

INNOVATIVE FINANCING AND GOVERNANCE STRUCTURES TO SOLVE THE GREENFIELD INFRASTRUCTURE GAP: A CASE STUDY OF NEW SOUTH WALES, AUSTRALIA

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ABSTRACT

As public debt rises, governments struggle to fund and finance new infrastructure. Partnering with the private sector is a potential solution, but private investors' appetite has so far been skewed toward existing assets, while the majority of the global infrastructure needs lie in building new infrastructure. Governments have attempted to attract institutional investors, primarily pension funds, into greenfield projects, notably using innovative structures such as "platforms," but with limited success. New South Wales (NSW) in Australia has put in place a novel mechanism to obtain funds from investors' interest in existing cash-flow-generating assets and systematically use it to develop new infrastructure projects. The mechanism relies on a new vision of the role of government as an efficient, effective and risk-taking investor in infrastructure. Based on interviews and publicly available information, we present a single case study about New South Wales' mechanism to fund new infrastructure through an independent government agency (InNSW) and an asset recycling fund (RestartNSW). Our analysis of InNSW reveals that an independent government agency staffed with professionals from the private sector, with the power to require government departments to follow private sector' processes for decision-making, and reporting directly to the highest ranked political leader, are factors supporting change in the government's infrastructure planning, financing and construction process. This study also concludes that using a fund to ensure that the proceeds of the lease of existing assets fund new infrastructure, increases public support, and can be a way for governments to increase funding sources. However, it requires that the government be able to structure a competitive bid driving up the sale price, prioritize new projects and secure funding for their operation and maintenance, and finally that it acquires the skills and knowledge to take on construction and potentially patronage risk.

KEYWORDS: Asset Recycling; Greenfield Infrastructure; Public Private Partnerships; Project Finance; Infrastructure Funding Gap

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THE GREENFIELD INFRASTRUCTURE FUNDING GAP

Infrastructure is crucial for the economic development and competitiveness of a country. The World Economic Forum lists infrastructure as the second pillar of competitiveness and shows a linear relationship between the competitiveness score and the infrastructure scoreⁱ. 37% of the USA's 2013 gross domestic product (GDP) depended on its array of built assets, and this percentage averaged 40% for 30 countries, accounting for 82% of the global GDP (Arcadis, 2015). The most developed infrastructure systems produce considerable additional GDP per capita from it. For example, Singapore, ranked second in terms of its infrastructure worldwide produces \$29,500 in GDP per capita from its built assets, while USA, ranked 11th in infrastructure, produces \$17,000 in GDP from its infrastructure.

Despite the close link between economic growth and infrastructure quality, the need for investment in the construction of new infrastructure as well as the maintenance of existing infrastructure falls short of investments. In 2015,ⁱⁱ there was a gap of about US\$1 trillion between the need for infrastructure investment and what was actually funded annually.

However, this growing need for infrastructure funding happens when governments have fewer funds available and weaker borrowing capabilities. A global trend shows governments' debt levels rising. Gross government debt-to-GDP ratio globally grew from 65% in 2008 to 79.8% in 2014 and is projected to be 80.4% in 2015 (IMF, 2014). In developed economies, debt-to-GDP ratios have plateaued around 105% since 2012. Bailouts and cash injections to spur economic growth and support welfare systems seem to have driven this clear jump in public debt. However, structural changes, most notably the ageing of the population, also contribute to maintain high public debt levels. The IMF forecast that by 2030, health and pension spending in developed countries will grow by 4.4 percentage points of GDP, which means that governments are likely to have less funds to allocate to infrastructure.

The Global Financial Crisis' aftermath was also marked by reduced bank lending capabilities, leading many scholars, international associations and politicians to call for institutional investors—particularly pension funds, sovereign funds and insurance companies—to invest in infrastructure projects. These investors actually showed an interest in infrastructure projects, attracted by their low correlations, and stable and predictable cash flows.

However, private investors' increased interest in infrastructure has favored existing assets in developed countries: 53% of the infrastructure transactions in unlisted funds occurred in Europe, and 79% of the investments went to secondary stage (70%) and brownfield (9%) assets (Prequin, 2014). A look at infrastructure funds that raised money in 2009 showed that only 6.6% of the emerging countries funds closed between 2007 and 2009 (Probitas Partners, 2010), and the large majority of funds labeled as global actually targeted developed countries (only 21.7% targeted emerging countries).

The statistics show that the increased investors' interest for infrastructure is not aligned with the needs identified by international organizations to support economic growth. Despite some exceptions, the global trend is that large institutional investors favor investment mandates focused on developed economies and brownfield projects to avoid both user demand and sovereign political risks.

