

Land Value Capture: Taxation and Value for Money Perspectives

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Abstract:

Providing basic services in urban areas effectively is one of the most significant challenges facing city governments, as the ability to provide urban services largely determines the competitiveness, poverty level and quality of life of urban residents. Metropolitan cities and big cities in Indonesia face various needs for urban infrastructure services, including a mass rapid transportation system to serve public transportation in the downtown area and hinterland areas. Urban local governments face the dilemma of limited funding in servicing the increasing demand for urban services, mainly due to the flow of urbanization and increasing urban services, including as a center for financial and digital transactions. Land Value Capture (LVC) is an alternative solution that must be developed by city governments in Indonesia, especially in the perspective of taxation and other forms of return on investment costs. Institutional strengthening, collaboration between agencies, legal certainty and robust regulations are the main prerequisites for implementing LVC in Indonesia.

Keywords: Land Value Capture, urban growth, urban services, transportation investment, taxation, better regulations.

1. Challenges of Metropolitan and City Regions

The world has been experiencing significant urban growth for many decades. According to United Nations estimates, more than half of the global population currently lives in cities (4.0 billion). Over a thousand urban settlements have 10 million or more inhabitants. If this trend continues, the urban population is expected to reach 60% of the world's total population by 2030.² Effectively providing public goods and services effectively is one of the most significant challenges facing cities, as their provision determines to a great extent their competitiveness, poverty levels and quality of life. While it is the responsibility of local governments to provide basic services in most countries of the region, their adequate provision requires that local

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² United Nations, 2016. The World Cities in 2016, p 2.

institutions have the necessary technical and financial capacities to satisfactorily meet the demands of their inhabitants.

As urbanization increases, so do demands for urban services and infrastructure, which in turn generate pressure on the investment budgets of subnational governments. The rate of urban growth has surpassed the capacity of local authorities to respond to these demands, resulting in wide and growing gaps in service provision, consequently reducing competitiveness, sustainability and the quality of urban life. It is, therefore, extremely important to have the adequate tools to help close these gaps for financing the required investments.

Cities around the world, including Indonesia are looking for more and more innovative ways in which they can increase their competitiveness, and improve their liveability. Cities in developing countries are experiencing unprecedented growth, but this is often accompanied by the negative impacts of car-dependent urbanization such as congestion, air pollution, greenhouse gas emissions, inefficient use of energy and time, and social inequality of accessibility, especially urban transport system.

Developing, implementing and maintaining an urban transport benchmarking initiative for the benefit of cities in transition and developing countries has the following benefits: (i) providing consistent and comparable performance data; (ii) fast-tracking the performance improvement process by learning from others with superior performance; (iii) identifying good practices and implementing changes; (iv) providing cities and organizations with continuous performance improvement; (v) establishing a forum for cities and organizations to share their experiences and exchange information; it allows for an incremental development process that may start simple but can develop more as more and better data becomes available; and (vii) building a knowledge network mechanism to encourage development in the urban transport sector for development countries. Cities in transition and developing countries are experiencing simultaneous growth of urban population, income, and private vehicle ownership, which, combined with resource constraints, creates a challenging environment for their urban transport systems. Policymakers in these cities must be able to quickly design and implement performance enhancing measures for their urban transport systems that are commensurate with the challenges they face. This entails the ability to conduct self assessments, learn from good practice elsewhere, and identify the areas and scale of potential improvement. The institutionalization of this benchmarking provides policymakers with tools to continuously seek enhanced performance for their urban transport.

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, Tokyo, Beijing, Jakarta, and Sydney.

Globally, though many recent Value Capture (VC) based financing experiences but are limited from the stakeholder engagement perspective → Further, there is a limited research with regards to the community engagement aspects of the VC process, especially in a rail transit financing context → There emerges a need for a solution approach for stakeholder engagement

in a VC process in a transportation mod such as rail transit financing context, especially to address the following? → Who shall be engaged? → What are the engagement interests? → Where and how to engage? → Is there any defined engagement approach? → What are the appropriate engagement techniques? → How to evaluate engagement success?

