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Funding Transport Infrastructure Development in the Philippines: A Roadmap Toward Land Value Capture

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RESEARCH

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Prevailing discussions surrounding transport infrastructure in the Philippines tend to focus on the boons and banes of different financing models. While such discussions are important and worthwhile, the fact remains that the sustainability of a transport service ultimately hinges on the ability to pay for it. Whether publicly or privately financed, adequate and reliable funding underlies every project's long-term success.

This paper examines a class of funding tools that has been underutilized, but which the Philippine government may consider using as it plans for an era of "Build, Build, Build." Land value capture, or LVC for short, takes a "beneficiary-pays" approach to infrastructure and encompasses a plethora of strategies that leverage the benefits of higher land values typically found around transport infrastructure such as urban transit stations, corridors, integration hubs, and roads. For many years, there have been two conflicting demands on who should take on the burden of paying for transport projects. On the one hand, there are calls to reduce transit subsidies, which impose a large tax burden on the population, including nonusers. On the other hand, there is continual pressure to keep transit fares at an affordable level for the commuting public. LVC provides a way out of this conundrum and offers the prospect of an infrastructure funding mix that is more equitable, efficient, and sustainable.

LVC has taken on various forms around the world, but not all may be suitable for the Philippine context. Based on local case studies and the country's current needs, the schemes identified to be the most viable include tax-based instruments such as real property taxes and special assessments, as well as development-based mechanisms such as joint ventures, land asset management, and third-party contributions. An added advantage of development-based schemes

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is that they can be used as a policy instrument to promote social equity and environmental sustainability. In any case, practicing one form of LVC does not preclude the use of another. Which scheme or combination of schemes is most appropriate will depend on the characteristics and objectives of the project in question.

To facilitate the successful implementation of LVC, the Philippines can aim to address key challenges surrounding the issues of land valuation and taxation, infrastructure and land-use planning, governance, land ownership, and land settlement. In particular, it may explore the following policy solutions:

1. The establishment of a single, market-based schedule of land values
2. The adoption of a long-term national transport infrastructure plan
3. The enforcement of updated local land-use plans
4. The appointment of a permanent body to coordinate LVC efforts

Should the government choose to pursue these policy recommendations, additional risks and challenges will likely be encountered along the way. One of these risks is corruption, an inherent threat to any undertaking that involves the large-scale transfer of resources. Hence, the implementation of LVC through a structured program will be critical in establishing transparency, as well as in mobilizing public support.

INTRODUCTION

The Philippines has experienced remarkable economic growth in recent years. From 2010 to 2017, the country grew at an average rate of nearly 6.4 percent per annum—far surpassing the global equivalent of 3.8 percent.¹ However, it is uncertain whether the emerging economy will be able to sustain this level of growth without significant investments in transport infrastructure. The dilapidated and deteriorating state of the country’s transport infrastructure is undermining national competitiveness and represents a looming threat to future economic expansion. Based on data from 2017, approximately PHP1.28 trillion worth of economic opportunities are lost annually due to severe traffic congestion in Metro Manila alone—a figure that has escalated by 46 percent from 2014 estimates.² According to the World Economic Forum’s 2017-2018 Global Competitiveness Index, the Philippines ranks 97th out of 137 countries in the area of infrastructure, which includes the quality of its roads, rail, ports, and airports.³

To boost competitiveness, President Rodrigo Duterte’s current administration has made infrastructure development a major component of its economic development strategy. Under its PHP8-9 trillion “Build, Build, Build” program, the government has committed to ramp up public spending on infrastructure from 5.4 percent of GDP in 2017 to 7.4 percent of GDP by 2022.⁴ Approximately 4,895 projects are slated for completion over the next three years, to be financed using a combination of government funds, official development assistance (ODA), and private-sector investment.⁵

¹ “Real GDP Growth.” Data Mapper. 2017. Accessed March 12, 2018. http://www.imf.org/external/datamapper/NGDP_RPCH@WEO/OEMDC/ADVEC/WEOORLD/PHL

² De Vera, Ben O. “Jica: Traffic congestion now costs P3.5 billion a day.” Philippine Daily Inquirer, February 22, 2018. Accessed March 1, 2018. <http://newsinfo.inquirer.net/970553/jica-traffic-congestion-now-costs-p3-5-billion-a-day-metro-manila-traffic-jica-cost-of-traffic>

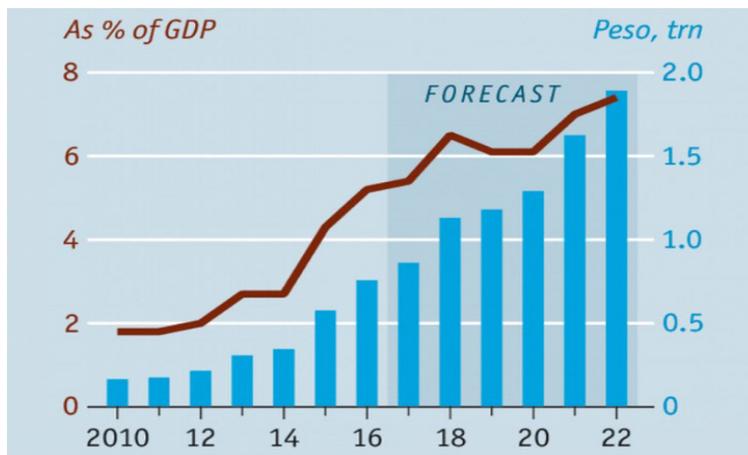
³ Schwab, Klaus. The Global Competitiveness Report 2017–2018. Report. Accessed January 11, 2018. www3.weforum.org/docs/GCR2017-2018/05FullReport/TheGlobalCompetitivenessReport2017%E2%80%932018.pdf

⁴ “Tax Reform to Fund Infra Buildup and Spur Growth above 6 Percent.” Department of Finance. January 16, 2017. Accessed January 11, 2018. www.dof.gov.ph/index.php/tax-reform-to-fund-infra-buildup-and-spur-growth-above-6-percent/

⁵ “Php1574-B Infra Projects to Roll out in Poorest PH Regions.” National Economic and Development Authority. May 03, 2017. Accessed January 10, 2018. <http://www.neda.gov.ph/2017/05/02/php1574-b-infra-projects-to-roll-out-in-poorest-ph-regions/>

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Figure 1. Expected Public Spending Infrastructure Spending in the Philippines,⁶ 2010 - 2022



Source: *The Economist*

⁶ “Philippines, government spending on infrastructure.” Digital image. *The Economist*. August 19, 2017. Accessed January 26, 2018. <https://www.economist.com/news/asia/21726315-when-it-comes-jobs-and-investment-rodrico-duterte-more-reformer-wrecker-philippine>

⁷ Salon, Deborah. Location Value Capture Opportunities for Urban Public Transport Finance. Report. May 2014. Accessed January 11, 2018. library.rpa.org/pdf/TLS-2014-Research-Paper-Value-Capture.pdf

This capital will come at a cost and must eventually be paid. Historically, the country has relied on general taxation and, where applicable, user fees to sustain its borrowing and spending. The Tax Reform for Acceleration and Inclusion (TRAIN) Act, which took in effect in January 2018, continues this trend, with 70 percent of the incremental revenues it is expected to generate earmarked for infrastructure. But as the country embarks on its largest infrastructure campaign to date, it is worth asking: Are there still untapped or underutilized sources of public revenue that can support the fiscal sustainability of the government’s infrastructure agenda?

One promising option for the transportation sector is the use of land value capture (LVC), a class of funding tools that leverages the benefits of higher land values around transport facilities such as urban transit stations, corridors, and integration hubs, as well as expressway and toll road exits. Albeit in different ways, it has been applied in many of the world’s great cities, including New York, London, Sydney, and Tokyo. In certain cases, such as New York’s Subway 7 Line Extension, LVC has funded up to 88 percent of total project costs (see Table 1).⁷ In addition, LVC has also been used as a policy instrument to advance social equity and promote environmental sustainability.