The “infrastructure gap” seems to derive primarily from a perceived lack of “investable projects”: a gap between the requirements and expectations of private investors and the characteristics of existing projects. Much work has been done by researchers and international organizations, to identify the risks of each infrastructure project, and the regulations, governance and project structuration that could reduce these risks and align interests between governments

and private investors (Loosemore, 2006; Yescombe, 2014; Déau, 2011; Page et al. 2008). Based on these ideas of framing projects to allocate risk to each stakeholder most capable of managing it, and create investment opportunities that match institutional investors' mandates, several governments have tried innovative investment partnerships. Examples include the N33 road in which pension funds invested in equity and debt for a road renovation project (Bennon et al., 2015), and the Project Finance Initiative in the UK (OECD, 2014), which sought to bring together UK pension funds and give them priority access to a pipeline of infrastructure projects, aligning interests between all stakeholders and creating investable opportunities for pension funds.

RESEARCH QUESTION AND METHODOLOGY

This study examines a novel strategy devised by the government of NSW to gain access to private money and fund new infrastructure. The novelty of the strategy is twofold: the financing of greenfield projects is indirect, and the system is based on the demonstrated preference of private investors for existing projects. The specific goal of this case study is to understand the mechanism set up by the government of New South Wales, its key elements and potential for replication and evolution. While this paper focuses on the case of NSW, it uses background information and examples from other Australian States.

The overarching theme of the research lies in understanding how privatizing existing infrastructure assets can help finance new infrastructure projects. This interest was motivated by the observation of a novel mechanism put in place by the government of the State of NSW. In this model, the government created a dedicated entity to manage the lease of existing assets and redeploy those funds to develop infrastructure. Thus, the specific research questions that the analysis of this single case study address are:

1. What was the mechanism used by the NSW government to fund new infrastructure?
2. What key elements in this mechanism have supported the success of the project so far?

We consider this mechanism successful, first because of the public support it received __ the liberal government was re-elected with asset recycling at the core of its political program __ second, because its flagship privatization attracted sophisticated investors from around the world and reached a high price, and finally because the funds raised have been redeployed in the construction of greenfield projects. Given the nature of the questions and with a desire to focus closely on the way key elements fit together, the authors chose to complete a single case study. The data gathered is qualitative, primarily based on documentation publicly available on internet, and completed with a small number of discussions with actors on the private investors' side and the government side in Australia. The case selection and data analysis follow guidelines from Yin (2014) and Flyvbjerg (2006), but the small number of interviews and the absence of recording and transcript of the interviews make this study an opinion piece more than a full-fledged single case study.

THE CASE OF NEW SOUTH WALES IN THE AUSTRALIAN CONTEXT

The Australian federal government has made infrastructure a priority with the creation in 2008 of Infrastructure Australia, an independent statutory body created to prioritize and progress nationally significant infrastructure. Infrastructure Australia's mission is to provide independent

research and advice to all levels of government as well as investors and owners of infrastructure. Since 2009, Infrastructure Australia has published infrastructure plans, audits and whitepapers assessing Australia's infrastructure, analyzing inspiring infrastructure initiatives in the UK (notably Infrastructure UK, and the Private Finance Initiative), and recommending infrastructure investments and policy changes based on population and economic growth forecasts. These reports use national statistics to predict the scale of Australia's population growth as well as its impacts on infrastructure needs. Australia's population is expected to grow from 22.3 million in 2011 to 30.5 million in 2031, with 72% of this growth concentrated in the four largest cities. As a result, demand for public transport in these cities is expected to grow by 89% by 2031, while car travel time would increase by 20 to 50%. The cost of not providing adequate infrastructure in response to population growth is estimated at \$53.3 billion in 2031. (Infrastructure Australia, 2015)

Although new infrastructure seems crucial if Australia is to make its population growth an opportunity to achieve economic growth, the country already benefits from a pool of existing infrastructure assets that are of high quality and that generate attractive cash flows. The country has been able to leverage these assets built and owned by governments to obtain funds through privatizations and long-term leases. The Australian Trade Commission boasts a 25-year history of embracing public-private partnerships (PPPs) for roads, rail and energy networks as well as social infrastructure projects. The country has developed a mature model of private engagement, recognizing that the private sector can bring innovation and operational efficiencies to infrastructure projects, as well as alleviate pressure on public finances.

Nevertheless, privatization remains a source of controversy among Australian citizens, and Infrastructure Australia's recommendations are only advisory. In addition, States and not the Federal Government, hold most of the power when it comes to new infrastructure investment and maintenance. Before 2015ⁱⁱⁱ, only New South Wales had created its own independent statutory body, Infrastructure New South Wales (InNSW) by legislative act in 2011. InNSW's missions and structures are very similar to Infrastructure Australia's. It was tasked with identifying and prioritizing the delivery of critical public infrastructure in NSW. A few differences are that its CEO and Chairman are still appointed by the Premier, whereas a 2014 amendment gave Infrastructure Australia the right to appoint its own CEO and create an independent board. InNSW advises the Premier and Treasurer on which projects should be prioritized and which financing structure should be used. InNSW sets the procedures that government agencies need to follow when proposing projects. Finally, and most importantly to this case study, InNSW was tasked with managing an infrastructure fund named Restart NSW. Restart NSW was promised by the NSW liberal government as a way to make sure that the partial privatization of the electricity general, transmission and distribution networks, would be used to fund new infrastructure projects and enhance existing infrastructure assets in the State. InNSW oversees this fund and publishes a prioritized, budgeted list of projects, which the Premier and CEO can only accept or refuse and not tweak as they wish.