2. Land Value Capture Promotion of Sustainable Metropolitan and City Regions in Indonesia

Accessibility describes the ease of getting to and from an area and moving about within it. Transport infrastructure is a key to accessibility. Local citizens and visitors can travel quickly and reliably to and from jobs, shops, schools and parks. Government decisions to invest in new transport infrastructure can improve accessibility and therefore value. For instance, if a government extends a railway line or freeway to a new residential area, it may become viable for people who work further away to live there. Better connected land is more valuable to businesses that need to attract workers and customers. It is available to government at any time to rezone, relax restrictions and otherwise set terms that can be a complement to building. Often known as —joint development||, these actions include auctioning air rights, auctioning any government land that is no longer needed after construction, and commercialization of property and space within government-owned buildings. A good public transport system provides a high level of access to work and other activities for households and to customers and employees for businesses. The monetary value of this access will be reflected in the value of a home or a business, in addition to the value of other features such as the specific physical attributes of the building and neighborhood characteristics. The impact of public transport on property values has been studied from many perspectives, combining analyses of different types of systems (i.e., rapid, commuter, light rail), of residential versus commercial impacts, with studies that have attempted to isolate both positive and negative effects. The varied approaches make it difficult to compare the results of one study to another. Further, some of the contradictory results observed over the years probably are the result of differing methods of analysis, data quality, and regional differences.

Among the main reasons causing the under-utilization of the value capture instruments are: technical difficulties in measuring the increment in value generated by public interventions and its interpersonal distribution, the risks of high initial costs and implementation problems, and in some cases, general public resistance. Four types of value capture instruments are commonly used to finance urban projects: Betterment levies, selling of development rights and exactions, Tax Increment Financing (TIF), and land readjustment. Each one of them has advantages and disadvantages, and their efficiency and feasibility depend on multiple variables internal and external to the project.

A master plan needs to provide a long-term vision of development shared among all members of a city. Policymakers must emphasize transit infrastructure as the spine of spatial development strategies in their visionary plans, helping guide planning, funding, construction, and operations in a way that supports transit. This long-term development vision should be consistently reflected in other planning instruments such as diverse sector plans and local master plans. Master plans from the past decades of global good practice cities clearly identified

rail transit systems as the backbone of urban development. Even after user charges and taxes on nearby landowners, new infrastructure may still bring benefits and value. These could be large or small, depending on the infrastructure. Typically the largest of these benefits is the reduction to congestion through the road system or the transport system as a whole. Any reduction in pollution and greenhouse gas emissions is also a benefit to the community as a whole. These benefits to the community as a whole cannot be attributed either to users or nearby landowners, and so it is unfair for user charges and taxes on nearby landowners to fund that proportion of the infrastructure's benefits.

LVC is a way to capture the increase in the value of land and development generated by the improved accessibility of transportation. Improved access has value which is reflected in land and property values just like property which has waterfront views. The focus of this discussion paper is the added value generated around transit stations. There are many more examples around the world showing that transit increases the value of land and property around stations and how a well- designed and executed LVC strategy can ensure a significant portion of that value uplift is made available for the transit investment. When people perceive value, they are willing to pay for it. For example, people will often pay a premium to buy a house in a good local school catchment area or for an apartment with a lake view. In the same way, if a house has good access to where the residents want to go then that will attract a premium. This is known and accepted by the property market and development industry and there is a lot of data to back it up as evidenced by the examples above. It happens, it's additional and its real money. In other words, the money reflects the value created by the improved accessibility and the accessibility makes the land more productive; i.e. more valuable. This uplift in value due to improved accessibility will vary depending on the local circumstances.

Economic theory suggests that transit infrastructure can have positive impacts on property values by improving accessibility. The —bid-rent theory|| for properties posits that households and firms are prepared to pay a certain amount of money for the location of the land, based on the value they place on that location's accessibility to markets, jobs, and other activities.³ Because transit infrastructure improves accessibility of a location to the central business district and other areas, proximity to transit stations is of value, although rents are expected to decline as distance from a transit station increases. However, mass rapid transit may also have negative effects on rents and land values if it generates negative externalities, such as noise.⁴

Development-based LVC is a powerful financing and planning apparatus, unlocking unexplored land value to finance transit and promote transit- oriented development, but the risks of overreliance, corruption, and gentrification should be carefully addressed. Case studies of cities that have creatively pursued development-based LVC to finance transit and transit-oriented development in both developed and developing countries highlight the unique contexts and challenges of creating and sharing land values for transit financing and transit-oriented development. The insights from these experiences point to policy recommendations and implementation measures that deserve careful consideration at different levels of strategic

³ Alonso, William. 1964. Location and land use.

