID systems are combined with the weighbridge to automate the waste measurement process. Electronic tags are placed on each vehicle and are read by RFID readers installed at weighbridge sites. Once the RFID reader reads the WCV tag, it automatically calculates the net weight without the need to enter the empty weight. A modification of this system is seen in cities with two sets of weighbridges, one for entry and another for exit. After filled vehicle weight is taken at entry, the weight of the empty vehicle is taken at the exit and the net weight is attributed to the waste collected by the vehicle.

The waste collection data collected from weighbridges is used to calculate

the waste collection efficiency (WCE), which is calculated at the end of each month.

$$WCE = \frac{\sum Net\ weight\ of\ vehicle\ crossing\ weighbridge}{Waste\ generated\ per\ capita\ per\ day * Population * (n-2)}$$

where n = number of days in a month

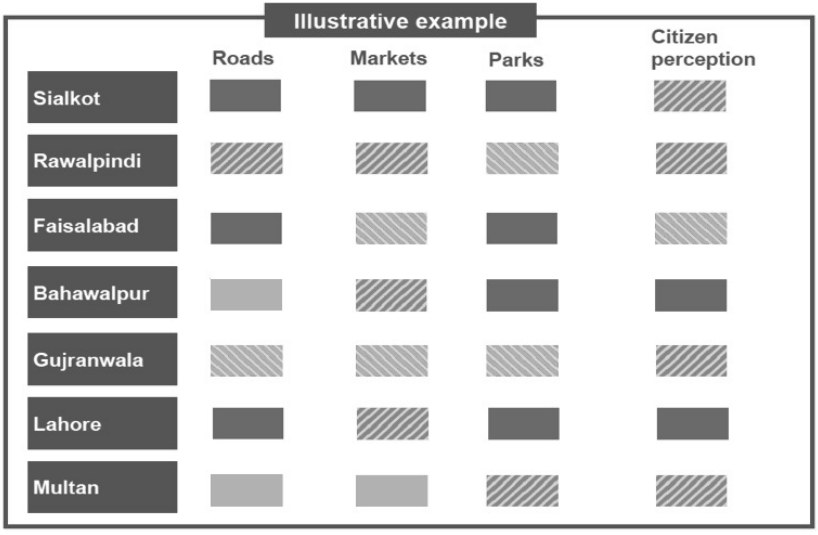
d) Street Cleanliness and Perception Scorecard

The focus of the roadmap has now shifted towards improving outcomes for citizens. For this purpose, a scorecard has been developed, to assess the cleanliness of cities and to determine how well changes in waste collection efficiency correspond to street cleanliness (Van Ryzin, Immerwahr, and Altman 2008; Srivastava 2015; Miami Beach 2009).

Independent Monitoring and Evaluation Assistants (MEAs), equipped with an android tablet and mobile data, visit nearly 9,200 public places identified in the seven cities each month. These MEAs determine the cities' cleanliness on a scale of 1 to 4, as illustrated in Figure 4. The MEAs also interview a representative sample of citizens in each city, in order to get monthly data on citizen perceptions of SWM and performance of WMCs.

WMCs can now compare their performance across union councils and across various types of locations, such as roads, tourist locations, and markets. This has bolstered the integrated solid waste management approach and enabled targeted, location-specific interventions.

Figure 4: Illustrative example of the SWM scorecard



Discussion

ICT-based interventions in solid waste management in Punjab have made service delivery more rigorous and have increased the accountability of staff in each tier of the waste collection process.

As part of the solid waste management roadmap, regular data has been collected and reported on input indicators such as primary workforce attendance and vehicle activity as well as the main output indicator, which is waste collection efficiency. While GIS data from trackers installed on waste collection trucks and weighbridge data from dumpsites was available from October 2016 (except for Lahore, where these interventions had been rolled out earlier), worker attendance monitoring faced several teething problems, ranging from data network issues to bugs in the android attendance application. Due to these issues, supervisor attendance (the percentage of supervisors using the system instead of worker attendance) was very low from October to mid-December (see Figure 5). Therefore, the worker attendance data from October to mid-December might not be reflective of the reality on the ground. A revamped attendance monitoring application was launched in mid-December 2016 with practical training for supervisors in each city and consequently, the supervisor attendance increased in the following months.

As per our theory of change, the monthly data from October 2016 to August 2017 shows that both the input and output indicators have improved over the period when the ICT-based monitoring interventions were rolled out.

Between January 2017 and February 2018, the number of field supervisors using smartphones to monitor daily attendance of primary workers in their jurisdiction increased by 35 percentage points, (Figure 5), as more supervisors became accustomed to the new technology. During the same period, the number of workers present each day increased from 55 percent to 74 percent (Figure 5) on average.

The availability of reliable data on worker attendance to middle-managers in the operations departments of waste management companies enables them to hold supervisors accountable and question them whenever they fail to report attendance or when specific workers are recurrently absent for long stretches of time. Similarly, managers can also hold secondary waste collection workers, such as truck drivers, accountable when vehicles are not travelling on designated routes. Consequently, this direct monitoring mechanism has increased the number of containers being visited by vehicles by 24 percentage points (Figure 7).

Figure 5: Supervisor attendance and worker attendance percentage (Oct 2016 to Feb 2018)

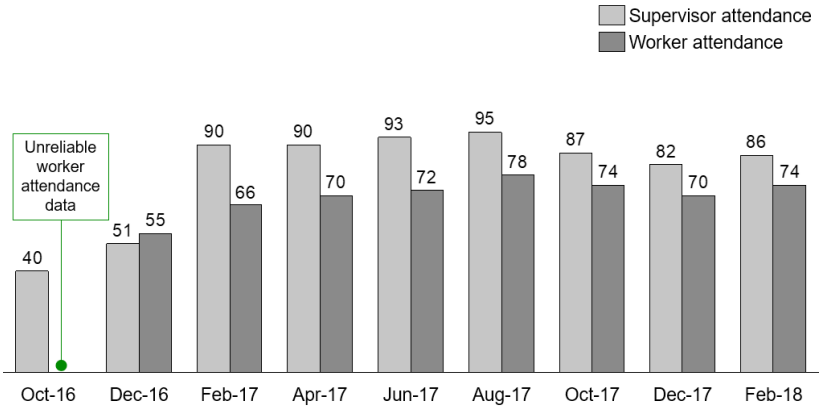


Figure 6: Vehicle Activity percentage (Oct '16 vs Feb '18)

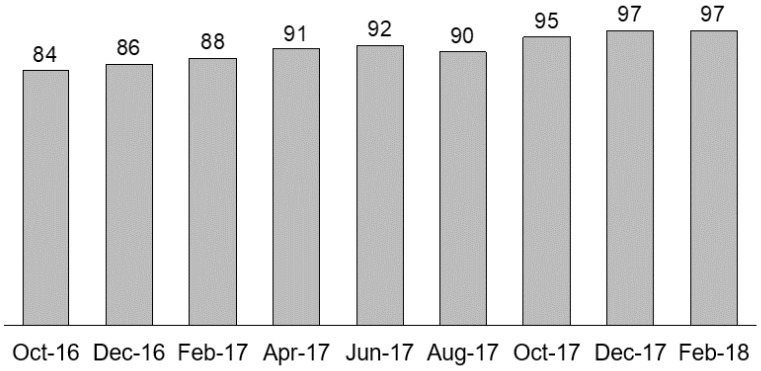
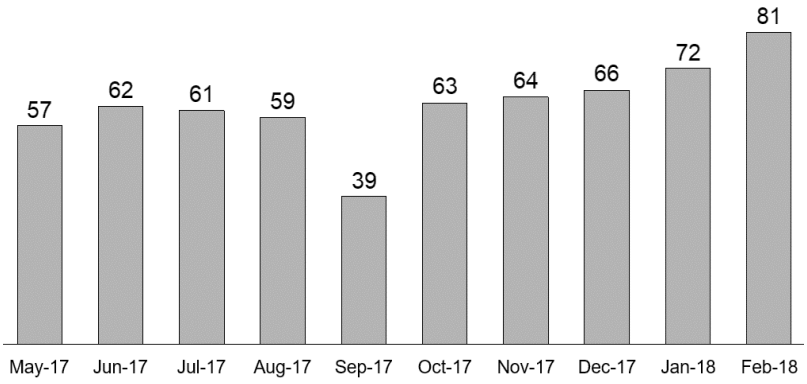
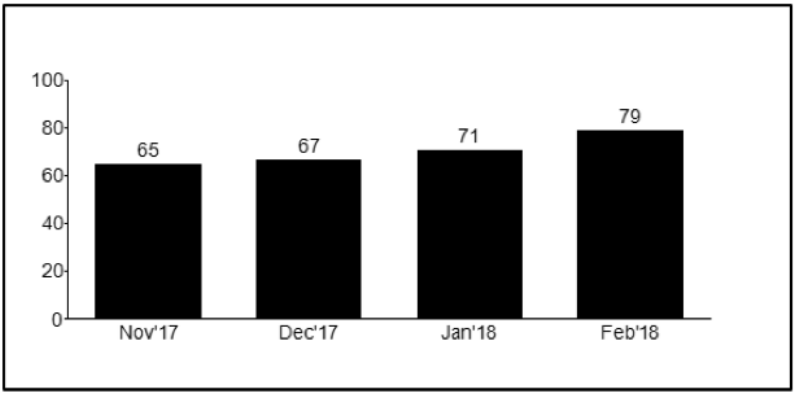


Figure 7: Trend in container collection efficiency (percentage)



Overall, improvements in inputs translated into improved street cleanliness. According to the newly launched scorecard, overall street cleanliness rose from 65 percent to 79 percent within four months of the launch. This increase can be attributed to the increased granularity with which SWM outcomes can now be monitored using the scorecard tool, since union-council level rankings are available.

Figure 8: Aggregated street cleanliness scores from November 2017 to February 2018



To understand the impact of these monitoring tools on the subjects being monitored, we held focus group discussions with 12 vehicle drivers from Lahore Waste Management Company to find that the new monitoring system had been seen in positive light by these ground-level users.

According to these drivers, the system has improved accountability and reduced opportunities for fuel theft by other drivers. In case of vehicle breakdowns, the tracking devices enable central control rooms to pinpoint vehicle location to dispatch repair teams in order to reduce downtime. This reduces the load on drivers who were previously solely responsible for transporting dysfunctional vehicles to workshops. There have been no reports of protests by drivers or sanitary workers after introduction of new monitoring systems.

While technology has helped waste management companies improve their overall performance, there is a limit to which these interventions alone can change outcomes. Issues related to human resources are one of the key challenges in improving primary waste collection. WMCs have little control over their workers' performance management. The services and asset management agreement signed by the WMCs with municipalities only allows the WMCs to utilize the sanitary workers, who remain the employees of municipalities. The companies' management do not have firing power, which still lie with the municipalities. As a result, it is difficult to hold workers accountable even when they underperform.

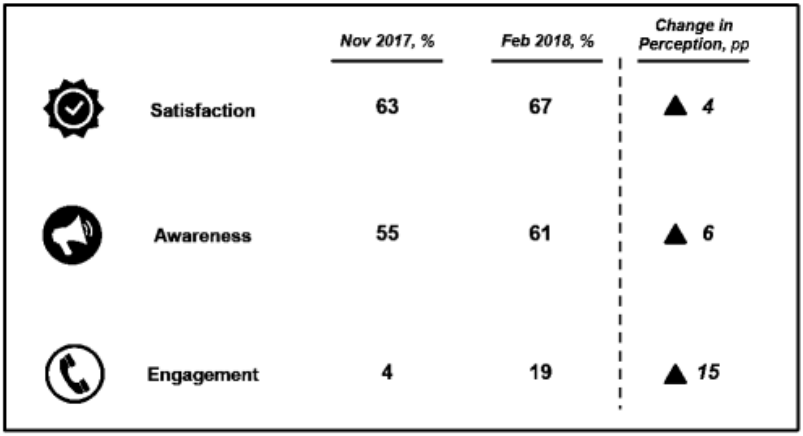
WMCs are administrated by a board of directors (BoD) comprising of political representatives, government officers, and technical personnel. The Chief Minister himself sanctions the constitution of BoDs. In February 2017, BoDs of all WMCs were dissolved and delays in their reconstitution exacerbated human resource and procurement issues. In the absence of a board, procurement of equipment of vehicles and hiring of essential staff were stalled. In Gujranwala, for instance, the contracts of 900 primary workers and vehicle drivers expired in March and could not be renewed. The workers' strike that ensued led to a reduction in worker attendance, from 94.5 percent in February to 81.5 percent in March. There was further drop in attendance to 70.3 percent in April because the Management Information System manager, who monitors worker attendance via a dashboard, resigned, which shows that regular monitoring is effective in ensuring good performance.

Moreover, other exogenous factors can cause fluctuations in indicators and cannot be mitigated through use of technology. Between March and April 2017, there was a reduction in supervisor compliance (-4.7 percentage points) and worker attendance (-0.6 percentage points), which can largely be attributed to Easter, when a large proportion of Christian staff was absent.

Despite the limitations of technology, the improvements in WMC performance that have been driven by the application of ICT have translated

into improved perceived outcomes for citizens. According to the citizen perception surveys across the seven cities, 63 percent of the respondents in the first survey were satisfied by the work done by WMCs, which rose by 4 percentage points in the following four months. The proportion of citizens who are aware of the WMCs' services or have engaged with these companies in some way has also increased since the monthly perception surveys began, as can be seen in the figure below.

Figure 9: Citizen Perception Survey Results



Conclusion and Next Steps

Successful and efficient SWM requires regular monitoring of both inputs and outputs to track progress. This paper demonstrates how low-cost ICT solutions can be used on a large scale to collect and report real-time data on a municipal SWM system in a developing country. According to our results, using technological tools for monitoring has made data collection on inputs such as worker attendance and vehicle activity more reliable and transparent. In turn, this not only improves performance management of workers, but also helps improve outputs in the form of increased waste collection efficiency.

However, this paper also demonstrates that technology alone is not a silver-bullet solution for all issues in SWM in a context such as Punjab. Management issues including strikes by sanitary workers, bureaucratic hurdles in hiring and procurement, and a lack of landfill sites result in WMCs performing below their potential. Since WMCs currently depend upon supplementary government funding through annual grants, the

sustainability of these interventions poses yet an additional concern. Long term funding mechanism should be formalized into the province's Annual Development Program.

Notes

[1] Estimated using average generation figures of 0.45kg/capita from "*What a Waste"* report published by World Bank (2012).

[2] This does not include waste generated from construction, demolition, agricultural, or industrial activities.

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3

Accountability and Ownership in Brazil's Development Cooperation: The Case of ProSavana in Mozambique

Claudia Horn

Introduction

Donor dependence has constrained the development visions of African countries during the last few decades. Today, the principle of recipient ownership is therefore seen as indispensable for aid effectiveness and legitimacy (Booth 2012; Castel-Branco 2008; Cramer, Stein, and Weeks 2006). However, the dominance of the OECD-DAC—the Development Assistance Committee of 30 industrialized donor countries, the World Bank, IMF, and UNDP—in defining ownership has been challenged by private actors and Southern providers of aid, such as China and Brazil.[1] While traditional donors associate ownership with recipient commitment to good governance standards, many emerging powers claim to better and unconditionally meet the demand in developing countries based on their domestic experience. Scholars have argued that access to new, alternative, and competing sources of finance from emerging powers, particularly foreign direct investment (FDI), could increase the negotiating power and ownership of recipient governments (Kragelund 2014; Whitfield and Fraser 2010, 348). And indeed, South-South aid has been attractive for developing countries that have been disenchanted by the prescriptions of

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traditional donors (Woods 2008). This paper explores the extent to which recipient actors can gain or even take ownership by looking at the case of ProSavana, an ambitious yet unpopular and failed agriculture initiative that Brazil and Japan started in Mozambique in 2011. This analysis suggests that aid without explicit political conditions does not necessarily increase recipient control if decision-makers merely act as facilitators for foreign direct investment and the interests of the business sector.

The ProSavana program promised to boost the productivity of large-scale as well as subsistence agriculture along Mozambique's Nacala corridor by combining public technology transfer with a private sector investment plan. Advocates of the initiative emphasized the potential to replicate Brazil's agro-industrial success in improving food security, based on the assumption of socio-cultural and geographical affinities with lusophone Mozambique (Carrillo 2011). Without concealing its own commercial and political interests in Africa, Brazilian development agencies have distinguished their programs from traditional aid as demand-driven, non-interventionist, and based on solidarity and mutual benefit (Amanor and Chichava 2016; Hopewell 2013; Ikegami 2015). Similarly, though an OECD-DAC member, Japan has distinguished itself from DAC norms to untie aid and combined its foreign assistance with FDI. The implementation of ProSavana, however, reveals the pitfalls of this model. In 2016, five years after inception, ProSavana had been abandoned due to Brazil's domestic political and economic crisis and small-farmer resistance in Mozambique. Is this case no different from traditional foreign aid programs? Can this failure help inform and advance a meaningful concept of ownership from a recipient perspective?

This paper uses the case of the ProSavana program to explore the implications of South-South development cooperation for recipient ownership regarding the design, implementation, and impacts of interventions. It develops three principal hypotheses that contrast with the argument that competing sources of finance increase recipient ownership. First, South-South cooperation has potential for sharing technological innovation. However, if South-South technical assistance is based on superficial assumptions of bilateral similarities, it cannot respond to environmental, geographical, and socio-economic demands. Second, if foreign corporate interests are privileged over the benefits of local communities, then neither the limited political conditions of South-South cooperation nor the commitment of recipient governments translate into greater recipient control or support by the local population. Finally, the discussion concludes that a conception of ownership should not only focus on the negotiating space

of recipient governments, but highlight the rights, representation, and welfare of affected communities. The case of ProSavana highlights key dynamics shaping South and North-led initiatives today, including aid dependence, private-driven aid, land conflict, food security, and particularly the integration of African agriculture into global value chains. This paper does not claim to draw generalizable conclusions on South-South cooperation. However, it aims to inform future policy by elucidating the pitfalls of donor-driven and state-centered concepts of ownership for the analysis of development interventions.

The remainder of this paper proceeds as follows: section two considers contrasting concepts of ownership in international development, reflecting on the dynamics of power and dependence between developing country governments and donors. The aid dependence of Mozambique serves to illustrate these dynamics. Section three examines the power dynamics between donors and recipients throughout the ProSavana program, focusing on the agency of three types of local actors: the Mozambican government, local technocrats, and civil society groups. The ProSavana program is a well-known and well-documented experiment of large-scale South-South cooperation. Hence, the analysis draws on program documents, gray literature, newspaper articles, and in-depth case studies (Fingermann 2015; Shankland, Gonçalves, and Favareto 2016). The paper closes by summarizing the main arguments and considering how the analysis of this case study can advance our understanding of power dynamics of South-South partnerships and the prospects for local ownership in the contemporary aid landscape.

Ownership By Whom? A Contested Concept

The donor community of the OECD conceives recipient ownership as exercising leadership over national development policies through implementation, translation in results-oriented operational programs, and coordinating aid with donors (OECD 2007). Emphasizing policy implementation rather than conception, this mainstream definition of ownership has in the last decades of development practice implied the "commitment" of recipient states. National ownership emerged as a concept among development elites and agencies following the shift towards neoliberal governance models in the 1990s. While strong state governments played a commanding role in developing countries until the mid-1970s, neoliberalism painted the state as an impediment to the forces of free markets. Structural adjustment programs, by reducing the financial and political means of national governments in favor of implementing the visions of external technocrats,

further nurtured a discourse of developing country governments as incapable and corrupt (Mkandawire 2001). At the end of the 1990s, donors reconsidered the imposition of policy reforms as an aid condition. They would now provide resources and seek to align aid with national strategies if recipients commit to poverty reduction and "good governance" targets. In this sense, their recognition of the importance of ownership has in practice allowed a deeper penetration into spheres of governance and civil society. This narrow idea of ownership—central to the 2005 Paris Agenda for Aid Effectiveness—has accompanied new poverty reduction strategy papers and aid models, legitimized through the Millennium Development Goals. In least-developed countries with high dependence on external support, this approach has repeated colonial patterns of external command, as the following outline of aid dynamics in Mozambique illustrate. Furthermore, to enhance economic policy, neoliberal ownership approaches promote an alternative "multilayered" governance system that gives decision-making authority to various stakeholders such as supranational institutions, donors, private sector, civil society, and states (Whitfield 2009, 12). Critics argue that this diffuses accountability between governments and their constituencies, and weakens democratic representation (Dietrich 2016; Howell 2002). As a result, neither recipient governments nor donors can be held responsible for development policies and their consequences for people's lives.

Mozambique illustrates how aid interventions have constrained rather than enabled national developmental ownership. As a low-income country, Mozambique is donor-dependent, with aid representing roughly 18 percent of gross national income (OECD 2017). Structural adjustment during the 1980s weakened the state by putting in place fiscal constraints, which, in turn, diffused control over resources across public institutions and donor programs (Wuyts 1996). Hence, the Mozambican government finds itself in a weak negotiating position with its donors (Whitfield 2009). Furthermore, donors have at times actively undermined state autonomy—for instance, by insisting on the liberalization of cashew production despite government opposition (De Renzio and Hanlon 2008). Managerial explanations for compliance with donor interests are aid fragmentation, donor inflexibility, and administrative costs. Mozambican ministries manage a diverse set of donors, and as a result, focus more on attracting project finance than developing a national strategy. But there are also political motivations for compliance, including the possibility of private and political gain and maintaining elite privilege. And in the absence of substantial pressure from civil society, parliament, or media, the governing Mozambique Liberation

Front (FRELIMO) has few incentives to challenge donor policies. This aid dynamic has shaped the state-civil society relationship from the outside, and arguably fuels an oligarchic patronage system that cautiously controls the process of liberal-democratic decentralization and effectively excludes citizens from the political process (Buur 2009).

Taking these dynamics into account, Whitfield and Fraser (2010) propose an alternative concept of ownership to the donor discourse that conceals political questions of power, control, and responsibility. They define ownership as the amount of "development space," or control that aid-receiving governments have over the negotiation process and the formulation of interventions. They argue that ownership is not an instrument for aid effectiveness, but an end in itself: it reflects the legal sovereignty of African states and their safety from external influence (Whitfield and Fraser 2010, 343). The authors recognize that recipient state control does not naturally increase the accountability of governments towards their constituencies. However, they suggest that clearly defined national responsibility for policy implementation could support domestically determined lines of accountability and expose governments to greater scrutiny.

Providers of South-South cooperation have incorporated these critiques. Brazilian development actors offer their own definitions of ownership; they claim that South-South cooperation is based on solidarity, partner demands, non-conditionality, and non-interference into national affairs (Cintra 2011). Brazilian actors recognize that cooperation is hardly without asymmetries, yet they argue that it can be horizontal and based on mutual benefits (Esteves, Abdenur, Gomes, and Fonseca 2014). On the other hand, critics have described the insertion of powerful corporations like Brazil's Vale and Odebrecht in Africa as extractivist (Veltmeyer 2012; Garcia 2016), sub-imperialist (Bond 2016), and ignorant of human rights (Abdenur and Neto 2013). Rather than a "win-win" arrangement, the South-South cooperation approach to ownership implies a new constellation of winners and losers. The case study of ProSavana suggests that a concept of ownership as national sovereignty omits the private interests of domestic and transnational elites, which can effectively undermine progressive socio-environmental impact.

In summary, traditional aid has more often impeded rather than enabled recipient leadership by focusing on commitments to predefined good governance standards. In contrast, recipient-centered concepts emphasize the sovereignty of developing countries to define their own development path—a critique that Southern aid providers invoke. Ultimately, however, the meaning of ownership depends on the interpretation and interests in

regards to who should be the "owner"—the funding donor, the recipient government, private organizations, or affected civil society organizations. In this sense, the subsequent analysis of ProSavana reveals the limits of both a donor-centered concept as well as Whitfield and Fraser's focus on recipient government control. The findings suggest that recipient government leadership does not imply meaningful ownership—one which fosters local economic and socio-environmental rights, benefits, and agency—as long as it privileges the interests of foreign corporations over those of citizens.

South-South Cooperation and Ownership: The Case of ProSavana

The Replication of Development Blueprints

This section considers the foundation of ProSavana and the contested model of agrarian change it promised to bring to Mozambique.[2] ProSavana sought to emulate Brazil's development of the tropical Cerrado region that had been supported by USAID and Japan's aid agency JICA between 1979 and 2001 and managed by the Brazilian Agricultural Research Corporation (Embrapa). The modernization of the Cerrado privileged capitalized large-scale farmers and export crops. Previously a net-importer of food, Brazil became a world export leader of grains, ethanol, sugarcane, and meat (Wolford and Nehring 2015). On the one hand, this became an export success story in the eyes of the World Bank. On the other hand, the development has driven the dramatic deforestation of over 60 percent of the Cerrado's grasslands and woodlands—precipitating biodiversity losses in one of the world's most biodiverse regions.[3] Furthermore, the program has been associated with corruption, the abuse of weak protection laws, and the displacement of small-holder farmers. Commercial and extractive powers have dominated over local state officials, small farmers, and communities, demonstrating the trade-offs of this economic modernization in terms of popular ownership, poverty reduction, and livelihood improvement (Klink and Machado 2005).

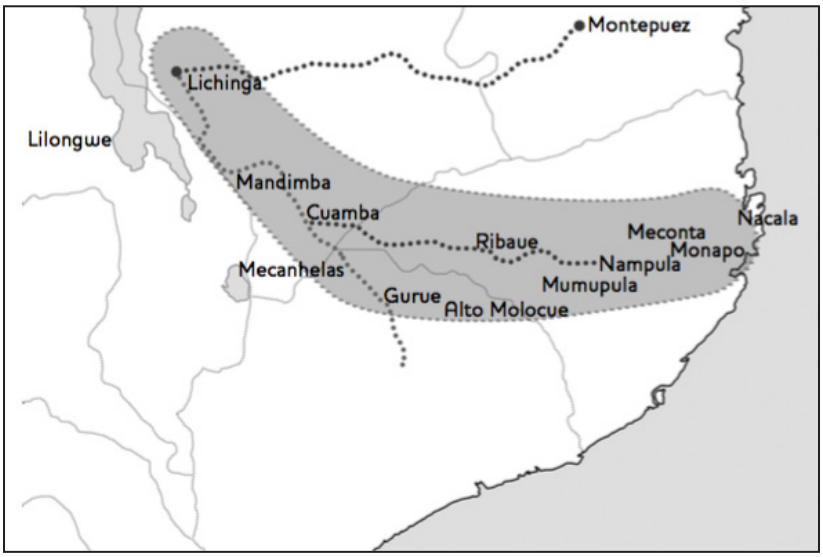
Drawing on this divisive, yet internationally lauded model, ProSavana targeted Mozambique's Nacala corridor (Figure 1), an area of approximately 540,000 square kilometers. This program was planned to last twenty years, starting in 2011. The program consisted of three parts: First, ProSavana-PI (Projecto de Investigação) focused on research and capacity-building of Mozambique's Institute of Agricultural Research (IIAM); second, ProSavana-PEM (Projecto de Extensão) focused on agricultural extension through training and pilot projects with commercial and small growers; and third, ProSavana-PD (Plano Director) aimed at producing a "Master

Plan" for plot models that would integrate smallholders into value chains and guide investments—particularly from Brazil and Japan (Chichava et al. 2013a). The consultancy Getúlio Vargas Projects (GV-Projetos) managed these investments as a subcontractor through the private Nacala Fund. A detailed breakdown of ProSavana's timeline and funding structure is provided in the appendix.

Underlying this South-South initiative has been an assumption of cultural and climatic similarity between Mozambique and Brazil. The two countries share ecological characteristics such as a tropical climate, common pre-colonial roots in Africa, and the same language (Wolford and Nehring 2015). However, the failed replication of the Cerrado blueprint highlights salient differences in key factors of production. First, in contrast to Brazil's private land ownership, there is no official land market in Mozambique. Since the end of the country's civil war 1992, land has been state-owned with use rights for residents, and this system stayed intact following civil society and peasant mobilization (De Renzio and Hanlon 2008). The profitability of large-scale agricultural programs depends on a land market. The government has provided 14 million hectares[4] for foreign investors, but as the Nacala corridor is more densely populated than the Cerrado, this was met by considerable opposition from local communities fearing displacement. Secondly, in contrast to Brazil's Embrapa-led agro-technological modernization, Mozambican agriculture is characterized by low productivity, dominance of small-holder farmers without experience with industrial farming methods, lack of inputs, and poor access to market. Most production is rain-fed as most farmers cannot afford irrigation systems or do not have the land tenure to justify installing them. Thirdly, the Cerrado development was financed by a strong, already industrializing state. As mentioned above, Mozambique lacks the capital and state autonomy to lead a similar development process (Wolford and Nehring 2015).

To conclude, the Cerrado development represents a top-down, export-driven, and environmentally destructive development model. Moreover, the attempt to replicate this blueprint ignored the different conditions regarding land, labor, and capital in Mozambique and hence limited the possibility of local ownership. The following sections turn to the agency of the Mozambican government, foreign interests, and local responses that have shaped the failure of ProSavana.