In the following sections, we start by analyzing the values and mindsets that supported the creation of Infrastructure Australia and InNSW, and then describe in detail the mechanism behind InNSW and Restart NSW.

Values and Ideas Supporting New South Wales' Strategy

Before detailing the mechanism behind InNSW and Restart NSW, it is important to understand the intent and values behind InNSW and Restart NSW, and why they attracted

community support and capital from private investors. InNSW represents a change in expectations regarding the government's role and processes. We posit that this change in the "institution" of government is supported by a change in "institutional logic." The study of institutions and institutional logic is the focus of many previous studies —see Scott 2013 for an overview of Institutional Theory. For the purpose of this study, we build on the work of Thornton and Ocasio and define institutional logic as "socially constructed, historical patterns of cultural symbols and material practices, including assumptions, values and beliefs, by which individuals and organizations provide meaning to their daily activity, organize time and space, and reproduce their lives and experiences." This definition is quite large, but we want to emphasize the "assumptions, values and beliefs" and their importance in influencing the actions of stakeholders (Thornton & Ocasio, 2012).

Goldberg & DiMaggio (upcoming) contrast people's "construals", defined as their value system and perceived world order, with their "positions" defined as how people respond to opinions. We use their concept of "construals" to underline that the mechanism in our case study go hand in hand with a specific set of values and understanding of the world, and more specifically of the role of government. Institutional change can require that stakeholders share the same understanding of the situation (share construals), or allow for different understandings leading to the same position. For example, a position in favor of infrastructure privatization could allow for different justifications and understandings of what privatization entails. On the other hand, a similar understanding (or construal) of privatization, such as infrastructure design and delivery based on profit-seeking mechanisms, can lead to opposed positions, pro or against privatizations. The use of construals and positions to analyze this case can give a deeper understanding of the mechanisms of the new government agency and the infrastructure fund.

Shared Values Supporting the Initiatives of InNSW

Our analysis of the official communication of InNSW and discussions with someone from InNSW, reveals the following four main construals regarding the role of government in infrastructure delivery and operations.

1. Infrastructure is crucial to economic growth, and infrastructure investment should maximize the ratio of economic growth produced / investment made by the taxpayer.
2. Taxes are understood as investment by citizens, therefore the processes and rationale of a company making an investment (e.g. Net-Present-Value calculation) are relevant for government.
3. The government has not proved, in the past, to be a good shareholder and operator. It does not gather enough information and monitor the performance of the assets, as a shareholder would. As such, operations and maintenance would be more fully optimized by a private operator/investor. Government operations tend to be driven by budgets, instead of quality of service. Regulation and contract with a private operator based on quality of service might be better for the end-user than operation by the government.
4. The government can take risks, notably the risk of developing new infrastructure, provided that the government takes appropriate measures to assess and mitigate it. In fact, private investors might price political risk very highly, increasing the cost to Government for a risk they are most-able to control. The private sector might

also price patronage risks excessively highly, since inflated traffic forecasts by private infrastructure sponsors have led to several project bankruptcies.

Potential Alternative Views of Government

Before diving more deeply into the mechanisms, it is worth mentioning that another understanding of the role of government is possible and could fuel opposition to these mechanisms in this case or in other countries/states.

First, taxes can be considered as serving a redistribution mechanism insofar as taxes contribute to projects where the private sector would not invest and where the government is bound not to recoup an investment. In such a case, it is plausible that values and beliefs such as the need for everyone in a city to have the same level of connectivity and service, regardless of the volume of people using the road or transit network, could be a guiding value. In that case, prioritizing projects that create greater financial or economic value would not really make sense. Another construal, in opposition to the first, could be that local contributors should see reinvestment of their contributions in their local districts, leading to better infrastructure where more wealth is created.

These construals may exist among voters or politicians, but they are clearly not dominant in the official discourse and in the press in NSW. On the contrary, there is considerable opposition to privatization in Australia, but it does not seem to be based on contradictory values regarding the role of government or how taxes should be used. For example, an article from a labor candidate attacked the proposed fund Restart NSW premised on the risk that the money from privatization would not be enough to cover the investment promises, but not on the beliefs that government should be efficient and effective, and that contributions from taxpayers be invested in profitable projects (Tranter, 2011). Quite the contrary, opponents to privatization argue that privatizing represents a loss of profits for the government, confirming the construal that government should behave like an investor, even if the position is that profits should go back to citizens rather than be handed over to the private sector. Neither does it seem that opponents of privatization support the belief that the government should take no risk, since they encourage government to stay involved in the construction and operation of infrastructure. Indeed, the opposition argues that government should be as efficient as the private sector and effectively protect the public interest.