⁴ Abdul Abiad, Kathleen Farrin, and Chris Hale, 2019. Sustaining Transit Investment in Asia's Cities A Beneficiary-Funding and Land Value Capture Perspective. p 32.

decisions. They also highlight policy decisions, planning exercises, and project development in applying development based LVC in developing countries. The rapid population increase and robust economic growth in rapidly growing cities in developing countries, particularly in middle-income countries, are certainly favourable for development based LVC. Regardless of diverse political, institutional, and regulatory frameworks, regardless of different economic development stages and financial positions, and regardless of state leasehold or market freehold systems, all cities are endowed with invaluable land resources that have made them what they are. Policy makers, government officials, transit practitioners, developers, landowners, and citizens can together decide their cities' future—whether they continue to let cars dominate their places or whether they reclaim those places for the benefit of society. To reverse unsustainable development trajectories caused by rapid motorization, cities can unlock unexplored land values to finance transit investments and promote transit-oriented development for the wellbeing of people today and for their sustainable future.

3. Value Creation and Financing Land Value Capture

Development-based land value capture (DBLVC) financing schemes being practiced in Asian megacities like Hong Kong SAR, China, and Tokyo have helped them not only to generate funds for transit investment and operational and maintenance costs but also to promote sustainable urban development through transit-oriented development (TOD). Many world cities have managed to build on their well performing urban transport to increase competitiveness and attractiveness. Their urban transport systems provide citizens with good access to economic and social opportunities and enhanced quality of life and enable businesses to efficiently access labor and markets. These cities offer valuable lessons for transition and developing countries.

Increasingly cities around the world are seeking innovative financial mechanisms to build urban transportation projects. Land value capture (VC) is a financing mechanism to fund urban transportation. → Often VC mechanisms are viewed only as a financing tool applied in relation to increased land values from the administration and legislation perspectives, without actively involving the community in the process. → The transportation beneficiary community and city tax payers are especially important stakeholders in this process as their willingness to participate is critical to the overall VC success and transport outcome.

One way that cities can achieve these goals is by creating and capturing the benefits of higher land values around urban transit stations and corridors. Needless to say, land has its own intrinsic value. Private investors pay to obtain property rights and develop the land, further pushing up its value. These developers rightly deserve to profit from their investments, but shouldn't your city, too? Taxes and fees certainly have a role, other approaches are explored which will enable cities to reap the benefits of increases in land value attributable to public policies and actions—such as changes in land use regulations and investments in infrastructure, specifically transit-oriented development.

Besides its positive effect from the viewpoint of public finance, land value capture can also help to increase the economic efficiency of municipal investments. Peterson (2009) argues that the underlying principle behind the concept is that the urban land market capitalizes the benefits of

infrastructure projects in land value. Therefore, —as long as the spatial distribution of project benefits can be internalized within a well-defined ‘benefit zone’, it is economically efficient to finance infrastructure projects by tapping the increments in land values resulting from them.]]

Indonesia is no stranger to LVC. Although not explicitly labeled as such, some forms of LVC are currently in place and several 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. The merits of value capture, its suitable role in the infrastructure funding mix, and its impact on the broader economy are the subject of ongoing policy debate. A fulsome consideration of these topics is useful for decision makers in coming to a position on the appropriate role of value capture in the project funding and policy mix. Value capture provokes a diversity of opinions within governments, the infrastructure and property sectors, and the community more broadly. Debate on value capture is often a contested space, with different stakeholders motivated to variously exaggerate or underestimate the benefits and risks of value capture, and the role it can play. Some argue that value capture can deter and distort local investment, while others claim that value capture can provide the sole source of funding for large-scale projects. The truth lies somewhere in between. Value capture is a worthwhile source of the infrastructure funding and should be routinely considered by governments in all project development processes. But putting the concept of value capture into practice requires governments to first overcome several hurdles, risks and sensitivities. The clearest evidence of the challenge these issues present is that although value capture has been understood in Australia for almost a century, it has only rarely been used to fund infrastructure. While some of these risks and sensitivities present a challenge for governments, it is important that they are acknowledged and addressed. The key to winning and maintaining support for value capture is for governments to engage at an early stage of each process, and to keep industry and the community informed throughout project delivery

4. Realizing Land Value Capture in Indonesia

Jakarta, the capital of Indonesia, expanded from 180 km² in 1960 to a fully urbanized metropolis in the 1970s. Today, as a mega-city, Jakarta’s nucleus area has spatially and economically expanded beyond its original fringes. Jakarta has increasingly been integrated with eight other proximate cities and called as Jabodetabek Metropolitan area. Now, Jabodetabek encompasses a total land of 6,580 km², with Jakarta area is 656 km² and 9.6 million inhabitants. Most of the economic activity in the Jakarta capital region is concentrated in DKI Jakarta, and the increase in the volume of commuters traveling from surrounding cities to DKI Jakarta and the traffic congestion at peak times due to commuter traffic are now serious problems.