Figure 1: The Nacala Corridor (Chichava et al. 2013a)



Elite Interests

Arguably, ProSavana demonstrates the expectations and interests of the Mozambican government in South-South cooperation, although the latter had virtually no influence in the conception of the program. During Brazil's diplomatic and commercial expansion under President Lula da Silva (2003–2010), JICA and the Brazilian Cooperation Agency (ABC) committed to a "Japan-Brazil Partnership Programme for the Development of the African Tropical Savannah." The two parties confirmed during a G-8 summit in 2009 to implement it in Mozambique (Chichava and Durán 2016). However, despite the absence of the Mozambican government in the initial design, the project was in line with the institutional framework over technical cooperation between the Mozambican Ministry of Agriculture (MINAG) and ABC (Patriota and Pierri 2013) as well as Mozambique's Strategic Plan for Agricultural Development (PEDSA). PEDSA aims to increase the competitiveness of the agricultural sector, strengthen agrarian institutions, improve infrastructure, and create a legal framework that encourages investment (MINAG 2010). ProSavana's capital- and technology-intensive agribusiness focus aligns with this modernization discourse as well as with elite private interests. Indeed, senior MINAG and IIAM officials have personally managed the program (Chichava et al. 2013a, 105). MINAG and the Mozambican investment company Gapi also

financially contributed through the Development Initiative Fund (PDIF), aiming to include small-scale farmers through contract farming (Chichava and Durán 2016, 17). The Mozambican government was eager to gain from Brazilian know-how on tropical agriculture and, in 2014, invited a total of 70 researchers of the Brazilian public agricultural development institution Embrapa. However, South-South technical cooperation did not fulfill these high expectations.

The Practice of Technology Transfers

This section examines the inclusion and agency of local development institutions and their staff in the implementation of the technical assistance component ProSavana-PI (JICA, ABC, and MINAG 2015). With an estimated cost of $13.48 million USD, the technical component was intended to benefit 500 researchers and 40,000 farmers through the provision of equipment and technologies (soil improvement, fertilization, soil and plant analysis, seed processing units), and training of the staff of IIAM (providing models for rural extension). As part of this project, cotton, maize, soybean, sorghum, and Cerrado bean seeds were bred to grow in local conditions (Patriota and Pierri 2013). The official evaluation document suggests that the training activities were implemented effectively. However, contrasting Brazil's official representations of a horizontal and demand-driven approach, the program evaluation indicates that the specialists from Brazil dominated throughout the program. It also notes poor communication among the agencies of the three countries: Japanese and Brazilian activities were not coordinated and carried out separately. As a result, the project was inefficient and faced major delays. Moreover, while Japan and Mozambique met their commitments, since 2012, ABC faced budget cuts under President Dilma Rousseff. Embrapa retreated from its planned contributions to the program, which has only been exacerbated by the economic recession, political crisis, and the regime change (JICA, ABC, and MINAG 2015, 30).

Nonetheless, it appears that Mozambique's agricultural researchers made some gains from Embrapa's expertise in developing tropical agriculture. IIAM and MINAG have worked to extend technology to local farmers (JICA, ABC, and MINAG 2015, 30), increased the budget for research and development, and committed to continuing these efforts even without Brazilian and Japanese support. They expect the impact of the technology transfer to be high, which is surprising considering the apparent collapse of ProSavana as a triangular initiative. Still, the potential for local ownership depends on Mozambique's capacity to institutionalize the skills and

apply the technology. Since the evaluation does not consider feedback from beneficiaries, local farmers, or the connection between research and the extension of knowledge, it is uncertain if these beneficiaries will endorse and utilize the technologies.

Privileging Foreign Corporate Interests

Unlike Embrapa's technical support, ProSavana's land investment component has been particularly controversial. The rise of private-led large-scale farming reflects an international trend, which has been promoted by many African governments, but at the cost of local small-holder farmers. For the Mozambican government, the development of the Nacala corridor links it with strategic assets: the railway to Malawi and the Tete province, the Nacala airbase, and the Nacala port (Patriota and Pierri 2013). However, there is evidence that the increasing leadership of foreign private corporations undermined the control of local institutions. MINAG attracted Brazilian farming companies by providing land on advantageous financial terms, under the condition that 90 percent of the employees will be Mozambican (Patriota and Pierri 2013). In fact, Brazilian firms in Mozambique have significantly shaped ProSavana. In particular, the mining company Vale—which has engaged in mineral extraction and corridor development in Brazil and Mozambique—has positioned itself as a key player in the agricultural development of the Nacala corridor. Vale has links to Embrapa and FGV-Projetos that is managing the ProSavana investment plan. Hence, through its financial and technical power, Vale has had a transformational impact of agricultural development in the region (Shankland, Gonçalves, and Favareto 2016).

More generally, ProSavana illustrates a pattern of development cooperation from finance-rich countries to resource-rich (but finance-poor) countries that is characteristic of North-South and South-South aid (Hochstetler and Oliveira 2015). Like those from Brazil, Japanese agencies were also motivated by finding business and investment opportunities on the African market. Japan is food-dependent, importing 60 percent of its supply (Kana Roman-Alcalá Okada 2015). In the context of global food crises in 2007 to 2008, countries like Japan have reoriented their food security strategy towards liberalization and offshore agricultural investment. In turn, comparably cheap lands in Sub-Saharan Africa have become new frontiers as their regional agriculture has been integrated into global value chains through mono-cropping, and large-scale production (Kana Roman-Alcalá Okada 2015). Unlike other donors of the OECD-DAC that officially untie aid from investments, Japan has long combined the

two, a strategy that is usually ascribed to emerging donors. Japan expected facilitated access through the language and cultural mediation of Brazil (Classen 2013). Thus, ProSavana was effectively promoted as South-South cooperation.

As noted above, ProSavana reveals the direction of the Mozambican government regarding the promotion of foreign land investments. Large farming in Mozambique has failed in the past 15 years despite much investment, in part, due to the country's land tenure regime (Hanlon 2011). The state allocates use rights based on application, occupation for 10 years, or communal tenure. In practice, most farmers do not hold formal rights, and the administration lacks capacity to implement land tenure laws and track and identify available land for investments (Ekman and Macamo 2014). Moreover, Mozambican elites disagree over the kind of land investments the country should seek: foreign or domestic, small or large scale, for food or for cash crops (Hanlon 2011). In this context, ProSavana reveals the government's failure to take control by setting clear terms. A 2013 leaked draft version of the master plan argues that ProSavana could harmonize the goals of bringing local products to external markets, addressing the constraints of rural people, and supporting family farmers. However, the framework did not outline the decision-making process over investments and environmental and social concerns, and strategies to manage family farming alongside large-scale farming (Shankland, Gonçalves, and Favareto 2016). Furthermore, the government has not defined the respective shares of production for domestic food security (e.g. maize, beans, and sorghum) and for external markets (soy and cotton). The overall lack of transparency regarding foreign investments further indicates that the Mozambican government served the interests of investors while containing rather than addressing civil society demands. The following section considers popular responses to this practice.

Civil Society Opposition

ProSavana was designed by diplomats, agricultural researchers, and investment experts who envisioned an agricultural transformation, but neglected the existing conditions. Presuming a close similarity between Brazil's Cerrado region and the Nacala corridor, the imposed master plan did not consider that the latter is more densely populated and used by small-holder farmers (Chichava et al. 2013b). The implementation would have displaced thousands of locals for new larger farms. Hence, the program faced substantial resistance from national and transnational civil society and peasant organizations calling for transparency, agrarian justice, and ecological

protection. The Mozambican civil society organizations União Nacional dos Camponeses (UNAC), Plataforma Provincial da Sociedade Civil de Nampula (PPOSC-N), Justiça Ambiental (JA), and Acção Académica para o Desenvolvimento das Comunidades Rurais (ADECRU) have opposed ProSavana because they are concerned about the implications for small farmers (Chichava and Durán 2016, 18). Though the program claims to improve local farmers' skills, opposition groups argue that this is propaganda to cover up "land grabs" and the privileging of foreign companies over local food security. In 2012, this opposition allied with Via Campesina and Brazilian and Japanese civil society groups, addressing all three governments to demand the termination of ProSavana. In 2014, UNAC, JA, and ADECRU, together with other groups such as the Fórum Mulher (FM), and Liga Moçambicana dos Direitos Humanos (LDH) launched the "No to ProSavana" campaign. The campaign appealed particularly to President Armando Guebuza and the Frelimo party, denouncing the connections between political elites and foreign investors that supported land grabs in the Nacala region (Fairbairn 2011). Though not opposing FDI altogether, these activists have insisted on the significance of subsistence agriculture for rural Mozambique and promoted state-supported family farming (Chichava and Durán 2016).

The civil society response exposes the top-down governance structure of ProSavana and the dominance of foreign private interests. ABC has defended the technology transfer as demand-driven. However, the investment plan affecting a large population was developed behind closed doors. Program developers responded by organizing consultations between MINAG and civil society, and by publishing program information. Cabral and Leite (2015) argue that the domestic mobilization has shaped Brazil's emerging South-South development cooperation approach that has up to now mainly been in cooperation with state agencies. If true, this form of international mobilization addressing all three stakeholders could present a new mechanism for holding donors accountable and pushing for participation.

Discussion and Conclusion

Field studies show that despite significant investment in technical training, the impact of ProSavana in the Nacala corridor has been insignificant. By 2015, the program had been internationally criticized, neglected by the struggling government of Brazil, and faced financial uncertainty (Shankland, Gonçalves, and Favareto 2016). Brazil's engagement was ambitious but increasingly unreliable. While Brazilian agencies appear to have taken

leadership in designing a program that suits Brazilian interests, the country's political and economic crisis has directly affected the country's structural programs abroad. For Brazilian investors, Mozambique has become less attractive as President Michel Temer has removed environmental and social protections in Brazil, facilitating the expansion in the domestic Cerrado and Amazon regions. Initial foreign requests for land use permits have not been realized. For instance, recent records on the Landmatrix.org database show that ABC's planned land investment in an area of 700,000 hectares in the Nacala corridor date back to 2009. The same database chronicles only one concluded contract by the Brazilian Pinesso Group in the corridor (in Lioma, concluded in 2014, over 9,000 hectares). Of the 136 recorded (intended and concluded) ventures in Mozambique, most investors are European, Asian, or African (while 31 are Mozambican public and private investors). For better or for worse, ProSavana has barely impacted the lives of small-scale farmers in the Nacala corridor. It has certainly not led to an agrarian transformation, despite making waves in the public realm. In March 2017, Mozambique's President Filipe Nyusi traveled to Japan to reactivate the government's commitments (Frelimo 2017). Though the Japanese government has shown motivation to continue this project bilaterally, most programs have been stalled at the time of writing as a result of Mozambique's current debt crisis.

ProSavana is emblematic of the South-South development cooperation promise to increase recipient ownership through the combination of technical cooperation and foreign investment without imposing political conditions. While the effectiveness of the technical assistance component suggests that there is potential for positive impacts, the successful opposition campaign demonstrates the importance of integrating the expertise of Mozambique's farmers. Interestingly, a recent field study shows that another Embrapa-led program during the 1980s has shown long-term impact: Mozambican peasants have reportedly adapted tropicalized soy varieties even though the project was abandoned by official ministries (Shankland, Gonçalves, and Favareto 2016). But overall, this analysis reveals the dynamics and interests that have undermined local ownership and contributed to ProSavana's failure. While aligning with elite interests and promoters of market liberalization, the replication of Brazil's agribusiness model ignored the local conditions and socio-environmental demands of Mozambique's population. My analysis shows that although South-South development cooperation does not impose aid conditions on recipient governments, it does not alter their dependency in the context of today's global political economy.

In this context, the analysis of this South-South initiative in Mozambique can critically inform the contemporary political economy of aid and private investment in Africa. Public-private partnerships increase the role of the private sector, cross-sector technology transfers, and innovations, and are promoted across the continent, for instance through the Grow Africa Initiative and the New Partnership for Africa's Development formed by the African Union in 2001. The support of this model is based on the belief that the main challenges for countries such as Mozambique in improving agricultural productivity are gaps in technology and finance, and access to markets. On the flip side, not only Brazil and Japan but also other donors increasingly combine commercial interests and development cooperation—a reversal of efforts to untie aid. For instance, the programs of the UK and Norway in Mozambique's Beira corridor are also led by UK businesses and consultancies. However, the findings presented show that private sector-oriented program governance can weaken political accountability mechanisms and create new dependencies (e.g. international agricultural companies). The paper also aligns with those critiques based on the lack of sustainability and benefits to rural development and poverty reduction, as well as their externalized socio-environmental costs (Castel-Branco 2014; Mawdsley 2015).

As for recommendations resulting from this analysis, the Mozambican government should establish a clear land policy framework regarding foreign investment and its role within the transformation of the agricultural sector. It should support a participatory political process to ensure that investments in farming benefit local production and socio-environmental priorities. If the continuation of ProSavana with Japan does not contribute to local food security but increases the reliance on commercial crops, one should advise against it. Given the limitations of its domestic agricultural development, the government may instead pursue investment in productivity gains for small-scale farmers, for instance, through fair contract farming, and the support of smallholder cooperatives and farmer associations. In this context, the successful international mobilization of smallholder farmers could also reflect an opportunity for a progressive reform of traditional aid relationships.

Overall, the case of ProSavana shows that the combination of technical cooperation and foreign investment causes conflict if governments present it as a win-win situation without addressing the political dimension of FDI, in this case the powerful interests of Brazilian agribusiness. This conclusion calls for a concern for ownership that includes civil society groups while emphasizing the importance of recipient government agency and sovereignty.

Notes

[1] For instance, between 2005 and 2010, Brazil's technical cooperation increased nearly fourfold, particularly in lusophone African countries (Costa Leite et al. 2014).

[2] The country's agriculture sector accounts for a quarter of GDP, employing over 80 percent of the population, particularly women (90 percent) (World Bank data).

[3] International organizations including the World Bank and the Food and Agriculture Organization of the United Nations (FAO) tend to downplay the biodiversity and carbon costs of converting wet savannahs and assume that preservation and demarcation mechanisms are adequate. However, studies of the carbon conversion efficiency of land for food crops suggest the costs to biodiversity are much higher than can be justified. Given the goals of preserving carbon while meeting food needs, they suggest limiting cropland expansion and increase productivity (e.g. irrigation) on existing land (Searchinger et al. 2015).

[4] One hectare is equal to 0.01 km2, or 2.47 acres.

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Appendix

ProSavana Budget Overview

Project Component		Financial resources allocated by each partner	Total Budget	Timeframe
ProSavana	PD	JICA - US$ 6,264,000	US$ 7,723,370	24 months
		ABC - US$ 1,159,370		
		MINAG - 300,000		
	PI	JICA - US$ 7,317,000	US$ 13,483,840	5 years
		ABC - US$ 3,672,960		
		EMBRAPA - US$ 1, 356,280		
		MINAG - 1,137,600		
	PEM	not available	to be defined	6 years

Source: (Fingermann 2015)

4

Air Pollution at the U.S.–Mexico Border: Strengthening the Framework for Bilateral Cooperation

Lauren Eades

Introduction

The U.S.–Mexico bilateral environmental agenda has prioritized reducing air pollution at the border for more than two decades, yet poor air quality continues to plague the region. Urbanization and cross-border trade are contributing factors, with the high volume of commercial trucks, passenger automobiles, and idling vehicles at border crossings exacerbating air pollution. The U.S.–Mexico border has 43 points of entry (POEs), through which 6 million trucks, 77 million passenger vehicles, and 42 million pedestrians crossed northward alone in 2017 (U.S. Department of Transportation 2018). In addition, pollution from border factories and plants, legal and illegal burning of garbage and agricultural fields, the use of brick kilns for cooking in rural communities, and dust from desert areas all contribute to poor air quality.

It is difficult to collect data that pinpoints where air quality problems are most intense because air quality monitors on both sides of the border are spread thinly throughout the border region, and the averages within

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a city or county may not accurately reflect the pollution concentration in different parts of the region, particularly at the POEs. According to Quintana et al. (2015, 290), air pollution "is monitored by a few stations per region that are purposefully located away from local pollution sources and that reflect large scale air quality as the environmental laws apply to the airshed level concentrations, not local hotspots." In addition, differences in reporting practices between the United States and Mexico make direct comparisons difficult.

Despite these challenges, evidence indicates that the border region experiences high levels of airborne particulate matter (PM), especially PM_{10} and $PM_{2.5}$ (particulate matter less than 10 and 2.5 micrometers in aerodynamic diameter, respectively). These air pollutants are associated with dusty roads and industry, as well as gases and smoke emanating from vehicles and factories. Ozone (O_3), the major component of smog, is also prevalent in the border region due to the high levels of vehicle exhaust. O_3 is produced when vehicles emit nitrogen oxides (NO_x) and volatile organic compounds which combine with sunlight (Davila Fragoso 2016b; Quintana et al. 2013, 49). These compounds persist in the air as they move away from roadways; in particular, PM_{10} only reaches background concentrations at 580 feet from roadways, and NO_2 at 1,250 feet (Quintana et al. 2013, 12). Perhaps even more concerning, $PM_{2.5}$ does not concentrate around roadways; due to its tiny size, this type of particle floats freely in the air.

Reports demonstrate that cities along the U.S.–Mexico border regularly fail to meet their respective national standards governing air quality. In 2017, according to the U.S. Environmental Protection Agency (EPA), various border cities experienced multiple days with air pollution levels that were unhealthy for sensitive groups. Among them, El Paso, Texas had 22 days with unhealthy air quality; Las Cruces, New Mexico had 27; El Centro, California had 33; and San Diego, California had 55 (EPA 2017). The latest official data on Mexican air quality is from 2015, when Mexicali, Baja California reported levels of PM_{10}, $PM_{2.5}$, and O_3 that exceeded government standards (INECC 2015, xiii). In the same report, Tijuana, Baja California reported levels of PM_{10} that exceeded government standards, but no data was collected for $PM_{2.5}$ or O_3 (INECC 2015, xiii). Ciudad Juárez, Chihuahua was not part of the 2015 study because no data was submitted for the city, but in the 2014 report Juárez had excessive levels of PM_{10} and O_3 (INECC 2014, 6).

The U.S.–Mexico border region has a population of about 15 million people, largely concentrated in 14 pairs of sister cities that constitute binational urban areas (U.S.–Mexico Border Health Commission 2015;

Quintana et al. 2015, 287). Due to the border region's high rates of migration, high levels of poverty, low levels of health insurance, and inequitable health conditions relative to other parts of both countries, air pollution has a disproportionately large impact on border communities. For example, although the overall U.S. uninsured rate is 8.8 percent, in most Texas border counties more than 25 percent of the population lacks health insurance. Other U.S. border states fare better, with most border counties averaging 10 to 15 percent uninsured (Barnett and Berchick 2017, 1; Bowers, Gann, and Upton 2018, 4). Additionally, every U.S. border county has been designated a Health Professional Shortage Area (HPSA) for primary care, meaning that certain income groups, geographic areas, or facilities face shortages in health care providers (HHS 2017). In Mexico, 34.6 percent of border residents were uninsured in 2010, while 40 percent of Mexicans were uninsured nationwide (Lara-Valencia 2013, 43). Higher levels of employment in the border region result in better-than-average health insurance access on the Mexican side, but shortages of health care professionals have historically been more acute in Mexican border communities than in the United States (Lara-Valencia 2013, 43–44).

Related to the limited access to health insurance and health care, air pollution is associated with increased rates of allergies, asthma, cancer, tuberculosis, heart conditions, adverse birth outcomes, and premature deaths in border communities (Quintana et al. 2015, 2; Davila Fragoso 2016a). Elevated levels of air pollution particularly affect sensitive groups, including children, senior citizens, pregnant women, and people with underlying health problems, as well as people living closest to POEs, those who cross POEs on foot, and those who work at POEs.

Even though broader diplomatic relations between the United States and Mexico have been strained under the Trump administration, now is an important time to address air pollution due to the groundswell of support for clean air initiatives at the local and state levels. For example, in San Ysidro, a city in eastern San Diego County, community leaders are partnering with San Diego State University and the University of Washington to install new air pollution monitoring devices (Smith 2017). In Mexicali, an outcry is rising over the sickness and death associated with air pollution (Davila Fragoso 2016a, 2016b). In addition, California and New Mexico were among the 16 states that sued the EPA in the summer of 2017 for delaying the implementation of an air pollution law that would lower ozone levels (Hand 2017). Particularly in the United States, the current presidential administration's actions on climate change policy have motivated communities to tackle environmental problems more actively.

In Mexico, the upcoming change in presidential administration could influence the policy environment. After winning the July 2018 presidential election by the highest margin in more than 30 years, Andrés Manuel López Obrador will take office in December 2018. Although he has not directly addressed border air quality issues, his environmental agenda includes creating sustainable cities and combating climate change. Specifically, his "NaturAMLO" proposal calls for a shift away from highly polluting vehicles and personal vehicle use in cities (2018, 12).

Prior to his election, López Obrador spoke scathingly about President Trump and his policies toward Mexico, but he appears to be adopting a more conciliatory stance as president-elect. The week following his election, López Obrador stated, "We are neighbors, we have economic and commercial relations, links of friendship… Cooperation with the United States is very important to our progress" (McDonnell 2018). The López Obrador administration is expected to have goals broadly aligned with progress at the border, even though air pollution is not a high priority for the incoming administration as compared to corruption and public security concerns.

Over the past few years, community actions have highlighted the roles of various relevant stakeholders in reducing air pollution: in addition to local communities, academia, and state governments, environmental policies also influence the private sector and non-governmental organizations (NGOs). By working creatively with all of these groups, U.S. and Mexican environmental agencies can more effectively combat air pollution and its damaging effects on the health of the border population. This paper analyzes the existing agencies and agreements that govern border air pollution and offers policy recommendations to create more effective bilateral cooperation through coordination between local, state, and federal actors.

Analysis

Complementary institutions govern border air pollution, but they lack resources and some are not well integrated.

This analysis explains the border region's complex network of institutions that are intended to uphold air quality standards. Although these agencies and programs enhance institutional capacity in the border region by adding to the range of available mechanisms for environmental protection, their funding sources are ad hoc, varied, and sensitive to the political priorities of national, state, and local governments (Coronado and Mumme 2018, 3). As a result, border air quality initiatives are limited in capacity. Furthermore, this situation results in government agencies "lurching from crisis

to crisis" (Stephen Mumme, interview with author, July 3, 2018) in their efforts to protect the environment, lacking a broader strategic vision that would capitalize on the potential contributions of these complementary institutions, agencies, and programs (Sánchez-Ródriguez and Mumme 2013, 153).

The United States–Mexico Agreement on Cooperation for the Protection and Improvement of the Environment in the Border Area (1983), commonly referred to as the La Paz Agreement, is the main framework that underpins bilateral cooperation on shared environmental challenges in the border region. The La Paz Agreement facilitates decentralized collaboration between the U.S. and Mexican environmental agencies that is independent of each country's foreign ministry (Córdova and de la Parra 2009, 282–3). Accordingly, the EPA and the Secretariat of the Environment and Natural Resources (*Secretaría de Medio Ambiente y Recursos Naturales*, SEMARNAT) are the implementers of the La Paz Agreement, which provides the mechanism for the governments to work on environmental protection issues without stipulating a specific strategy (Mumme and Collins 2014, 304). The agreement requires national governments to consult with state governments and incorporates the participation of states and cities, intergovernmental organizations, NGOs, U.S. Native American border tribes, and Mexican indigenous communities (Mumme and Collins 2014, 305; EPA and SEMARNAT 2016a, 4). Finally, the agreement can be updated over time, as subsidiary agreements can be added in the form of annexes. Annex IV of the agreement deals specifically with air pollution resulting from copper smelters along the border, while Annex V addresses transnational air pollution in urban areas (EPA 1983).

Additional agencies also contribute to carrying out the La Paz Agreement. Among them, bilateral institutions were established following the signing of the North American Agreement on Environmental Cooperation (NAAEC), the environmental side agreement of the North American Free Trade Agreement (NAFTA). These institutions include the Border Environment Cooperation Commission (BECC) and the North American Development Bank (NADB). A trilateral institution that includes Canada, the Commission for Environmental Cooperation (CEC), was also created at that time. The NADB is a financial institution capitalized equally by the United States and Mexico that provides funding for environmental infrastructure projects in the border region, while the BECC designs and certifies environmental infrastructure projects in the region. In November 2017, the BECC was merged into the North American Development Bank (EPA 2018c). In 2016 the BECC administered $761,383 USD in EPA

grants for 19 border environmental projects as part of the La Paz Agreement (NADB and BECC 2017, 17). Under the merged NADB, the EPA has approved grants of $1.42 million USD for 26 projects beginning in 2018 (NADB 2018, 14).

Working in close partnership with SEMARNAT, Mexico's National Institute for Ecology and Climate Change (*Instituto Nacional de Ecología y Cambio Climático*, INECC) operates a National System of Information on Air Quality (*Sistema Nacional de Información de la Calidad de Aire*, SINAICA). This platform gathers and disseminates national air quality monitoring data. SINAICA provides hourly updates for major cities indicating which have acceptable air quality levels, air pollution levels exceeding government standards, or inadequate information (SINAICA 2018). SINAICA has been incorporated into SEMARNAT's implementation of the La Paz Agreement by serving as the instrument that communicates border air quality data to the public (EPA 2012, 18).

Along the same lines, AirNow is the official U.S. platform for air quality data. The border region's air quality data is supplied by the various state-level agencies, including the Texas Commission on Environmental Quality (TCEQ), the New Mexico Environment Department, the Arizona Department of Environmental Quality, the California Air Resources Board, the Imperial County Air Pollution Control District, and the San Diego County Air Pollution Control District.

The U.S.–Mexico Border Information Center on Air Pollution (*Centro de Información sobre Contaminación de Aire*, CICA) is sponsored by the EPA's Clean Air Technology Center, and it provides in-depth technical support to federal, state, and local government agencies, as well as academic institutions that are working to address air pollution in the border region.

Implementation of the La Paz Agreement also relies on the advice of two primary advisory committees. The Good Neighbor Environmental Board (GNEB) is a U.S.-based independent federal advisory board that provides recommendations regarding environmental infrastructure needs in states along the southern U.S. border. Its members include public servants and professionals from the private sector, academia, and the nonprofit sector. The advice of the GNEB is incorporated into EPA and SEMARNAT's border environmental strategy (EPA 2012, 39).

SEMARNAT's Advisory Councils for Sustainable Development (*Consejos Consultivos para el Desarrollo Sustentable*, CCDS) are the Mexican equivalent of the GNEB, and the CCDS advise the EPA and SEMARNAT on their shared border initiatives (EPA 2012, 39). In November 2017, the United Nations Development Program released a report that highlighted

the need for deep reform to make the CCDS truly participatory (UNDP 2017, 9).

Other agencies and institutions also deal with border air quality, but they are not incorporated into the EPA and SEMARNAT's framework. These agencies serve key functions in the context of transborder environmental policies.

- The U.S. Department of State's Office of Environmental Quality and Transboundary Issues (EQT) coordinates the development of U.S. foreign policy on air pollution. This office ensures that trade agreements have environmental commitments, engages with international institutions, and leads the environmental review process for transborder infrastructure projects (U.S. Department of State 2018).

- In Mexico's Ministry of Foreign Affairs (Secretaría de Relaciones Exteriores, SRE), the staff that focus on the environment work in several offices across the General Directorate for Global Issues, which is part of the Secretariat for Multilateral Affairs and Human Rights (SRE 2018).

- The U.S.–Mexico Border Health Commission (BHC) is a binational organization that the U.S. and Mexican governments created by executive agreement in July 2000 to study major public health issues affecting people in the border region. The commission is particularly concerned about air pollution as it relates to elevated incidence of asthma in children and adults (BHC 2015, 12). However, as of 2018 the BHC headquarters in El Paso, Texas has been closed, leaving its future role uncertain (Stephen Mumme, interview with author, July 3, 2018).

Border environmental plans have yielded mixed results.
The Border XXI Program (1995–2000) was the first program under the La Paz Agreement to deal specifically with air quality. Border XXI introduced air-quality assessment programs in each of the seven major urban areas along the border, and it implemented abatement programs in two of them: El Paso-Ciudad Juárez and Mexicali-Imperial Valley (Mumme and Collins 2014, 307). Arguably, this program offered the most ambitious goals under the most centralized model thus far in border environmental collaboration.

The Border 2012 Program (2002–2012) was implemented following the election of more conservative governments in both countries. Border 2012 had a lower federal budget and an emphasis on decentralized action, which translated to less progress. Other circumstances also limited Border

2012, including harsh new national security policies in the United States and rising drug violence in Mexico (Mumme and Collins 2014, 308). However, reducing air pollution was one of the five overarching goals of the program, and some progress was achieved. The program established five air quality monitoring areas and carried out joint monitoring at the El Paso-Ciudad Juárez border (Mumme and Collins 2014, 308). The program also facilitated the adoption of retrofitted emissions controls for diesel-powered trucks and buses. Despite these advances, a lack of interoperable data continues to limit air quality assessment efforts (Mumme and Collins 2014, 308).

The Border 2020 Program (2012–2020) builds on the work that took place under Border 2012, emphasizing bottom-up strategies for setting priorities with the goal of protecting the environment and public health. Border 2020 has five major goals, and Goal 1 is to reduce air pollution. The five key objectives underpinning Goal 1 are summarized below (EPA 2016):

1. Reduce the number of vehicles in the border region that do not comply with emissions standards, and reduce emissions at POEs through anti-idling and other measures.

2. Reduce the emissions of pollutants to ensure national air-quality standards are met in the major binational airsheds.

3. Maintain air-monitoring networks with real-time access to air quality data in all binational airsheds.

4. Complete climate action plans in Mexican border states and build up the capacity to ensure implementation.

5. Reduce emissions through energy-efficient or renewable energy projects.

The 2016 progress report, "State of the Border Region Indicators Interim Report 2016," does not offer adequate information regarding progress. The only air pollution-relevant indicator that has been reported is the "number of days exceeding air quality standards in border monitoring areas" (EPA and SEMARNAT 2016b, 9). Therefore, progress toward Objective 2 is highlighted, but no other progress has been reported. Other indicators that need to be measured include the percentage of vehicles that do not comply with emissions standards, progress on the implementation of anti-idling measures, the functioning of air monitoring networks, progress on the

completion of climate action plans in Mexico and related capacity, and progress on the implementation of energy-efficient and renewable energy projects.