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The Philippines is no stranger to LVC. Although not explicitly labeled as such, some forms of LVC are currently in place and a number of infrastructure projects in the pipeline incorporate value capture elements. However, the most widely practiced scheme—namely, the real property tax—is not the most targeted mechanism for capturing transit-induced land-value increases, while project-based cases of LVC have occurred on an ad hoc basis. For the practice of LVC to become regularized, a series of policy reforms may help. To this end, this paper provides a road map that the government may consider should it choose to tap into LVC as a larger and more consistent funding source for transport infrastructure development.

Table 1. Funds Raised from LVC Projects in Select Cities

City	Project	Scheme	Funds Projected/ Raised	Percent of Project Cost or Budget
New York	Subway 7 Line Extension	Tax hypothecation	US\$2.1 billion	88%
Washington D.C.	Dulles Metro-rail Silver Line Expansion	Special assessment	US\$730 million	14%
London	Crossrail	Business rate supplement; Community infrastructure levy	£4.1 billion	32%
Nanchang	Metro Lines 1 and 2	Development rights lease, Joint venture	RMB11.8 billion*	36%

Source: Adapted from Salon (2014) and World Bank (2015)

* Projected revenues from 2012-2016.

FROM A USER-PAYS TO A BENEFICIARY-PAYS APPROACH: LAND VALUE CAPTURE (LVC)

Defining LVC

Land value capture refers to the act of collecting a share of the benefits generated by public actions that flow to the value of land. Transport infrastructure investments and associated regulatory decisions, such as changes in land use, typically lead to improvements in accessibility or productivity. These improvements are capitalized into surrounding areas in the form of higher land and property values. Existing lands and properties become more desirable, just as more people and businesses are willing to pay a

premium to locate beside the new infrastructure. The notion, then, is that the private owners should not be the sole beneficiaries of the rise in values. The government—through the use of LVC mechanisms—has the right to capture some of the land-value increments, to help recoup various infrastructure costs.

Traditional forms of LVC are tax or fee based, encompassing instruments such as property and land taxes, special assessments, and tax hypothecation schemes.⁸ Meanwhile, nontax or fee-based instruments—dubbed by the World Bank as “development-based” LVC schemes—have taken the form of land or air rights sales, joint ventures, land readjustments, and urban redevelopment schemes. Each type of LVC comes with a unique set of benefits, risks, and ramifications. They vary in terms of who they target (e.g., property owners vs. developers), the timing of the payments (e.g., one-time vs. recurring), and the area from which the payments are collected (e.g., immediate vicinity vs. zones within a city vs. a whole city vs. the entire country). Hence, the appropriate scheme or combination of schemes is usually assessed on a case-by-case basis.

The Case for LVC: A More Equitable, Efficient, and Sustainable Funding Mix

The “user-pays approach” suggests that the costs of a transport system should be borne primarily, if not exclusively, by the users of that system. In practice, however, this is very difficult to enforce, as the majority of the world’s transit systems struggle to cover their operations and maintenance costs using fare revenues, let alone their construction or debt service costs.⁹ Governments, therefore, often shoulder a sizable fraction of the costs using general taxation funds, on the basis that transport infrastructure confers positive externalities on local economies, or even the national economy as a whole. The Philippine government grants an average annual subsidy of PHP5 billion to the MRT-3, the country’s most widely used rail line.¹⁰

In the face of competing interests, however, it is of little surprise

⁸ Suzuki, Hiroaki, Jin Murakami, Yu-Hung Hong, and Beth Tamayose. *Financing Transit-Oriented Development with Land Values*. Report. 2015. Accessed January 11, 2018. <http://documents.worldbank.org/curated/en/468551468165570019/pdf/936860PUB00ISB0TransportDevLV0final.pdf>

⁹ Ibid.

¹⁰ Cordero, Ted. “MRT3 stands to lose P236M in monthly revenues if operations stop -DOTr.” *GMA News Online*. November 21, 2017. Accessed January 24, 2018. <http://www.gmanetwork.com/news/money/companies/633956/mrt3-stands-to-lose-p236m-in-monthly-revenues-if-operations-stop-dotr/story/>

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that citizens residing outside the metropolis take issue with paying for expensive transit services from which their benefits are difficult to measure and are mostly indirect. At the same time, raising fares to boost the operational budget of the system has always been a politically contentious issue. Even when fares are successfully increased, the marginal revenue that is generated may still fall short of total costs. A fare hike administered across Metro Manila's three rail lines in 2015, which raised the cost of end-to-end trips by 50 to 87 percent, merely led to a 17 percent decrease in annual government subsidies, from PHP12 billion to PHP10 billion.¹¹

¹¹ "MRT, LRT fare hikes to take effect January 4." Rappler. December 20, 2014. Accessed January 25, 2018. <https://www.rappler.com/nation/78540-mrt-lrt-fare-hike-january-4>

The greatest merit of land value capture is perhaps its ability to address this two-pronged challenge of a substantial taxpayer burden and limited revenues. Departing from a strict "user-pays approach," LVC extends the definition of beneficiaries to include landowners in an infrastructure's vicinity whose land has been made more valuable by its existence. In doing so, LVC offers to deliver a fairer and more efficient infrastructure funding mix. Extracting funds from those areas that directly benefit from public transport infrastructure not only ensures that the profits this infrastructure generates are mobilized for the benefit of the greater community, but also frees up taxpayer pesos for other competing economic priorities. In the absence of LVC, pent-up land values are pocketed by existing landowners or even speculators who make investments in anticipation of the demand for land that new projects typically induce.

Additionally, shifting to a beneficiary-pays approach may bolster the sustainability of infrastructure funding. LVC augments the number of sources, and thus, the overall level of revenues retrieved from infrastructure. While a scheme's funding potential varies depending on how, where, and when it is applied, capturing even a small percentage of the windfall gains associated with big-ticket projects can translate to millions or even billions of pesos in additional funding. When pursued in conjunction with transit-oriented

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development policies,¹² LVC may also lead to additional sources of long-term revenues from new businesses that locate above or around infrastructure facilities, as well as from increased transit ridership. In these ways, LVC has the potential to allay some of the pressure that the government faces to raise fares, and can help keep commuting costs at an affordable level. Furthermore, diversified revenue sources can afford the government the flexibility to temporarily suspend dysfunctional transit services. According to former Transportation Undersecretary for Rails Cesar Chavez, a key reason it had refused to shut down the MRT-3 for much-needed maintenance work was because of the PHP236 million in monthly passenger revenues that it would have forgone, and which it would have subsequently needed to cover. The government relies heavily on these revenues to service the PHP2.7 billion in annual equity payments owed to the project's original contractor.¹³

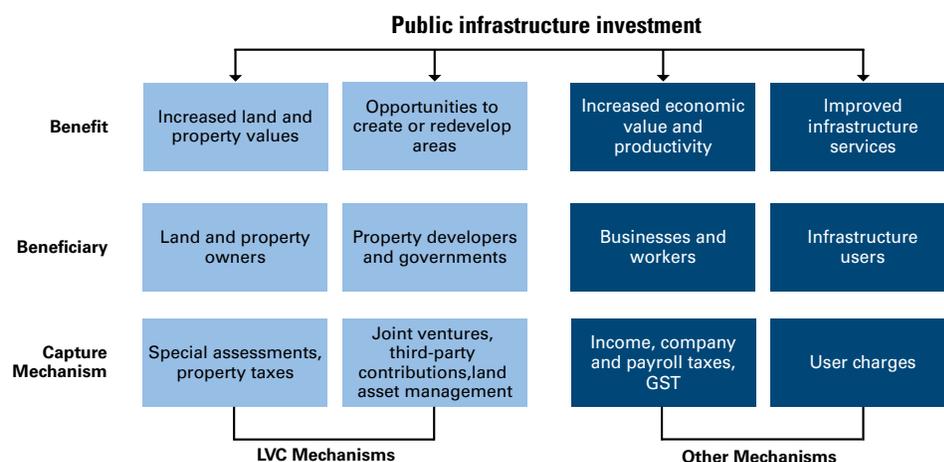
LVC is associated with a host of other benefits beyond the revenues it is able to generate. Engaging the public, aligning business and government interests, and encouraging carefully planned and coordinated land use around transport infrastructure are just some of the additional benefits that LVC can bring. However, it is imperative to clarify that these outcomes are merely tangential. In isolation, they do not constitute sufficient basis for the pursuit of LVC. Relatedly, it should be noted that LVC cannot alter the economic viability of infrastructure projects.¹⁴ It may enable the government to deliver the projects and their associated economic benefits sooner, by front-loading funding, but LVC ought to remain a secondary consideration to these projects' inherent economic value. Thus, while a powerful tool, LVC is only warranted if projects already make strategic or economic sense, and if it is able to deliver on making infrastructure funding more fair, efficient, and sustainable.