These beliefs are shared among the political class; the political opposition to privatization rests on how these goals can be best achieved. Is it by keeping infrastructure public, entering into P3s, or privatizing infrastructure? The opposition against P3s is also tainted with the fear of foreign powers gaining control over assets that are critical to the economic growth of the territory. Again, there is a shared understanding that infrastructure is critical for the economy, but the question is, can regulation and contracts protect the public interest while getting the efficiency needed to keep costs low, and is the private sector bound to pursue profits or foreign political goals against the general interest, leaving the government and citizens to suffer the consequences? This opposition has even led the NSW government to privatize some projects only partially and to hold on to the majority of shares in these projects. Before the lease of TransGrid in late 2015, a poll among NSW citizens cited by a local newspaper^{iv} showed that only 23% of voters supported privatization. But support increased to 47% of voters if all the proceeds of the privatization of existing assets went toward infrastructure investment.

THE MECHANISM BEHIND INFRASTRUCTURE NSW

InNSW is an independent government agency, created to rationalize infrastructure investment in New South Wales, and can be described by matching its salient organizational characteristics with the values and construals it bears and that we began describing in the previous section. Its overarching logic is to support an efficient and effective government, inspired by the private sector's practices, and to be able to partner with the private sector by increasing internal capabilities and reducing information asymmetry, while proposing a process and deals that are attractive to private investors. Based on a thematic analysis of notes from discussions, and official communication (website, plans and other reports) published by InNSW, we identified the following themes as salient traits of InNSW.

Collaborate, Challenge, Transform

The catch phrase that people see when visiting InNSW's website alternates between "We collaborate"; "We challenge"; and "We transform". As these suggest, InNSW is now an integral part of the government's process of determining priority projects and advising on the structure to finance and deliver these projects.

The notion of collaboration refers to the coordination of InNSW with the Federal Government and Infrastructure Australia. Copying the model of a dedicated entity for infrastructure at the state level helps align the federal plans with the State's, and makes the process of getting federal grants smoother. Collaboration also addresses potential misalignment and miscommunication between private actors and government. InNSW aims at making information flow more easily between them, making private actors more comfortable with processes such as project procurement, and enabling the government to benefit from their inputs. InNSW and the government created a pipeline of projects to help private actors have a clearer view of opportunities, and eventually increase interest and competition for the projects.

However, InNSW also "challenges" and "transforms" government processes by infusing them with rational assessment methods and knowledge inspired by the private sector. InNSW is dominantly staffed and directed by representatives of the private sector. InNSW's board is made of five private sector representatives: a chairman who is a company director and held board positions for banks and has been a secretary for three state departments (treasury, planning and Premier's cabinet); and the CEO, who has a background as Department Secretary for the State of Victoria. The collaboration seems to be mostly with the State Government's existing departments, and aims at changing their practices and the whole process used by the State government to plan and deliver infrastructure. The values, process and opinions of the private sector are brought in through the workforce of InNSW more than by formal discussion/negotiation platforms. On the contrary, collaboration with the government is led by the new process set up between the State departments, InNSW, and the decisions made by the Treasurer and the Premier.

A key role of InNSW is to provide an integrated plan for infrastructure development in NSW, breaking the silos of traditional government departments. According to an interviewee, the way government budgets used to work was that, under each minister and ministry, there was an agency. The agency would make its own list of projects, price them, and then ask the Treasurer (under the Premier) for the amount they wanted. Then the Treasurer would negotiate with each agency under each ministry. The process led to a five-year plan updated every year that would allocate funds to each Ministry. This process created two main issues: first, there was virtually no possibility to adopt an integrated plan in which projects across ministries were thought of as

complementary to each other, and investment in one was thought in correlation with investment in other to decrease costs and increase benefits. The budget was negotiated and distributed in a way that hindered holistic, systematic and integrated infrastructure planning. The second issue was that projects would get politicized: A Minister might give priority to a project in his/her constituency for example.

InNSW proposed a solution to both of these issues by establishing integrated plans and transparent funding processes. First, InNSW requires that each agency/ministry make a business case for each project proposed. This role was described as an “umbrella oversight” and “overarching viewpoint” by an interviewee. InNSW does not gather the information about each project, they act as a sort of regulator outside of government, requiring departments to develop a business case, asking external consultants/auditors to check the business case, then recommending to the Treasurer and Premier which projects to fund based on the criteria of “strategic fit” and “economic merit.” Second, the treasurer can only say ‘yes’ or ‘no’ to these recommendations, which avoids “unfair” political pressure for “earmarked” projects. In line with its overarching role, InNSW is meant to stay “small and nimble”, and use the same requirements for itself and the agencies it tries to change. The work of InNSW itself is audited as a private company’s would be. The use of consulting companies increases the legitimacy of the recommendations and business cases to the citizens and potential private partners, and reduce InNSW’s weight on the government’s balance sheet.