Furthermore, a detailed breakdown of funding for the Border 2020 program is not available. Neither the EPA Budget in Brief (2017) nor the SEMARNAT Authorized Budget (2017) refer specifically to the program, although general information about funding for projects at the U.S.–Mexico border is included in the EPA Budget in Brief. The funding section of the "Border 2020: U.S.–Mexico Environmental Program" report does not include any dollar or peso amounts and merely reports that the Border 2020 coordinating bodies will evaluate funding needs on an ongoing basis (EPA and SEMARNAT 2012, 39). The report indicates that funding sources include federal funds, investments by state and local governments, private investment, and NADB financing (EPA and SEMARNAT 2012, 39). More details about the expenses of specific projects are shared in the Winter 2014–2015 and Autumn 2016 Highlights Reports: for example, the Autumn 2016 report describes a grant of $89,750 USD for the Texas A&M Transportation Institute to study the emissions of drayage trucks at the Laredo-Nuevo Laredo border, and a grant of $28,725 USD to the State of Chihuahua in partnership with the Autonomous University of Ciudad Juárez to conduct a study of particulate matter's sources in the Paso del Norte region (EPA and SEMARNAT 2016a, 5 and 9). In addition, EPA Region 9 states—California/Baja California and Arizona/Sonora—publish biennial action plans. California/Baja California provided nearly complete information on costs and funding sources for 2017–2018 projects, which totaled about $785,000 for Goal 1 (EPA 2018b). Arizona/Sonora left most costs "TBD," while the majority of funding sources were provided (EPA 2018a). However, despite these details, publicly available information does not demonstrate that Border 2020 is on track to achieve its goals in the planned timeframe.

Recommendations and Conclusions

More effective U.S.-Mexico bilateral collaboration on air pollution is needed, but complex institutional structures and decentralization have hindered progress. Peripheral challenges also influence the potential for policy change, especially U.S. security concerns at the border. Below are a few policy alternatives that could address these issues.

1. ***Monitoring systems must be able to identify air-pollution hot spots.*** The existing system, which measures overall pollutant levels in airsheds, does not accurately assess the conditions that affect some border communities. A

much denser network of monitors is needed on both sides of the border. In the absence of more federal funding to expand the network, communities could partner with universities, the private sector, or NGOs to organize these projects.

2. ***Joint monitoring on a broader scale must be achieved.*** Joint monitoring of air pollution levels has been a goal for almost two decades. In order to fully understand and respond to air pollution hot spots, monitoring systems must be interoperable on both sides of the border, and personnel must be employed to quickly fix monitoring stations that break down. More funding for the effective maintenance of the monitoring system may be needed.

3. ***Agencies must collect appropriate data to gauge progress.*** As the Border 2020 interim report demonstrates, the EPA and SEMARNAT need to collect more data that tracks progress. In the future, this might mean setting goals that the agencies know they will be able to measure. Some indicators that would assist in measuring progress toward Goal 1 include the change in average idling time at POEs, change in the percentage of POEs that have regular air quality monitoring, and changes in the types of pollutants that are monitored. In addition, the EPA and SEMARNAT should consider the percentage of vehicles crossing the border that do not comply with emissions standards, progress toward anti-idling policies, progress toward Mexican states' climate action plans, and progress toward energy efficient and renewable energy projects in the border region.

4. ***Funding for Border 2020 must be more transparent to ensure accountability and appropriateness.*** A major challenge in evaluating Border 2020 is the difficulty in accessing information about public spending on the program. Advocates cannot argue for increased EPA and SEMARNAT budgets without a deeper understanding of how the existing budget is being spent. Ultimately, Border 2020 may be in need of a larger budget, but publicly available data does not permit that analysis.

5. ***Border wait times must be reduced.*** Extended waits at border crossings have long been identified as a major cause of vehicle-based pollution, and current efforts have not curbed the concentrated air pollution at border crossings. The EPA and SEMARNAT should partner with Customs and Border Protection (CBP), which is already working on reducing border wait times through increasing its staffing and implementing trusted traveler programs, including SENTRI, NEXUS, and FAST, as well as Ready Lanes

and Pedestrian Ready Lanes (CBP 2017, 25–26). In its 2017 report, the GNEB also highlighted the need to reduce border-crossing wait times to combat air pollution (GNEB 2017, 44).

6. ***Coordination among key institutions must be enhanced.*** High-level collaboration between the EPA, SEMARNAT, the State Department, SRE, and a revitalized BHC would improve priority-setting and goal alignment, and greater integration could lead to steadier funding streams by raising the profile of border environmental initiatives. Collaboration between these institutions on border air quality issues is currently very limited, as federal interest in border environmental collaboration has declined in recent years.

In the short term, the EPA and SEMARNAT should prioritize making Border 2020 as effective as possible. One way to do so would be to follow the San Ysidro air quality monitoring example by partnering with academia or other institutions to develop innovative, scalable projects. Such projects would enable the EPA and SEMARNAT to access new funding streams and benefit from local knowledge. Education programs regarding public-private or public-academic partnerships could be organized quickly and carried out within the next year. Such initiatives could be championed by regional EPA and SEMARNAT offices and could have the effect of strengthening public commitment to fighting air pollution in border cities.

In the medium term, the EPA and SEMARNAT should lead the way in streamlining institutional processes and identifying solutions to reduce border wait times in partnership with other border agencies, particularly CBP. This strategy would require buy-in from CBP, which should be feasible given that all three agencies have an interest in reducing border traffic while maintaining security. In particular, CBP aims to cut down wait times by operating as efficiently as possible in order to stimulate the U.S. economy (CBP 2017, 4–5). Working with environmental agencies may also afford reputational benefits to CBP. In addition to expanding the programs already being implemented by CBP, the agencies could incentivize vehicles to reduce their emissions by creating a "fast track" lane specifically for vehicles that meet certain higher emissions standards.

Finally, even though concerns related to budget transparency have been discussed above, the EPA and SEMARNAT should push for more funding to improve binational air pollution monitoring systems. The average cost of an air monitoring station start-up is $100,000 USD, not including the monitoring equipment (Shina, Brick, and Shields 2015, 35). Equipment for one monitoring station has traditionally cost $100,000 USD, although much cheaper new technologies are emerging (New Jersey Clean Air Council

2017, 18). Therefore, if existing technology is used, doubling the density of air monitoring stations at the border would cost roughly $27 million USD. In the United States, champions for this budget increase could come from various levels—ranging from civil society groups and local governments to congressional and Senate leaders. In Mexico, the federal government has historically been more willing to support environmental goals, although it has fewer resources to contribute. The United States could provide a larger portion of funding for binational monitoring systems if Mexico does not have the available resources.

The EPA and SEMARNAT have appropriate goals to improve air quality in the border region, but so far implementation and monitoring have been weak, and a policy intervention may be necessary for improvement. The implementation of these recommendations would enhance environmental justice at the U.S.-Mexico border and contribute to better health outcomes in the medium and long term. More broadly, environmental policymakers can learn from this case that effective data collection, transparency, interagency collaboration, and political will are necessary to achieve environmental goals.

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5

The Great Canadian Oligopoly: A Comparative Approach to Controlling the Shadow Banking Industry

William O'Connell

Introduction

Though the causes of the 2007–2008 financial crisis were numerous, perhaps none were as unprecedented as the rise of the shadow banking industry. Technological innovation, deregulatory trends in domestic and global financial governance, and an unquenchable thirst for yield all contributed to an explosion of credit intermediation that took place outside traditional banking in the United States and elsewhere. Operating outside public oversight, shadow banks drastically increased systemic risk, ultimately undermining the entire global financial system. This trend, however, did not affect all countries equally; some countries, including Canada, found themselves considerably less exposed to the collapse of the shadow market. The United States, by contrast, served as a breeding ground for these institutions.

While Canada is by no means immune to the risks posed by the shadow banking sector, the market structure of its banking system and the centralized nature of its regulatory regime has served to reduce the importance of shadow banking in Canada as compared to other countries, the United

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States in particular. In view of Canada's relatively mild experience during the 2007–2008 crisis, this paper seeks to identify how the oligopolistic nature of banking in Canada, and the concentrated regulatory regime that oversees it, mitigated both the size and scope of the shadow banking sector and reduced the systemic risk posed by such institutions in the lead-up to the crisis. In contrasting this approach with that of the United States, where financial institutions and regulatory agencies are far more decentralized, it is clear that the Canadian approach is better suited to contain the risks posed by shadow banks.

As the crisis unfolded, Canadian banks remained relatively stable. There were no bailouts or government-negotiated takeovers and retail deposits remained stable, allowing banks to maintain a crucial source of liquidity. Canadian banks also did not experience the spike in overnight funding costs seen in other markets, nor did they suffer the heavy losses felt by their American counterparts (Arjani and Paulin 2013, 1–3). Though the market for asset-backed commercial paper collapsed in Canada, as elsewhere, the resilience of other markets blunted the impact of this event.

Given the increasing integration of financial markets and the growing ability of contagion to shift domestic panics into international crises, the nature of domestic markets and regulations necessarily has a significant impact on the international financial system as a whole. As such, attempts to stabilize global financial markets necessarily involve domestic policy reforms and structural change. Thus, this paper seeks to demonstrate a means through which domestic markets may become less subject to certain forms of systemic risk, namely the proliferation of shadow banking, which in turn increases stability of the global financial system as a whole.

The first section provides an overview of shadow banking. It will discuss which institutions can be defined as "shadow banks," the purpose they serve within the financial system and the role they played in the 2007–2008 financial crisis. The second section discusses the role market structure plays in determining the size and scope of the shadow banking sector by contrasting the Canadian and American banking models. Canadian banks are chartered at the federal level and the largest securities dealers are subsidiaries of the largest banks. Thus, nation-wide branching systems have emerged in Canada, providing banks with an enormous deposit base from which to draw funds. The American system, conversely, is much more regional and fragmented, necessitating a more active wholesale funding market.

The third section reviews the regulatory frameworks employed by these two countries and their effectiveness in limiting vulnerabilities caused by

the proliferation of shadow banking activity. In Canada, financial services firms are regulated by the Office of the Superintendent of Financial Institutions (OSFI). With a broad, flexible mandate and a responsibility to ensure the stability of organizations as a whole, OSFI leaves little room for the creative regulatory arbitrage that plagues the United States. The American system, meanwhile, is fragmented into a dozen or more highly specialized agencies, with none overseeing organizations involved in several areas of finance top-down, allowing for banks to "shop" for their regulators and use creative corporate structure techniques to skirt prudential oversight.

The final section discusses the implications these two countries' approaches have for the systemic risks posed by shadow banks in order to identify both factors that insulated Canada from the worst of the financial crisis and aspects that could be adopted by other countries to reduce systemic risk in the global financial system. With a nation-wide branching system and the consolidation of commercial and investment banking, the Canadian system reduces the necessity for a large wholesale funding market, potentially reducing systemic risk in the banking industry. By consolidating oversight, regulators can see the entire "puzzle", allowing them to evaluate the health of entire organizations to better anticipate issues that may arise. Both factors are essential to the relative stability of the Canadian financial system; the interaction between the two increase stability far beyond what would be achieved with just one.

Shadow banks, or rather the activities generally undertaken by shadow banks, do not *in themselves* pose a major systemic risk to the financial system,[1] but allowing these activities to take place predominantly outside the scope of regulators is highly problematic. By expanding the scope of activity undertaken by conglomerates primarily engaged in commercial banking and both broadening and consolidating the authority of the agencies that oversee them, the systemic risk posed by the shadow banking sector can be contained. Though strengthening explicit regulations is no doubt important, this paper aims to demonstrate that market and regulatory concentration can reduce systemic risk irrespective of the rules imposed upon institutions. There remain substantial questions regarding moral hazard and accountability given an oligopoly of systemically important financial institutions as well as the economic value of certain forms of derivatives trading undertaken by these institutions (and their shadow counterparts), but these are beyond the scope of this paper.[2]

What Are Shadow Banks and What Purpose Do They Serve?

In a 2012 speech, former U.S. Federal Reserve Chairman Ben Bernanke defined shadow banks as institutions or markets that provide financial intermediation much like banks, but do so outside the scope of traditional regulation. Among his examples were money market mutual funds, asset-backed commercial paper (ABCP) markets, investment banks, and mortgage dealers.[3] Much like traditional deposit-taking banks, these institutions provide credit intermediation services, making loans and borrowing short-term to fund long-term investments. The essential difference is that the former does so under clearly-defined supervisory structures and with the guarantee of government-sponsored deposit insurance, while the latter is pursued either through off-balance sheet activities of regulated banks or by institutions that are subject neither to explicitly prudential regulation nor insurance for their creditors. In essence, "banks" are financed primarily through *retail* funding, while "shadow banks" are financed primarily through *wholesale* funding.

Banks traditionally borrow short-term by using their clients' liquid deposits and lend long-term to finance mortgages, business investment, consumption etc., charging interest on these loans to generate profit. The originate-to-distribute model, which emerged in the 1970s, began to break this pattern down. Under this model, banks create loans which are then securitized and distributed. Investment dealers or off-balance sheet structured investment vehicles (SIVs) pool these loans and sell them to investors or other SIVs with varying risk appetites (Pozsar 2008, 13). In theory this system should distribute risk to those with the greatest appetite for it, though as the recent crisis demonstrates, the complexity of the securities and the opaqueness of the institutions that sponsor them pose challenges to properly evaluating their risk. In June 2007, shadow bank liabilities stood at $22 billion USD compared to $14 billion USD for traditional banks (Pozsar et al 2013, 6).[4]

In addition, as Adrian and Shin (2009) point out, the majority of these risks were not necessarily passed on to final investors leading up to the crisis, but rather were contained within the banking system itself. Loans were securitized by non-bank financial institutions and sold to other non-bank institutions, who could purchase credit default swaps (a form of insurance against the default of assets underlying asset-backed securities) from a third set of non-bank financial institutions to insulate themselves

from any perceived risk. These non-bank intermediaries, shadow banks, were operating outside the reach of regulators and, as such, could borrow on extremely short-term ABCP markets to fund illiquid long-term investments, with asset-liability ratios far beyond the capital requirements imposed on deposit-taking banks.

Prior to the financial crisis this activity was often undertaken through conduits and structured investment vehicles (SIVs) (Pozsar 2008, 16). A conduit is an entity that purchases or creates loans, generating profit by pooling these loans and selling them to investors (Elmer 1999, 27). An SIV is a pool of assets, typically financed short-term, designed as an off-balance sheet entity (Das and Kim 2016, 1–2). Many of these entities were sponsored by banks, but as they were off-balance sheet, the risk they posed to the financial system went unnoticed in the lead-up to the crisis. In addition, the credit default swaps purchased by SIVs and other entities to hedge against their securities were likewise often produced by such off-balance sheet entities.

As these institutions operate through wholesale, and not retail, funding, they pose a substantially greater risk to the financial system than traditional deposit-taking banks. Retail deposits are insured and, as such, if a bank begins to falter there is little incentive for its creditors to withdraw their funding. Wholesale funding does not have this luxury; if a shadow bank begins to falter, creditors have an immediate incentive to withdraw their funds or refuse to roll over loans. The result is much like a traditional bank run. Thus, when investment banks such as Bear Stearns or Lehman Brothers start to appear shaky, a domino effect occurs where creditors pull their money from these institutions, forcing them to pull their loans to other such institutions and so on. Without insurance to insulate against these runs and oversight to prevent shadow banks from accumulating too much risk or debt, their activity poses a grave threat to financial stability.

The Effects of Market Structure

Canada's banking sector is dominated by the so-called Big Six.[5] These financial conglomerates have controlled roughly 90 percent of the banking sector in Canada for the past twenty years (McKeown 2016, 2) and, unlike many of their American counterparts, operate nation-wide branching networks. While much of the post-crisis policy discussion has been centered around the too-big-to-fail nature of the United States' largest banks, the Canadian banking sector is far more concentrated than its counterparts to the south. Indeed, while organizational separation between the largest commercial and investment banks still exists in the United States, in

Canada the largest securities and investment companies are in fact arms of the Big Six.

Though a full historical overview of the divergent paths of banking in North America is beyond the scope of this paper, it is important to note that these differences in market structure are not a recent phenomenon. Banks in Canada are chartered federally, whereas in the United States federal authority over banking has historically been an ambiguous and highly contentious issue (Bordo, Redish and Rockoff 2011, 4). Canadian banks were free to establish nation-wide branching systems while the United States fostered a mix of state-chartered regional banks. The result was a major divergence in the relative stability of each country's financial sector. As Calomiris and Gorton (1991, 116) note, Canada has never experienced a systemic banking crisis and the bank failures it has experienced have been both fewer in number and less severe than those in the United States.

Prior to the 1980s, the Canadian banking system was characterized by the "four pillars" of financial institutions: chartered banks, trust companies, life insurance firms, and securities dealers. Canada, however, was not immune to the deregulatory trends that began to emerge in this period. By the mid-1990s, the Big Five (as they were then) had each purchased or, in the case of TD Bank, created the country's largest securities dealers and mortgage brokers. They also began sponsoring the largest pools of mutual funds.

Brean, Kryzanowski, and Roberts (2011, 263–265) identify two key, interconnected benefits from this difference in concentration. The first is that it allowed Canadian banks to finance themselves through less risky avenues. As bank deposits are insured, they are less susceptible to runs than money markets or other forms of credit intermediation. As a result, a bank (or bank-like institution) lending against a higher percentage of insured deposits is necessarily safer than a similar institution lending against other forms of funding at the same ratio. The second benefit is that it drastically reduced the necessity for a secondary funding market for banking activity; banks could remain highly profitable without drastically increasing their risk exposure. Indeed, as Pauly (2014, 163) notes, leverage ratios for Canadian institutions averaged 18-to-1, while American and European banks were between 25- and 35-to-1.[6]

There is a third important benefit from this market convergence; bringing the largest investment banks under prudential supervision. As Chang et al. (2016, 25) note, bank-owned investment dealers in Canada are subject to supervision by OSFI. This distinction is essential to understand the relative importance of shadow banking in Canada vis-à-vis the United States. In

Canada, non-bank investment dealers have a small and declining share of the investment banking market (Chang et al. 2016, 35), while the same cannot be said of the United States. For example, though Royal Bank of Canada's Dominion Securities and Goldman Sachs serve similar market functions, the former is subject to greater prudential regulation due to its direct linkage with RBC's retail banking business.

More than a decade after the four pillars were removed in Canada, the United States passed the Financial Services Modernization Act in 1999, removing the separation between commercial and investment banking that had been in place since the Great Depression. Though this repeal did lead to mergers and consolidation within the American banking system, and thus an increase in the systemic risk posed by individual institutions (Korotana 2012, 629–630), nation-wide branching networks did not develop to nearly the same extent. As a result, the too-big-to-fail institutions that developed in the United States were primarily investment banks like Bear Stearns and Lehman Brothers that were subject to far less regulation than commercial banks and were far more exposed to the risks associated with the shadow banking market.

The role that the failures of Bear Stearns and Lehman Brothers played in the crisis highlights the importance of this distinction. By being primarily investment banks, these institution's creditors were not covered by deposit insurance. This left them much more susceptible to runs, and therefore more systemically risky, than traditional commercial banks. Canada's too-big-to-fail institutions, by contrast, are covered by deposit insurance which serves to better insulate them from creditor panics. Thus, the consolidation of commercial and investment banks, and the establishment of nation-wide branching networks, can be seen as means of limiting banks' exposure to and reliance on shadow banking markets.

It should be noted, however, that this extreme concentration is not without trade-offs. For one, the Big Six are able to extract oligopoly rents from consumers through higher fees and lower interest rates on deposits. While this increased profitability could also reduce the need for banks to take risky investment positions, it is inherently regressive insofar as it represents a "tax" on society to maintain financial stability. In addition, the too-big-to-fail nature of the Big Six, and the fact that their operations draw funds from an enormous insured deposit base, contribute to greater moral hazard within the Canadian system.

The Centralization of Regulation

Financial regulation in Canada is consolidated into a small number of

agencies with broad mandates. The Office of the Superintendent of Financial Institutions (OSFI) is responsible for all banks, insurance companies and other non-bank financial institutions. It is likewise responsible for monitoring the systemic health of both individual conglomerates and the system as a whole, with the authority to take over insolvent or systemically important institutions if the agency deems it in the public interest to do so.[7] It may also set and adjust different standards for different banks as it sees fit. In addition, the Canadian Deposit Insurance Corporation (CDIC) and the Financial Consumer Agency of Canada (FCAC) are responsible for overseeing the federal deposit insurance program and consumer protection, respectively. Securities are regulated at the provincial level.

In contrast, the American regulatory system is highly fragmented, composed of many agencies with overlapping mandates. The main federal regulators consist of the Federal Reserve, which regulates a variety of bank and non-bank holding companies and state banks that are members of the Federal Reserve system, the Federal Deposit Insurance Corporation (FDIC), which regulates federally-insured depository institutions and state banks that are not members of the Reserve system, and the Office of the Comptroller of the Currency (OCC) which regulates federally chartered banks. The Securities and Exchange Commission (SEC) oversees securities markets and investment banks, and the Commodity Futures Trading Commission (CFTC) regulates derivatives markets and related firms. Insurance companies are regulated at the state level.

To illustrate the consequences of these differences in approaches to financial regulation, consider the failure of American International Group (AIG) in the summer of 2008. An enormous financial conglomerate, AIG was subject to a $182.5 billion USD bailout (Sjostrom 2009, 945) at the height of the financial crisis as a result of its position as a primary issuer of credit default swaps. AIG was primarily an insurance company and, as such, its insurance subsidiaries were subject to oversight by individual state insurance regulators. However, as Sjostrom (2009, 988) notes, AIG's purchase of a savings and loan bank in 1999 put its non-insurance businesses under the regulatory purview of the Office of Thrift Supervision (OTS).[8] Among the institutions under OTS supervision was AIG Financial Products (AIGFP), whose main activity was the issuance of credit default swaps.

The credit default swap market, however, was explicitly exempt from prudential regulation as a result of the Commodities Futures Modernization Act of 2000 (CFMA). Despite existing as a tradable financial instrument (and therefore a "security," subject to regulation by the SEC) and a

financial derivative (and therefore subject to oversight by the CFTC), the CFMA amended existing laws to exclude derivatives contracts between large institutional investors and firms (Sjorstom 2009, 984). Thus, the CFMA left AIGFP as a *de facto* shadow bank and the organization as a whole subject to a dozen or more regulatory agencies, each examining an incomplete section of the puzzle, with the most systemically important piece outside any oversight at all.

Though the state-level insurance regulators were responsible for ensuring the solvency of AIG's subsidiaries, as Schwarcz and Schwarcz (2014, 1633) point out, these regulators did not focus their attention on the holding companies that own these and other financial services firms. Indeed, as these holding companies cross a number of legal jurisdictions, insurance regulators did not require aggregate financial reporting for the parent companies of the firms they oversaw. Schwarcz and Schwarcz suggest this issue within the insurance industry contributes strongly to the potential for systemic risk. Given the highly fragmented nature of regulation over the entire financial industry in the United States, this argument can be applied to banking regulation as a whole.

In contrast, consider the regulatory structure AIG would have faced in Canada.[9] As an insurance company, AIG would have been overseen top-down by OSFI. Its insurance, banking, and investment subsidiaries would all have been under the microscope of one agency with the authority to pre-emptively intervene if necessary. While its securities dealings would be regulated at the provincial level, the impact of those dealings on the health of the organization as a whole would nonetheless have been under scrutiny. Breydo (2015, 1028) draws a similar comparison with JP Morgan's Chief Investment Office; in either example it is clear that OSFI's access and mandate to review organization-wide data could have better foreseen potential overexposure. In this view, OSFI's more comprehensive mandate would have eliminated AIGFP's status as a *de facto* shadow bank.

This is not to say Canada avoided any of the issues associated with shadow banking during the global financial crisis. In 2007, the market for asset-backed commercial paper[10] in Canada (and elsewhere) froze, jeopardizing upwards of $30 billion CAD, or roughly one-third of the market, for investors in ABCP notes (Chant 2008, 4), a proportion similar to the ABCP crisis in the United States (Covitz, Liang and Suarez 2013, 12). Chant (2008) describes how the issuers of ABCP notes were exempted from issuing a prospectus to provincial securities regulators and investors. They needed only an approved rating from a credit rating agency, agencies that themselves are not subject to oversight. Beyond this, the sponsors of

the conduits issuing ABCP notes were subject to little or no regulation; sponsoring banks used SIVs to skirt capital requirements, while a large number of issuers were sponsored by firms that were not involved in financial services themselves and thus not subject to oversight by regulators. While the Canadian regulatory structure certainly improved oversight and stability in Canadian financial markets, the ABCP crisis shows it is far from a perfect model.

Implications for the Oversight of the Shadow Banking Sector

At the onset of the 2007–2008 financial crisis, the liabilities of the shadow banking sector stood at over one and a half times the liabilities of the traditional banking sector in the United States. In Canada, however, the relative size of the shadow banking sector peaked at around 60 percent of the traditional banking sector in 2007 (Arjani and Paulin 2013, 5). This enormous difference can be explained in part by the differences in market and regulatory structure between the two countries.

First, through consolidating financial services into a small number of extremely large firms, Canadian financial markets had fewer incentives to search for alternative forms of financing or to engage in creative regulatory arbitrage to gain a competitive advantage. Additionally, the acquisition or creation of Canada's dominant investment dealers by the Big Six brought the bulk of the investment banking industry under the prudential supervision of OSFI. The American system, on the other hand, encouraged rapid innovation both in the types of assets and derivatives available on the market and in accounting and corporate structure techniques that skirted effective regulation. The result was a thriving shadow banking sector in the United States leading up to the crisis, with a comparatively weaker sector in Canada.

Historical legal structures no doubt play an important role. Since Canadian banks are chartered at the federal rather than the provincial level, commercial banks can easily establish nation-wide branching systems that afford both stability and broader deposit bases to draw from. Canada's dominant financial conglomerates can thus function primarily as commercial banks. By contrast, commercial banks in the United States must navigate different legal requirements in each state, making it enormously costly and difficult to establish branching networks across states. As a result, the United States has seen many of its systemically important financial institutions operate primarily as investment banks. Both the Canadian and U.S. models can contribute to moral hazard within the financial system,

but the latter model is subject to much looser regulation and is far more susceptible to runs on its core activities.

Second, the concentration of regulatory authority and the broad, principles-based approach embedded in OSFI severely hampered the ability of Canadian financial institutions to engage in regulatory arbitrage. By encompassing a far larger spectrum of financial institutions under its regulatory regime than its American counterparts and having the authority to evaluate systemic risk on an organization-wide level, OSFI brought markets and firms under the microscope in Canada that existed in the shadow of regulated banks in the United States. The regulatory regime in the United States, by contrast, is highly fragmented into dozens of agencies with specific mandates; as such, markets and firms were created outside of the scope of regulation, in whole or in part, vastly increasing systemic risk.

The spectacular collapse of AIG Financial Products demonstrates this difference. Its parent company was subject to dozens of different regulatory agencies and many of its activities were explicitly exempt from supervision. As such, there was no singular authority reviewing the financial health or systemic risk of the organization as a whole. The centralized regime AIG would have faced in Canada could perhaps have prevented its collapse.

It is thus the interaction between market and regulatory concentration that could serve as a model for reducing the systemic risks posed by the proliferation of shadow banking and financial innovation. In a highly concentrated market, it becomes more difficult for significant financial intermediation to occur outside the institutions under scrutiny. Nationwide branching gives banks a much larger retail deposit base from which to draw funds, reducing the incentive to create and sustain vibrant wholesale funding markets. Under consolidated regulatory agencies that have broad and flexible mandates, large organizations have much more difficulty hiding activity off of their balance sheets or engaging in activities that pose serious systemic risks to the system as a whole. Without different prudential regulatory agencies, regulatory arbitrage becomes difficult if not impossible.

While each of these forms of consolidation on their own would likely improve stability, their effectiveness at limiting systemic risk would be reduced significantly in the absence of the other. Under a consolidated financial market but with a highly fragmented regulatory regime, regulatory gaps within large financial conglomerates can dramatically increase the likelihood and consequences of a firm's failure, as seen with the collapse of AIG. The opposite arrangement, regulatory consolidation with a

highly fragmented banking market, would also pose challenges. Though it would reduce the ability of financial services firms to engage in regulatory arbitrage, such an arrangement would also force regulatory agencies to monitor a significantly higher number of firms, which would strain the agencies' resources more than if they were tasked with monitoring fewer, larger conglomerates. The wider market incentivizes regulatory agencies to issue blanket rules rather than taking the tailored, principles-based approach that has made OSFI so effective and adaptable vis-à-vis its more legally-focused American counterparts.

This is not to imply that the Canadian banking system is without risk, nor that the trade-off of financial stability over competition in banking is necessarily ideal. Some scholars, such as Russell (2012) and Boone and Johnson (2010), are more pessimistic about the health of the financial system in Canada, and with good reason. Issues of moral hazard, conflicts of interest and high fees for consumers persist. Nonetheless, it is clear from the fallout of the financial crisis that the banking system in Canada is better protected against the risks posed by shadow credit intermediation. Its market and regulatory model could be emulated in other countries to help bring an enormous part of the global financial system out from the shadows.