¹² Policies that coordinate and maximize residential, business, and leisure spaces surrounding public transport hubs.

¹³ Cordero, "MRT3 stands to lose P236M in monthly revenues if operations stop -DOTr."

¹⁴ Capturing value: Advice on making value capture work in Australia. Report. December 2016. Accessed January 11, 2018. http://infrastructureaustralia.gov.au/policy-publications/publications/files/Capturing_Value-Advice_on_making_value_capture_work_in_Australia-acc.pdf

Figure 2. Beneficiary-Pays Approach to Public Infrastructure



¹⁵ Philippines. Bureau of Local Government. Valuation Legislative Reform: The VRA Bill. By Ma. Presentacion R. Montesa. Accessed January 11, 2018. <http://lamp2.blgf.gov.ph/pages/lamp/1stcongress/Presentations/Plenary%201/The%20VRA%20Bill%20-%20Ma%20Presentacion%20Montesa.pdf>

Source: Adapted from *Infrastructure Australia* (2016)

BARRIERS TO LVC IN THE PHILIPPINES

As previously mentioned, the practice of LVC is not new to the Philippines, although this exact terminology may not be used. Prior experience notwithstanding, there are a number of barriers preventing LVC from being effectively implemented in the country.

Inconsistent Land Valuation Practices

The ability to measure the impact of infrastructure on surrounding land values is a prerequisite for LVC. To do this, an account of land values that is both comprehensive and up-to-date is critical. At present, at least 23 different national government agencies and 1,714 local government units (LGUs) conduct independent valuations for their own purposes. A unique record of land values is used for national taxation (Bureau of Internal Revenue or BIR), land conversion (Department of Agriculture), private property expropriation (Department of Public Works and Highways), and real property taxation (LGUs), among other uses, with disparities across these various records.¹⁵ Moreover, individual records are not always complete and well-organized. For example, while the BIR maintains a seemingly comprehensive database of zonal values for the country's 19 revenue regions, these zonal values are not collected consistently

over time nor across municipalities. These records also tend to be inconsistent with market rates. A study conducted in 2011 revealed rampant undervaluation of land in records used for tax purposes, and overvaluation in records that are used in cases where the government acts as the payor.¹⁶

One consequence of inconsistent valuation is that property taxes are not generating as much revenue for LGUs as they potentially could. Whereas real property tax collections represented an average of 35.5 and 37.7 percent, respectively, of local government revenues in middle- income and high- income countries in 2014,¹⁷ the equivalent figure for cities in the Philippines was 30 percent.¹⁸ Considering that land valuation lies at the heart of LVC and that property tax constitutes one of its most basic forms, improving valuation and property taxation practices will be critical for more complex applications of the tool.

Absence of a Long-Term National Transport Infrastructure Plan

The lack of an authoritative national transport infrastructure plan is primarily a consequence of the Philippines' political structure. The election of a new president has almost always come with the appointment of a new Department of Transportation (DOTr) Secretary, a new thrust for transportation development, and a new infrastructure blueprint. As Table 2 shows, a number of transport studies and plans have been commissioned by various government agencies over the years, many of them focused on Metro Manila. However, seldom have they endured beyond the term of a president nor been brought to full completion.¹⁹ The dearth of a national transport plan is particularly inhibitive for the effective implementation of LVC, which necessitates long-term strategic planning and coordination of infrastructure and potential development areas where value capture is to be applied.

¹⁶ Montesa, Valuation Legislative Reform: The VRA Bill.

¹⁷ Philippines Urbanization Review. Report. March 31, 2017. Accessed January 11, 2018. <http://documents.worldbank.org/curated/en/963061495807736752/pdf/114088-REVISED-PUBLIC-Philippines-Urbanization-Review-Full-Report.pdf>

¹⁸ Philippines. Department of Finance. Bureau of Local Government Finance. LGU Taxation and Revenue Practices. October 2015. Accessed April 5, 2018. <http://blgf.gov.ph/wp-content/uploads/2015/11/LGU-Taxation-and-Revenue-Practices-October-2015.pdf>

¹⁹ Napalang, Sheilah, and Jose Regin Regidor. Challenges of Urban Transport Development in Metro Manila: A look back at the last 40 years. Eastern Asia Society for Transportation Studies. Accessed January 11, 2018. http://www.dynamicglobalsoft.com/easts2015/program/pdf_files/1296.pdf

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Table 2. Selection of Past Transportation Sector Studies and Master Plans

Year(s) Undertaken or Implemented	Administration	Commissioned by	Partner	Name
2017-(ongoing)	Rodrigo Duterte	National Economic and Development Authority (NEDA)	Transport and Traffic Planners, Inc., Philkoei International, Inc., and Test Consultants, Inc.	Philippine Transportation System Master Plan
2014	Benigno Aquino III	National Economic and Development Authority (NEDA)	JICA	Roadmap for Transport Infrastructure Development for Metro Manila and Its Surrounding Areas (Regions III and IV-A)
2014	Benigno Aquino III	National Economic and Development Authority (NEDA)	World Bank, Australian Aid	Philippine Transport Infrastructure Development Framework Plan
2006-2007	Gloria Macapagal-Arroyo	Department of Transportation and Communications (precursor of DOTr)	JICA	Mega Manila Public Transport Study
1996-1999	Fidel Ramos	Multiple government agencies	JICA	Metro Manila Urban Transportation Integration Study
1990-2000	Corazon Aquino	Multiple government agencies	Multiple government agencies	Metro Manila Urban Transport Development Plan
1976-1977	Ferdinand Marcos	Department of Public Works, Transportation and Communications (precursor of DOTr)	World Bank	Metro Manila Transport, Land Use and Development Planning Project
1976-1977	Ferdinand Marcos	Department of Public Works, Transportation and Communications (precursor of DOTr)	Technical Cooperation Agency (precursor of JICA)	Urban Transport Study in Manila Metropolitan Area

Multilayered Governance Structure

The DOTr serves as the primary body for transport planning, policy-setting, and development. As seen in Table 3, however, there are various agencies involved in the country’s transportation sector. There is nothing inherently wrong with having multiple actors in this space; the issue arises when their mandates and interests overlap or conflict. Indeed, interagency competition to carry out “legacy projects,” as well as tensions between local and national governments, represent key bottlenecks for infrastructure development.²⁰ As an example of the latter, the sorts of high-capacity projects that would benefit from LVC must be initiated from the top, yet LGUs have plenty of power to stop them.²¹ Perhaps the greatest challenge for LVC is the fact that not a single entity presently has the legal or programmatic capacity to adequately oversee

²⁰ Napalang and Regidor, *Challenges of Urban Transport Development in Metro Manila: A look back at the last 40 years.*

²¹ Siy, Robert. E-mail interview by author. February 20, 2018.

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and coordinate LVC efforts in Metro Manila, let alone the entire country. Many cities that have applied LVC on a large scale owe a considerable share of their success to the existence of a government body with authority over area-wide transport planning and finance.