The Crucial Role of a Political Sponsor

Despite its will to present itself as an independent auditor, InNSW is not completely neutral. It does represent the will and values of the liberal government that created it, and above all the vision of the Premier. Interviewees did mention that the success of this initiative seemed tightly linked with the persona of the Premier. Some explained that the same idea of privatization and asset recycling failed in another State partly because of a lack of likability of the political leader supporting it there. Another interviewee also underlined the fact that the Premier “had the appetite”—he was willing to lease government assets, and be transparent about it. The Premier also had a banking background, and thought about the assets owned by the government through this lens. Supporting this argument that change was strongly led by the Premier is the fact that InNSW reports to and gives recommendations directly to the Premier, and the Premier appoints the CEO and Chairman of InNSW. The Premier who created InNSW in 2011, Barry O’Farrel, fired the CEO and Chairman over disagreements in 2013. The close link between the Premier and the agency is understandable given the importance of the infrastructure program for the previous and current Premiers, and their will to change the way government works. This link gives them more control over the values and directions of the agency and the program. However, it also creates less stability, since a change in Premier or governing party is likely to change the current structure’s leaders and culture.

InNSW can be thought of as a “Governance Unit”, as described by Fligstein and McAdam (2012): an organization supporting the adoption of new values, rules and processes among actors in the field (here the government). The logic is still emergent, and it would be interesting to see how the governance of the structure evolves over time. Fligstein & McAdam’s description of field emergence would predict that as the new logic begins to be adopted by the actors in the field, we might see a change in governance, loosening the link between the Premier and the agency, giving it more independence, and for example linking it to a more stable body

such as the Parliament. This new governance would make the agency more likely to mitigate the impact of changes in governing party on its internal logic.

An ‘Efficient and Effective’ Government

Although InNSW’s mission includes facilitating privatizations, this does not mean that privatization is held to be the best solution for all projects. InNSW wishes to build the tools for the government to assess what type of procurement is best for each project, and how to be an effective project manager if the government decides to handle design and construction, which is the case for some of the large greenfield infrastructure projects being developed now in NSW. On one hand, InNSW does follow up on projects approved for funding, doing regular “health checks” following upon time and cost compliance and on the risks identified during the planning stage. On the other hand, InNSW itself is responsible for the delivery of some important infrastructure projects in Sydney and created to this end Projects NSW, an internal team of specialists. Projects NSW mirrors the skills and knowledge an owner’s representative might gather, and makes sure that InNSW can effectively monitor its contractors and avoid being a “price taker”. With this expertise, Project NSW hopes to become the internal consultant of all other government departments needing to build infrastructure. All projects will not be delivered internally, but this team reduces information asymmetry between contractors and the government.

The efforts from InNSW to build capabilities to design and deliver infrastructure projects can be understood by the history of greenfield projects delivered as P3s in Australia. Private consortiums took patronage risk for new toll roads for which the forecast in traffic did not materialize, leading to the bankruptcies of Sydney’s Cross City and Lane Cove tunnels, which left their parent companies in the hands of administrators. These experiences led many private investors to rule out considering projects where they had to take on patronage “demand” risk. In a recent enquiry by the Productivity Commission related to private investment into transport infrastructure, the private sector overwhelmingly asked the government to take on a larger proportion of both construction and patronage risk in greenfield projects. As an interviewee puts it: they “learned their lessons.” After these projects’ failures, the government had to offer availability payments if they wanted to attract private money. This did not exclude leasing projects once built and operating, since this stage of the project attracts way more private investors. Competition could then help the government make profits later on. However, this scenario can only happen if the government has the internal capabilities to identify, measure and mitigate risks, as well as to deliver projects on time and on budget.

InNSW therefore gives the government new capabilities to be able to build new projects. However, the government still needs the upfront funds to take on the role of developer. In the next section we analyze asset recycling as a complementary mechanism, giving the government these needed funds.

ASSET RECYCLING VIA RESTART NSW

“Asset recycling” is a mechanism by which state-owned mature and cash-flow generating infrastructure is partially or completely leased to private investors in order to raise funds for the construction of new infrastructure projects. The Federal Government estimated that close to AU\$ 40 billion of capital on governments’ balance sheets could be “unlocked” by leasing these projects to the private sector and “recycled” by investing the newly acquired sums into new

projects that would support economic growth. The underlying idea is that government should prioritize new investments rather than keeping profitable assets. The Federal Government decided to incentivize States to “recycle” mature assets by giving them an additional 15% of the value the private sector would pay to lease existing infrastructure, provided the States reinvested these funds. The program was launched with the signature of all State Governments in May 2014. The State governments then had only 2 years to agree with the Federal Government on a list of assets to lease and new assets to fund with the proceeds, and then had to lease and start construction of new projects before June 30th, 2019, to get access to the AU\$5 billion budget allocated by the Federal Government to this incentive program.