Notes

[1] An assumption not without debate, to be sure.

[2] Though having fewer systemically-important institutions, even if they are larger and more systemically important, could prove easier to regulate.

[3] For the full speech, see Ben S. Bernanke, "Some Reflections on the Crisis and Policy Response" (Speech, New York, New York, April 13, 2012).

[4] This discrepancy has decreased since the crisis, though shadow bank liabilities remain a significant portion of total bank debt.

[5] In order of size, the Royal Bank of Canada (RBC), Toronto-Dominion Bank (TD), the Bank of Nova Scotia (BNS), the Bank of Montreal (BMO), the Canadian Imperial Bank of Commerce (CIBC) and the National Bank of Canada (NB).

[6] Though Wells Fargo and JP Morgan, the two most sustainability run large American banks, had ratios substantially lower than the Big Six average (Boone and Johnson, 2010).

[7] See *Guide to Intervention for Federally Regulated Deposit-Taking Institutions,* OFSI, http://www.osfi-bsif.gc.ca/Eng/fi-if/rai-eri/sp-ps/Pages/gid.aspx

[8] An agency formerly responsible for supervising savings and loan institutions whose responsibilities were divided between existing regulators and the newly created Consumer Financial Protection Bureau as a result of the Dodd-Frank Act.

[9] Perhaps the best Canadian equivalent would be the Manulife Financial Corporation, an insurance giant with a large banking subsidiary, the Manulife Bank of Canada.

[10] A short-term loan (typically 90 days or under) backed by an underlying asset or group of assets.

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6

Public Sector Isolation: Labor Market Divisions in Jordan

Caper Gooden

Introduction

Jordan's ethnic economic divisions could undermine the regime; current U.S. policy does not account for the political risks of these divisions. Recent International Monetary Fund (IMF)-imposed privatization policies deepen ethnic tensions by economically benefiting West Bankers (also referred to as Palestinian-Jordanians) at the expense of East Bankers. Since the 1970 Jordanian Civil War when the Palestinian Liberation Organization attempted to overthrow the regime, the monarchy has depended on East Bankers for protection against disgruntled West Bankers, who are politically disenfranchised and prone to anti-regime protests. However, East Bankers are becoming increasingly dissatisfied with the monarchy's new economic policies. As a result, their support is declining. This development is particularly dangerous since East Bankers comprise the bulk of the Jordanian military, police, and mukhabarat (Jordan's internal security apparatus). In the context of declining support from the security sector, a West Banker revolt could threaten regime survival.

Current U.S. policy focuses on strengthening Jordan's security against external threats and facilitating broad economic growth initiatives but fails to account for internal social cleavages. Washington cannot afford for Jordan, a vital ally in an increasingly unstable region, to succumb to civil unrest. With a well-educated, largely unemployed workforce, Jordan

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has high growth potential in skilled industries such as information and communication technology (ICT). To stave off unrest, the United States should alter existing ICT sector development programs to place more emphasis on the economic empowerment of East Bankers.

Potential for Instability in Jordan

The psyche of the Jordanian people has gotten to a boiling point.

-King Abdullah II, 2016 (Jordan Times)

As a strategic regional partner for the United States and European powers, Jordan's stability is crucial. Recent threats to this stability are of international concern. Jordan's high refugee intake and operations against the Islamic State in Iraq and Syria (ISIS) have led to terrorist infiltration and spillover violence that pose the greatest external risks to Amman. The Kingdom has long depended on the East Banker-dominated military and intelligence apparatus to maintain order in the face of internal and external threats, and it continues to do so in the wake of these new challenges. For this reason, growing East Banker discontent as a result of deteriorating economic conditions poses an existential threat to the regime. The labor market in Jordan is divided between East Bankers and West Bankers, and unequal economic growth prompts hostilities both between the two groups and against the regime itself.

Underlying Causes: IMF Pressure and Divided Society

The 2012 Jordan-IMF agreement has had unforeseen consequences due to the monarchy's previous economic policies, which favored an ethnically divided labor market. This agreement has contributed to the risk of imminent economic crisis by deepening this divide.

- *IMF Stand-By Arrangement*. In 2012, the IMF approved a $2 billion USD Stand-By Arrangement (SBA) that provided liquidity to help Jordan reduce fiscal deficits while strengthening growth prospects (International Monetary Fund 2015). The terms of the SBA mandated that Jordan enact strict austerity policies. To reduce the deficit, improve the investment climate, and maintain fiscal sustainability, the monarchy increased fuel prices and cut water, electricity, and energy subsidies, thereby increasing the cost of living (International Monetary Fund 2015). Moreover, the policies failed to create enough jobs to compensate for these higher prices, provoking some Jordanians to protest (Satloff and Schenker 2013, 3).

In August 2016, the IMF agreed on a $723 million USD Extended Arrangement for Jordan to continue implementing economic reforms. Similar to the previous SBA, the broad goals would be to stimulate job creation, reduce Jordan's high public debt, and reform governance and labor market policies (International Monetary Fund 2016). These changes have led to increased privatization, reduced government spending, and decreased subsidies on food and energy.

- *Ethnic Tensions*. Jordan's population is divided into two groups: East Bankers and West Bankers. The term "East Bankers" refers to the population that historically lived in Jordan prior to the Hashemites' ascension to the throne. They constitute the monarchy's main support base. While they were once the majority, East Bankers now comprise between 25 and 40 percent of Jordan's population (Sharp 2016, 6). The Hashemite regime has traditionally favored East Bankers, who consequently have a disproportionately large amount of political influence (El Muhtaseb 2013, 2). In exchange for loyalty, the government has historically provided East Bankers with public sector jobs, access to better health care, and larger pensions (Tell 2015, 3). Notably, many East Bankers work in the armed forces, police, bureaucracy, and intelligence apparatus (El Muhtaseb 2013, 2). These military jobs are often the only thing preventing rural East Banker families from slipping into poverty (Baylouny 2008, 287–301).

  There are two subsets of East Bankers: the elite and *Hirak*. High-ranking officials in these agencies are the elite East Bankers, who provide consistent support for the monarchy. The survival of the regime is in their best interest so long as their benefits are maintained. *Hirak* is a group of East Banker youth who began organizing in opposition to the regime in 2011 (Yom 2014, 229). Unlike elite East Bankers, *Hirak* demands greater democracy and an end to corruption. Moreover, in 2011 *Hirak* protests demanded that King Abdullah step down, which was unprecedented and illegal in Jordan (Greenberg 2011).

  West Bankers are refugees and descendants of refugees who have been living in Jordan since the 1948 Arab-Israeli War (Sharp 2016, 6). Since their arrival in Jordan, they have been politically disenfranchised, especially since the Palestinian Liberation Organization attempted to overthrow the Jordanian monarchy in 1970. For example, over 60 percent of Jordan's population lives in urban areas, which are predominantly West Banker, but only one-third of parliament seats represent urban districts (Freedom House 2015). Fair

electoral districting would weaken the political leverage of East Bankers. As such, East Bankers fight against political reforms that would benefit West Bankers (Shaikh 2012). The systemic political exclusion of West Bankers has fueled resentment against the monarchy.

- *Non-Inclusive Economic Growth*. Due to recent IMF-mandated reforms, approximately 70 percent of new jobs in Jordan are created in the private sector (International Labour Organization 2011). The main beneficiaries of these policies have been West Bankers, who have historically dominated the private sector. On the other hand, East Banker dependence on public sector jobs and perceived inaccessibility of private sector opportunities prevents smooth integration into the free market, thus decreasing their employment options in an increasingly privatized economy (El Muhtaseb 2013, 2). The few East Bankers who do work in the private sector complain of limited upward mobility, though the underlying reason is unclear (Sean Yom, in discussion with the author, March 2016). Since 2012, more than half of all labor protests have been in the public sector (Namrouqa 2014).

The combination of Jordan's ethnic divisions and the ongoing economic reforms has accelerated the institutionalization of economic inequality between the East and West Bankers. These factors are potential drivers of instability; however, it is unlikely that Jordan will reverse its economic reform program.

Proximate Causes: Alienated East Bankers

While the underlying causes lay the groundwork for potential instability, their consequences present a more immediate threat of civil unrest. These proximate causes are reaching a climax, but they can feasibly be addressed through policy changes.

- *High East Banker Unemployment.* In exchange for government patronage, East Bankers preserve the Hashemites' political interests and prevent a West Banker uprising (El Muhtaseb 2013, 2–3). With diminishing opportunities for public sector jobs and hesitation to work in the private sector, many are left jobless. Unemployment rates in regions dominated by East Bankers generally exceed 20 percent (O'Toole 2014), compared to 16 percent in 2008 (Khamis 2011). Even though East Bankers tend to be well-educated, there are few job opportunities available upon graduation. In 2013, 200,000 college graduates applied for 6,400 public sector jobs (Schenker 2015). As of early 2016, over 200,000 graduates have passed the civil service exam requisite for a government position, but are still waiting for a job. Many believe that

a position will only become available if someone retires (Sean Yom, phone interview by author, March 22, 2016). Importantly, East Banker-dominated regions are significantly poorer than the West Banker urban areas. When given a government job, only one person per family works and the salary barely manages to keep the family above the poverty line (David Schenker, in discussion with the author, March 2016).

- *Disgruntled and Empowered West Bankers*. Although they are politically marginalized, West Bankers have benefitted the most from the government's recent economic policies (Jordan Department of Statistics 2015). This wealth gives them slightly greater influence within Jordanian society (David Schenker, discussion). Despite this improved economic standing, since the Palestinian Liberation Organization attempted to overthrow the Jordanian monarchy in 1970, there has been a climate of suspicion towards West Bankers. This wariness impacts government policy and leaves West Bankers politically disenfranchised. Since 2007, West Banker-supported political groups have demanded reforms to address this inequity. These groups demanded a reduction of the king's influence, an increase in the power of the parliament, and reforms to address government corruption (Bondokji 2015, 3). During the Arab Uprisings in 2011, West Bankers (mainly organized through Islamist parties) comprised the largest groups of protesters and encouraged rioting in the streets (Al Sharif 2013).

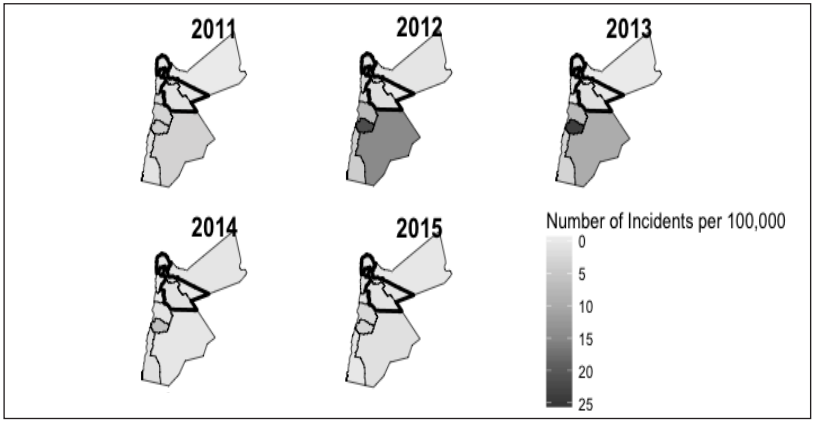
Combined, these two factors increase the likelihood for political instability. With the new economic reforms, East Bankers feel that the government is favoring West Bankers over its loyal supporters. In the meantime, persistent West Banker discontent toward the regime and the slow pace of political reform may eventually lead to another attempt to overthrow the government. As noted above, East Bankers make up the armed forces and the *mukhabarat* that has successfully quelled previous uprisings and threats to the regime. However, if the monarchy continues to implement policies at the expense of East Bankers, such as cutting government jobs, they may decide not to protect the regime from civil unrest. In the event of instability, the Hashemite Kingdom may be in jeopardy.

Below are original maps showing the location of non-violent and violent events over time, curated through reviewing six years of daily *Jordan Times*

archives. West Banker dominant areas are outlined in bold. These maps demonstrate that unrest has increased in East Banker dominant areas from 2010 to 2015.

Figure 1: Reported non-violent incidents in Jordan from 2011 to 2015

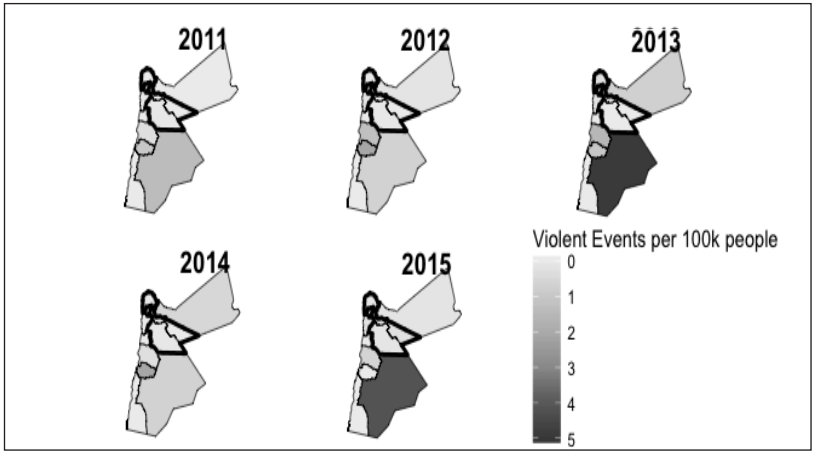
Nonviolent Events Per Capita



Areas outside the bold line are East Bank dominant.

Figure 2: Reported violent incidents in Jordan from 2011 to 2015

Violent Events Per Capita



Areas outside the bold line are East Bank dominant

Effect of Economic Instability in Jordan on U.S. Security

Jordan is one of the few remaining stable U.S. allies in the Middle East and has been a critical partner for furthering U.S. interests in the region. Not only has the Hashemite monarchy cooperated with the United States on various security and counterterrorism operations, but it has also maintained a strong commitment to other Western allies. Civil unrest in Jordan likely would deepen U.S. involvement in regional conflicts and hinder the achievement of Washington's strategic goals in the Middle East. To protect U.S. influence in the region, American policymakers must prioritize stability in Jordan.

Destabilizing a Key Regional Ally

Jordan is an important ally for advancing U.S. regional security goals. The United States relies on Jordanian military cooperation and has given military aid to the monarchy since 1957, including helping the Royal Jordanian Air Force to maintain a technologically advanced fleet that enhances its border patrol and counterterrorism efforts. The United States classifies Jordan as a major non-NATO ally; areas of cooperation include counterterrorism efforts as well as supporting Iraq's stability. Jordan has been instrumental in helping rebuild Iraq as the United States withdraws troops. For example, Jordan has trained over 50,000 Iraqi police cadets since the fall of the Saddam Hussein regime in 2003 (Sharp 2011, 15–17). If Jordan collapses, the United States will lose regional support for stabilization efforts in Iraq, a strong anti-Assad, anti-ISIS coalition partner, and access to vital intelligence regarding terrorist activity in the region. In short, U.S. operations in the region would be crippled, and it would take years to rebuild comparable infrastructure with another Arab ally.

Undermining Jordan-Israeli Peace

In 1994, Jordan became the second and most recent Arab nation to sign a peace treaty with Israel, a longstanding U.S. ally in the region (Sharp 2016, 4). Since then, Jordan has played a central role in the peace process between Israel and Palestine. King Abdullah strongly advocates for a two-state solution, with the guarantee that Israel's security would not be compromised (Goldberg 2013). Continuing the peace process is a high priority for Jordan, as any solution will substantially affect the Hashemite Kingdom given Jordan's high volume of Palestinian refugees. Additionally, the United States has taken steps to further strengthen ties between Jordan and Israel through Qualifying Industrial Zones (QIZs), with the objective of expanding

trade between the two countries. In these zones, goods made with specified levels of Jordanian and Israeli input may enter the United States duty free. Jordan's peace treaty with Israel also has improved its standing with other Western governments and international financial institutions, allowing for greater collaboration between Jordan and the West (Sharp 2011, 9–14).

Despite the economic advantages of the peace treaty and the resulting QIZs, official ties with Israel continue to be politically unpopular among Jordanian citizens, especially among West Bankers. There are 1.9 million U.N.-registered Palestinian refugees residing in Jordan, and more than half of all Jordanian citizens are originally from the West Bank or from the territory that now makes up Israel (Sharp 2011, 9). Even during times of relative calm between Palestine and Israel, Jordanian citizens generally object to dealings with Israel, such as a recent agreement to import Israeli natural gas to lower energy prices in Jordan (Pizzi 2015). Despite domestic disapproval, King Abdullah remains committed to good relations between the two nations (Goldberg 2013). If he is deposed by domestic instability, the treaty is likely to be repealed, threatening Israel's security.

Threatening the Pro-West Regime

Since ascending to the throne in 1999, King Abdullah has demonstrated an unwavering pro-Western orientation and commitment to furthering U.S. interests in the region. Jordan vocally supports the United States in its War on Terror, unlike other Middle East allies. Moreover, King Abdullah often expresses his desire to transition Jordan to liberal democracy with a constitutional monarchy, similar to the United Kingdom. Although political change has been slow and limited in scope thus far, his rhetoric continues to reflect his intention to reform once the region stabilizes (Goldberg 2013). In the wake of ongoing instability following the 2011 Arab Uprisings, the relationships between the United States and its regional allies are in flux. As such, Washington cannot afford to lose Amman's support.

Current U.S. Strategies for Securing Jordan

While there are several United States Agency for International Development (USAID) projects currently being implemented in Jordan, most of U.S. policy focuses on enabling Jordan to protect itself from external threats from Syria, Iraq, and ISIS (Sharp 2016, 1). The United States works closely with the Jordanian Armed Forces to ensure that it is well-equipped to defend against terrorists and religious extremism.

Focusing on External Threats

Current U.S. policy seeks to strengthen Jordan's military and its ability to respond to external threats. In July 2015, Congress passed legislation to accelerate military equipment sales to Jordan to support its fight against ISIS (Wilson 2015). It has also redirected defense aid originally allocated for Yemen to supply the Kingdom with more aircraft (Sharp 2016, 16). Currently, there are 2,200 U.S. military personnel in Jordan to support its security apparatus, and there is no known timetable for removing them (Sharp 2016, 3). In total, the United States gives Jordan $300 million USD in military aid annually, making the Kingdom the third largest recipient of U.S. foreign military financing after Israel and Egypt (Sharp 2016, 13; U.S. Department of State 2015).

U.S. foreign military financing enables the Royal Jordanian Air Force to maintain a technologically advanced fleet that enhances its border patrol and counterterrorism efforts. Since 2009, Jordan has received over $80 million USD worth of excess U.S. defense equipment. Moreover, the United States pledged $1 billion USD to Jordan annually to help defend its border with Syria between 2015 and 2017 (Sharp 2016, 12–14). In 1974, the United States and Jordan established a Joint Military Commission that aims to increase military cooperation between the two countries. Jordan regularly hosts joint military exercises and approximately 300 Jordanian military personnel study in the United States every year. In 2009, Washington helped fund the King Abdullah II Center for Special Operations Training, a regional headquarters for counterterrorism training.

Due to the large amount of U.S. support, Jordan is well-equipped to respond to threats, both internal and external. Its armed forces are among the most formidable in the region and have been successful in mitigating spillover violence, training Syrian rebels, and rooting out terrorist cells operating inside of Jordan (El Kurd 2014). The greater risk to Jordan's security lies in internal pressures on its infrastructure, social services, and economy.

Economic Development Policy

In response to Jordan's tepid economic growth, USAID started the Jordan Competitiveness Program (JCP) in 2013 with the aim of improving the Jordanian business climate and firm competitiveness. This five-year program focuses on job creation in the "knowledge economy," including clean technology, healthcare and life services, and ICT. Through this initiative, USAID-JCP has built partnerships with Intel, Microsoft, and Cisco for ICT training to enhance workforce development. The program also hosts

ICT forums to attract other large technology firms to open and expand operations in Jordan (USAID JCP 2015, 5–9).

This project is designed to stimulate Jordan's economy in a broader sense, but fails to account for the ethnically divided labor market. As previously mentioned, West Bankers dominate the private sector whereas East Bankers are largely confined to the public sector. Since USAID-JCP targets the private sector, there is a risk that East Bankers will not see the benefits of the project. This approach could succeed if the East Bankers were not discontented with and heavily reliant on the monarchy. However, in overlooking the grievances of Jordan's East Bankers, USAID-JCP may actually worsen existing ethnic tensions and increase the risk of political instability.

Other Unaddressed Issues

Current U.S. policy does not adequately account for Jordan's ethnically divided economy and ignores the impact of Syrian refugees on Jordan's economy. In addition to poor economic growth, pressure from the IMF, and preexisting ethnic tensions, the refugee crisis exacerbates these other problems and increases the likelihood of instability within Jordan. Jordan has incurred direct and indirect costs of $6.6 billion USD since the Syrian crisis began in March 2011, which is almost 20 percent of its total GDP (Kaplan 2015). Moreover, Jordan provides free healthcare and public education to all refugees, adding to its budgetary shortfalls (Porges 2014).

While this refugee crisis is not the focus of this paper, it is the backdrop for Jordan's current economic troubles and fosters Jordanian hostilities towards the regime. For example, 80 percent of refugees resettle in cities, a trend which has tripled the cost of rent for Jordanians (Reed 2015; Porges 2014). Moreover, new government initiatives to create jobs for Syrian refugees will lead to competition with Jordanians for employment opportunities, thus further fueling resentment of the regime and increasing overall unemployment in the country (Laub and Malkawi 2016). Although Jordan's economic problems alone threaten the regime, the simultaneous refugee crisis adds to the urgency of resolving these issues. U.S. policy must account for Jordan's political economy and the impact of Syrian refugees on Jordanian labor markets.

Policy Recommendations

Jordan's ethnically-rooted political and economic problems cannot be solved through unilateral U.S. assistance. In the long term, the monarchy will need a comprehensive plan to smoothly transition East Bankers into

steady private-sector jobs while maintaining their support. In the short term, however, the priority must be shoring up East Banker support for the monarchy so that they continue to protect the regime from external and internal threats. This paper recommends a two-part solution: 1) refocus ICT training programs to benefit East Bankers and 2) coordinate these programs with existing special economic zones (SEZs) to maximize their impact on the Jordanian economy.

Involving East Bankers in the Tech Industry

The ICT sector already contributes 12 percent of Jordan's GDP (Ghazal 2015). In 2015, Internet penetration in Jordan was 86 percent, ahead of Israel, and over 70 percent of Arabic web content already comes from Jordan (Al Emam 2015; Internet World Stats 2015). As such, the tech industry shows potential for growth, and USAID-JCP public-private partnerships will help accelerate development in this sector. However, most projects emphasize the expansion of the private sector, thereby excluding East Bankers from these programs. A revision of these training programs towards inclusion of East Bankers will provide them with skills necessary to work in the private sector, give them a steady source of income, and diminish their discontent with the monarchy.

- *Training program model.* Microsoft Jordan has been an industry leader in Jordan's IT sector and provides a lucrative and sustainable model for the involvement of other U.S. tech companies in the Kingdom. One particularly successful training program is the Microsoft Innovation Center, which allows people of all work backgrounds to develop their ICT skills. Since its launch, it has trained over 3,500 Jordanians. Microsoft has also invested in 15 Jordanian startups, and as of 2010, every one Jordanian Dinar (JD) of revenue generates almost seven JD for the local ICT ecosystem ("Microsoft Jordan Factsheet" 2010). Moreover, in March 2015, Microsoft teamed up with USAID-JCP to build the Jordan Academic Accelerator Program, a six-month program that equips teams with the technical skills to design, launch, and sustain their own ventures (USAID 2015).

- *Engaging East Bankers.* In order to ensure that East Bankers benefit from these accelerator programs, USAID-JCP should target college graduates from rural areas. Although this metric is not perfect, East Bankers tend to live in rural regions of Jordan, while West Bankers concentrate in urban areas, namely Amman and Zarqa. While not preferred, a quota system may be necessary to guarantee East Banker involvement in these programs. Targeting East Bankers must not be limited to the Microsoft accelerator and training

programs; it should become a part of all USAID-JCP projects, especially those in the ICT sector. With Jordan's well-educated population and growing tech start-ups, the kingdom is positioned to become a tech hub for the region.

Implementing these programs will likely have challenges. Incentivizing private companies to provide training programs for Jordanian youth requires sufficient funding, which is contingent on Washington continuing to prioritize foreign aid and development. Moreover, targeting East Bankers using rural regions as a proxy is an imperfect metric, as thousands also live in urban areas. Thus, the method of recruiting East Bankers into these programs may need to be adjusted in order to ensure their participation. Still, this method is a good place to start.

Reorienting programs to be inclusive of East Bankers is a crucial piece of any development policy that seeks to improve Jordan's economy. Without their inclusion in the private sector, East Banker discontent will continue to grow, possibly leading to civil unrest. This unrest would be devastating to the Jordanian economy and negate any previous progress in the ICT sector.

Linking with Special Economic Zones

In addition to expanding East Banker access to ICT training programs, USAID should improve coordination with existing SEZs within Jordan. Several of Jordan's SEZs have substantial tax benefits that could incentivize U.S. companies to operate in the region and provide an environment for Jordanian startups to grow successfully. Although some companies already have a presence in these SEZs, they are significantly underutilized. For example, HP, Dell, and Cisco have offices in the King Hussein Business Park in Amman, but they are predominantly used as call centers (King Hussein Business Park 2015). This approach squanders the economic potential of the SEZs.

The United States should work with the Jordanian government to encourage trainees of the USAID-JCP accelerator programs to operate in these SEZs. Not only are the business regulations significantly less stringent in these areas, but these areas also feature modern office accommodations and telecommunications infrastructure that fosters quick growth of startups. Additionally, the two governments should work together to encourage U.S. companies seeking a presence in the region to take advantage of these development areas for expanded operations. Pairing the USAID-JCP training programs with the existing SEZs will facilitate the success of Jordanian tech companies and improve the economic welfare of East Bankers.

This recommendation requires sufficient Jordanian political capital to adopt this policy change, and the current political environment appears to be focused on coping with the influx of Syrian refugees. However, Amman is also keen to improve its economic situation and promote job creation. Part of the regime's strategy is promoting these SEZs and attracting foreign investment into these areas. As such, this particular challenge would likely be relatively easy to surmount.

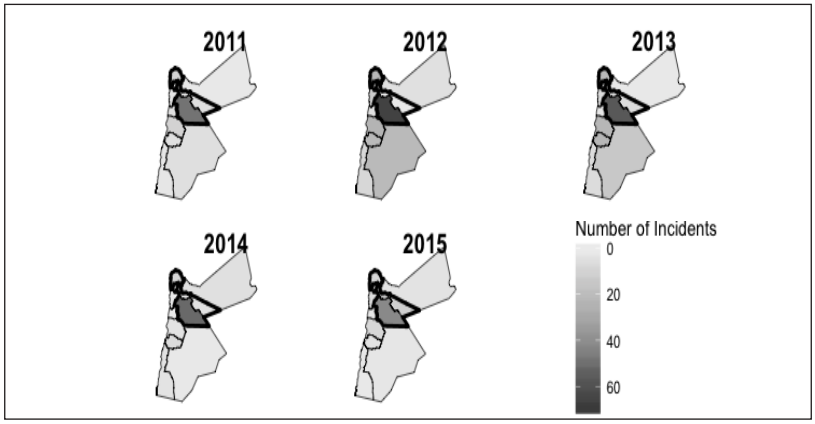
This two-part policy recommendation would help alleviate East Banker economic hardships by providing them with marketable skills for the private sector and high-skilled jobs. Additionally, since these new measures would come partially from the Jordanian government, East Bankers would feel less neglected by the monarchy, and thus would be more likely to continue supporting the regime against West Banker discontent. Lastly, these policies would promote economic improvement through targeted private sector growth and by attracting U.S. tech companies to expand operations within Jordan.

Conclusion

Recent austerity measures and privatization policies have disproportionately harmed the monarchy's loyal supporters, East Bankers, who comprise the country's bureaucracy, internal security apparatus, and armed forces. Deteriorating economic conditions may cause East Bankers to lose faith in the regime, depriving the Hashemites of their protection against civil unrest. The resulting instability could derail U.S. interests in the region. As a stopgap measure to ensure Jordan's short-term stability, the United States must promote growth and East Banker employment in private ICT industry. This policy would help to transition East Bankers into the private sector and temporarily reduce their discontent with the regime. It is important to note that this solution is not meant to solve Jordan's dysfunctional labor market, curb its high unemployment, or boost its low labor force participation rate. Rather, it is a risk-mitigating measure to support Jordan's stability in the face of heightened external pressures. In the long term, Jordan's government must address its internal problems. The United States cannot save Jordan from itself.