Table 3. Government Agencies Involved in the Philippines’ Transportation Sector

● Planning ● Regulation ● Finance ● Operations

Agency	Function
Department of Transportation (DOTr) ● ● ● ●	Executive department of the Philippine government that oversees the country’s land, air, and sea infrastructure
National Urban Development Land Transportation and Franchising Regulatory Board (LTFRB) ●	<ul style="list-style-type: none"> Regulates motorized land-based public transportation services and oversees fare control Attached agency of DOTr
Land Transportation Office (LTO) ●	<ul style="list-style-type: none"> Issues drivers’ licenses and oversees registration of all motorized land-based transportation vehicles Attached agency of DOTr
Toll Regulatory Board (TRB) ●	<ul style="list-style-type: none"> Regulates all toll roads in the Philippines Attached agency of DOTr
Philippine National Railways (PNR), Light Rail Transit Authority (LRTA) ●	<ul style="list-style-type: none"> Oversees the operations of heavy and light rail systems, respectively, in Metro Manila Attached agencies of DOTr
Department of Public Works and Highways (DPWH) ● ● ● ●	Oversees the planning, design and construction of national roads and bridges
National Economic and Development Authority (NEDA) ● ●	<ul style="list-style-type: none"> Social and economic development planning and policy-coordinating body Chaired by the President of the Philippines
Public-Private Partnership (PPP) Center ● ●	<ul style="list-style-type: none"> Facilitates the implementation of the country’s PPP projects Attached agency of NEDA
Department of Finance (DOF) ●	<ul style="list-style-type: none"> Ascertains financing and funding arrangements for infrastructure projects The DOF secretary concurrently serves as the chairman of the Investment Coordination Committee, which reviews and confirms all major infrastructure projects
Housing and Land Use Regulatory Board (HLURB) ● ●	Promulgates and enforces policies on land use, housing, and homeowners associations
Metropolitan Manila Development Authority (MMDA) ● ●	Performs planning, monitoring, and coordinative functions across Metro Manila’s 16 cities and one municipality
Local Government Units (LGUs) ● ● ● ● ●	Responsible for street construction and maintenance, tricycle franchising, traffic management, and regulation within the city or municipality
Legislative Branch ● ●	Approves the annual budget of national agencies, including that of the Department of Transportation

Source: Adapted from Napalang & Regidor (2015)

Outdated Land-Use Plans and Weak Implementation of Land-Use Regulations

Land-use plans directly affect the development potential and, in turn, the value of land. As shown in Table 4, a number of complementary documents provide guidelines on land use in the country, which encompass different time frames (long-term vs. medium-term) and scopes (national vs. regional vs. provincial vs. local). As the overarching strategic framework for land-use planning in the country, the National Framework for Physical Planning (NFPP), prepared and periodically reviewed by the National Economic and Development Authority (NEDA), ostensibly underlie all these various documents. The Housing and Land Use Regulatory Board (HLURB) also plays a role in overseeing spatial development, regulating the comprehensive land-use plans of cities and municipalities, and providing guidelines and technical assistance to LGUs and provincial and regional land-use committees when respectively crafting and reviewing these plans.²²

²² National Framework for Physical Planning 2001-2030: Executive Summary. Report. 2013. Accessed January 11, 2018. <http://www.neda.gov.ph/wp-content/uploads/2013/10/execsum.pdf>

Land-use plans directly affect the development potential and, in turn, the value of land.

Table 4. Documents Pertaining to Land-Use in the Philippines

Name	Implementing Agency	Time Frame of Current Document	Description
The National Framework for Physical Planning (NFPP)	National Economic and Development Authority (NEDA)	2001-2030, periodically reviewed	Long-term strategic framework for land-use planning in the country
National Urban Development and Housing Framework	Housing and Land Use Regulatory Board (HLURB)	2017-2022, periodically updated	Overarching framework for urban development, housing, and other HLURB mandates
Regional Physical Framework Plan	Regional Planning and Development Office/ Regional Development Council	Varies, updated as needed	Provides a vision and policy directions for the spatial development of a region
Provincial Development and Physical Framework Plan	Provincial Planning and Development Office	Varies, updated as needed	Provides a vision and policy directions for the spatial development of a province
Comprehensive Land-Use Plan	City/Municipal Planning and Development Office	Varies, updated as needed	Principal basis for determining the future use of lands and national resources for production and protection within the jurisdiction of a city or municipality

Source: Adapted from *Infrastructure Australia* (2016)

While involved in the goal-setting and regulatory side of land use, NEDA and HLURB have little authority in the actual planning and implementation processes, which ultimately fall under the purview of local governments. This presents a challenge for LVC, in light of the fact that a sizeable share of cities and municipalities in the country have outdated land-use plans that are not strictly enforced. The plan of Cebu City, for example, has purportedly remained unchanged for 38 years.²³ Places like Bogo,²⁴ Almagro, and Matuguinao do not even have a plan.²⁵ When they do exist, land-use plans are usually only updated to accommodate the construction of new projects or to reflect current development patterns, instead of acting as the initial basis for zoning.²⁶ The discretionary issuance of development permits undermines the strategic planning process that is vital to LVC and opens up opportunities for corruption.

Land Ownership and Settlement Patterns

The experiences of cities like Singapore, Nanchang, and Hong Kong demonstrate the immense revenue potential of development-based value capture tools such as land sales and leases, which can most easily be administered when the government owns the majority or the totality of land in a city or country. Not only does the Philippines operate under a market freehold system, but privately owned land tends to be fairly concentrated. In provinces like Batangas, Laguna, Cavite, Quezon, and Bulacan, individual families or companies can own vast tracts of land that span thousands of hectares.²⁷ This is by no means an intractable situation as far as LVC is concerned. In fact, the concentration of private-land ownership—which limits the number of parties with which the government must negotiate—can be an enabling factor for certain LVC schemes such as joint ventures. Many of the country's public-private partnerships (PPPs) have indeed been facilitated by the fact that companies with significant land holdings want a stake in public infrastructure projects that may affect the value of their land. What is critical for success are fair and mutually beneficial terms between these landowners and the government. So far, they have been difficult to come by.

²³ World Bank Group, Philippines Urbanization Review.

²⁴ Galolo, Jeandie O. "Revisit land use plans, LGUs urged." SunStar. September 08, 2017. Accessed January 11, 2018. <http://www.sunstar.com.ph/cebu/business/2017/09/08/revisit-land-use-plans-lgus-urged-562656>

²⁵ Philippines. Samar Provincial Government. Planning Office. Comprehensive Land Use Planning Capacity of Local Government Units in Samar Philippines. By Rosalina Salazar-Quitaig and Ronald L. Orale. December 2016. Accessed April 11, 2018. https://www.researchgate.net/publication/313243587_Comprehensive_Land_Use_Planning_Capacity_of_Local_Government_Units_in_Samar_Philippines

²⁶ World Bank Group, Philippines Urbanization Review.

²⁷ Large Landholdings amid Peasant Landlessness. Infographic. Quezon City: IBON Foundation, November 15, 2017.

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Unlike the skewed distribution of private land, the prevalence of informal settlements represents a strict barrier to LVC in the country. The Philippines is home to an estimated five million informal settler families, with over a third of the urban population living in slums.²⁸ In addition to the opportunity cost associated with the inability to tax these communities, illegal settlers hinder LVC by impeding the land acquisition or right-of-way process that precedes the ability to build infrastructure and develop the surrounding land.