However, the first example of asset recycling preceded this federal initiative. The NSW State Government created the fund Restart NSW as part of its Rebuild NSW program in July 2011. It is an example of asset recycling in action: it is a program to lease existing assets, capture the money in a fund and reinvest the money in the fund into new infrastructure projects. The process is summarized in Figure 1. Restart NSW is a fund aimed at directing capital toward high-priority future infrastructure projects. This mission is made possible by the work of InNSW to establish such a prioritized list of projects, relatively isolated from political influence. The sources of funds come from the privatization of two ports for AU\$4.3 billion in 2013, the lease of the Sydney Desalination Plant for AU\$312 million, and most recently, the 99-year lease of the Transgrid electricity distribution network for AU\$10.258 billion at the end of 2015. However, AU\$96 million from additional tax revenues and AU\$46 million from Waratah Bonds complement the capital coming from the lease of existing infrastructure. The fund collected more than AU\$15 billion, getting close to the AU\$20 billion the Prime Minister announced as necessary for his infrastructure program. Restart NSW also put together a detailed list of prioritized projects with corresponding capital required to fund them, a list that the State Government officially approved. In 2013, AU\$4.7 billion out of about \$9 billion had been allocated, with 2.6 billion going to highway projects in the Sydney region, notably the first stage of the Motorway WestConnex for AU\$1.8bn in 2013.

Almost a third of the proceeds of Restart NSW are reserved for projects in regional NSW, with 10 % of this funding to be spent on the Resources for the Regions program, which aims to ensure a fair share of infrastructure for communities affected by mining activity. In addition, out of the lease of one port, AU\$100 million were put into the Restart NSW Illawarra Infrastructure Fund. Local councils, community groups, industry and business groups and non-government organizations were consulted to identify the region's highest priority infrastructure projects. Finally, AU\$135 million were also allocated to the Bridges for the Bush program to replace and upgrade 17 bridges in regional NSW.

The mix of tax, bonds and proceeds from privatization into the fund makes the nature of this capital enigmatic. The government describes the mechanism as a funding solution, but it most closely resembles a financing mechanism, which deserves further discussion.

Is Asset Recycling a Funding or a Financing Mechanism?

Capital raised through “financing” has to be paid back in the future. Sources of financing are equity and debt, both of which expect cash flows in the future to pay back the capital and an interest to compensate for the value of time. The future cash flows needed to pay back creditors come from funding sources. Funding sources can be cash flows created by the project such as user fees, or funds sustainably dedicated to a project as in the case of taxes. Financing can help create value, when the money borrowed is invested in projects that will create an incremental

stream of cash flows worth more than the repayment of the debt and interest. We can analyze asset recycling using this difference between funding and financing.

Potential profits from the lease of assets

With asset recycling, the government obtains funds when leasing an asset, but commits to giving away user fees or giving availability payments to the lease holder. On their balance sheet, they also have exchanged capital for cash. Theoretically, the government did not create value. In practice, they can make a profit if the bid value is higher than the present value of the future cash flows they would have received from owning and operating the asset. In that case, the value creation is highly dependent on the procurement process, and the ability of the government to attract multiple investors to compete in the bid, and package the deal so that from their point of view, the money they get is superior to the Net Present Value (NPV) of future cash flows. It is also debatable to decide whether the government made a profit, because the NPV calculation depends on assumptions for the discount rate used to transform future cash flows into a present value. However, comparisons with other deals can provide a good benchmark.

By this standard, the NSW Government has been successful at setting up bids for assets and getting high payments for them by industry standards. Part of the high price can be explained by the fact that many investors are interested in brownfield infrastructure assets, and competition is driving prices up. However, this explanation seems to be insufficient, because other deals for brownfield assets in developed countries did not draw as much interest, or as high prices. The consortium that won the bid for TransGrid paid about 14.7 times the EBITDA of the company, less than the 28 times EBITDA some investors paid for a toll road and tunnel in Brisbane, but more than the 8 to 11 times EBITDA usually paid for regular private companies. For regulated assets, a bid price of between 1.3 and 1.4 times the regulated asset value is considered normal, but TransGrid was sold for 1.65 times its asset value. The asset was highly levered, but after repaying debts, the NSW Government was estimated to obtain about AU\$7.3 billion^v. The bid also attracted four bidding consortia with institutional investors from all over the world. The winning consortium was composed of the Canadian pension fund Caisse de depot et placement du Quebec (CDCQ) with 24.99 %, Hastings (20.02 %), the Abu Dhabi Investment Authority (19.99 %), Kuwait Investment Authority (19.99 %) and with the remaining 15.01 % held by Spark Infrastructure, which will operate the asset.^{vi}