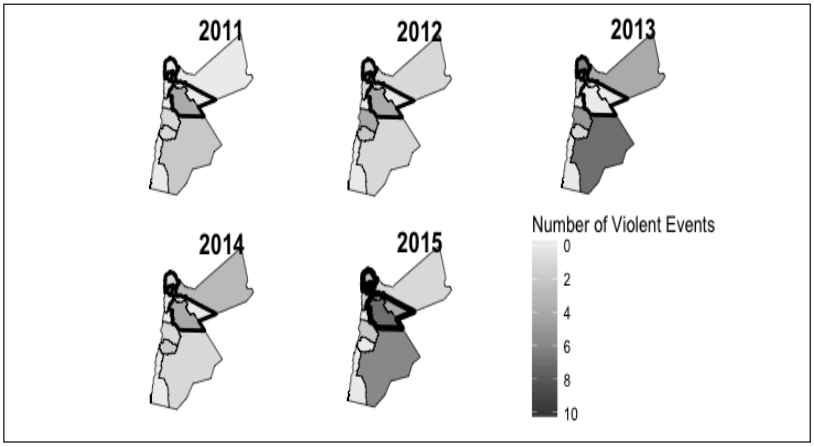
Appendix: Maps

Figure A: Nonviolent Events between 2011-2015



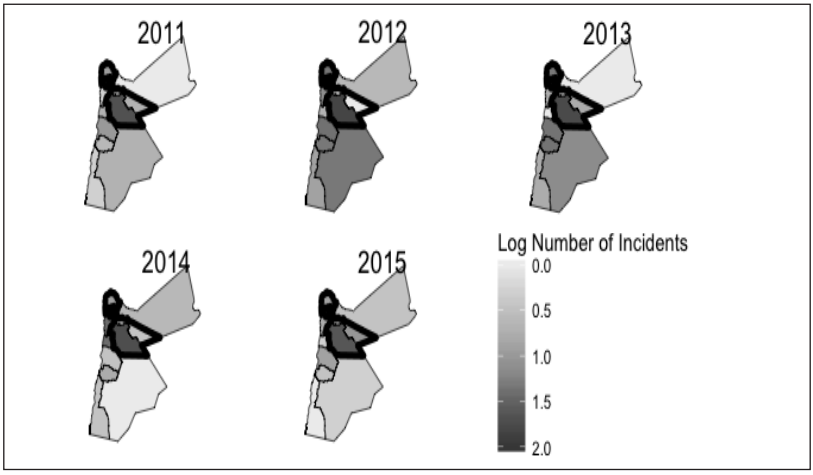
Areas outside the bold line are East Bank dominant.

Figure B: Violent Events between 2011-2015



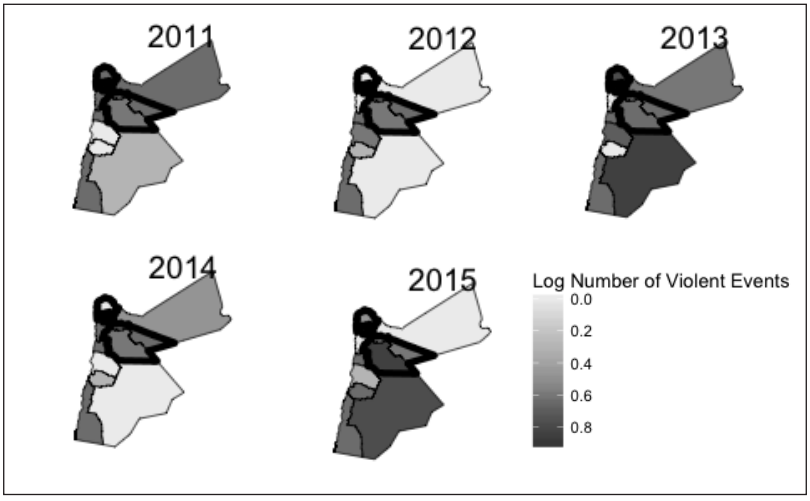
Areas outside the bold line are East Bank dominant.

Figure C: Nonviolent Events between 2011-2015 (Logs)



Areas outside the bold line are East Bank dominant

Figure D: Violent Events between 2011-2015 (Logs)



Areas outside the bold line are East Bank dominant

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7

Undermining the Non-Proliferation Treaty (NPT): A Legal Analysis of the Treaty on the Prohibition of Nuclear Weapons (TPNW)

Paige KW Gasser

Introduction

> *"The release of atom power has changed everything except our way of thinking."*
>
> -Albert Einstein

In the summer of 1945, Albert Einstein's work on the atom led to the creation of the first atomic bomb. Its use in Hiroshima and Nagasaki in 1945 demonstrated that nuclear weapons have both immediate and long-term consequences due to the heat, blast, and radiation generated by a nuclear explosion. Seventy-two years later, the Treaty on the Prohibition of Nuclear Weapons (TPNW) was adopted on July 7, 2017. The objective of this treaty is to create a legally-binding instrument to prohibit and ultimately abolish nuclear weapons. One hundred twenty-two United Nations member states voted for the TPNW, Singapore abstained, and the Netherlands voted against it. While the TPNW appears to be a huge success within the international community, few have examined how this treaty interacts with previous non-proliferation legal regimes, namely the

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Nuclear Non-Proliferation Treaty (NPT).

While eliminating nuclear weapons is a noble cause, the TPNW is an unfortunate reaction to the NPT's lack of momentum and the stagnation of arms control regimes more generally. In this paper, I examine how the NPT and TPNW intersect and add legal significance to the issue of nuclear weapons, while arguing that the TPNW undermines the NPT for three primary reasons: the TPNW diminishes the disarmament goal, fragments the non-proliferation legal regime, and if implemented, could hamper the deterrent value of nuclear weapons in the European theater and East Asia, leading to a more insecure global environment. Lastly, I identify four policy recommendations to strengthen non-proliferation and disarmament verification efforts.

Legal Developments Prior to the TPNW: The Non-Proliferation Treaty (NPT)

The Development and Obligations of the NPT

At the third Nixon-Kennedy Presidential debate on October 13, 1960, John F. Kennedy stated:

> There are indications because of new inventions, that 10, 15, or 20 nations will have a nuclear capacity, including Red China, by the end of the Presidential office in 1964. This is extremely serious...I think the fate not only of our own civilization, but I think the fate of the world and the future of the human race, is involved in preventing a nuclear war (Carnegie Endowment 2003).

This proliferation of nuclear weapons states was successfully averted by the 1968 Nuclear Non-Proliferation Treaty (NPT), which is widely regarded as a "cornerstone" of international nuclear security (Borrie, Caughley, and Ritchie 2015, 1). The NPT opened for signature on July 1, 1968 in Washington, London, and Moscow, and it entered into force on March 5, 1970 (Joyner 2011, 20). With 189 signatory states, the NPT has been the principal legal barrier against the spread of nuclear weapons for almost 50 years. The NPT calls for a conference to be convened every five years to review the efficacy of the treaty, which has resulted in nine NPT Review Conferences (RevCons) since the ratification of the treaty. Originally the NPT was given a 25-year limit with the opportunity to be renewed; however, the treaty's duration was extended indefinitely by consensus in the 1995 Review and Extension Conference. The NPT remains the only treaty that obligates the five nuclear weapons states (NWS)

that are party to the treaty—China, France, Great Britain, Russia, and the United States (NPT5)—to pursue nuclear disarmament measures. The term NWS does not include the additional states that are believed to possess nuclear weapons: India, Israel, Pakistan, and North Korea. While North Korea was party to the NPT, it announced its withdrawal in 2003. In this article, "nuclear weapons-possessing states" refers to all nine states known or suspected to possess nuclear weapons.

The NPT establishes that it is not only concerned with regulating the proliferation of nuclear weapons. Instead, three principles underpin the NPT: peaceful use of nuclear energy, non-proliferation of nuclear weapons, and disarmament of nuclear weapons stockpiles (Joyner 2011, 20). These three pillars comprise the purpose of the NPT, and they should be understood as "presumptively juridically equal," that is, none of the pillars should be prioritized over the others in legal interpretations (Joyner 2011, 34). Under Article II, states parties that did not conduct a nuclear test prior to 1968 are not permitted to "manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices" (Treaty on the Non-Proliferation of Nuclear Weapons 1970, Article II). Moreover, Article III states that each state party to the treaty undertakes to accept monitoring of its civilian nuclear program through safeguards administered by the International Atomic Energy Agency (IAEA) (Moxley Jr., Burroughs, and Granoff 2011, 680). Article IV then allows for "the fullest possible exchange of equipment, materials and scientific and technological information" for peaceful uses (Treaty on the Non-Proliferation of Nuclear Weapons 1970, Article IV (2)). This most notably includes nuclear reactor technology for the purpose of generating electricity. Article IV also recognizes the inalienable right "to develop research, production and use of nuclear energy for peaceful purposes" (Treaty on the Non-Proliferation of Nuclear Weapons 1970, Article IV (2)).

Despite some challenges, most would agree that the NPT has been widely successful as a legal and political barrier against proliferation. Instead of Kennedy's fear of a dozen new nuclear weapons states in addition to the original NPT5, only four states—India, Pakistan, North Korea, and Israel—are now known or suspected to possess nuclear arsenals. While North Korea originally ratified the NPT in 1995, it became the first state to acquire nuclear weapons and withdraw from the NPT in 2003, demonstrating the fragility of the treaty (Moxley Jr., Burroughs, and Granoff 2011, 680). These criticisms of the NPT must be examined to understand how the TPNW was introduced and established. Three central critiques, the unequal burden between NWS and non-nuclear

weapon states (NNWS), the perceived slow pace of disarmament, and the lack of provisions prohibiting nuclear weapons, have led to questions about the viability of the NPT and ultimately acted as the main drivers of negotiations for the TPNW.

Unequal Burden: Inaccurate Interpretation

One aspect of the NPT that has been criticized is the discriminatory character of the treaty. There is an emphasized distinction between the NPT5 and NNWS, where the former were permitted to have nuclear weapons while the latter were not. Some argue that this distinction between NWS and NNWS is outdated (Borrie and Caughley 2013, 59), while others judge that the NPT represents a status quo that suits nuclear-armed states and disempowers non-nuclear states (Borrie and Caughley 2013, 112). However, nuclear weapons remain a central component of each of the nuclear weapons states' military strategies by serving as a deterrent and ultimately provide security assurances for other NNWS through extended nuclear deterrence.

The NPT's diplomatic history highlights why states accepted an unequal status regarding the possession of nuclear weapons. Specifically, the NPT makes distinctions through a series of trade-offs, and the treaty would have never been established if the principle of peaceful use and disarmament had not been combined with the principle of non-proliferation (Dunn 2009, 158–160). The right of all states to peaceful uses of nuclear energy reduces the central inequality that divides states into nuclear-weapon-haves and have-nots. However, this peaceful underpinning is frequently misunderstood by legal commentators, leading to incorrect legal interpretations of the NPT. For example, many NWS have shared the view that the obligations of the peaceful use principles of Article IV are secondary in priority to the non-proliferation obligations under Article II and III (Joyner 2011, 48). This is a failure on the part of NWS to correctly interpret the provisions of the NPT in light of the treaty's original purpose. Interpreting the NPT as a means to attribute legitimacy to the NWS is highly controversial. Former IAEA Director Mohamed ElBaradei stated in 2006:

> Under the NPT, there is no such thing as a "legitimate" or "illegitimate" nuclear weapons state. The fact that five states are recognized in the treaty as holders of nuclear weapons was regarded as a matter of transition; the treaty does not in any way confer permanent status on those states as weapons holders (Borrie and Caughley 2013, 49).

The NPT is an institution that manages the global nuclear order, halting the spread of nuclear warheads and countries that deploy them. This legal framework, as well as the possession of nuclear weapons by the NPT5, does not represent a crisis of "legitimacy," but suffers from inaccurate interpretation. Nevertheless, many describe the unequal provisions of the treaty as jeopardizing the NPT's effectiveness by generating widespread discontent (Cortright and Väyrynen 2010, 36).

Slow Disarmament

When the NPT was negotiated and eventually signed and ratified, many parties felt that the treaty was an important step toward disarmament. They argued that the treaty could prompt more urgent action to reduce nuclear risk and promote disarmament (Sanders-Zakre 2017, 20–21). This commitment is most evident in Article VI of the NPT, which states that:

> Each of the Parties to the Treaty undertakes to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a Treaty on general and complete disarmament under strict and effective international control (Treaty on the Non-Proliferation of Nuclear Weapons 1970, Article VI).

Thus, Article VI explicitly obligates states parties to disarm completely. This is in clear contrast to the rest of the treaty, which does not prohibit possession of nuclear weapons by the NWS (Joyner 2011, 19). This demonstrates on a normative level how many of the NPT's parties viewed disarmament as an important goal for the entire international community. However, this commitment has come with several challenges. Namely, 20 years after the 1995 review and indefinite extension of the NPT, all of the NWS have still continued to modernize their nuclear arsenals (Borrie, Caughley, and Ritchie 2015, 3). Despite the robust development of the NPT regime at the 1995 and 2000 RevCons, the following decade spurred widespread concern that the NPT is deteriorating due to the slow disarmament. The NPT5, particularly the United States, have largely failed to implement the "13 Practical Steps for Disarmament," which were adopted at the 2000 RevCon (Moxley Jr., Burroughs, and Granoff 2011, 681).

Nevertheless, the 2010 NPT RevCon demonstrated that the NPT states parties were moving toward disarmament. The NPT states parties unanimously expressed the humanitarian concerns surrounding nuclear weapons in the 2010 Action Plan. The 2010 RevCon:

> Express[ed] its deep concern at the continued risk for human-

> ity represented by the possibility that these weapons could be used and the catastrophic humanitarian consequences that would result from the use of nuclear weapons (Sanders-Zakre 2017, 20–21).

On April 5, 2009, U.S. President Barack Obama also pronounced the United States' commitment to a reduction in nuclear arms while speaking in Prague:

> Today, I state clearly and with conviction America's commitment to seek peace and security of a world without nuclear weapons. I'm not naïve. This goal will not be reached quickly—perhaps not in my lifetime. It will take patience and persistence. But now we, too, must ignore the voices who tell us that the world cannot change. We have to insist, yes, we can (Pella 2016, 5–6).

The case for the United States' commitment to Article VI was further strengthened by the release of the 2010 Nuclear Posture Review (NPR), which called for a reduction in the number of nuclear weapons the United States possessed (U.S. Department of Defense 2010). Despite this progress and acknowledgement of humanitarian consequences, the subsequent 2015 Review Conference also had several challenges. Namely, the NPT5 had made little progress in implementing the disarmament steps agreed to in the 2010 Action Plan (Borrie, Caughley, and Ritchie 2015, 1). Because the Action Plan is political and not legal in its strength, a state's failure to implement these obligations does not conflict with its legal duties under the NPT and holds less weight. Therefore, many of the NNWS argue that the United States is not doing enough to fulfill its Article VI commitment. Many argue that there is a gap between the rhetoric and action of NWS, specifically the United States, in their reluctance to give up their nuclear arms. For example, according to the 2018 U.S. NPR, the U.S. Department of Defense (DoD) currently spends between 2 and 3 percent of its budget to maintain and operate its nuclear force; however, this is projected to increase to about 6.4 percent in order to modernize the United States' nuclear forces (Department of Defense 2018, 51).

These fiscal projections do not align with the statements regarding the United States' commitment to nuclear reduction and disarmament. However, verifiable disarmament is a complex challenge. Moreover, not only do some states not possess the technical means to disarm, but the full implementation of Article VI also poses the challenge of what to do with loose materials, such as uranium and plutonium. For the United States, the National Nuclear Security Administration (NNSA) is the governmental

body that oversees the dismantling process; however, nuclear weapons disassembly is still dangerous and difficult to achieve with these high explosive components. Despite the NPT's efforts, there is no international verification process for determining if a nuclear warhead is destroyed, leading to serious challenges for fully implementing Article VI.

Prohibition of Nuclear Weapons

The objective to eliminate nuclear weapons is explicitly stated as the ultimate goal of the NPT. In connection with the decision to extend the treaty indefinitely, the 1995 NPT Review and Extension conference adopted procedures to strengthen the review process. These "Principles and Objectives on Nuclear Non-Proliferation and Disarmament" provide for "systematic and progressive efforts to reduce nuclear weapons globally, with the ultimate goal of eliminating those weapons" (Moxley Jr., Burroughs, and Granoff 2011, 681). The United States has historically supported the objective of eliminating nuclear weapons, and under Article VI of the NPT, the NPT5 are under a legal obligation to "pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament." However, due to the structure of the NPT, it is unable to delegitimize nuclear weapons and the practice of nuclear deterrence (Borrie and Caughley 2013, 59). Nuclear deterrence, mutually assured destruction, and "escalate to de-escalate" are all still deeply embedded in nuclear weapons-possessing states' doctrines and nuclear policies. The NPT lacks the legal authority or structures to alter these national strategies. Judge Shigeru Oda echoed a similar sentiment in his dissenting opinion to the International Court of Justice's Nuclear Weapons Advisory Opinion when he stated that since NWS continue to have nuclear weapons, threaten to use them, and show willingness to use them, an international custom prohibiting such use cannot be found (Moxley Jr. 2000, 201).

Therefore, the inaccurate interpretation of the NPT by NWS and NNWS, the slow disarmament due to the lack of states parties' technical means to disarm in a verifiable way, and the lack of structure in the NPT that can delegitimize the practice of nuclear deterrence have all spurred the development of the TPNW.

The Treaty on the Prohibition of Nuclear Weapons (TPNW)

Background

The Treaty on the Prohibition of Nuclear Weapons (TPNW) originated

from the Humanitarian Initiative, a group of NNWS that have pushed for nuclear disarmament by focusing on the humanitarian consequences of a potential nuclear war (Nuclear Threat Initiative 2017). Humanitarian consequences were first addressed at the 2010 NPT RevCon, when a consensus final document provided a detailed Action Plan for implementing the NPT with a focus on nuclear disarmament (Borrie, Caughley, and Ritchie 2015, 1). The 2010 NPT Action Plan helped to catalyze the humanitarian approaches to the use of nuclear weapons and outlined potential ways to reframe the process of accountability for nuclear weapons states (Nystuen and Egeland 2016). These humanitarian concerns motivated a group of states, primarily Austria, Mexico, and Norway, to organize a series of three conferences in 2013 and 2014 to discuss the humanitarian consequences of nuclear weapons use (Sanders-Zakre 2017, 20–21). In 2015, this movement gained support among the international community, and the Humanitarian Initiative was hopeful that the 2015 NPT RevCon would achieve substantial progress toward nuclear disarmament. One hundred sixty states endorsed the Humanitarian Initiative at the 2015 NPT RevCon, but the conference failed to adopt a consensus final document (Nuclear Threat Initiative 2017)

Within the United Nations General Assembly (UNGA), efforts to advance the disarmament agenda led to an open-ended working group (OEWG) on nuclear disarmament in December 2015. Chaired by Thailand's Permanent Representative Thani Thongphakdi, the OEWG specified that a legally binding instrument would establish general legal obligations, prohibitions, and political commitments to achieve a nuclear weapon-free world. The group's mandate was to address effective legal measures, legal provisions, and norms that were necessary to realize a world without nuclear weapons (United Nations 2017). Over the course of the three OEWG meetings in February, May, and August 2016 in Geneva, participating states including Algeria, Brazil, Indonesia, and South Africa discussed strategies for opening negotiations for a full ban treaty. At the final session of the OEWG, 68 states voted in favor of adopting the final report, with 22 against and 13 abstaining. The final report recommended the UN General Assembly to convene a conference in 2017 to prohibit nuclear weapons (Nuclear Threat Initiative 2017). In an effort to establish a comprehensive and legally binding prohibition treaty, the OEWG recommended these multilateral disarmament negotiations in the UNGA Resolution 70/33.

The prohibition treaty and the vision of a nuclear-free world was led by Austria, Brazil, Mexico, South Africa, and New Zealand (Bendix 2017). As a result of UNGA Resolution 71/258, multilateral nuclear disarmament

negotiations began, and the TPNW was negotiated by over 130 countries at the United Nations Headquarters in New York from March 27 to 31, 2017 and from June 15 to July 7, 2017. Adopted on July 7, 2017, the TPNW opened for signatures on September 20, 2017 and will enter into force 90 days after 50 states ratify it (United Nations 2017). As of May 2018, 58 states have signed the treaty, while 9 states have ratified it (ICAN 2018).

Basic Obligations of the TPNW

The impetus to negotiate a new treaty grew from what many describe as the "deterioration of the NPT" and the renewed recognition of the humanitarian consequences of nuclear weapons use. The TPNW's 24-paragraph preamble states:

> [States parties are] deeply concerned about the catastrophic humanitarian consequences that would result from any use of nuclear weapons, and recognizing the consequent need to completely eliminate such weapons, which remains the only way to guarantee that nuclear weapons are never used again under any circumstances (Treaty on the Prohibition of Nuclear Weapons 2017, Preamble).

Article 1 is the cornerstone of the TPNW, which details a clear ban on nuclear weapons and declares them to be categorically illegal, similar to chemical and biological weapons, land mines, and cluster munitions. The TPNW prohibits states parties from developing, testing, producing, manufacturing, acquiring, possessing, stockpiling, or threatening the use of nuclear weapons or other nuclear explosive devices (Treaty on the Prohibition of Nuclear Weapons 2017, Article 1 (a) (d)). Signatories are also prohibited from transferring or receiving nuclear weapons and other nuclear explosive devices (Treaty on the Prohibition of Nuclear Weapons 2017, Article 1 (a–c)). States parties also cannot allow the stationing, installation, or deployment of nuclear weapons and other nuclear explosive devices in their territory (Treaty on the Prohibition of Nuclear Weapons 2017, Article 1 (g)).

When joining the treaty, a state party must declare whether it has eliminated a previous nuclear weapons program, currently has nuclear weapons, or holds another country's nuclear weapons on its territory (Sanders-Zakre 2017, 20–21). The provisions call on states with nuclear weapons to "remove them from operational status and destroy them as soon as possible, but not later than a deadline agreed by the first meet-

ing of states parties" (Jenkins 2017). The treaty also requires states that possess nuclear weapons to report on their progress until disarmament is completed (Jenkins 2017). In addition, states parties are obligated to provide victim assistance and assist with environmental remediation efforts (Nuclear Threat Initiative 2017). Article 3 details safeguards for NNWS, which are required to have "a comprehensive safeguards agreement with the IAEA without prejudice to any future additional agreements" (Treaty on the Prohibition of Nuclear Weapons 2017, Article 3(1–2)).

How the TPNW Undermines the NPT and the International Security Environment

Proponents of the TPNW claim that there are numerous provisions within the TPNW that reinforce the NPT, especially the Article VI requirement for nuclear disarmament. Supporters argue that the TPNW will close a "legal gap" with the NPT, which does not explicitly ban nuclear weapons. They also argue that it can even reduce the prominence of nuclear weapons by prompting more urgent action to promote disarmament. According to the UN, these provisions also mean that no state can benefit from leaving the NPT, and that participation in the TPNW cannot harm existing non-proliferation standards (United Nations 2017). However, I assess that the TPNW undermines the NPT for three reasons. First, the TPNW diminishes the disarmament goal and raises concerns similar to those surrounding the NPT regarding disarmament verification. Second, the TPNW has led to a fragmentation of the non-proliferation legal regime, which has led to legal inconsistencies. Lastly, the TPNW could weaken the value of deterrence, leading to a more unstable international security environment.

Disarmament Under the TPNW and Undermining the IAEA

Proponents of the TPNW have highlighted the success of the International Campaign to Abolish Nuclear Weapons (ICAN) in advocacy as the TPNW shows that through the humanitarian initiative ordinary citizens can mobilize effectively on this issue. However, the agreement's ultimate success will depend on how nuclear weapons states react to the treaty and whether they decide to take steps toward joining it. There are two ways for a NWS to accede to the TPNW: it can join the treaty and then destroy its nuclear weapons, or it can destroy its nuclear weapons and then sign onto the treaty. States that destroy first and then join the TPNW must cooperate with a "competent international authority" designated by the treaty to verify dismantlement (Treaty on the Prohibition of Nuclear Weapons 2017, Article 4 (2)). States that decide first to join and then destroy must

remove nuclear weapons from operational status and submit a time-bound plan for their destruction within 60 days of joining the treaty (Sanders-Zakre 2017, 20–21).

However, the TPNW does not specify what "competent international authority" is responsible for verifying the disarmament of nuclear-armed states (Sanders-Zakre 2017, 20–21). Additionally, the state would become a party to the TPNW without knowing what "cooperation" on verification with the competent international authority would entail, since it is not detailed in the treaty. One of the main issues with the ambiguity of this provision of the TPNW is that it threatens to undermine the IAEA, since the treaty does not designate a competent international authority to verify the elimination of nuclear weapons. Facing scarce financial resources and challenges recruiting nuclear experts, the IAEA could find its authority further eroded by a competing "competent international authority." Instead of writing real verification provisions in the treaty, the negotiators drafted a treaty that encourages states to work out verification later.

Therefore, the TPNW raises the same technical concerns for disarmament as elicited by the NPT—the same concerns that led to the creation of the TPNW in the first place. If Article VI of the NPT cannot be implemented, the disarmament provision in the TPNW will also fail due to the lack of technical means needed to disarm verifiably because it contains no system for verifying nuclear disarmament. As Christopher Ford, former U.S. special assistant to the president and National Security Council senior director for weapons of mass destruction and counter-proliferation, commented on the TPNW:

> It is... appalling that negotiators, at the very least, did not see fit to also require adherence to an IAEA Additional Protocol—which does much more to address the challenge of detecting illicit activities that the host government does not actually choose to declare (Ford 2017).

Additionally, an anonymous senior U.S. DoD expert on countering weapons of mass destruction (CWMD) contends that the TPNW "dilutes the international community's disarmament efforts (and particularly that of the NPT5 nations), adding complexity to step-by-step disarmament efforts" (2017). The DoD official goes on to explain how this is compounded by the fact that many nations have few diplomats who focus on non-proliferation or disarmament. In this context, many such diplomats are "already overtaxed individuals;" therefore, "setting priorities will be difficult" for many nations (2017). Thus the question of who regulates

disarmament and what happens with loose nuclear material, coupled with a nation's limited capacity within their diplomatic structures, proves to be incredibly difficult to address without established processes through the TPNW.

Regime Proliferation and Forum Shopping

The nine nuclear weapons-possessing states—the United States, Russia, Britain, China, France, India, Pakistan, North Korea, and Israel—and most NATO countries boycotted the working group sessions and the 2017 TPNW negotiations. Specifically, the NWS asserted that the treaty would distract attention from negotiating a fissile material cutoff treaty or ratifying the Comprehensive Test-Ban Treaty (CTBT). They also expressed that the TPNW could undermine the extensive safeguard provisions by giving states the option to choose between the two treaties (Sanders-Zakre 2017, 20–21). Though supporters of the TPNW argue that it will close a "legal gap" that exists regarding nuclear weapons, I assess that the TPNW actually creates a legal gap—specifically, the conflicting requirements of the two treaties. Article VI of the NPT requires nuclear-armed states to "pursue in good faith and bring to a conclusion negotiations leading to nuclear disarmament," whereas the TPNW prohibits nuclear weapons and "lead[s] towards their total elimination." This demonstrates how the NPT and TPNW are distinct legal regimes that contain inconsistent elements, creating a lack of coherence in international law. Daniel Drezner terms this "regime proliferation," or the existence of multiple and overlapping institutional orders (Drezner 2009, 5). The proliferation of international law can lead to conflicting legal obligations, which provides the opportunity for states to "forum shop," or choose which treaty meets their needs. Once these conflicting obligations emerge, so does the problem of reconciling them (Drezner 2009, 5). Christopher Ford also asserts that the TPNW:

> Harms the effective operation of the global non-proliferation regime by increasingly entangling and preoccupying vital non-proliferation institutions—e.g., the NPT review process and the IAEA—in sterile but contentious debates and disputes over disarmament policy, making it harder for them to do the job the international community needs them to do in preventing nuclear proliferation (Ford 2017).

Although the international humanitarian movement did not intend to create this conflict, the TPNW is an unfortunate example of how the establishment of a new international legal regime can "erode the *opinio juris* necessary for international law to function properly." (Drezner 2009, 7).

Weakening the International Security Environment: Operational and Strategic Risks

Lastly, there are several strategic and operational concerns with the ratification of the TPNW. Prior to the adoption of the TPNW, the United States, which did not attend any of the OEWG sessions, rejected the OEWG's final report, calling its efforts to ban nuclear weapons "unrealistic" (Nuclear Threat Initiative 2017). The nine countries recognized as possessing nuclear weapons were also absent from the two rounds of negotiations of the TPNW, as were most members of NATO (Bendix 2017). The NWS opposed the TPNW's fast-track approach to disarmament and instead favored a "building-blocks" or step-by-step approach, which were originally reflected in the 2013 OEWG report A/68/514 (Nuclear Threat Initiative 2017). However, some nations wondered if this "progressive" approach was intended to maintain a nuclear-weapons-based international security system, while others felt that the NPT could serve as a valuable part of this "building blocks" approach toward nuclear disarmament. In a joint statement released after the treaty was adopted, the U.S., British, and French governments stated, "We do not intend to sign, ratify or ever become party to [the TPNW]" (Gladstone 2017). The UN ambassadors for the United States, Britain, and France also argued that the TPNW "clearly disregards the realities of the international security environment" (Bendix 2017).

Of particular concern is the fact that the treaty fails to address the growing threat of North Korea's nuclear and missile programs. Rather than ban nuclear weapons and risk vulnerability to a North Korean attack, the United States, Britain, and France hope to strengthen the NPT. The North Korea issue alone makes implementation of the TPNW not only unrealistic, but also dangerous as it ultimately weakens the international security environment by disregarding the value of extended deterrence. Article 1(g) may also have operational costs for NWS. The CWMD DoD expert further claims:

> The legal impacts for nuclear-armed states (not to mention the complexities associated with "declared" versus "non-declared" nuclear powers) will be far-reaching. For example, states parties to the TPNW may not "allow any stationing, installation or deployment of any nuclear weapons or other nuclear explosive devices in its territory or at any place under its jurisdiction or control." That single clause will have serious legal, operational, strategic, and tactical implications for nuclear-armed states (2017).