²⁸ “Manila – Urban Challenges Overview.” Manila – Urban Challenges Overview. December 21, 2016. Accessed January 24, 2018. <https://www.humancities.co/2016/12/manila-urban-challenges-overview/>

INSTITUTIONALIZING LVC IN THE PHILIPPINES

LVC SCHEMES

The following lists the schemes deemed to be the most useful as well as the most politically and practically feasible in view of the Philippines' current infrastructure needs, the barriers discussed in the previous section, and local case studies. It is important to point out that this selection is not exhaustive and does not bar the use of other types of LVC in the future. In fact, it may be in the government's best interest to continually explore the suitability and viability of new mechanisms as the country's needs evolve. For example, while this paper primarily considers ways that LVC can support infrastructure funding, LVC can also be used as a financing tool, as in tax increment financing schemes.²⁹ Financial sector liquidity is currently not a major concern for the country, but it may well be an issue as the infrastructure pipeline continues to grow and capital needs expand.

TAX-BASED SCHEMES

Property Tax

A property tax is a tax levied on the assessed value of land and associated properties (e.g., buildings and machineries) and is an LVC mechanism to the extent that it captures economic spillovers from new and improved infrastructure. As previously mentioned, a locally administered real property tax already exists in the Philippines.³⁰ However, outdated land value records are undermining its value capture potential. Based on 2013 figures, harmonizing and updating the country's record of land values is estimated to produce PHP8.03 billion to PHP29.7 billion in additional revenues for LGUs per annum.³¹

²⁹ A public financing method whereby municipalities divert future property tax revenue increases from a defined area toward a particular infrastructure project.

³⁰ LGUs outside and within Metro Manila can respectively levy up to 1 percent and 2 percent of the assessed value of real properties within their jurisdictions.

³¹ Philippines. Department of Finance. Revenue impact of the proposed VRA bill in the real property tax collections of the local government units nationwide. March 2015.

Special Assessment

A special assessment is a surtax imposed by governments on property owners who benefit directly from specific public investments, to help defray the costs of these investments. Officially called “special levies,” LGUs already possess the legal authority to charge special assessments for projects that they have financed, up to 60 percent of the total costs. However, this tool has remained underutilized, due in part to the lack of technical expertise on how to implement it.³² When special levies are imposed in association with local infrastructure, collections are oftentimes absorbed by the general budget.³³ To be a more targeted LVC instrument, local governments may consider earmarking revenues from special levies to help pay for the projects in question. At the national level, the government may explore the option of permitting cities, provinces, and municipalities that benefit from infrastructure projects it has funded to collect special assessments on its behalf, and subsequently allocating the revenues between the parties involved. The sharing of revenues could be one way to align the incentives of national and local governments.

DEVELOPMENT-BASED SCHEMES

Joint Venture (JV)

NEDA defines a joint venture as a type of PPP whereby a private sector entity and a government entity “contribute money/capital, services, assets or a combination of any or all of the foregoing to undertake an investment activity.”³⁴ In the context of LVC, joint ventures particularly refer to project-specific PPP arrangements in which the government and private developers coordinate the development of transport infrastructure facilities and adjacent private properties, with the latter contributing financially or in-kind to these facilities that are expected to add value to their real estate holdings.

³² Real Property Taxation in the Philippines. Issue brief. June 2003. Accessed January 11, 2018. <http://www1.worldbank.org/publicsector/decentralization/June2003Seminar/Philippines.pdf>

³³ Canilao, Cosette. Telephone interview by author. November 2, 2017.

³⁴ Philippines. National Economic and Development Authority. Revised Guidelines and Procedures for Entering Into Joint Venture (JV) Agreements Between Government and Private Entities. Accessed January 15, 2018. <http://www.neda.gov.ph/wp-content/uploads/2017/09/2013-Revised-JV-Guidelines.pdf>

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Although their implementation can be quite complex, JVs have a good chance of working well in the Philippines. The government has a long history of engagement with the private sector for the delivery of infrastructure, many of their partners being large conglomerates with interests in both real estate and infrastructure. What's more, the PPP Center has actually begun to explore LVC opportunities through JVs in recent years. The MRT-7, a new rapid transit line in Manila currently under construction, will see the erection of a mixed-use development project around its terminal station in San Jose del Monte, Bulacan. Tax revenues from the project will cross-subsidize railway operations, while land development proceeds will be split by the government and its private proponent.³⁵ Another proposed project called the Laguna Lakeshore Expressway Dike involves the reclamation of 700 hectares of land, which will be the site of a new business and residential district. A share of the revenues from this district will help pay for the project and cross-subsidize toll fees.³⁶

As the PPP Center continues to explore ways to work with the private sector, it could consider playing a more active role in identifying and facilitating mutually beneficial value capture opportunities through JVs. The MRT-7 was a result of an unsolicited proposal, its LVC component an unintentional byproduct of the fact that the project's private proponent happened to have a stake in real estate. While the project initially garnered much interest from the private sector, the Laguna Dike Expressway failed to secure a bidder on its first try, due to what was perceived as unfavorable terms for the private proponent.³⁷

This last example of the Laguna Dike Expressway underscores the importance of designing PPPs around the incentives of both public and private stakeholders, as opposed to just one or the other. Difficult as it may seem, achieving a positive sum outcome is certainly possible, as evidenced by success stories all over the world. Hong Kong, whose experience is detailed in Figure 3, is just one example. That members of the private sector claim to place value on what is beneficial for society as for their bottom line can only

³⁵ GMA News Online. "\$1.2B MRT-7 Project Opened to Rival Bids." GMA News Online. February 25, 2007. Accessed January 15, 2018. <http://www.gmanetwork.com/news/money/companies/32023/1-2b-mrt-7-project-opened-to-rival-bids/story/>

³⁶ "NEDA board approves biggest PPP project: Laguna Lakeshore Expressway-Dike." Official Gazette of the Republic of the Philippines. June 20, 2014. Accessed January 15, 2018. <http://www.officialgazette.gov.ph/2014/06/20/neda-board-approves-biggest-ppp-project-laguna-lakeshore-expressway-dike/>

³⁷ Camus, Miguel R. "Bidding for Laguna dike project fails." Inquirer Business Bidding for Laguna dike project fails Comments. March 29, 2016. Accessed January 15, 2018. <http://business.inquirer.net/208974/bidding-for-laguna-dike-project-fail>