Comparing the value of owning an asset to using these funds to build a new asset

Another important question to assess if asset recycling creates value is to compare the projects sold to the new projects being funded. A report from The McKell Institute supports this comparison. They classify projects based on their profitability and the value and certainty of the cash flows coming from different infrastructure projects. They underline that the assets being sold are probably the most profitable. Therefore, from an investor's perspective, for the reinvestment to be worth the sale, the new projects being funded should have a Net Present Value superior to the ones just sold. This would mean that the government has to invest in toll roads for example, and not in hospitals or schools according to their classification of infrastructure projects by potential to generate future revenues. However, a critical difference is that the government values economic development creation and livability as well as purely financial cash flow generation. In addition, the cash flows for the government need not necessarily come from user fees, they can come from taxation, notably of new businesses and activities born thanks to new infrastructure.

The new projects in which the NSW government will invest the Restart NSW's funds show both the desire to invest in projects that make financial and economic sense, as well as projects that reflect a sense of duty to invest fairly across the territory. Part of Restart NSW was earmarked for community projects, in which communities had a large say about the projects they wanted to see built, demonstrating attention to local social and civic values. On the other hand, the flagship project being financed and developed by InNSW is the WestConnex road in Sydney. Although this project is attractive for many institutional investors, and seems like it would bring profitable cash flows the government had enough money to decide whether development would be better handled internally or by using a private consortium. In this case, they judged they could design and build the project more cost-efficiently themselves, mainly because the private sector prices the construction and demand risks higher than the government did. Part of the government rationale might also be that the private sector would pay a premium to buy the asset once it is operating, which would largely compensate them for the risk of construction. The government did not, in fact, announce that it would sell the project, but one can imagine that the fund will become similar to a revolving fund, in which the government could take construction and demand risk for some projects but sell projects that are less risky, creating steady cash flows that allow investment in new projects that drive economic growth.

In summary, asset recycling makes the government give up future cash flows from existing projects to fund the construction of new projects. However, operation and maintenance costs still need to be covered by other sources of funds, taxes or user fees, and ideally, construction costs would also be recouped through these funding sources if the government does not want to lose capital. In addition, securing future cash flows is essential to continue recycling assets, and sell these greenfield projects to private investors in the future. Nevertheless, future cash flows do not necessarily need to come from user fees to make the project more valuable to the community and the government. Thus, a transit project not fully funded by user fees might create more economic value, tax revenues, avoid future costs to the government, and be more valuable overall to the government and citizens than a toll road fully funded by user fees.

KEY LEARNINGS AND FURTHER RESEARCH

We conclude with key methodology and practical insights from this single case study and ideas for future research.

Measuring the Extent of the Change that One Wishes to Spur

Through this case study, we have illuminated how shared understandings of the role of government, and differences in positions based on these shared understandings, are a key factor enabling NSW to instigate change in government practices successfully. We can hypothesize that in contexts where there is greater disagreement on construals of the object and purpose of change, the strategies that will instigate change will be different. One such strategy might actually be to try to obtain an agreement on positions without changing construals. Many other strategies might be possible, but identifying the stakeholders' construals and positions, and the extent to which they are shared, can provide a better understanding of how to change strategies and better predict their success or failure. In the case of NSW, we've underlined that a key supporting factor of this project was the shared political understanding that government should be efficient and effective with the money from constituents, and act using economic and financial analysis tools similar to the ones used by the Private Sector. In the case of NSW, once

the government showed that these same agreed-upon tools supported the position of privatizing existing assets to invest in new projects, the opposition's arguments were significantly weakened.

Key Characteristics of InNSW and Restart NSW

In the case discussed here, InNSW benefited from the strong support of two State Premiers, and from the direct link between this government agency and the government's decision leaders. This governance structure might need to change to institutionalize the values and processes borne by InNSW. However, this direct link to political leaders was a key factor in instigating change in government processes, and resembles structures described by Fligstein and McAdam (2012) as elements of institutional change. InNSW was a key node in between the logic of Government and the logic of the private sector. The negotiation between the two logics was made possible by the presence of a workforce and leaders primarily from the private sector, but also from having clear processes in place to make existing government and department agencies work with InNSW according to InNSW's rules.

On its end, Restart NSW, benefited from the isolation from the government's budget. Partitioning the proceeds from privatization from the government's budget gave confidence to voters, and ensured the rational use of funds toward the goal of maximizing economic benefits. The mechanism was based on the idea of maximizing profits from the sale, and choosing the correct projects, notably with the capabilities to efficiently procure them internally if necessary. To realize this vision, InNSW had to build capabilities, and not only gather knowledge and communicate it. It also had to advise on structuring an attractive bid and coordinate with consultants to that end, and create internal capabilities to evaluate and mitigate construction and patronage risk.

An underlying question is:

Can the government deal better with those risks, for example, by being able to suffer reduced revenues during the early operational years of the project, but benefit from advantages to businesses, for example by getting higher tax revenues from more economic activities, even if the toll revenues are low at first?