While many supporters of the TPNW argue that the ambition of Article 1(g) was meant to compel compliance of other states through the stationing and installation provision in order to obtain NWS as signatories, it is still vital to examine the provision's operational effects on both NWS and NNWS. For example, under this provision, a state not party to the treaty would not be allowed to even refuel on the territory of a state party to the treaty if a nuclear weapon is present on a naval warship. This illustrates how this provision has the potential to endanger operations surrounding the Korean Peninsula, while jeopardizing security for NNWS in the region.

The provision also raises several other operational concerns in the European theater where U.S. nuclear weapons systems are based. NATO's nuclear command and control is located in Europe, where there has been an increase in Russian military exercises on the eastern flank, stressing the necessity of an extended nuclear deterrent for countries like Poland. If some NATO countries were to sign on to the TPNW, they would divide the nuclear alliance and decrease the credibility of the well-established nuclear deterrence. Jeopardizing the NATO alliance would dramatically alter the international strategic environment, as some NATO countries may feel the need to acquire their own nuclear weapons if the "nuclear umbrella" is weakened in the European theater. Christopher Ford echoes this argument by stating that the TPNW may create a more unstable and dangerous world by "seeking to delegitimize the 'extended deterrence' alliance relationship that the United States has with its allies in Europe and in the Asia-Pacific" (Ford 2017). The TPNW could not only degrade existing security relationships, but it could also lead to the proliferation of nuclear weapons if the credibility of the extended deterrence is undercut for the United States' allies in Europe and East Asia (Ford 2017).

These operational and strategic concerns are unfortunate examples of how the TPNW not only undermines the NPT, but also leads to a dangerous legal regime in the current context of North Korea and Europe. North Korea's recent nuclear tests and the advancement of its nuclear weapons program, as well as the strategic extended nuclear deterrence in Europe, highlight the current necessity of nuclear weapons.

Policy Recommendations

The security benefits the international community has derived from the NPT have been highly underappreciated. Multilateral approaches to disarmament and nuclear non-proliferation remain a critical feature of the international security architecture. However, previous efforts toward disarmament have highlighted key gaps in the non-proliferation legal

regime. The following four policy recommendations address these gaps.

Recommendation #1: Strengthen Collaboration within the International Partnership for Nuclear Disarmament Verification (IPNDV)

One of the ways to strengthen the NPT's Article VI provision is through the development of technologies required to verify the dismantling of warheads and weapons production facilities. The International Partnership for Nuclear Disarmament Verification (IPNDV) is a group of 25 countries working with private organizations to address verification and disarmament challenges, including by developing these technologies. By combining the interests and expertise of nuclear and non-nuclear weapons states, the IPNDV addresses verification challenges in a collaborative manner. Strengthening this type of collaboration between countries, rather than excluding the nuclear weapons-possessing states via the TPNW, will help to bolster global non-proliferation efforts.

Recommendation #2: Negotiate a Multilateral Agreement on Verification Between NWS

It is unlikely that NWS will become states parties to the TPNW as the treaty does not incentivize these states to join. Therefore, a multilateral effort among NWS is required to promote disarmament where it matters most. States possessing nuclear weapons should negotiate an agreement that implements a mechanism to ensure verification of nuclear disarmament. An agreement could be modeled on the U.S.–Russia bilateral arms control agreements or the UK/Norway Initiative on nuclear warhead dismantlement verification. While proponents of the TPNW might respond that the treaty does not rule out this approach, the treaty ultimately does not serve as a means to verify disarmament. Therefore, a stronger multilateral agreement should be pursued to strengthen these verification efforts among states that actually possess nuclear weapons.

Recommendation #3: Amend the IAEA's Statute

The TPNW leaves all disarmament verification issues to be determined at a later time (Ford 2017). One of the main issues with this approach is that it threatens to undermine the IAEA, since the treaty does not designate a competent international authority to verify the elimination of nuclear weapons. This is an unfortunate provision since the IAEA is already financially strained and the TPNW's mandate could create a competing organization as a competent international authority. Instead, there is legal

space to amend the IAEA's mandate in its charter. The IAEA is the world's technical agency in charge of ensuring that countries maintain safeguards on their peaceful nuclear programs. If given the authority, the IAEA could also be the lead to verify and assess disarmament efforts, while coordinating the implementation of any actions that need to be taken. IAEA member states should task the Agency to be the designated competent international authority regarding disarmament and Article VI of the NPT. Expanding the IAEA's mandate would enable member states to pool resources, share expertise, and establish common standards to ensure global disarmament.

Recommendation #4: Maintain the Policy of Extended Nuclear Deterrence

The policy of deterence has helped to maintain international peace and security in Europe and East Asia for more than 70 years. However, the TPNW is incompatible with this policy. Establishing a new legal regime that conflicts with current non-proliferation efforts and ignores the necessity of extended nuclear deterrence was not a constructive way to channel criticism of the NPT. Instead, the NWS, specifically the United States, should continue to maintain a policy of extended nuclear deterrence on the Korean Peninsula and in Europe. The United States should continue to reduce the role of nuclear weapons in its security strategy, while balancing reassurances for its allies by maintaining effective extended deterrence.

Conclusion

By examining the historical development of the NPT, it is clear that disarmament was the goal of the NPT under Article VI. However, states did not muster the political will to strengthen the NPT and the disarmament verification process. Although the 2010 Action Plan reframed the way states thought about disarmament by addressing the humanitarian consequences of nuclear weapons use, states parties decided to establish a new legal regime, resulting in two conflicting treaties. As a legal document, the TPNW does not establish international legal norms or make a positive contribution to achieving nuclear disarmament. Instead, this new treaty undermines previous legal frameworks while posing several security concerns by weakening the deterrent value of existing nuclear weapons that remain critical to global peace and security. Despite the best efforts by the TPNW to create an international norm of non-use, the policy of extended nuclear deterrence remains necessary in our current international security setting.

Additionally, the TPNW does not set up the proper processes to imple-

ment disarmament verification, which further undermines the NPT. Instead, this regime proliferation incentivizes states to forum shop as conflicting legal obligations exist within the international community. From this perspective, it is necessary for NWS, such as the United States, to continue to pursue disarmament per their legal obligations in the NPT through a comprehensive whole-of-government approach. While the nuclear decision-making calculus is complex, NWS should continue to pursue their legal responsibilities under the NPT and all non-proliferation efforts should focus on an interagency process. This would ultimately prove to be more valuable than becoming a signatory to a newly established prohibition treaty that disregards the realities of the international security environment.

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8

Disentangling Lebanon from Regional Wars: Re-thinking Hezbollah

Laurie Georges

Introduction

The surprise resignation of Lebanese Prime Minister Saad Hariri while on a trip to Saudi Arabia in November 2017 sent shockwaves throughout the Middle East. Outrage at the possibility of Saudi's involvement in forcing Hariri to resign was curbed only after he announced the suspension of his resignation two weeks later. This incident is only the latest in a series of tumultuous episodes of Lebanese politics caught in a web of regional power struggles. In this paper, I examine the interplay of domestic and regional constraints that prevent the "normalization" of Lebanese foreign policy, i.e. disentanglement from regional wars, specifically the Arab-Israeli and the Iranian-Israeli conflicts. Although since 2007 the United States and, to some extent, Europe have tried to assist Lebanon in strengthening its army and weakening Hezbollah, these policies have been misguided. Only a better understanding of domestic dynamics can reshape these policies.

After the end of the civil war in 1990, Lebanon had receded in importance for U.S. foreign policy priorities. The United States was reluctant to get involved in Lebanese internal politics after the 1983 attack on the U.S. Marine barracks in Beirut. Rather, the United States preferred to focus on the Israeli-Palestinian and Syrian-Israeli conflicts. Until the 2005 withdrawal of Syrian troops after the "Cedar Revolution," the United States dealt only with Damascus on issues related to Lebanon and maintained

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limited economic aid and investments to Lebanon during post-civil war recovery (Schenker 2009; Najem 2012, 111).

Only recently with the "war on terror" and in the frame of countering Iran's influence in the region has Lebanon begun to receive some financial assistance from the United States, if not the attention of foreign policy experts. While the U.S. Congress had kept levels of engagement with Lebanon low since 1983, since 2007 it has committed itself to a Foreign Military Financing program (FMF). This program, which seeks "to professionalize the Lebanese Armed Forces and to strengthen border security and combat terrorism" (Consolidated Appropriations Act 2017, 529), amounted to $1.5 billion USD over the past 10 years (U.S. Embassy in Lebanon 2018). Out of the 31 congressional measures signed into law that mentioned either Lebanon or Hezbollah in the past 10 years, 21 refer to the FMF program in annual budgets and 8 to countering Iran's influence. These eight laws detail sanctions against Iran's ballistic missile program but also against Iran's sponsorship of international terrorism. These measures are specifically aimed at undercutting support for groups such as Hezbollah.

The U.S. government has classified Hezbollah as a terrorist organization since 1997 and this categorization was refined in 2001 to describe Hezbollah as a "Foreign Terrorist Organization" possessing "global reach" (Harb and Leenders 2005, 175; U.S. Department of State). Hezbollah has also been described by many senior U.S. officials as one of the most dangerous terrorist organizations in the region, assessing in particular that it surpassed al-Qaeda as a "threat to peace" in the early 2000s (Harb and Leenders 2005, 175). This increased attention is epitomized by the Hezbollah International Financing Prevention Act of 2015. A bundle of new bills has been introduced in the U.S. House of Representatives in 2017 to make this legislation more stringent.

However, the continued view that Hezbollah is an "illegitimate" terrorist organization that a "legitimate" Lebanese state is unable to cope with is flawed and leads to inadequate responses. Indeed, U.S. policies reflect an out-of-date narrative that does not sufficiently capture recent developments (Hourani 2013, 51; Harb and Leenders 2005, 175–177). The reality of the Lebanese state, as in many postcolonial states, is the blurring of lines between state and non-state actors. Entities that are formally recognized as being part of the state and other elements that belong to sectarian political movements combine in the politics of Lebanese security to form "hybrid sovereignties" (Hazbun 2016, 1056). Hezbollah now functions as a "state-within-a-state" and has entered the realm of normal politics by associating itself with new President Michel Aoun's March 8 coalition, one

of Lebanon's two state coalitions. It has also established itself as a welfare network, which I define in this paper as the social infrastructure that enables Hezbollah to provide security, utilities, medical services, education, and employment to its targeted demographic.

In addition to misreading these domestic dynamics, Western foreign policymakers have also misread the international intricacies of Lebanese foreign policy. Torn between Saudi Arabia and Iran and caught in a war of regional influence, Lebanon has tried unsuccessfully to maintain a neutral foreign policy. The American irritation at increasing Iranian influence in Lebanon must be recalibrated in view of Lebanese domestic issues. These considerations raise the following question: how can Lebanon achieve a normalization of its foreign policy? As Hezbollah is the main reason why Lebanon is still in a state of war with Israel and remains involved militarily in neighboring conflicts, can the United States do more to help Lebanon disentangle itself from Hezbollah? By examining Lebanon's domestic politics and institutions, I will show that the country faces structural imbalances that enable the rise of entities such as Hezbollah, which in turn exacerbate these imbalances to their advantage. Network analysis further sheds light on such hybrid sovereignties while speech evidence suggests that Hezbollah is not necessarily unstoppable. These findings highlight the need to identify the right tools to challenge Hezbollah's hold over Lebanon.

This paper outlines several issues that need to be addressed to diminish Hezbollah's influence in Lebanon. The link between sectarian divisions, external penetration, and institutional weaknesses which enables the creation of entities with hybrid sovereignties should be severed. Misunderstanding Hezbollah as simply being "terrorists" rather than a sophisticated network that provides social services in the continuity of Lebanese political practice obstructs novel ways of dealing with Hezbollah as a welfare network. Lastly, Hezbollah's populist nature should be properly identified to make a new range of tools available. Part I of this paper identifies the traditional determinants of Lebanese domestic imbalance, Part II focuses on the hybrid sovereignties that emerge from these conditions, Part III examines how such hybrid sovereignties arise and persist from a network perspective, and Part IV highlights the populist features of Hezbollah, which could limit its influence over governmental functions. Lastly, I will present several policy recommendations.

The Traditional Determinants of Lebanese Imbalance

Sectarian Divisions

The fundamental obstacle standing in the way of "normalizing" Lebanese foreign policy is the sectarian, or "confessional," structure of the Lebanese state. This confessional structure accentuates and is in turn reinforced by external pressures and institutional weakness. Dating back to the National Pact of 1943 and the revised constitution with the Ta'if Agreement after the civil war in 1989, the consociational system—a power-sharing arrangement between confessions—has been in place to overcome sectarian divisions. However, rather than incorporating cultural diversity, the state has remained fractured along sectarian lines. Each confessional community enjoys great powers, playing both religious and political roles. Beyond its authority over personal status law, each confessional community also holds political privileges in terms of reserved parliamentary seats and in the distribution of political roles. For instance, presidential functions are reserved to Maronite Christians, the position of prime minister to Sunni Muslims, and that of speaker of the assembly to Shi'ite Muslims. The state has become a platform for deadlock and competition of diverging interests between rival factions (Wilkins 2012, 25).

As none of the confessional groups comprise a majority of the population, they form coalitions and look for external patrons. A pillar of the National Pact of 1943 was to give Lebanon a neutral foreign policy, a compromise between pan-Arab and pro-Western orientations. This neutrality has never been implemented as each substate group held its own foreign-policy agenda and tried to impose it with external help (Wilkins 2012, 26). This dynamic persists today. The coalitions and agendas may have changed, but the multiplicity of agendas and the impossibility of imposing a neutral foreign policy—or at least a non-belligerent foreign policy—remain.

Post-2005, Lebanon regained some of its independence in foreign policy after the Syrian withdrawal. During this time, two main political coalitions emerged: March 8 and March 14, named for the day of protests held by each coalition's respective followers after Rafiq Hariri's assassination. Syrian allies, mainly Shi'ite parties (along with Hezbollah) and Christian followers of Michel Aoun took to the streets on March 8 to "thank Syria" and reaffirm its special relationship with Lebanon. A week later, Hariri's Sunni movement, along with the Christian political parties Lebanese Forces and Kataeb, responded with an even larger demonstration, lead-

ing to the Syrian withdrawal (Hourani 2013, 48). The two narratives are utterly irreconcilable: the pro-Western and pro-Saudi March 14 coalition emphasizes economic imperatives, the disarmament of Hezbollah, and disengagement from the Arab-Israeli and Iranian-Israeli conflicts, while the pro-Iran and pro-Syria March 8 coalition prioritizes armed resistance against Israel and Western domination (Najem 2012, 116–117).

External pressures

No Lebanese leader can alone prevail over the others. This sectarian imbalance has fueled a recurrent phenomenon where external patrons intervene in Lebanon's domestic politics. Sectarian leaders have often called on foreign powers for help, powers with significant strategic interests in the region. During the civil war, it was the Christian forces who called for Syria and Israel to intervene (Zahar 2012, 66–67). Prior to 2005, Saudi Arabia poured billions of dollars into the Lebanese economy on behalf of the Sunnis. With the support of the United States, Saudi Arabia assured the premiership to Rafiq Hariri from 1992 to 1998 and from 2000 to 2004. The benefactors of Hariri's financial network from Riyadh dominated economic matters, especially in the domains of real estate, insurance, and post-war reconstruction (Hourani 2013, 45). While Saudi Arabia had infiltrated the economy and still plays a major role in it, the security sector was deeply affected by other relationships, mostly between Hezbollah and Syria and Hezbollah and Iran (Wilkins 2012, 43–44).

After its 2005 military retreat from Lebanon and until the outbreak of the Syrian civil war, the Syrian government sought to retain control over Lebanon and over the Hezbollah-Israel conflict. It provided Hezbollah with arms (which originated in Iran) and shared key intelligence and strategic planning. Using this cooperation, Syria ensured that Lebanese foreign policy remained aligned with its own. Acting through the March 8 coalition, Syria vetoed pro-Western policies or deals with Israel before they could reach any deal themselves with the Jewish state (Najem 2012, 118). Syria also had a long history of political assassination, eliminating anti-Syrian figures and opposition in Lebanon. Furthermore, even after its withdrawal from Lebanon, Syria kept its transboundary networks. They are interwoven into the Lebanese government and military and continue to engage in corruption and cross-border trafficking of primary goods, such as cement and oil (Picard 2012, 97–100; Hourani 2013, 48).

Hezbollah's relations with Iran go far beyond a strategic entente. The two share a strong ideological affinity. Iran's Revolutionary Guard established Hezbollah among the Lebanese Shi'ite population in the 1980s to

spread the Islamic Revolution and set up an Islamic state in Lebanon. Iran provided Hezbollah with arms, intelligence, and training. Many of Hezbollah's spiritual leaders have family ties with Iranians. Iran has given Hezbollah hundreds of millions of dollars in aid, enabling Hezbollah to effectively become a patronage network within the Shi'ite community but also to rebuild after the war with Israel. The retreat of Israel from the south of Lebanon in 2000 and the stalemate in 2006 demonstrated Hezbollah's value as a critical asset in Iran's eyes. Iran will maintain its support as long as Hezbollah can act as an effective deterrent against Israel. Iran has already threatened to turn the Lebanese-Israeli front into a theatre of war through Hezbollah in case of an Israeli attack on Iranian territory (Najem 2012, 118–119; Wilkins 2012, 34–35).

The absence of U.S. support to Lebanon's formal military before 2007 and the inadequacy of the FMF support that came after accentuated the imbalance between the "state" army and Hezbollah's. As the Lebanese Armed Forces (LAF) already lagged behind Hezbollah's forces in capabilities, U.S. aid to the LAF simply did not measure up to Iran's financing for Hezbollah. From 2009 to 2011, U.S. aid to the LAF was cut by half from already low levels (U.S. Department of State, 2017) and represented in 2016 one-tenth of what is believed to be Iran's aid to Hezbollah (Harris 2017). Although the FMF funds rose in 2017, the proposed budget for 2018 cancels the FMF for the LAF, which could have even more deleterious consequences for Lebanon (Abrams 2018, 3). Unlike Iran, the United States is also concerned about minimizing the threat to Israel, its regional ally. A surge of arms in the region increases the risk of weapons falling into the wrong hands. This perception has considerably restricted U.S. financial assistance along with lethal and offensive armament delivery to the LAF (Nerguizian 2014, 12).

Institutional weakness

The Lebanese state has always been weak due to its consociational system and lack of military capacity, and this weakness predates the civil war. Nevertheless, after the Ta'if Accord, the system has been even more prone to deadlock: with the attribution of equal powers to the president, prime minister, and speaker of the house, the formerly all-powerful president no longer plays the role of domestic arbitrator (Najem 2012, 120). Similarly, the sectarian allocation of ministries and appointment to public sector positions prevent coordinated policies as each leader puts the need of his or her own group and clientele network ahead of state interests. Looking at foreign policy-making, when the prime minister (PM) and the foreign

minister (FM) belong to different coalitions, as was the case between PM Fouad Siniora and FM Fawzi Salloukh, communication can be completely severed (Wilkins 2012, 46–47). Ta'if also accentuated confessional grievances which reinforce disagreements, as the long-marginalized Shi'ite community still resents unequal participation in power-sharing and the Maronites feel insecure about their diminished role (Hamdan 2012, 44–45).

The weakness of the army is even more problematic than the inefficiency of the civil service. Lebanon has a small army with outdated equipment and no real air force or navy (Wilkins 2012, 47). The army has around 70,000 men, including reservists, which is equivalent to the number of Hezbollah fighters (Rose 2018). This deficit can be traced back to the Ta'if Agreement, which established an unequal cooperative relationship between Syria and Lebanon, with the Lebanese army and police being subordinated to their Syrian counterparts. The Lebanese army, which was almost non-existent after the civil war, was remodeled according to the Ba'athist model, based on conscription and obsolete training. Syria had total control over Lebanese intelligence and ensured that Lebanese intelligence officers' allegiances were to Syria. To maintain this control, Syria devoted important financial resources toward training, intelligence, wages, and gifts. Minimal sums were left over for equipment and armament. Syria was also not keen on rearming the Lebanese army, preferring to keep it weak. Moreover, during this period, most Western powers were reluctant to help rebuild an army under Syrian control. Furthermore, Syria set up numerous competing security institutions in intelligence and in the elite military corps, which made coordination between different units negligible, as officers were accustomed to reporting to their own Syrian patrons. The ensuing lack of Lebanese strategic planning and materiel explains why the military was dysfunctional after the Syrian withdrawal. It also explains why the Lebanese military was effectively a bystander during the 2006 Israeli attack and local insurgencies in 2007. It had lost the monopoly on the use of violence over its territory, leaving a vacuum partly filled by other entities including Hezbollah (Picard 2012, 86–90).

Furthermore, the army has not been representative of the ethnic balance of the population. Under Syrian leadership, most anti-Syrian Christians were excluded from the officer corps. Since 2005, the army has reflected the divide between the March 8 and March 14 coalitions. The Syrian withdrawal reactivated the intra-Christian rift between President Aoun on the one hand and Lebanese Forces leader Samir Geagea and Kataeb supporters on the other. This rift also fostered more distrust toward the army for being too soft on the Shi'ites by letting them support Hezbol-

lah's military arm. Sectarian allegiances prevail, and in times of war these divided loyalties are counterproductive for any military operation (Picard 2012, 94–97).

Lastly, corruption is rampant across institutions. Corruption has persisted and spread since the days of the lawless economy under Syrian rule. It pervades the system from the level of political leaders and senior civil servants down to the ordinary police officer. Corruption allegedly costs the Lebanese state more than $1.5 billion USD per year (Picard 2012, 98).

Since 2007, efforts have been made to reform the Lebanese Armed Forces (LAF), but as stated above, American funding has not been enough to overcome the LAF's many defects and has not compared to the aid Hezbollah receives from Iran (Picard 2012, 90). The 2014 Ministerial Conference on International Support for the LAF in Rome demonstrated international concern for strengthening the LAF, capped by a Saudi pledge to donate $3 billion USD worth of French arms. However, Saudi Arabia later scrapped the arms package as the Saudis faced low oil prices and increased spending for their intervention in Yemen. Resentment against the Lebanese government for not condemning the attack on the Saudi embassy in Iran may also have played a role in the cancellation of the arms package (Reuters 2016).

This structural imbalance has made the Lebanese state prone to competition over its sovereignty. The root causes of sectarian divisions, external penetration, and institutional weakness have enabled Hezbollah to thrive and push for a more belligerent agenda. U.S. foreign policy only consists of measures that focus on Hezbollah's military capabilities and connections, overlooking the place Hezbollah has come to hold in Lebanese political life.

Hybrid sovereignties and the transformation of Hezbollah

The official U.S. foreign policy narrative of the "illegitimate" terrorist organization against a "legitimate" state is misleading when it comes to understanding Hezbollah. This narrative is based on misconceptions and on analyses that have not changed since the 1980s. Though Hezbollah did commit acts of terrorism in the 1980s and has been accused of doing so in the early 1990s, and while it does support Hamas in its fight against Israel, amplifying this discourse overshadows other realities. Since the mid-1980s, Hezbollah has replaced suicide operations with more conventional warfare. It has also denied responsibility for other terrorist attacks, such as the 1992 and 1994 bombings in Buenos Aires and London (Harb and Leenders 2005, 175–178). Rather, it shifted towards more sophisticated

military operations, such as launching rockets and missiles on Israeli positions (Saad-Ghorayeb 2002, 133) and now sending men to fight alongside Bashar al-Assad's forces in Syria (Reuters 2018). In this sense, Hezbollah's tactics are less "terrorist" and better described as "quasi-state" military operations.

Another exaggerated claim is that Hezbollah is associated with al-Qaeda (U.S. National Commission on Terrorist Attacks Upon the United States 2004, 128), which completely ignores the long-standing animosity between the two groups. Hezbollah's leader Hassan Nasrallah described al-Qaeda soon after the September 11 attacks as an "entity trapped in medieval ages and bent on killing innocent Muslims" (Saab and Riedel, 2007). Reciprocally, the late leader of al-Qaeda in Iraq Abu Musab al-Zarqawi accused Hezbollah of acting as a protective buffer for Israel (Saab and Riedel 2007; Kaplan 2006). Moreover, al-Qaeda has carried out several attacks on Hezbollah, such as the July 2004 attack on Hezbollah senior official Ghaleb Awali (Saab and Riedel 2007).

A final misconception is about Hezbollah's ideal of establishing an Islamic state in Lebanon. Although establishing an Islamic state was Hezbollah's goal at its inception, Hezbollah has not proposed the establishment of an Islamic state in its political platforms since it began participating in Lebanese elections in the early 1990s. Party leaders still contend that it is an abstraction to be aspired to, but that it is impossible to impose without consensus, given the pluralism of the Lebanese context (Harb and Leenders 2005, 179).

Many sources base their "terrorist" claims on Hezbollah's public discourse, with its anti-American rhetoric and full support of Palestinian armed resistance (U.S. Department of State 2004, 122). However, this strong discourse is similar to many party discourses in the Arab world (Salamey and Pearson 2007, 422).

Hezbollah has developed into a whole new kind of organization since the 1980s. It has become a state-like entity that provides electricity and water as well as a wide range of social services including healthcare, education, and economic development programs. It assures basic welfare to its constituency and offers new opportunities for unemployed youth through its numerous affiliated companies and charity organizations. It also assists Shi'ite citizens in securing positions within the government or in ministries and helps them navigate Lebanon's corruption-prone bureaucracy. It is a highly professional network, and its efficacy in long-neglected Shi'ite areas enabled it to absorb other Shiite rivals and to gain wide popular support (Hourani 2013, 40–41; Deeb 2006, 118).

At the same time, Hezbollah has also managed to develop into a Lebanese Shi'ite social movement. Its holistic approach goes far beyond material assistance to its constituents and promotes an elaborate ideology. Hezbollah's mission is centered around the concept of resistance against Israel and Western domination, both in terms of the West's regional policies and of the capitalist and materialist culture it imposes on the Middle East (Saad-Ghorayeb 2002, 88). Its military and social dimensions are deeply intertwined, as armed resistance against Israel is associated with the Shi'ite social and moral responsibility to resist Western decadence. Hezbollah aims to produce a new "Resistance Society" and push for modernization with an Islamic outlook. The combination of the material and ideological components in its discourse appeals to different segments of the population and makes Hezbollah a formidable adversary that cannot simply be "removed" by force (Harb and Leenders 2005, 184–188; Deeb 2006, 122).

In view of these dynamics and of Hezbollah's ability to take on the role of a state where the Lebanese state is absent, the official U.S. narrative on Hezbollah must change. Lebanon is not simply a weak state that lacks sovereignty. Rather, it should be viewed as a constellation of hybrid sovereignties. Beyond the state/non-state dichotomy, one should also take into account polities which do not coincide with the state, but which fulfill state-like functions where the central government is absent. These realities change the way one should conceive of the state and of non-state actors, especially when the former does not completely assume its role and relies on the latter to complement its services, be it in the provision of military protection or of social welfare. These special arrangements shed light on the different ways of governing a territory that are prevalent throughout much of the postcolonial world (Fregonese 2012, 659; Hourani 2013, 41).

Understanding Hezbollah's evolution is necessary to comprehend how it has taken root in the fabric of Lebanese politics and society. The simple "terrorist" label has concealed for too long what makes Hezbollah so enduring—namely, its ability to fulfill particular material and ideological needs for the population. Nevertheless, this form of governance is not novel in Lebanon, and proceeding to a network analysis sheds some additional light on the development and possible trajectories of such entities.

Seeing Hezbollah Under the Network Lens

Rather than invoking the state/non-state dichotomy, policymakers should view Hezbollah as part of a succession of sectarian-based networks that have controlled Lebanon. These networks, "in which political movements develop and become anchored in non-state and parastatal institutions that

provide economic, social and security services and even military capabilities" (Hourani 2013, 41), are paradigmatic of the Lebanese mode of governing.

One could trace this pattern back to the wartime Christian Kataeb network, which from 1975 to 1990 established a parastatal institution in the region it controlled, and then began to capture existing state institutions in 1982. It redistributed economic aid to political allies and military assistance to its militia, the Lebanese Forces, and to the loyal part of the Lebanese Army. It maintained its clientele by incorporating Phalangist institutions into the state apparatus, notably the Council on Foreign Economic Relations which became the Board of Foreign Economic Relations (BOFER). The BOFER had wide latitude to manage tourism, industrial development, and foreign trade, making deals with private companies and directly negotiating with foreign governments. The Kataeb network declined due to two reasons. First, U.S. support was withdrawn under President Ronald Reagan after then-Lebanese President Amine Gemayel failed to sign the May 17 Agreement with Israel in 1985. Second, the 1989–90 economic crisis triggered the collapse of Lebanese financial institutions upon which the Kataeb mercantile elite were dependent. Subsequently, other smaller networks came to prominence, such as the Druze "Administration of the Mountain" created by the militia of the Jumblatt family, the most politically prominent Druze family in Lebanon (Hourani 2013, 41–42).

The Hariri network is another example of this mode of governance, and it thrived after the civil war when the remodeled state would have been expected to regain its control. The Saudi-backed billionaire and construction magnate Rafiq Hariri controlled a constellation of companies and charities and also provided an impressive range of social services such as healthcare, education, and post-war reconstruction planning. He also captured Lebanese financial institutions, the Central Bank and the Banks' Association, and inserted his allies into the state apparatus. His former lawyer became the minister of justice and the head of his Mediterranean group became the finance minister. Moreover, he put in place a powerful Council for Development and Reconstruction, which acted just as the BOFER did before with the Kataeb network (Hourani 2013, 43–44).