Traffic congestion in Jakarta is among the worst in the world, leading to unhealthy air quality caused mainly by vehicle emissions. TransJakarta is the world's largest bus rapid transit (BRT) system, serving almost one million passengers per day over a network of 13 corridors. First introduced in 2004, its popularity transformed commuting and has fostered rapid growth since then. The popular preference for private car use has resulted in annual growth in vehicle numbers of around 9.5 per cent yet the road network has expanded by less than one per cent. Greater Jakarta is ranked the seventh worst in the world for traffic congestion and is estimated to lose \$4 billion annually from this. A range of private sector services have filled the shortfall in public transport provision. Go-jek, which started as ride-hailing for motorcycle taxis, is now Forbes-ranked and Southeast Asia's largest transportation network company (TNC). The level of satisfaction with public transit on the part of commuters in Jakarta is the lowest of any major city in Asia, and the need for construction of a large-scale public transport system is extremely high. This project is in alignment with the priority areas for Japanese aid, as it will build transportation hub space for subway station and railway station use in the central part of the Jakarta capital region, build infrastructure that will provide a basis for attraction for the revitalization of districts linked with the neighborhood around the station, improve services for railway users, and promote a modal shift to public transportation. It is highly appropriate and necessary to support the project, considering also that Dukuh Atas Station and the Sudirman railway station are in this area and could potentially be moved underground in the future.

As the country's center of governance and commerce, Jakarta is a magnet for millions of people who reside or run businesses in the capital city. Every day, no fewer than four million commuters from areas around the Special Region of Jakarta (Greater Jakarta/Jabodetabek) flood into the capital, adding to the city's population who are bustling with activity outside their homes. With the geographic expansion of Jakarta and Jabodetabek, transportation costs increase significantly, while the rate of mobility lessens, and living quality declines. It is time for Jakarta to build a better, faster, safer, more comfortable and accessible transportation system to answer its citizens' mobility problems. One solution is a public transportation system that is integrated, connecting Jakarta with its surrounding regions. Alongside an effective and efficient railway system, Mass Rapid Transit (MRT) is believed to be the fitting answer. MRT Jakarta is a sustainable, visionary system that aims to improve the living quality of the city's people. MRT Jakarta must be able to bring Jakarta to a par with, or even exceed, the world's other great modern urban centers, as a city that provides a fast, safe and comfortable transportation system for its citizens – as resonates in the tagline of MRT Jakarta, *Increasing Mobility, Improving Life Quality*. MRT Jakarta supports economic growth and infrastructure development acceleration in Indonesia. It provides a fast, comfortable, safe and reliable means of transportation for Jakarta's citizens. It also opens growth and revitalization opportunities for areas around transit stations and along MRT corridors, as well as reducing traffic congestion and pollution. Transportation sector contributed of 70% air pollution in Jakarta. Energy consumption of transportation in Jabodetabek is more than 700 million kilo liter per year. And the estimation of economic cost from traffic congestion in Jakarta reached US \$68 million a year, not including the cost of health impact to human from transport pollution. The challenges of Jabodetabek are how to manage the high traffic growth and to reduce traffic congestion, and the increasing demand of travel from suburbs. In term of carbon emission, Indonesian

government has committed to reduce 26% greenhouse gas in 2020. Part of that emission reduction policy is from transportation sector.

Jakarta Mass Rapid Transit (MRT) is Indonesia's first underground train system in the city to provide affordable and efficient public transport for its citizens. The construction of the Jakarta Mass Rapid Transit began in 2013 with the help of international and local partners, such as the Japanese International Cooperation Agency, in a bid to tackle Jakarta's severe traffic congestion. The first concept of an MRT in Jakarta was born during the 1980s, but huge political and financial challenges delayed the start of project for nearly three decades. The first phase of the project finished in 2019 and has already exceeded one of its targets of serving 65,000 passengers per day.