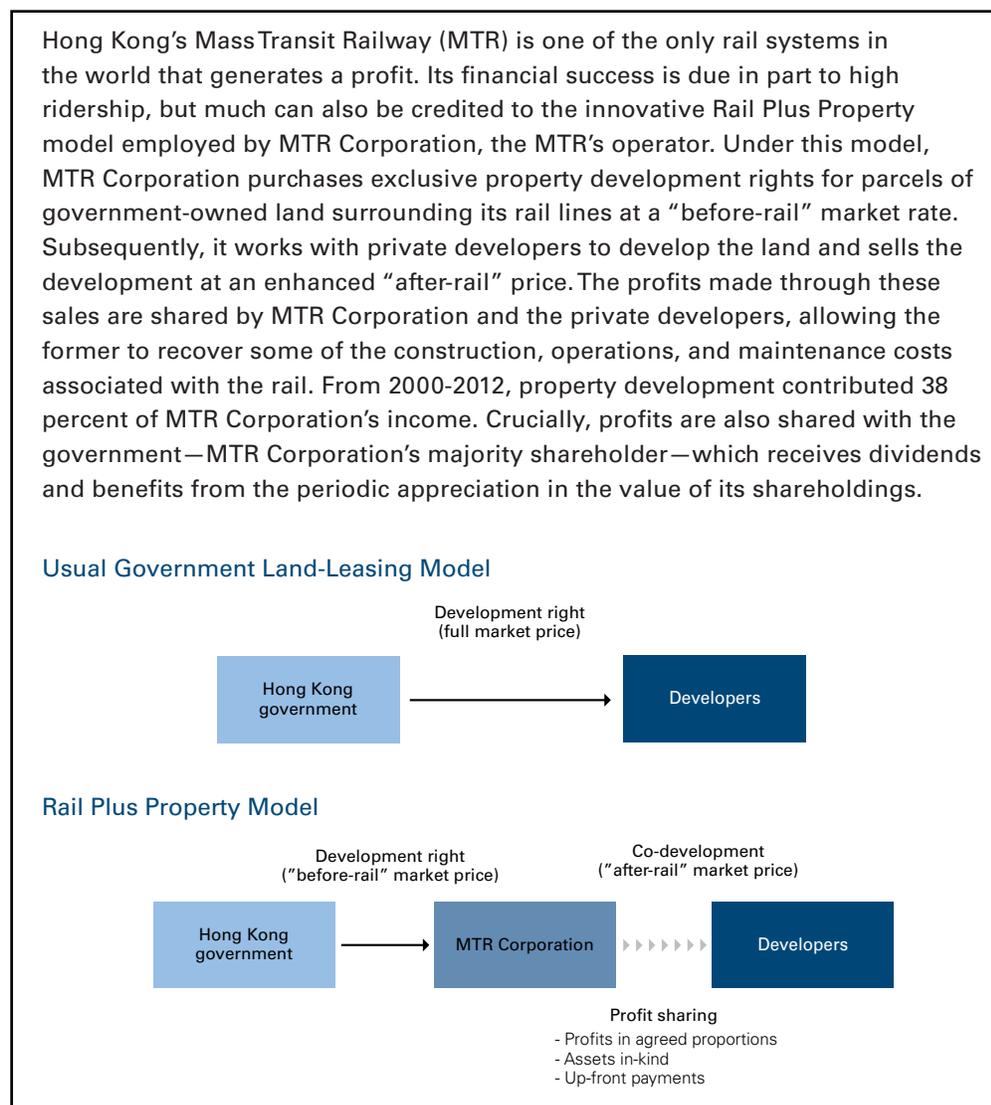
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ease the process of conducting JVs in the Philippines, if this makes them more willing to cooperate. For example, according to Rene Almendras, CEO of the infrastructure unit of Ayala Corporation,³⁸ “In considering PPP projects to be undertaken, generally, Ayala assesses the positive or value enhancing externalities that can be gained as a result of the PPP, [in addition to their stand-alone value]. [That is,] whether the project can contribute holistically to improving the quality of life of the communities around us by creating jobs and spurring economic activity.”³⁹

³⁸ Ayala Corporation is the country’s oldest and largest conglomerate. Its business interests include infrastructure, retail, education, real estate, banking, telecommunications, and healthcare (among others).

³⁹ Almendras, Rene. E-mail interview by author. February 23, 2018.

Figure 3. JV Best Practices: Hong Kong’s Rail Plus Property Model



Source: World Bank (2015)

Land Asset Management

Although the Philippines operates under a market freehold system, the government still owns a significant amount of land around the country. If opportunities to build infrastructure on these plots of land arise, it may explore the option of selling or leasing a portion of the land as a way to raise funds to pay for the infrastructure. The government need not look far for guidance on how to do this, as it already has experience with this strategy. In 1995, a newly created public entity called the Bases Conversion Development Authority (BCDA) struck a deal with a private group of companies to develop a former U.S. military compound located in between the cities of Makati and Ortigas. The BCDA sold a 55 percent stake in 150 hectares of Fort Bonifacio to a new joint venture corporation called the Fort Bonifacio Development Corporation. Of the PHP30.4 billion raised from the sale, 50 percent was channeled towards infrastructure investments in other parts of the country.⁴⁰

In fact, value capture can also be used as a policy tool to aid the poor and promote sustainable urban growth.

Fort Bonifacio was among the last remaining plots of undeveloped land in Metro Manila, but there remain significant public land holdings outside of the National Capital Region. Land may also be repurposed and leveraged in places that are already built up, through the sale of development rights above or below ground. Regardless of strategy, the nature of land as a limited resource to be strategically managed cannot be overemphasized. If land were to be sold for short-term cash flow, among the things that would be lost (aside from the asset itself) would be bargaining power that could be harnessed to meet other social or economic objectives. This paper has largely focused on the funding potential of LVC, but in fact, value capture can also be used as a policy tool to aid the poor and promote sustainable urban growth. For example, the provision of land or development rights in the form of density bonuses⁴¹ can

⁴⁰ Peterson, George E. *Unlocking Land Values to Finance Urban Infrastructure*. Report. 2008. Accessed April 11, 2018. <https://openknowledge.worldbank.org/bitstream/handle/10986/6552/461290PUB0B0x3101OFFICIAL0USE0ONLY1.pdf?sequence=1&isAllowed=y>

⁴¹ Density bonuses provide incentives for developers to build public amenities in return for a greater density level than is permitted under existing zoning.

be tied to the construction of affordable and social housing, among other amenities such as parks, bike lanes, pedestrian sidewalks, and public spaces. While not a catch-all solution, this could be one way to tackle the growth of informal communities and the increasing privatization of public space in the country. Returning to the example of Fort Bonifacio, there is a case to be made that even more value could have been extracted had the government set additional performance standards aimed at making the former military compound more socially and environmentally sustainable. These could have included requirements with respect to the percentage of open space, the number of housing units, and specific transportation goals in the area.

Third-Party Contribution

The Ninoy Aquino International Airport Expressway project received an unprecedented offer from a group of casino operators: in exchange for the addition of entry and exit ramps to this expressway that would lead to their properties, the operators would jointly offer generous staple financing—in the form of an infrastructure support fund—to all bidders of the project. Made in anticipation of the uptick in land value and business that they would enjoy with the construction of these ramps, their offer was effectively a PHP6.5 billion loan with a 20-year maturity, a 10-year grace period, and zero interest.⁴² While the winning bidder ultimately did not avail of the fund, this project shed light on a new model of project financing that directly engages developers external to, but clearly benefiting from, a given infrastructure project.

In the future, the government may consider initiating the creation of similar staple financing funds. It is worth noting, however, that these funds represent a financing solution. Depending on the scenario, other forms of third-party contributions, such as negotiated exactions⁴³ or development impact fees,⁴⁴ may be more appropriate, especially if funding is the primary issue at hand.

⁴² Baclagon, Lulu. “Creative Transactions: The Philippines NAIA Expressway Project.” Infrastructure & Public-Private Partnerships Blog, July 26, 2017. Accessed January 15, 2018. <http://blogs.worldbank.org/ppps/creative-transactions-philippines-naia-expressway-project>

⁴³ Negotiated exactions require developers to contribute part of their land or facilities in return for the benefits associated with improved transport and accessibility.

⁴⁴ Development impact fees are one-time charges, procured in connection with the approval of a development project, for the purpose of funding the cost of transport infrastructure expected to benefit the project.

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Table 5 provides a summary of the various LVC schemes discussed in this section.

Table 5. List of Potential LVC Schemes in the Philippines

Scheme	Type(s)	Level(s)	Contributor	Timing of Payment	Benefit Zone
Property tax	Tax-based	Local	Property owners	Recurring	Country
Special assessment	Tax-based	Local	Property owners, businesses	Recurring	Area of improvement
Joint venture	Development-based	National, local	Developers	Recurring	Specific land parcels at or near infrastructure
Land-asset management	Development-based	Local	Developers	One-time	Specific land parcels at or near infrastructure
Third-party contributions	Development-based, fee-based	National, local	Developers	One-time	Specific land parcels at or near infrastructure

Source: Adapted from World Bank (2015), Salon (2014) and SGS Economics & Planning (2016)

POLICY SOLUTIONS

This section presents a policy road map that the Philippines may consider, should it seek to more widely apply LVC. These steps could create a more enabling environment for existing forms of LVC and pave the way for novel applications.