An analysis of these networks highlights another common feature, which is their transnational nature: they rely on foreign patronage. Both the Kataeb and the Hariri projects were successful because they had the financial and military backing of foreign powers, the United States for the former and Saudi Arabia for the latter. Moreover, the withdrawal of external support is usually part of the reason why these networks collapse. It is when they lose their usefulness for their external patron that they start

to decline, as was the case with the Kataeb and the United States, and as seems to be the case today with Hariri and Saudi Arabia (Hourani 2013, 45–46).

Hezbollah shares many of the features of the Kataeb and Hariri networks highlighted above. Nevertheless, there is a significant difference in that Hezbollah does not seem to seek control of the Lebanese economy. Rather, it emerged to fill the military vacuum left by the Hariri network in the South (Hourani 2013, 46). In other words, all of these networks have provided social welfare, but while the Kataeb and especially the Hariri networks were mostly concerned with capturing the economy, Hezbollah, building on its anti-neoliberal stance, largely focuses on its armed resistance against Israel and Western domination. In terms of financing, Hezbollah does not seem to need to capture the economy. It is mainly funded by Iran, but also to a large extent by the donations of expatriate Lebanese, which are presumed to be in large part derived from criminal networks (Levitt 2013, 248, 328–329), and pious Shia, who consider their contributions as a form of religious tax in line with a key pillar of Islam to give to charities (Deeb 2006, 121).

Lebanese history offers some perspective on Hezbollah's current trajectory. In view of all the similarities to the other networks, one could argue that Hezbollah is following a similar path to power. It has evolved from a militia into a state-like entity providing needed welfare to a long-marginalized population. It has succeeded in infiltrating state institutions and enjoys strong financial and military backing from Iran. However, even though it exhibits many of the features of previous ruling networks such as the Kataeb or the Hariri networks, it does not dominate the financial and trading sectors. This unique feature is a result of Hezbollah's populist nature, which differentiates it from previous ruling networks but also limits its governmental influence.

Populism As a Constraint on Hezbollah's Ascendency to Power

Hezbollah's success and popularity lies not only in its military victories but also in its "symbolic capital" in terms of honor, dignity, and martyrdom. The party was on the verge of disappearing in 2003, but Israel's attack in 2006 rejuvenated it. Hezbollah used the war to rebuild its narrative and navigate its way back into Lebanese politics. Hezbollah shares four main characteristics with populist movements. First, the party uses a strong anti-elite discourse: the United States' and Israel's corrupt allies in the government did nothing when Lebanon was under attack. Second, it targets its

message to the "silent majority," the "good" average Arab who is suffering in silence and with whom Hezbollah's discourse resonates. Third, Hezbollah's charismatic, non-corrupt, and puritan leader, Hassan Nasrallah, holds great sway over his constituency as well as over other segments in society and is easily accessible via his TV channel. Lastly, it maintains its influence by perpetuating the narrative of armed resistance and the defense of the nation against the Israeli enemy. If, in 2003, Hezbollah was on the verge of becoming a rebel without a cause, today the party emphasizes more than ever its self-stated noble purpose of leading the defense against the existential threat from Israel. This discourse directed at the pious poor and underclass reflects to a large extent the current trend of Islamic populism in the Middle East (Leenders 2006, 44–47). Hamas in the Gaza Strip, Jaysh al-Mahdi in Iraq, and the Muslim Brotherhood in Jordan and Egypt exemplify such practices (Salamey and Pearson 2007, 420–421).

A consequence of this populist strategy is that it limits the involvement of Hezbollah in government. Hezbollah needs to stay separated from state institutions as it builds its popularity by denouncing them. Since it began to participate in "normal" politics, Hezbollah has witnessed an erosion of its "corruption-free reputation" and its nation-wide support. Indeed, participation in the consociational system requires a sectarian orientation. Hezbollah was therefore expected to represent its Shi'ite constituency. Moreover, criticism about its role in the 2006 Israel war, as it is widely viewed that Hezbollah brought about the Israeli retaliation, forced Hezbollah to fall back on its Shi'ite support base. Lastly, it is not in Hezbollah's interest for the state to collapse, and the state-like role it plays is likely more than it wished for. The need to focus its resources and personnel in Lebanon diverts Hezbollah from the initial core purpose that enabled it to carve out a social and political space in the first place: its armed resistance (Leenders 2006, 48–51; Blanford 2015). The following excerpt of a recent statement by Nasrallah after U.S. President Donald Trump's decision to recognize Jerusalem as Israel's capital highlights some of the elements mentioned above, particularly the moral dimension of Hezbollah's message. More importantly, it emphasizes the need for Hezbollah to return its focus to the armed resistance against Israel in Palestine:

> The advantage of this American decision is that it reveals the vicious from the good in our Arab and Islamic worlds (…) I speak today in the name of all the resistance axis—people, states, and factions—the resistance axis has overcome the previous phase and today, it stands strong and victorious as it is finishing its battles and defeating the U.S. and Israeli elements, and

> now Palestine, its people, and al-Quds will return to be its top priority. (Moughnieh 2017)

Policy Recommendations

In this paper, I outlined several issues that need to be addressed to plausibly challenge Hezbollah's control in Lebanon, which would lead to a normalization of Lebanese foreign policy. The first main question raised is that of the link between sectarian divisions, external penetration, and institutional weaknesses which enable the creation of entities with hybrid sovereignties such as Hezbollah. The second key issue is Western powers' failure to understand Hezbollah's current role as a state-within-a-state and of its formation as a network in continuity with Lebanese political practices. This misunderstanding explains why counterterrorism measures are ineffective against Hezbollah. A thorough reform of Lebanon's political system is required to uproot an entity so interwoven with society. Lastly, the dearth of analysis on Hezbollah's populism has thwarted effective challenges to Hezbollah's influence.

In view of these problems, the United States, and to a certain extent Europe, must pursue a multifaceted strategy to dilute the factors that keep Hezbollah pertinent:

- As it is not currently feasible to address sectarian divisions and external penetration, policymakers should focus on correcting Lebanon's institutional weakness. The United States must continue to support the LAF by strengthening the training of officers and providing equipment. Crucially, the lack of offensive weapons is the LAF's Achilles' heel (Picard 2012, 102). Additional funds or weapons would enable the LAF to generate deterrence power and combat Hezbollah to re-establish the state's monopoly over violence. Strengthening the LAF is also a necessary first step in countering Hezbollah's narrative. If the LAF's capabilities are increased to match and even surpass Hezbollah's, it would undercut Hezbollah's argument that it needs to keep its weapons to defend Lebanon in case of an Israeli attack. Until now, both the Ta'if Agreement and United Nations Security Council Resolution 1701 (2006) have failed to disarm Hezbollah. Today, more than a decade later, no one seems to be able to force Hezbollah to give up its arms (Abrams 2018, 3–5). Continued diplomatic pressure on Hezbollah through the March 8 presidential coalition and support for the LAF would make it harder for Hezbollah to justify its unwillingness to disarm. Hezbollah's reputation as a "normal" and "benevolent" Lebanese political party would be undermined.

- There must be a reform of the consociational system, if not in its core, then at least in the distribution of welfare services. Such an effort must arise from the domestic sphere in the long term. This reform is hardly feasible in the short term, as the influx of Syrian refugees weighs on public services. However, it is very likely that Hezbollah would resist this process in the future as it draws its support base from these welfare networks. Only under two scenarios could we imagine Hezbollah agreeing to relinquish its control over its distribution of services. The first would be in the context of a war with Israel. With its resources and manpower under strain, Hezbollah could not possibly convince its core supporters to reject governmental help to maintain social services. The second would be to implement colossal state-sponsored development projects to build infrastructure and bring opportunities to southern Lebanon, which would restore confidence in the state. However, these plans would necessitate Hezbollah's cooperation, which would empower it further by depicting it as the party that brought the Shi'ite population back on the government's radar. This scenario would become more likely once Hezbollah begins to be weakened by the policies mentioned earlier in this section.

Regarding Hezbollah's populism, several approaches can be adopted:

- Revisit the current U.S. policy of tightening sanctions on Hezbollah, as it mainly damages the Lebanese banking sector without affecting Hezbollah's cash flows from Iran and Lebanese Shi'ite expatriates. Current sanctions endanger Lebanon's economy, which is heavily dependent on diaspora remittances that comprise around 20 percent of the economy (Gardner 2016). Hezbollah thrives in an environment of economic crisis. While some of its growing middle-class support base may be affected by these measures, sanctions feed the party's anti-American and anti-neoliberal rhetoric. Efforts should be devoted towards tracking Hezbollah's alleged criminal networks in Latin America and Africa (Levitt 2013). The United States should continue to conduct operations such as Operation Titan from 2008, in which U.S. and Colombian authorities raided a cocaine-smuggling and money-laundering ring that funneled part of its profits to Hezbollah (Brice 2013).

- The United States should amplify denunciations of Hezbollah's involvement in the Syrian conflict and, in view of the anti-American sentiments in the Arab world, pressure European leaders to intensify their verbal condemnation of Hezbollah's role. Hezbollah's image and credibility as a defender of the people took a hit when its open alliance with Bashar al-Assad drew it into the Syrian war to help save an authoritarian leader from being overthrown by his own people. Moreover, as ISIS retaliation attacks in the north of

Lebanon increased public disapproval of Hezbollah's operations, the party sought to deflect attention from its involvement in Syria (Khatib et al. 2014, 181–182). Renewed criticism would accentuate the setback that Hezbollah's popularity has suffered in the past few years.

- Fighting corruption is essential, as it is one of the root causes of all of Lebanon's evils. It feeds Hezbollah's populist rhetoric and institutionalizes sectarian divisions. Nevertheless, implementing anti-corruption measures and good practices requires political will, which is not present at the moment. For example, the government created the Office of the Minister of State for Administrative Reform in 1993, with combating corruption as one of its aims. However, lack of funding and general indifference have hindered its functions (Wickberg 2012). Civil society should be encouraged to continue lobbying for new legislation and better results from these existing institutions.

Conclusion

To conclude, it is possible to disentangle Lebanon from regional wars and normalize its foreign policy to promote peace and stability. Due to its confessional political structure and weak institutions, Lebanon will always be prone to external pressures and can easily be dragged into regional conflicts. However, it is both possible and necessary to diminish the influence of Hezbollah, which prevents Lebanon from pacifying its relations and moving on to economic and social reconstruction. The current U.S. foreign policy narrative should be revised to comprehend both Hezbollah's network form and its populist orientation. A better understanding of Hezbollah and the forces that sustain its hybrid sovereignty is a first step toward forging policies that can stabilize Lebanon in the long term.

Hezbollah will remain a dominant political force in Lebanon in the near future. Although its involvement in the Syrian conflict to help the Assad regime has diminished its popularity among Sunni populations, the resolution of this conflict will likely not be a game-changer for Hezbollah (Blanford 2015). Though the regional divide between Sunnis and Shi'ites will foster a hostile environment that can potentially escalate, and while the current policies of the Trump administration in the Israeli-Palestinian conflict present an additional challenge by inflaming and legitimizing Hezbollah, Hezbollah's biggest challenge will be domestic. The expansion of the party and its increased involvement in domestic politics will be at odds with its corruption-free reputation and its core purpose of resistance in the long term. Nevertheless, if Hezbollah manages to consolidate its power in the Lebanese government and parliament, it may appoint its

allies in top security positions and even push to amend the Constitution in its favor (Ghaddar 2017).

The May 2018 parliamentary elections confirmed this trajectory. While Hezbollah's number of members of parliament has not significantly changed, it won more than half of the seats in parliament through its coalition allies. This "parliamentary and moral victory," (Perry et al. 2018) as Hezbollah leader Hassan Nasrallah has boasted, not only dealt a heavy blow to Hariri's leadership but also strengthened the parties that have accepted Hezbollah's military arsenal. These results will make it even harder to bring back the issue of Hezbollah's disarmament on the government's agenda. Moreover, this parliamentarian majority increases the risk that international actors, such as Israel, no longer differentiate between the Lebanese government and Hezbollah, which could entail harsher stances towards Lebanon in the future. Lastly, this win also enabled the return to parliament of pro-Syrian political figures that had not held office since Rafiq Hariri's assassination in 2005. Although voter turnout was still relatively low, around 49 percent (down from 54 percent in 2009) (Perry et al. 2018), these elections reflect worrying trends for Lebanon. The policies recommended in this paper will be crucial for blunting Hezbollah's increasing influence before it holds all the cards.

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9

The Missegregation of the Twin Cities: How the Minnesota Land Use Planning Act of 1976 Failed to Stably Integrate the Twin Cities Metropolitan Area

Seleeke Flingai

Introduction

Housing in communities across the United States continues to be racially and socioeconomically segregated. Despite widespread recognition of the problem, efforts to integrate housing through policy reform have often proven fragile. In the late 1970s, arguably the best regional housing integration program in the United States was underway in the Minneapolis-St. Paul metropolitan area (known colloquially as the Twin Cities). Driven by a progressive spirit and the financial support of federal housing policy, the Metropolitan Council—the Twin Cities' regional planning agency—sought to develop a collaborative approach to land use planning and development. With the passage of the Metropolitan Land Use Planning Act of 1976 (LUPA), the state government had given the Council the tools it needed to make its regional dreams come true.

The law's primary goal was to contain urban sprawl. Yet in the minds of many, of equal importance was how the law would empower the

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Metropolitan Council to comply with the Fair Housing Act of 1968, the landmark federal legislation that demanded that state and local officials "affirmatively further" fair housing in their communities. As such, a key metric of LUPA's success was its ability to racially and economically desegregate the central cities of Minneapolis and St. Paul through "fair share" distribution of low- and moderate-incoming housing to nearby suburban areas. And in its first few years of passage, LUPA looked to be a runaway success: by 1980—a mere four years after the law's passage—black residents were seven percent less likely to live in highly segregated census tracts than in 1970 (Institute on Metropolitan Opportunity 2015, 5). Importantly, the percentage of cities in the region that offered subsidized housing grew from 8 percent to 51 percent during that same time frame (Institute on Metropolitan Opportunity 2015, 5). By 1979, 40 percent of subsidized housing units were located in the suburbs, and between 1971 and 1979, almost 75 percent of new subsidized houses were built in the suburbs, a national best (Institute on Metropolitan Opportunity 2015, 13). On all accounts, the Twin Cities region was an exemplar in racial and economic housing integration in the 1970s.

However, the tides shifted in the early 1980s, as cracks in LUPA and the Metropolitan Council failed to withstand the pressure of uninterested policymakers, a dynamic interest group environment, changing federal housing attitudes, and more. By 1983, progress on housing integration had effectively stopped, and by many metrics, the Twin Cities was worse off in the mid-2010s than in the mid-1970s. For example, as of 2015, over 41 percent of blacks live in majority-minority census tracts, the highest level since 1970; meanwhile, only 5.1 percent of non-Hispanic whites live in such neighborhoods, highlighting the vast differences in neighborhood diversity that LUPA in part aimed to reduce (Institute on Metropolitan Opportunity 2015, 5).

Why did integration fail in the Twin Cities? How did fair housing arrive on Minnesota's political agenda with such force, only to be systematically ignored and forgotten less than a decade after passage? I argue that focusing events such as the 1968 urban riots forced policy elites at the state and federal level to open up a policy window that enabled fair housing initiatives to enter federal, state, and local political agendas. I contend that the resultant policies, saddled with weak enforcement measures and supported by unstable, modestly invested coalitions, led to a weak reform that had little chance of standing the test of time. Finally, I suggest how this story might have ended differently—how the state legislature could have structured LUPA to better withstand political pressures and fundamentally alter political structures to maintain its objectives.

Framework

The process of policymaking can be broken down into a set of subprocesses, including 1) the setting of the agenda; 2) the specification of policy options from which to choose; 3) the choice of a particular policy option; and 4) the implementation of the policy decision (Kingdon 2003). In order to understand some of the reasons fair housing policy reform may rise and fall in short order, I look at a case study of the Twin Cities metropolitan area regional housing policy landscape in the mid- to late-20th century, focusing specifically on how fair housing became prominent on the national and local policy agendas, why officials selected certain policy options with weak enforcement measures, and how those policy choices left the reform subject to erosion. Throughout this case study, John W. Kingdon's theory of political agenda-setting and Eric M. Patashnik's policy reform analysis guide my approach. These perspectives focus on how social reforms often require stable coalitions before and after passage in order to endure, especially once the focusing events that force an issue onto political agendas fade into memory.

The Pre-Reform Situation

In 1967, President Lyndon B. Johnson established an 11-member commission to study the causes of the urban riots ripping across American cities. The resulting 1968 document, commonly known as the Kerner Report, began with a ominous warning of America's trajectory: "Our nation is moving toward two societies, one black, one white—separate and unequal" (United States Kerner Commission 1968, 1). The panel cautioned that an increasingly segregated society would threaten America's future, and in a bold declaration, the commission unequivocally implicated white society in the creation and maintenance of the American ghettos that separated black people from whites:

> What white Americans have never fully understood but what the Negro can never forget—is that white society is deeply implicated in the ghetto. White institutions created it, white institutions maintain it, and white society condones it (United States Kerner Commission 1968, 1).

The commission ultimately recommended federal action on employment, education, the welfare system, and housing. In regard to housing, the panel called for "a comprehensive and enforceable federal open housing law" that would cover all housing sales and rentals, as well as a reorientation of

federal housing programs to better distribute low- and moderate-income housing outside of central cities—a "metropolitan dispersal strategy" that would break up the ghettos and integrate metropolitan areas across racial and class lines (Keating 1994). Four weeks after the report's release, Martin Luther King, Jr. was assassinated, precipitating urban riots in more than 100 cities throughout the country. President Johnson capitalized on the civil unrest: he urged Congress to pass his oft-opposed fair housing bill as soon as possible to prevent further destruction. Less than a week later—after years of failed attempts and intense opposition—the Fair Housing Act of 1968 became law.

Fertile Soil for Agenda Setting

Focusing events can serve as the necessary spark to power new or existing coalitions toward placing a pressing issue on the government's policy agenda. However, once focusing events fade from the public's view, stable coalitions and substantial investments toward the reform's implementation are necessary to prevent the erosion of social policies. In the case study at the center of this paper, the placement of fair housing on the policy agenda, the passage and underwhelming implementation of the Fair Housing Act of 1968, and the similar fate of LUPA were direct results of such a framework. As Kingdon writes in *Agendas, Alternatives, and Public Policies*, "a complex combination of factors is generally responsible for the movement of a given item into agenda prominence" (2003, 76.) It is important to point to all of the variables that placed fair housing on the federal agenda before assessing the reform itself. A series of focusing events (the 1967 urban riots and King's assassination) and an activist national mood forced political elites (the Kerner Commission) to publicly wrestle with the connection between civil unrest (the problem) and racial housing segregation. Politicians and policymakers generated numerous alternatives to fix the problem, one of which was a federal fair housing act—a solution that President Johnson had pushed upon an unreceptive Congress for years. Suddenly, the combination of factors opened a policy window that transformed the fair housing agenda from a conversation into a landmark law. Yet these ideas were not born from the 1967 urban riots; civil rights activists had been fighting to end housing discrimination for years and President John F. Kennedy had signed an (all but ignored) executive order in 1962 to end such practices. But by 1968, the soil had become fertile enough for real change to happen and the Fair Housing Act was finally passed.

Role of Federal Housing Policy in the Regional Integration Debate

A key provision of the Fair Housing Act was the establishment of a civil rights office within the Department of Housing and Urban Development (HUD), which would assess whether state and local governments tried to "affirmatively further" fair housing. However, the criteria by which HUD would determine compliance was unclear and ultimately ineffective: the agency directed jurisdictions receiving HUD funds to submit an "analysis of impediments" (AI) to fair housing, but these reports were optional, left expectations unclear, suffered from subpar data quality, and rarely received HUD review. (A 2015 rule change provided municipalities with better public data and replaced the AI report with a mandatory, user-friendly fair housing assessment.) Furthermore, how communities would tackle the fair housing problem was up for debate. Anthony Downs, an economist at the Brookings Institution and author of *Opening Up the Suburbs: An Urban Strategy for America* (1973), was a vocal advocate for regional integration strategies. Having previously served on President Johnson's National Commission on Urban Problems, Downs argued throughout the early 1970s that opening up the suburbs to minorities would, among other benefits, lower the "possibility of major conflicts in the future caused by confrontations between two spatially separate and unequal societies in metropolitan areas" (Downs 1973, 26). However, sensing fears from white suburban residents and politicians that racial integration would increase social problems and reduce property values, Downs modified his recommendations to place a greater emphasis on economic integration instead (Downs 1973, 138).

George Romney, President Richard Nixon's pick for HUD secretary in 1968, made no such distinction between economic and racial integration. Romney was the former governor of Michigan and witnessed firsthand the 1967 Detroit riots, during which 43 people were killed and over 2,000 buildings destroyed. He agreed with the Kerner Report's conclusion that racially segregated central cities were the root cause of urban riots in the 1960s. In his capacity as HUD secretary, Romney sought to "affirmatively further" fair housing creatively by threatening to withhold federal grants from municipalities that were actively engaging in segregated housing schemes (Hannah-Jones 2015). However, knowing that Nixon would disapprove of federally-promoted suburban integration, Romney and his associates kept his plans secret from the Nixon administration. Romney successfully withheld grants from the Baltimore, Boston, and Toledo met-

ropolitan areas when those regions rejected affordable housing development in white neighborhoods.

When Romney tried to "affirmatively further" fair housing in 1970 in Warren, Michigan (a white Detroit suburb), a letter from town officials to the White House ended Romney's bid. Soon, congressmen and local officials from across the South, who were vehemently against government-mediated integration policies, blasted Romney's attempts at suburban integration, and Nixon responded by taking fair housing policy into his own hands. By 1972, Romney had resigned as HUD secretary after spending the last two years of his tenure powerless and isolated from the Nixon administration. Four years into the Fair Housing Act, federally promoted suburban integration was no more.

Perhaps due to President Nixon's efforts to restrict the federal government's role in suburban integration, regional councils of government (CoGs) became the focal point through which metropolitan dispersal strategies could be employed. CoGs, which often doubled as regional planning councils, were responsible for reviewing federal grant applications from local constituents regarding metropolitan planning, coordinating area-wide planning and development, and reviewing other matters affecting the region. In the Minneapolis-St. Paul metropolitan area, the Metropolitan Council served these functions and more. Founded in 1967, the Metropolitan Council oversaw regional planning and development for the seven-county metropolitan area. However, it wasn't until 1971 that the Council began to consider fair housing allocation when reviewing federal grant proposals from localities. By connecting this grant review mechanism (known as the A-95 review process) to regional housing allocation, the Metropolitan Council was able to push segregated suburbs to develop more modest-cost housing if those suburbs hoped to receive federal funding for planning projects. In 1973, the Council developed a Housing Allocation Plan that set regional goals to increase low- and moderate-income housing (Goetz et al. 2002, 15).

As the 1970s progressed, the Minnesota state legislature granted the Metropolitan Council more power to contain urban sprawl in the region. By 1975, the Council could now suspend proposals from towns, cities, and counties during the review process for up to 90 days, and suspend proposals with a larger regional footprint for up to 12 months (William Mitchell Law Review 1977, 306). During the following year, two interrelated housing items were on the political agenda in Minnesota: How should low- and moderate-income housing be distributed, and how much power should the Metropolitan Council have?

Public opinion on those two questions varied depending on where one lived in the metropolitan area. Minneapolis and St. Paul, which have consistently held a disproportionate share of subsidized housing since at least the 1970s, were generally in favor of not only increasing the Metropolitan Council's power, but also of distributing low- and moderate-income housing more equitably throughout the region (Institute on Metropolitan Opportunity 2015). The *Minneapolis Star's* (now the *Star Tribune*) editorial staff endorsed these viewpoints, as well. However, outer-ring suburbanites wrote contrasting opinion pieces extolling the virtue of, as one writer put it, leaving the "decision for local government action [...] to the local government officials" (Gartner 1976). Others called for Metropolitan Council members to be chosen by election, rather than appointment, to increase public accountability.

Yet absent from these conversations was the issue of race, the very impetus for federal fair housing legislation. Despite the progressive reputation of the Twin Cities, the rhetoric of key regional political actors rarely centered on racial integration. The political feasibility of fair housing seemingly depended on maintaining a class-based frame on the issue and nothing more.

The Politics of Reform Adoption

After nearly a year of deliberation, the Metropolitan Land Use Planning Act of 1976 (LUPA) passed the Minnesota State Legislature, despite opposition from many outer-ring suburban politicians who saw the law as an unfair transfer of power from local officials to the regional Council. Senator Robert Brown, an outer-ring lawmaker from Stillwater, said that the bill would not only give the Council outsized power over local decisions, but that it would also benefit large developers and speculators to the detriment of smaller developers (Wilson 1976). Central city and inner-ring suburban lawmakers, however, claimed that the bill would help contain massive urban growth and "save millions of tax dollars which otherwise might be spent to duplicate building public facilities in outlying areas" (Wilson 1976).

The Act required cities and towns from within the seven-county metropolitan area to develop comprehensive land use plans for the Metropolitan Council within three years of the law's effective start date. The Council would assess whether each local government unit's comprehensive plan—which would consist of policies and proposals for transportation, school infrastructure, waste control, and more—was consistent with the Council's regional plans. Furthermore, the Act required each plan to ad-

dress how the locality would manage "private and public land use; land and water development and preservation; expected industrial and commercial development; planned population distribution; and local public facilities capacities" (William Mitchell Law Review 1977, 308).

The Minnesota Senate was instrumental in introducing the low- and moderate-income housing provisions of the Act. According to the *Minneapolis Star*, the Senate version of the bill required "that the [Metropolitan] council [...] set guidelines, which municipalities would have to follow, to ease local building restrictions, such as lot sizes and floor space, which now keep moderate-cost housing from being built in some communities" (Wilson 1976). Ultimately, municipalities were only mandated to follow these guidelines inasmuch as they needed the Metropolitan Council's approval of their federal grant proposals; there was very little enforcement built into LUPA. Indeed, the Council's A-95 federal grant review responsibility, a major pillar of power for regional councils across the country at the time (Mogulof 1971), was the key piece of leverage that would drive "cooperation" on the development of low- and moderate-income housing. The A-95 review process covered almost all federal programs "assisting physical development and new construction" (Hoffman 1975, 670), and had major impacts on local government planning initiatives:

> Knowledge that the Council controls the flow of federal money to local units through its power of review should encourage cooperation. The Council's determinations could affect the local unit's ability to carry out projects included within its plan such as the construction of sewage facilities and public buildings and the implementation of open space land programs. Refusal to recognize the powers of the Council could prejudice a local unit's proposals on both state and federal levels. (William Mitchell Law Review 1977, 309)

While many who feared that urban sprawl would lead to inefficient, uncoordinated development welcomed the bill, a number of community members argued that the containment strategy would lead to neglected development of inner-city areas. A *Minneapolis Star* editorial published weeks before the Act's passage warned that "some of the policies aimed at the fringe […] might only drain off reinvestment needed by the core areas" (1976). Indeed, when it came to the fair housing component of LUPA, the battle between inner-city investment and affordable suburban housing development would be one of the primary fissures that irreversibly weakened the law within its first decade. Addressing such tensions and mitigating their fallout will be crucial for future fair housing legislation.

Erosion, Not Outright Reversal

Forty years after the passage of LUPA, the Twin Cities metropolitan area has steadily reversed course on the immediate gains in housing integration achieved under the Act. A combination of uninterested policymakers, ineffective monitoring and follow-through, shifting federal housing priorities, and fluid interest group participation resulted in the large-scale erosion of LUPA's effectiveness. Housing re-segregation appeared in the Twin Cities region in the early 1980s and has not relented since. According to Myron Orfield, an expert on housing segregation and a professor at the University of Minnesota, Minneapolis and St. Paul now have a higher relative share of subsidized housing (compared to their suburbs) than at any point since the 1960s (Institute of Metropolitan Opportunity 2015, 2). Since 1990, the population of high-poverty, racially concentrated neighborhoods in the Twin Cities has tripled (Metropolitan Council 2014, 4). At the same time, the older, inner-ring suburbs are experiencing the effects of rapid segregation as well: the non-white population of Brooklyn Center, an inner-ring suburb of Minneapolis, increased from 4 percent in 1980 to 54 percent in 2010 (Semuels 2016). While LUPA has not been repealed, it has essentially been ignored in the regional housing conversation. In particular, the Minnesota legislature's passage of the Livable Communities Act (LCA) in 1995 negated many LUPA provisions without repealing them outright in a process Patashnik terms "smothering." The downward spiral of the Twin Cities' once-promising fair housing dispersal strategy is a sobering reminder of the seemingly intractable problem of American segregation.

Uninterested policymakers

Minnesota's political leadership during much of the 1970s and early 1980s was heavily invested in the Twin Cities metropolitan area. Wendell Anderson, who served as governor from 1971 to 1976, was a major proponent of equitable reform measures: his 1971 tax bill—known as the "Minnesota Miracle"—coordinated state and local fiscal policy to better address educational funding disparities and bolster the fiscal health of cities and counties throughout the state. According to the U.S. Advisory Commission on Intergovernmental Relations, Anderson's "rational state-local fiscal system…made Minnesota a model for other states to follow" (Haynes 2016). Anderson's picks to head the Metropolitan Council also reflected a similar culture of reform: his first Council chairperson, Al Hofstede (1971 to 1973), pushed for fair low- and moderate-income housing distribution throughout the suburbs and central cities to better integrate the

region. The subsequent Council chairmen, John Borland (1973 to 1979) and Charles Weaver (1979 to 1982) continued this push toward regional integration under Governors Anderson, Rudy Perpich (1976 to 1978), and Al Quie (1978 to 1983). During this era, fair housing-minded politicians and officials worked to affirmatively further the housing integration goals of LUPA. Yet the Council's housing dispersal strategy was still not innately enforceable. It was only the Council's crafty use of A-95 federal grant review power that compelled cities and towns—required by LUPA to send development plans to the Council for approval—to incorporate fair share affordable housing plans within their development proposals.