Benefits Job creation MRT Jakarta creates thousands of jobs during construction and after commencing operations Travel time decreases while mobility increases the mobility of Jakarta's population will increase, which in turn will support the city's economic growth at the same time as improving citizens' quality of life Environmental Impact MRT Jakarta reduces consumption of fuel that damages the environment. It contributes to reducing pollution and preserving the environment Restoring City Planning & Economic Growth With its Transit-Urban Integration concept, the MRT system is an incentive for spatial planning restoration that will drive economic growth in areas around MRT stations

The Jakarta Mass Rapid Transit is the first underground railway system in Indonesia and the first phase of the project connects 13 stations over 16 km from the south of the city to the business district. The first stage of the project was built by two consortia of local and Japanese companies and was officially opened on the 24th of March 2019. The line includes seven elevated and six underground stations and is expected to take less than 30 minutes. The transport system aims to carry 170,000 passengers per day for 0.96USD or less a trip. The second phase of the project is an 8km northward line which is aimed to finish by 2024.

Governments can always set terms that complement new infrastructure and maximize its value, whether they also seek to capture some of that value through user charges and taxes. Such —joint development practices include selling any government land that is no longer needed after construction, altering zoning rules on land about new infrastructure, and leasing space within government-owned buildings to commercial clients. While not themselves defined as value capture policies, these practices can increase the capturable value of a piece of infrastructure. Some examples of these joint development schemes, and shows that combining them with value capture taxes can yield up to the full cost of the project. The impact on land value differs from project to project: when it goes up, by how much, the difference that the transport mode makes, and the size of the land value increase relative to the construction costs. This section explains these four dimensions in more detail. Land value often increases as soon as a project is announced. But not always. Sometimes the increase happens during construction, and in some cases not until after the infrastructure is open.

A significant benefit of value capture generally is that, by reducing windfall gains to private individuals, it reduces incentives for individuals to seek political favors or engage in corrupt activities relating to specific projects. Adopting a bespoke approach would negate this benefit, by encouraging individuals to lobby for a scheme designed to favor them. Avoiding customized

approaches is the foundation to mitigating these risks. Whenever there is wide discretion, there are risks that it will be used to favor those who offer benefits – from donations to re-election campaigns, to a lucrative job after politics, to straight-out bribes. Governments should establish a standardized framework for value capture schemes, without scope for tailoring and customization, and then operate them at arm's length.

The implementation of Value Capture mechanisms in Indonesia potentially requires the involvement and support of multiple government organisations, institutional development and better collaboration among respective institutions. Whilst decentralisation provides local governments with some degree of freedom, the fact that the relevant sectors are governed by several agencies and institutions poses a challenge in terms of aligning the direction for a collaborative approach. Planning control over land use and densities produces a second kind of land value uplift, known as 'planning gain'. This can sometimes be confused with the first kind produced by transport projects. Planning gain arises because a new planning consent to change use or increase the density of development on a piece of land immediately raises its value to the landowner. This happens first, because controls on use mean that the value of land in residential use is an order of magnitude higher than its value in industrial or agricultural uses. So, when permission to change land use (say from industrial to residential) is given, the land immediately becomes significantly more valuable. And second, planning controls on density (particularly of housing) mean that the market values of new properties in London are usually significantly higher than their development costs, even after allowing for a reasonable profit margin for development. This 'residual' profit is capitalized into higher land values. The connection between transport projects and planning gain arises because improvement in transport accessibility or capacity is often a necessary condition for planners to give permission to change land use or increase densities, or for development to take place at all (particularly in poorly connected areas). At the same time, the increase in land values induced by transport creates incentives for landowners to develop land more intensively. Planning gain arising from new development catalyzed or induced by transport projects is therefore an indirect benefit to the landowner. In such cases, it becomes possible to capture both kinds of uplift (user benefits as well as planning gain) for the purposes of (at least partially) funding transport projects (and related placemaking interventions). Further, although there is considerable evidence that transport projects create land value uplifts, they are sometimes necessary but not enough conditions. They may need to be accompanied by the planning for and investments in 'place quality improvements' as part of wider regeneration programmes. In this study, we define 'transport projects' broadly to include any associated investments in placemaking that is necessary to ensure that transport user benefits are actually realized in practice. Finally, land value capture is different from 'tax increment financing' (TIF). TIF is a way of hypothecating the incremental taxes that arise from economic growth in an area for the purposes of funding a project that is a necessary condition for such growth. These may or may not be taxes on land and property, and may or may not involve uplifts in land values. Following our definition, land value capture refers to specific situations where a transport project is a necessary condition for an uplift in land values. This may or may not involve an increase in tax receipts.