Several more detailed questions underlie this problem. First, subsidizing a project with other revenues is often considered bad investment practice. However, for projects with hybrid goals, such as infrastructure, from a government's perspective, it might actually be better practice, because projects benefit from each other, and each projects' value can increase by the addition of another project. However, if the construals guiding the government is to have a sound financial and economic analysis, such a "transfer" still needs to be based on an economic analysis assessing the real cost versus revenues of a projects over its lifecycle, and the possibility for the government to recoup its investment in construction and unprofitable years of operation either by selling when the project becomes profitable at a price that compensate for them, or by other sources of revenues made available thanks to the project, but not necessarily directly coming from user fees.

Conditions for Asset Recycling Success

We also showed that asset recycling does not equate with complete funding of new projects whose maintenance still needs user fees or taxes. If a government is to behave like a rational investor, it must also compare the opportunity cost of selling a profitable asset and investing into assets that may not bring as much cash flows, or value, however the government decides to assess it. If the goal is to be able to lease these assets in the future, there needs to be a solid plan securing sources of future cash flows to compensate for the initial investment. Thus, we've underlined that the asset recycling mechanism in and of itself does not guarantee that a new project will be funded over its entire lifecycle. The government still needs to secure long-term funding for the operation and maintenance of new projects, be it through user fees, taxes or other innovative capturing of the value created by new projects.

Further Research

Lastly, the lessons drawn above are based on a single case, and construals and positions are a proposed framework that could become increasingly helpful as we use across cases and compare the NSW solution to similar solutions in other places, or to different solutions in places with similar conditions. Further research could focus on other cases varying across construals or positions and solutions to greenfield infrastructure funding, in light of the findings and framework outlined in this paper. Comparisons could be made with other Australian states and other OECD countries. We also only briefly described the key mechanisms that are the ability to procure projects, and to structure the sale of existing assets. Given the importance of such skills, further research could focus on understanding those mechanisms more fully.

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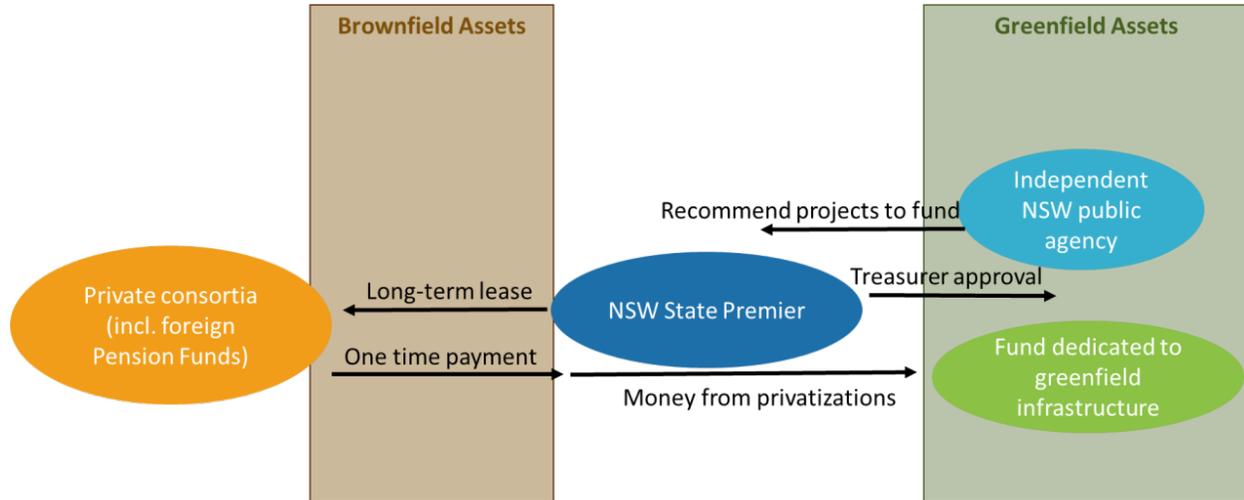
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Figure 1 – Asset Recycling Mechanism in the Case of Restart NSW



ⁱ 2013-2014 Global Competitiveness Study

ⁱⁱ Consensus estimates from the Organization for Economic Cooperation and Development (OECD) to the Boston Consulting Group and the World Bank Group.

ⁱⁱⁱ In 2015, Tasmania created Infrastructure Tasmania, and Queensland created a similar agency, but named Building Queensland

^{iv} The Coffs Coast Advocate, 28 Feb 2015, "LNP has 'no plan B' to privatising electricity" by Chris Calcino

^v "\$10.3 billion NSW power sale a good deal or the Baird government", by Malcolm Maiden. The Sydney Morning Herald. November 25, 2015

^{vi} "Transgrid deal: NSW power network asset sale proceeds set to top \$20b" by Brian Robins for the Sydney Morning Herald. November 26, 2015