However, uninterested policymakers at the state and Metropolitan Council level in the 1980s neglected to push for housing integration using this grant review mechanism, and as a result, cities and towns went unpunished for leaving low- and moderate-income housing plans out of their reports. When Rudy Perpich was re-elected as governor in 1983, he became more invested in broadening Minnesota's international footprint than in furthering metropolitan issues. As such, Perpich's picks for the Metropolitan Council during his second tenure crumbled under the pressure of a reorganized central city housing network and angry suburban politicians, who, according to Myron Orfield, "characterized integration as social engineering" and pushed for a reduced low- and moderate-income housing burden (Institute on Metropolitan Opportunity 2015, 15). As a result, the Council "began to back away from the fair share commitments of the Land use Planning Act" (Institute on Metropolitan Opportunity 2015, 15). By the mid-1980s, progress in metropolitan housing integration had frozen.

Shifting federal housing priorities

The changing federal housing landscape of the early 1980s further diminished much of LUPA's effectiveness. Lawmakers in Washington heavily reduced federal housing subsidies and infrastructure grants, leaving the Metropolitan Council with less money to promote low- and moderate-income housing and less clout to demand regional fair share housing plans from localities through the A-95 grant review process (Goetz et al. 2003, 216). As such, the Council simply stopped its practice of determining each city and town's low- and moderate-income housing fair share numbers and local planners never took up the task themselves.

Fluid interest group participation

During the late 1970s, a revolt of central city developers and non-profits,

who were angered that funding for affordable housing projects was increasingly directed toward the suburbs, led to the formation of the Family Housing Fund (FHF) in 1980. The FHF rapidly grew into a large network of housing developers and funders that shifted philanthropic and government resources away from suburban affordable housing development back into the central cities. By 1983, the FHF's board voted to establish the Twin Cities Housing Development Corporation (TCHDC), a nonprofit developer that built housing predominantly in the central cities.

The FHF further stabilized itself through close collaboration with the public sector. The Fund's "president of 34 years is a former deputy director of the Minneapolis housing agency" and the organization has worked "closely with virtually every other major public, private, and nonprofit entity in affordable housing construction and finance" (Institute on Metropolitan Opportunity 2015, 14). The fluid nature of the various group identities (the establishment of the FHF and its network of partners and developers) and affiliations (the Fund's public and private connections in Minneapolis and St. Paul) ultimately coalesced into a stable anti-suburban development bloc that used political pressure and creative partnerships to bypass LUPA's fair share commitments.

The resulting disparities in affordable housing construction illustrate the power of this bloc. During its 33 years of operation, only 5 of the 40 projects completed by TCHDC were located in the suburbs of Minneapolis and St. Paul (Twin Cities Housing Development Corporation, 2017). Even more telling, 2,489 of the 2,697 units—just over 92 percent—that TCHDC has developed since 1984 have been in either Minneapolis or St. Paul. Add in the estimated 10,500 low-income units that the Family Housing Fund reportedly established in Minneapolis and St. Paul between 1980 and 1990 (Institute on Metropolitan Opportunity 2015, 14), and it becomes abundantly clear that the FHF and its partners succeeded in redirecting affordable housing away from the suburbs and back to the central cities.

Modest investments and ineffective policy follow-through

The Metropolitan Council did not have the authority to force localities into building low- and moderate-income housing; cities and towns were simply required to submit a development plan that detailed how they would go about fulfilling their fair share housing obligation. As one Council staff member noted, "we can't say…you have to provide affordable housing. All we can say is that you have to provide *the opportunity to not discriminate against* affordable housing [emphasis added]" (Goetz et al. 2003, 216). A

coordinated support network of Metropolitan Council members, elected local officials, citizens, planners, and developers—all working toward fair share housing goals—was needed for a locality to develop low- and moderate-income housing in line with its fair share allotment. Unfortunately, there were critical breakdowns between various actors in this network that were caused by modest, but insufficient, investments post-reform or inadequate policy implementation and follow-through.

Many suburban officials and planners only modestly invested their resources to abide by LUPA's fair housing planning requirements. From 1976 to 1982, most communities within the Twin Cities metropolitan area submitted comprehensive development plans that, per LUPA's requirements, incorporated low- and moderate-income housing fair share goals. However, most of these communities subsequently failed to take the regulatory steps needed to facilitate low- and moderate-income housing development. According to an extensive analysis of post-LUPA implementation by Edward Goetz and colleagues, many communities "simply failed to carry out specific zoning and regulatory changes to facilitate lower-cost housing" (Goetz et al. 2003, 219).

As for the communities that did undergo regulatory changes, the scholars found that "many of the regulatory mechanisms used are actually ineffective in increasing [low-moderate] housing production" (Goetz et al. 2003, 220). Measures thought to cut costs rarely accomplished those goals, and planned unit development ordinances that cities passed were found to have "no impact on low-mod housing development" (Goetz et al. 2003, 220). Most communities also failed to invest in a post-LUPA inventory system to monitor the progress of their low- and moderate-income housing development. And suburban officials did little to assuage neighborhood opposition to fair housing developments; elected officials offered "tentative" support for developers' plans if they were located in other districts and typically opposed projects that were planned for their district (Goetz et al. 2003, 221). All told, most communities did not extensively invest their resources into ensuring the success of LUPA's fair share housing initiative.

The ineffective follow-through from the Metropolitan Council enabled much of these modest investments to ultimately weaken LUPA's effectiveness. After various federal housing changes in the early 1980s weakened the Council's funding power and leverage over communities applying for federal infrastructure grants, it became fairly easy for cities and towns to ignore LUPA. Yet even before the housing landscape shifted at the federal level, LUPA had issues of follow-through that were simply exacerbated

afterwards. According to Goetz et al.:

> For the years following enactment of LUPA, the Metropolitan Council has not monitored cities to determine (1) if local zoning conforms to the approved plan; (2) if the land set aside for high density housing in the plan was, in actuality, set aside as high density; (3) whether the housing built on such land that was set aside as high density was actually affordable to families of low- or moderate-income housing; (4) whether communities have in place other practices that impede the achievement of low- and moderate-income housing goals; or (5) whether the amount of low-mod housing built met the goals set out in the fair share allocation (for those years when the council was providing allocation numbers). (2003, 217)

In effect, LUPA failed on all accounts to provide a comprehensive monitoring and evaluation system that would hold communities accountable for their fair share of regional low- and moderate-income housing needs.

Smothering

The Minnesota legislature struck the final nail into LUPA's coffin in 1995 by passing the Livable Communities Act (LCA), whose impact on LUPA constitutes what Patashnik calls "smothering:"

> In this scenario, a reform law is not formally amended, but policymakers enact subsequent laws with antithetical policy goals. The original form remains "good law" but gets buried so deeply under a maze of conflicting statutes or rules that it all but disappears from view. (Patashnik 2008, 33)

The LCA incentivized inner-city affordable housing development while also revising the income thresholds that qualified individuals for affordable housing. Under LCA, such income thresholds were much higher than those of individuals eligible for low- and moderate-income housing under LUPA, resulting in fewer low-cost homes being built throughout the region. LUPA and LCA laws are both still in force, but planners, developers, city officials, and even the Metropolitan Council use LCA guidelines almost exclusively when preparing and evaluating affordable housing proposals (Institute on Metropolitan Opportunity 2015, 24).

As the preceding sections make clear, however, the passage of the LCA was only the culmination of a long decline in LUPA's effectiveness. Even in the absence of a final piece of "smothering" legislation, LUPA was hardly equipped from its inception to withstand shifting political environments

or a fluid network of interest groups that would eventually coalesce in opposition to regional integration. How could things have gone differently? And how well do Patashnik's policy reform analysis and Kingdon's agenda-setting framework explain LUPA's run toward irrelevance less than 10 years after its inception?

How Could LUPA Have Been Improved?

The temporary success of LUPA in the late 1970s begs the question: how could LUPA have been implemented to stably integrate the Twin Cities? If such a question had an easy answer, many metropolitan areas would be more racially and economically integrated than they are today. The difficulty of this inquiry makes an analytical framework useful for investigating this question. As such, I will use Patashnik's policy reform framework to inform my analysis of how the passage of LUPA could have led to long-lasting, effective reform.

LUPA's failure to stably integrate the Twin Cities may stem from the lack of investment from actors post-reform. Modest investments existed at multiple levels, but the dearth of consistent post-reform monitoring from the Metropolitan Council is undoubtedly central to LUPA's failure. However, it is difficult to separate the Metropolitan Council's lack of effective monitoring and guideline creation from the reduction in federal funding that supported low- and moderate-income housing development. Therefore, a more stable LUPA may have been one less reliant on federal funding.

One avenue to explore for alternative funding would have been a metropolitan area tax, handled by the Metropolitan Council to fund regional infrastructure and development activities. Such an option would maximize the Metropolitan Council's leverage, bolster regional investment in LUPA, and reduce reliance on federal funds. However, the political feasibility of such a plan would likely only exist if the Metropolitan Council were elected and not appointed, a hypothetical that has been debated since the Council's inception. If the Council were willing to gain more community trust by changing to an elected system, would they have had the political capital to demand more extensive group investments toward LUPA? Perhaps. What is clear is that an overreliance on federal funding created a domino effect that led to the eventual decline of any leverage power the Metropolitan Council had through LUPA. Regional and local initiatives need independent funding sources to shield themselves from shifting political winds at the federal level.

On a broader level, the rise and fall of LUPA can provide valuable les-

sons that can be applied today to housing desegregation policies outside of the Twin Cities context. Firstly, the failure of LUPA suggests that future housing desegregation reforms should be less dependent on federal funds and HUD financial support. HUD's dwindling budget and the Trump Administration's stalling of the 2015 HUD rule that sought to clarify "affirmatively furthering" fair housing rules both signal that a reliance on federal dollars may diminish the likelihood of stable housing reform.

Secondly, as regional councils have declined in influence since the 1970s, individual municipalities must be more proactive in establishing stable funding mechanisms to build affordable housing equitably throughout their jurisdiction. Such an initiative would only see sustainable levels of success if community leaders, housing experts, urban planners, and city officials all work together to build effective incentives (e.g. tax abatements that promote inclusionary zoning) to desegregate neighborhoods along both racial and class lines.

Lastly, desegregation is not the only answer: it is critical that local and state governments provide adequate funding and resources to historically under-resourced neighborhoods alongside desegregation efforts. This strategy would maximize the welfare of all citizens while building the infrastructure needed to reduce neighborhood segregation.

Conclusion

LUPA was a temporary success for a number of reasons. Focusing events like the 1967 urban riots and Martin Luther King, Jr.'s assassination, along with policy elite discourse by the Kerner Commission and Anthony Downs, among others, created an environment that allowed various solutions at the federal (the Fair Housing Act) and state/local (LUPA) levels to enter the political agenda and become law. For a moment, the federal Fair Housing Act allowed LUPA to succeed in its goal to "affirmatively further" fair housing. However, shifting political landscapes at the federal, state, and local levels, along with a fluid interest group dynamic that eventually joined in opposition to suburban-heavy affordable housing development, resulted in the disintegration of LUPA's strength. Overly reliant on federal funding, the law could not withstand flagging interest in fair housing at the federal level and became toothless within a decade, its guidelines and fair share regional housing goals ignored.

LUPA illustrates the promise and difficulty of stable housing integration practices. Not only does affordable housing development require funds that states and cities rarely have (or perhaps that states and cities rarely allocate toward affordable housing), but it also requires the political will

and welcoming environment of those in high-opportunity, typically white suburban communities. Such a combination has been historically difficult, but as the Kerner report makes clear while warning of the United States' drift toward two separate and unequal societies, it is in the nation's best interest to succeed.

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10

The Only Way to Get Out Is to Die: Mental Health, Public Safety, and Legal Implications of Sex Offender Civil Commitment in Texas

Erika Parks

Introduction

In the United States, there are few crimes more abhorred than sexually violent offenses, and by extension, few people more reviled than those who commit them. In popular media, people accused of sexually violent crimes are variously called "monsters," "scum," or "the worst of the worst." The Texas criminal justice system, along with a number of other state systems, have officially labeled these individuals "sexually violent predators" or SVPs (Texas Department of Health and Human Services 2009).

It is certainly difficult to feel sympathy for people who have committed terrible crimes against others, but the way we address sex crimes in this country has long been based on fear instead of evidence. The vast majority of people who commit sex crimes, regardless of severity, are placed on the sex offender registry upon their release from confinement. They are required to follow a host of rules and requirements that make it next to impossible to secure resources proven to reduce recidivism, such as stable

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housing or a job (La Vigne et al. 2009). People labeled as SVPs, however, are often never given the chance to reintegrate into society, even after completing their prison sentences. Many of these individuals are deemed too dangerous to be released, even with all of the restrictions in place for people convicted of sex offenses. Instead, upon completion of a prison sentence, some people convicted of sexually violent crimes are transferred to a civil commitment center, where they are held indefinitely—until they can prove that they are rehabilitated.

Like the criminal justice system more broadly, the stated goals of civil commitment are to provide treatment and rehabilitation for those who have committed serious crimes and to protect the public from possible future crimes they might commit. The criminal justice system has evolved to serve a multi-purpose role of rehabilitation, incapacitation, and punishment. The distinctions between these roles and their relative importance to each other, however, is not always clear. Many individuals are released from prison without having received any rehabilitative programming. Many more are held in prison long after they cease to be dangerous. The civil commitment system suffers from these challenges as well. Even after recent improvements, the practice of civil commitment in Texas raises concerns about its mental health, public safety, and legal implications. Specifically, the level of treatment Texas provides in civil commitment is insufficient, particularly for general mental health and trauma-informed care. The evidence for how much civil commitment improves public safety is not compelling, and Texas could open itself up to legal challenges on the constitutionality of the practice. This article examines the implications of civil commitment in more detail and makes recommendations to improve the practice of civil commitment in Texas and across the country.

A Note on Language

Following the lead of top scholars and advocates, I use person-first language whenever possible to refer to those involved in the criminal justice system (La Vigne 2016). Referring to people by the terms "sex offender" or "sexually violent predator" reduces them to their worst mistakes rather than acknowledging their humanity, even when flawed. In some cases, however, I am unable to easily adjust the language used by the system, so I do not attempt to do so.

I also use the term "civil commitment" to refer specifically to civil commitment for those convicted of sex offenses, and not to its broader context describing the involuntary commitment of other groups of people through the civil court system.

Civil Commitment in Texas and Nationally

Civil commitment, as it applies to those finishing prison sentences for sex crimes, refers to the indefinite confinement of people under the assumption that they are at enough risk of reoffending that it is irresponsible to release them into society. It is not a punishment for something they have already done and for which they have completed a sentence, but rather a preventative detention for something they might do in the future. Texas requires that someone have committed at least two sexually violent offenses to be considered for civil commitment and then relies on an actuarial risk assessment and/or the clinical judgment of a practitioner to determine whether the person should be civilly committed. A judge in a civil court makes the final decision.

Twenty states have laws that allow for the use of civil commitment for people convicted of sex crimes. Between these states and the federal government, there are approximately 5,400 people being held in civil commitment across the country (Steptoe and Goldet 2016). In Texas, the number is around 215, which is less than one tenth of one percent of the total number of people on the sex offender registry in the state (Rafique 2016). Civil commitment is most prevalent in California, Minnesota, New Jersey, and Florida, but is also practiced in Wisconsin, Illinois, New York, Kansas, Virginia, Washington, Massachusetts, Iowa, Nevada, Missouri, South Carolina, North Dakota, New Hampshire, Pennsylvania, and Arizona (Steptoe and Goldet 2016).

Texas residents who are civilly committed are held at the 382-bed Texas Civil Commitment Center in Littlefield, about 40 miles northwest of Lubbock. The facility is a former prison, so it looks and feels like one, with residents living in small rooms with metal bunks and toilets side by side. The Texas Civil Commitment Center is under the supervision of the Texas Civil Commitment Office but is run by Correct Care Recovery Solutions, a private company that operates 12 state hospitals and civil commitment centers in the United States and Australia (Correct Care Recovery Solutions 2016).

In Texas, as in many other states, there is a tiered system of privileges that people in civil commitment can access as they move through the levels of treatment successfully. Texas has a five-tiered system: the first four tiers involve inpatient treatment at the Littlefield facility, and the fifth tier is outpatient, in which program participants return to their communities under strict regulation and surveillance. Texas's civil commitment program was established in 1999 as an entirely outpatient program, the only one of

its kind in the country, with residents scattered at halfway houses across the state (Rafique 2016; Blaney 2016). However, the program included hundreds of rules, and by 2015 nearly half of the approximately 350 people civilly committed since 1999 had been reincarcerated due to rule violations. Not a single person had graduated from the program (Mitchell 2016). As other states began to face lawsuits about the lack of releases from their civil commitment programs, and Texas faced lawsuits about insufficient treatment and punitive conditions in its own program, the state decided to revamp the civil commitment program. In 2015, the Texas State Legislature passed Senate Bill 746, which made a number of management changes and implemented the tiered system (Whitmire 2015). Then the state hired Correct Care Recovery Solutions and transferred all its civilly committed individuals to the Littlefield facility (Rafique 2016).

Mental Health Implications

In addition to violent sex offending behavior, most states with civil commitment laws require someone to have a "mental disorder or abnormality" to be eligible for civil commitment. A mental abnormality is commonly defined as "a congenital or acquired condition affecting the emotional or volitional capacity which predisposes the person to commit sexually violent acts" (Jackson and Hess 2007). In practice, this often refers to a paraphilic disorder, but an individual need not have an official diagnosis to be civilly committed.

According to the current edition of the Diagnostic Statistical Manual (DSM-5), the nationally recognized resource for diagnosing mental illness, people are diagnosable with a paraphilic disorder if they "have a sexual desire or behavior that involves another person's psychological distress, injury, or death, or a desire for sexual behaviors involving unwilling persons or persons unable to give legal consent" (American Psychiatric Association 2013). Among civilly committed individuals, paraphilic disorders are the most commonly diagnosed mental illness, followed by borderline personality disorder and substance use disorders (Jackson and Hess 2007). Research has also shown that large proportions of people who commit sex offenses have experienced sexual trauma or abuse themselves (Jesperson et al. 2009). Neither childhood trauma nor a diagnosed paraphilic disorder excuses criminal behavior, but understanding the root cause of the behavior is an important step toward developing effective treatment for those who commit sex offenses, which is the first stated goal of civil commitment.

The Texas Department of Criminal Justice (TDCJ) reports that it provides people in civil commitment with the Sex Offender Civil Com-

mitment Treatment Program (SOTP-CC) within 18 months of transfer from prison to the Texas Civil Commitment Center (Texas Department of Criminal Justice n.d.). The SOTP-CC is a more intensive version of what TDCJ provides in prison, which includes 4 to 18 months of treatment, depending on risk level. Given that many sentences for sex crimes are measured in decades, this represents a very small proportion of time in prison spent in treatment. Texas's treatment program uses evidence-based cognitive behavioral methods, but there is no data available on what percentage of eligible individuals participate in or complete treatment while in prison (National Parole Resource Center 2014). Evidence is also not fully conclusive on what elements of treatment are most effective and for what kinds of people (Przybylski n.d.). Traditional sex offender treatments have focused on disclosure of crimes and deviant arousal, but more emphasis must be placed on healing trauma as well. In addition, the stresses of civil commitment can contribute to ongoing mental health problems, such as depression and anxiety, which should be addressed as part of treatment. A federal judge in Minnesota declared that there was "an emotional climate of despair" in the state's civil commitment program after one resident commented, "The only way to get out is to die" (Chammah 2017).

The basic question that underlies the practice of civil commitment is whether a propensity to commit violent sex offenses is something one can recover from. The existence of civil commitment centers in the first place seems to indicate that the answer is no—otherwise people should be sufficiently rehabilitated after receiving treatment in prison. If the issue is that there is not adequate treatment for those with sex offense histories available in prison, or that they are not completing it during their sentences, then the solution should be to increase the availability of and requirements for treatment in prison, not to implement civil commitment as a secondary sentence in order to provide treatment. However, the premise that anyone will ever be released from civil commitment depends on a belief that people can be rehabilitated. The courts have indicated that the ability of civil commitment centers to safely release residents is essential to the legality of those centers, as well as to the day-to-day mental health of residents held in civil commitment.

Public Safety Implications

The second stated goal of civil commitment is to protect the public from future offending, but it is very difficult to tell how much civil commitment actually improves public safety. Since very few people nationally have ever been released from civil commitment programs, there is no way to calculate

an accurate recidivism rate. However, the recidivism rate for sex offenses in general is often misreported and overblown. In a 2002 decision, Justice Anthony Kennedy, citing an unfounded magazine article, wrote that "the rate of recidivism of untreated offenders has been estimated to be as high as 80 percent" (Chammah 2017), when in fact research has shown recidivism rates for sex offenses between 3 and 14 percent, a number much lower than the recidivism rate for other crimes (Langan et al. 2003).

Of course, supporters of civil commitment would argue that its goal is to identify those 3 to 14 percent who will recidivate and keep them confined to prevent any further harm to the public. According to an American Psychiatric Association Task Force report, "The tolerance for recidivism is zero" when it comes to public perceptions of sexual offending (Steptoe and Goldet 2016). As if to reinforce the danger of the "sexually violent" individuals in its program, Minnesota reported nearly 50 "assaults, threats, and instances of criminal sexual conduct" toward staff in its civil commitment program between 2010 and 2014. However, in a program of over 700 of the state's "most dangerous" individuals, this is fewer than 10 incidents per year—many fewer than occur per capita in prisons (Chammah 2017). Texas does not release statistics about incidents in its program.

One way to assess the public safety benefits of civil commitment would be to compare sexual recidivism rates of states that have civil commitment programs and states in which people who commit sex offenses are released to the community with supervision and registration requirements. Using appropriate statistical controls, researchers could potentially isolate the effect of civil commitment on these rates, but this research has not yet been conducted. Most research on civil commitment is focused on avoided crime using predicted rates of recidivism from risk assessments. One study of 105 people civilly committed in Minnesota between 2004 and 2006 found that the Minnesota Sex Offender Screening Tool (MnSOST) predicted that nine percent of people who were civilly committed would reoffend within four years if released to the community. Put another way, the civil commitment of those 105 people reduced the overall sexual recidivism rate by 12 percent. The study's author argued that this small reduction is not worth the cost to the state of civil commitment and the money used for civil commitment could be better invested in intermediate community programs that might protect the public equally well (Duwe 2014).

Several other studies have compared people selected for civil commitment with those who were eligible but not selected. The civil commitment process relies heavily on actuarial risk assessments, such as the MnSOST and the STATIC-99, another common risk assessment for sex offenses.

While one study found that people selected for civil commitment are at higher risk of reoffending based on MnSOST and STATIC-99 scores (Calkins Mercado et al. 2011; Levenson 2004), another found that neither of these assessments has been shown to strongly predict sexually violent recidivism at all (Boccaccini et al. 2009). Texas uses both of these assessments as well as the Personality Assessment Inventory (PAI), which was also found to be a weak predictor of sexually violent recidivism (Boccaccini et al. 2010). It is difficult to argue that civil commitment prevents sexually violent recidivism when the evidence is not even clear how to predict it.

Legal Implications

Some of the strongest arguments against civil commitment have to do with its constitutionality. Legal scholars across the political spectrum have raised concerns related to double jeopardy, lack of due process, and the possibility of lifetime commitment based on a projection of future danger (Yung 2013). However, the U.S. Supreme Court upheld the constitutionality of civil commitment three times between 1997 and 2010 (Calkins Mercado 2011). The legality of civil commitment hinges on its use as a rehabilitative function rather than a punitive one. In its 1997 *Kansas v. Hendricks* decision, the U.S. Supreme Court warned that using the guise of treatment to continue to punish people after they have completed their sentences is a violation of their due process rights (Sullem 2017). Just before its 2015 reorganization, Texas's civil commitment program was on shaky constitutional ground itself, having not released anyone since its inception. This made it difficult to argue that the program was rehabilitative rather than punitive and directly led to the efforts to reform it.

In September 2017, the Supreme Court declined to hear a Minnesota case that alleged the state was violating due process by holding people in its civil commitment program indefinitely. The program had fully released 1 person in 23 years, leading to de facto life sentences for everyone else. This point is especially relevant for people who committed their crimes as juveniles, for whom the Supreme Court has struck down life imprisonment as unconstitutional (Rovner 2017). Thirteen states allow civil commitment for people who committed their crimes as juveniles, including Texas (Steptoe and Goldet 2016).

Civil commitment of people who have committed serious sex offenses has caught international attention as well. In October 2015, two high court judges in Britain refused to extradite someone to California because the possibility that he would be civilly committed was a "flagrant denial of his rights under the European Convention of Human Rights" (Steptoe

and Goldet 2016). By continuing to hold people in civil commitment without clear timelines for progression through treatment and eventual release, Texas is opening itself up to potential lawsuits. SB 746 requires a tiered program that "provide[s] for the seamless transition of a committed person from a total confinement facility to less restrictive housing and supervision and eventually to release from civil commitment," but it does not specify any timelines to do so.

Policy Recommendations

Without a Supreme Court ruling striking down civil commitment as unconstitutional, the 20 states with civil commitment laws will likely continue the practice. However, these states should take guidance from other states about ways to reduce their reliance on civil commitment. The fact that many countries outside the United States view civil commitment as a human rights violation indicates that alternatives are possible while still maintaining public safety. The following policy recommendations assume the continued existence of civil commitment but provide a roadmap for improving and reducing its use. By implementing these recommendations, policymakers in Texas and across the country could improve the mental health of people who are civilly committed, maintain public safety for people in the community, and reduce the possibility of legal challenges.

Mental Health

1) *States should reallocate funding from civil commitment to provide comprehensive and ongoing sex offender treatment while people are in prison, reducing the need for later civil commitment.* Comprehensive and appropriate sex offender treatment is necessary in prison systems whether or not civil commitment is also used. For states such as Texas that face frequent budget shortfalls, shifting funding from civil commitment to treatment provision in prison is a reasonable tradeoff that places emphasis on the rehabilitative goals of the criminal justice system.

2) States should provide comprehensive mental health services in civil commitment to treat underlying trauma as well as depression and anxiety associated with ongoing confinement. Because courts have determined that civil commitment programs must have an eventual goal of releasing people back to the community, providing appropriate mental health services within civil commitment centers is a public safety issue as well as a mental health issue. In order to be safely released, people under civil commitment must have the

opportunity to process underlying trauma and develop coping mechanisms for living back in the community after years of confinement. This recommendation should not require large amounts of funding, especially if the number of people under civil commitment is reduced.

Public Safety

3) *The federal government should fund rigorous research comparing sex offense recidivism rates for states with civil commitment laws and those without in order to determine the efficacy of civil commitment in preventing reoffending.* Although criminal justice decisions usually occur at the state level, the most rigorous research is often conducted nationally, especially when examining differences between states. The federal government is in a unique position to fund rigorous research comparing sexual recidivism rates in states with and without civil commitment laws, and should make this a priority.

4) *The federal government should fund continued research on the predictive validity of sex offense risk assessments and strategies to improve risk prediction.* The fact that civil commitment decisions often hinge on the results of risk assessments that have not been validated to predict sexually violent reoffending does not support the stated goal of civil commitment as a mechanism to increase public safety. The federal government should fund research partnerships between practitioners and academics to continue developing, testing, and refining risk assessment instruments, as well as evaluating the instruments for bias.

Legal

5) *States should implement defined timelines for civil commitment residents to progress through treatment and be released, preventing hopelessness and reducing the possibility of lawsuits.* The Texas State Legislature took important steps in 2015 to recommend that people in civil commitment move steadily toward release. However, because SB 746 did not include associated timelines, it lacked an enforcement mechanism. Texas should pass a bill that amends this process and provides recommended timelines for each tier of the civil commitment program. Other states that have struggled with releasing anyone from civil commitment, such as Minnesota, may need to create similar timelines. Otherwise, challenges to civil commitment laws will likely continue to appear in court.

6) *States should prohibit the use of civil commitment for people who committed their crimes as juveniles in order to avoid the unconstitutionality of de facto life sentence for these individuals.* The 13 states that allow civil commitment for people convicted of crimes as juveniles are especially susceptible to lawsuits challenging the constitutionality of this practice. Coupled with scientific knowledge about the brain development of adolescents, confining young people indefinitely for crimes they committed before the age of 18 is neither appropriate nor legal. This policy change would affect only a small number of people, but policymakers would likely be more receptive to the case for outlawing civil commitment for juveniles than the cases for other reductions in civil commitment.

Conclusion

Civil commitment is used in 20 states to provide additional treatment to those who have committed the most serious sex crimes while preventing them from committing further crimes in the community. However, the use of civil commitment raises significant concerns about the availability of in-prison treatment and the mental health of those held indefinitely without hope of release. Civil commitment has not been shown to significantly improve public safety, and it raises legal concerns as well. Although Texas took important strides in 2015 to restructure its civil commitment program, there is still significant work to be done. Other states face similar challenges. Based on further research and recommendations from other countries, the ultimate goal may be to eliminate use of civil commitment entirely. In the meantime, the policy recommendations above outline next steps for improving its use. If Texas and other states plan to maintain their use of the practice, states should implement the recommended reforms in order to address the mental health, public safety, and legal concerns related to civil commitment.

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