Establish a Single Market-Based Schedule of Land Values

A comprehensive and up-to-date database of land values is imperative for accurately estimating any changes triggered by transport infrastructure. Encouragingly, a law that would establish such a database has already been drafted. The “Real Property Valuation and Assessment Reform Act” (Senate Bill No. 44) was introduced by Senator Panfilo Lacson in June 2016 and is currently pending approval from the appropriate congressional committees. The bill proposes the establishment of a real property valuation service under the Department of Finance (DOF)’s Bureau of Local Government, which shall lead the effort to “develop, adopt, maintain

and implement uniform valuation standards...for taxation and other purposes.”⁴⁵ The passage of this bill is poised to bring in billions of pesos in additional property tax collections for LGUs without even altering the prevailing tax rate and assessment levels. Furthermore, this bill could ease the ever-problematic land acquisition process. A market-based record of property values may help mitigate the controversy surrounding compensation amounts and facilitate the extensive negotiation process that typically ensues between government agencies and landowners.

⁴⁵ Real Property Valuation and Assessment Reform Act, S. 44, 17th Cong. (2016).

⁴⁶ Philippines. National Economic and Development Authority. Philippine Development Plan 2017-2022. July 20, 2017. Accessed January 22, 2018. <http://pdp.neda.gov.ph/wp-content/uploads/2017/01/PDP-2017-2022-07-20-2017.pdf>

Adopt a Long-Term National Transport Infrastructure Plan

Cities that have met the most success with land value capture benefit from long-term, visionary transport plans. The importance of a transport plan is something that the current government seems to recognize: developing a “Philippine Transportation System Master Plan” was flagged in the Philippine Development Plan 2017-2022 as a priority in the administration’s agenda and is already under development.⁴⁶ For this blueprint to effectively facilitate LVC, it should be consistent with other planning instruments, such as local land-use plans, and be adhered to by all concerned agencies. In addition to articulating infrastructure needs, the plan would ideally identify short-, medium-, and long-term opportunities for value capture.

Cities that have met the most success with land value capture benefit from long-term, visionary transport plans.

Regardless of how strong this blueprint may be, however, much of it will go to waste if not brought into fruition. Hence, ensuring that this plan will persist beyond the present administration is most critical. One way to achieve continuity is through legislation, but legislation can be dangerous if the plan is not sound. Therefore, if the upcoming master plan is to be institutionalized, it is crucial that it is foundationally sound and stems from a participatory planning

process. LGUs—who likely have a deeper understanding of concerns on the ground—could be consulted to minimize the likelihood of public resistance.

⁴⁷ National Land Use Act of 2017, S. 1522, 17th Cong. (2017).

Update and Enforce Land-Use Plans in Accordance with the NFPP

The “National Land Use Act of 2017” (Senate Bill No. 1522) is currently pending approval in Congress and proposes the creation of an incentive and awards system in order to reward LGUs that update their land-use plans once every nine years.⁴⁷ Specifying a time interval within which local governments should issue a zoning ordinance would provide needed clarity on the obligations of LGUs to update their plans. However, there is a case to be made in favor of imposing negative incentives, as opposed to positive ones. A penalty would likely provide stronger impetus than a reward for LGUs to revise their plans. Furthermore, a policy that rewards LGUs for doing what they are supposed to do, and using up public funds in the process, might prove difficult to justify to the public. In any case, the enforcement of land-use plans will be vital for LVC techniques such as the sale of development rights.

HLURB may also aim to be more proactive in offering its technical assistance to LGUs and in ensuring that land-use plans across the country effectively translate the strategic objectives for infrastructure development outlined in the National Framework for Physical Planning, which are shown in Figure 4.

Figure 4. NFPP's Policy Guidelines for Infrastructure Development

1. Prioritize and implement infrastructure projects that support the policy of national dispersal through regional concentration.
2. Promote inter-modal transportation systems, taking into account compatibility, economic feasibility, comparative advantage, and linkages of desired transportation modes to facilitate smooth transfer of people and goods between designated transfer points.
3. Prioritize and implement infrastructure projects that allow increased access to basic social and other development services while catering to the productive sectors and market-based industry putting the entire population into the mainstream of sustainable development.
4. Ensure compatibility of infrastructure with local land use and development plans, giving priority to projects with the most strategic impacts.
5. Protect infrastructure right-of-way.

Source: NEDA (2013)

Appoint a Permanent Body to Coordinate LVC Efforts

Widespread and effective implementation of LVC would benefit from the appointment of a single government body to monitor and coordinate all LVC-related efforts. Its responsibilities could include the following:

1. Exploring value capture opportunities
2. Identifying the optimal schemes for projects of significance, and coming up with a corresponding implementation plan (this task could be delegated to LGUs for smaller projects)
3. Providing or facilitating advisory services to LGUs on how to carry out special assessments and joint ventures specific to transport infrastructure
4. Measuring the land value uplift attributable to transit infrastructure for projects for which an LVC mechanism is deemed appropriate, per a standardized process
5. Maintaining a database for ongoing LVC projects and all LVC related transaction

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6. Setting the rules and developing the mechanisms for profit- and risk-sharing among the various government and private entities involved in a given LVC arrangement
7. Managing land-related legislative tasks across agencies
8. Resolving stakeholder conflicts
9. Advocating legal and regulatory reforms that would create a more conducive environment for LVC
10. Managing public relations surrounding LVC.

This body could also be in charge of establishing and enforcing clear process flows for all LVC schemes, in order to ease project uncertainties, assuage public opposition, and avoid intergovernmental conflict.

In light of its mandate to facilitate public and private cooperation for the delivery of public infrastructure, the PPP Center appears to be the most suitable choice for this position. Several reforms will be helpful to enable the center to perform the functions described above. One such reform is the institutionalization of the center as a permanent body. The PPP Center was only established by virtue of an executive order, which can be repealed at any time by the current president. To avoid the shifts in policy direction associated with changes in administration, the coordination of LVC efforts across the country could also be included in the PPP Center's mandate. Finally, the center would benefit from additional resources to build the capacity needed to act as the official coordinator for LVC.

Should the PPP Center assume this role, however, it will need to work closely with the DOF throughout the planning process to determine the funding mix for major projects. In the words of Cosette Canilao, former executive director of the PPP Center, "For LVC to take off, DOF needs to be one of the central players. Though they do not play a key role in the development of infrastructure

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Figure 5. Project Monitoring, Facilitation, and Innovation Task Force⁴⁸

Objective: Institute policies and processes to address issues and bottlenecks in the project cycle of the Infrastructure Flagship Projects (from project identification/preparation, appraisal, funding, and budget allocation, procurement, implementation, and post-evaluation).

Functions:

- Recommend government-wide operational measures in resolving development and implementation issues, risks, and bottlenecks on the Infrastructure Flagship Projects
- Institute coordination mechanisms between oversight and implementing agencies to facilitate the function above
- Facilitate the deployment of resources, through the national government budget, official development assistance (ODA), and other sources to [aid] implementing agencies towards fast-tracking development and implementation of the Infrastructure Flagship projects

Composition:

- Steering Committee (co-chaired by the respective secretaries of NEDA and DOF)
- Management Group
- Secretariat
- Agency PFMI Teams

Member Agencies:

- National Economic and Development Authority
- Department of Finance
- Department of Budget and Management
- Office of the Cabinet Secretary
- Department of Public Works and Highways
- Department of Transportation
- Bases Conversion and Development Authority

Source: NEDA (2017)

⁴⁸ Philippines. National Economic and Development Authority. Implementation Guidelines for the Establishment of the Project Facilitation, Monitoring, and Innovation (PFMI) Task Force. September 1, 2017. Accessed January 30, 2018. <https://ppp.gov.ph/wp-content/uploads/2017/11/NEDA-DOF-DBM-JMC-on-PMFI-Task-Force.pdf>. Joint Memorandum Circular No. 2017-01

⁴⁹ E-mail interview by author. January 30, 2018. Interview with former PPP Center Executive Director.

projects, the final nod as to how [these projects] will be funded rests heavily on [the department]."⁴⁹ The DOF is also best positioned to incentivize LVC among LGUs. For instance, the DOF may set LVC targets that LGUs must meet in order to qualify for greater internal revenue allotment from the national government.

One possible avenue for the two government agencies to coordinate with each other, as well as with other concerned agencies, is via a task force co-chaired by the executive director of the PPP Center and the undersecretary of the DOF's Privatization and Office of Special Concerns. This task force could be modeled after the Project Monitoring, Facilitation, and Innovation (PFMI) Task Force, highlighted in Figure 5, which was established in 2017 to facilitate the development of infrastructure flagship projects.

RISKS AND CHALLENGES

The policy recommendations in the previous section are associated with a host of additional risks and challenges that will need to be managed.

Estimating Land Value Uplift

Value capture is rooted in the assumption that infrastructure or related regulatory changes will drive up the price of surrounding land. While this is often the case, the positive direction of this relationship should not be taken for granted. For certain types of transport infrastructure, nuisance effects such as sound and visual pollution may offset or even outweigh their accessibility benefits. In contrast to a bus or a metro station, people may not necessarily want to live beside a highway, a bridge, or an airport. But even transit stations can have a negligible or a downward pressure on the price of land. Albeit the exception, rail stations of cities such as Tehran have been shown to have a net negative effect on adjacent land values in affluent neighborhoods.⁵⁰ No reliable study has tried to determine the nature of this relationship for existing infrastructure in the Philippines. However, there is good reason to believe that at least some of the urban transit projects in the pipeline, especially the ones located in Metro Manila, will bring about the expected positive effect on surrounding land, based on the experiences of the vast majority of cities around the world, and specifically those of comparable Southeast Asian cities such as Bangkok⁵¹ and Jakarta.⁵² Furthermore, the country's major cities meet the key macro

⁵⁰ Forouhar, Amir. Estimating the impact of metro rail stations on residential property values: evidence from Tehran. Journal article. Architecture and Urban Design School, Art University of Isfahan. Vol. 8. Public Transport. 427-51. Accessed January 11, 2018.

⁵¹ Anantsuksomsri, Sutee, and Nij Tontisirin. The Impacts of Mass Transit Improvements on Residential Land Development Values: Evidence from the Bangkok Metropolitan Region. Journal article. Vol. 33. Urban Policy and Research, 2015. 195-216. Accessed January 11, 2018.

⁵² Syabri, Ibnu. The Influence of Railway Station on Residential Property Values-Spatial Hedonic Approach The Case of Serpong's Railway Station. Journal article. Institut Teknologi Bandung. 3rd ed. Vol. 18. Jurnal Teknik Sipil, 2011. Accessed January 11, 2018. <http://journals.itb.ac.id/index.php/jts/article/view/2807/1400>

⁵³ Suzuki et al, Financing Transit-Oriented Development.

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conditions that the World Bank lays out for implementing LVC: strong economic growth, rising real incomes, and mounting motorization and congestion rates.⁵³

Whether positive or negative, measuring the magnitude of an infrastructure project's effect on land values is a challenge in itself; and the effect may not even be uniform across land uses (e.g., residential vs. commercial). A variety of methods have been employed to estimate this effect, the most common of which are hedonic regressions, spatial regressions, and longitudinal studies. The relative merits of each of these techniques notwithstanding, the issue boils down to the fact that land prices can be influenced by a wide variety of factors, some of which are impossible to predict or control. Needless to say, the estimation process is bound to stir up controversy. The easiest way to mitigate controversy is to ensure that the measurement process is transparent and consistent across all projects.

Political Backlash

Other processes associated with LVC are similarly expected to be subject to pushback from landowners. These include defining the catchment area for special assessments, determining the appropriate level of exactions to be solicited from private developers, and introducing new value capture schemes in the face of existing taxes—such as the real property tax—that already extract a portion of infrastructure-induced land value uplift. Again, a systematic and transparent approach would be one way to combat such pushback. The government may consider delineating where the revenue raised from each tax and fee flows and how the infrastructure that these additional charges will help pay for will benefit the affected parties.

In terms of garnering public support, buy-in from the private sector as well as the general public is more likely if a portion of the land value appreciation that occurs is left for landowners and developers to enjoy. Implementing LVC is not a one-sided

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process; developers, businesses, and residents have a role in designing LVC arrangements. At its core, LVC is a value creation and sharing exercise that should ideally offer a win-win solution for all stakeholders involved.

Excessive Reliance on LVC

Other processes associated with LVC are similarly expected to be LVC should only ever play a supplementary role in the infrastructure funding mix. Relying too heavily on LVC for funding runs the risk of overexposing projects to the real estate market, which is susceptible to volatility and speculation. To protect against this risk, the government could make cautious assumptions and take market trends into account when estimating projected LVC revenues. Furthermore, alternative sources of funding will be helpful in the event that projected revenues are not fully realized.

Rent-Seeking and Corruption

Whether or not the allegations are true, various agencies within the urban transport sector are reputed to suffer from a history of corruption. The large sums of money involved in value capture schemes are likely to create incentives for rent-seeking, which would be damaging for private investment if actualized. It is also for this reason that transparency in all LVC transactions is paramount.

Corruption may similarly take place in the private sector. For instance, private-sector partners primarily interested in real estate may engage in the delivery of transport infrastructure with little care for quality execution and service. This is a real risk in the Philippines, where, as has repeatedly been mentioned, many of the companies that invest in transport infrastructure also have significant holdings in real estate. Schemes such as private-sector-initiated joint ventures and infrastructure support funds are especially vulnerable to corruption, to the extent that they might provide an avenue for developers to adversely influence the shape of projects. It is

therefore critical to ensure that all projects are built according to sound planning principles.

Gentrification and the Consolidation of Land

One clear downside of more expensive land is the potential displacement of low-income households and residential communities at large. Monumento station along the LRT-1, one of Metro Manila's rail lines, notoriously led to the bidding out of residents in the station area as adjacent land was converted into shopping malls and other commercial uses following its opening in 1985.⁵⁴ But LVC need not come at this tradeoff. As discussed earlier, the construction of affordable housing and public facilities around metro stations can be built into contractual agreements between the government and developers. The enforcement of land-use plans can also protect against excessive commercialization around station areas. Perhaps a bigger threat in the Philippine context is the further consolidation of private land ownership. The concentration of private land and the failure of meaningful land reform is widely recognized as a key reason why economic inequality has persisted in the country.⁵⁵

⁵⁴ Pacheco-Raguz, Javier F. Assessing the impacts of Light Rail Transit on urban land in Manila. Journal article. 1st ed. Vol. 3. Journal of Transport and Land Use, 2010. 113-38. Accessed January 11, 2018. <https://www.jtlu.org/index.php/jtlu/article/view/13/101>

⁵⁵ You, Jong-sung. Land Reform, Inequality, and Corruption: A Comparative Historical Study of Korea, Taiwan, and the Philippines. Publication. The Australian National University. 1st ed. Vol. 12. The Korean Journal of International Studies, 2014. 191-224. Accessed January 11, 2018. <http://www.piketty.pse.ens.fr/files/You2014.pdf>

CONCLUSION

As this paper has sought to demonstrate, there are funding sources beyond fare revenues and public subsidies that the current administration can tap as it ramps up the infrastructure pipeline. From special assessments, to joint ventures—land value capture in particular offers a wide array of funding possibilities for the transportation sector, and with it, the potential to make the current funding mix more equitable, efficient, and sustainable.

The importance of transparency and accountability in every step of the implementation process cannot be overstated. Transparency is critical for gaining public support, which, in turn, will determine the success of any LVC initiative. Indeed, the realization of the policy solutions proposed above rests almost entirely on public acceptance and strong political will. Institutionalizing LVC will surely be challenging, but the unprecedented levels of funding demanded by Duterte’s ambitious “Build, Build, Build” campaign call for policymakers to think outside the farebox.

ABOUT US

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DISCLAIMER

The sole purpose of this report is to explore new ways that the Philippine government may further support its ambitious infrastructure agenda, based on local case studies and best practices from abroad. It does not seek to be critical of any single institution or administration.

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