The use of public transport generates large positive externalities (such as reduced air pollution, fewer accidents and lower carbon emissions). This makes it economically inefficient to set fares

for full cost recovery, since the social cost of passenger journeys tends to be lower than their financial cost. And a desire to ensure that public transport is accessible to all income groups makes it politically impossible. For this reason, in the absence of any other ways of monetizing their benefits, public transport projects around the world depend upon grants from their host governments to cover the difference between fares and costs.

Property prices rise and fall for a large variety of reasons. How can one isolate the effect of accessibility to transport? Two common techniques are hedonic pricing, and the 'difference in difference' method. Hedonic price methods consider the variation in property prices over time or space, and they use regressions to test how much of this is explained by variations in transport factors (such as accessibility and connectivity) and place factors (such as the quality of local schools or high street). 'Difference in difference' methods examine variations in property prices (usually over time) between 'treatment groups' and 'control groups'. Treatment groups are properties that are in proximity to a transport project, and so lie within its zone of influence. Many studies use a 1-1.5km radius around the transport access point (such as a Tube station) as a measure of reasonable proximity (based on a reasonable walking distance). Control groups are sets of properties that are not in reasonable proximity to the transport link, but otherwise are of similar locational attractiveness to the treatment group. Well-designed controls should control for both background house price inflation as well as the effect of local place factors, leaving a residual which is likely to reflect a pure transport effect. For instance, good controls could be local sets of properties in a ring that lies just outside the zone of influence, or sets of properties in places of very similar locational attractiveness elsewhere in the city that don't have access to the transport scheme. Simpler controls can include a citywide house price index, which controls for background price inflation (but not for the effect of local place factors). How do we know that a particular transport project causes a particular planning gain? In some cases, it may be obvious. Some areas may be so inaccessible that no development could occur without transport connectivity. In the jargon, these would be called 'dependent developments'. All the development that takes place could therefore be reasonably attributed to the transport scheme. In more common urban situations, a transport scheme (for example, by creating additional transport capacity) enables higher densities of development on adjoining land, rather than being a necessary condition to development occurring at all. The challenge in such cases is isolating the effects of the transport scheme from what would have happened in its absence.

5. Land Value Capture Through a Series of Instruments may be Implemented

How well does the public sector currently capture land value uplift? How value capture is applied makes all the difference. Implementing value capture effectively can be far from straightforward. Predicting the value created by infrastructure is inherently challenging. Designing and timing the method of capture is complex. Engaging the community on the costs and benefits of this approach can be difficult. While there is clearly a role for value capture in many countries's future infrastructure funding mix, governments must carefully consider how each approach can be used to address specific funding challenges, and be realistic about the expected outcomes. While specific mechanisms can provide part of the solution, no single

project specific approach can provide the full solution. Similarly, value capture cannot change the economic viability of any project, and so should not influence which projects are prioritized or selected. That is why infrastructure priorities should continue to be selected and developed based on the benefits they can deliver to communities, irrespective of value capture opportunities. Governments should work with businesses and the community to identify and implement mechanisms that benefit all parties. Establishing a transparent and robust governance structure is integral to effective communication on the process and receiving meaningful feedback throughout the process helps to identify and address issues as they emerge. Where beneficiaries are required to contribute to a project, the government should ensure these stakeholders are still better off than if no project had been built and are aware of the clear benefits of engaging in the process. Value capture has been used in Australia for major infrastructure on a handful of occasions.

In general, although transport investment can have a mixed or negative impact on land value, land owners and developers usually benefit from transport infrastructure because of the increased accessibility. This results in increased land value. Importantly, landowners and developers may not directly use the transport infrastructure – the beneficiaries of transport infrastructure are often not one and the same as the users. Value capture mechanisms aim to 'capture' part of the incremental increase in land value that results from transport investment. It aligns the recovery of costs associated with providing infrastructure with the beneficiaries of those costs. Five proven LVC mechanisms that can be used in combination to provide a practical pathway to successful funding of major transit initiatives:

- a) Value capture through the mainstream taxation system;
- b) Special fees and levies;
- c) Auction of development rights;
- d) A comprehensive Transit-oriented Development (TOD) and urban renewal agency with value capture capabilities;
- e) Direct property-rail agency as developer in the 'East Asian' style.⁵

Value capture can take various forms, each suited to different contexts. There are a range of value capture mechanisms, each with their own benefits, risks and implications for project funding and the economy more broadly. Understanding how these mechanisms work, and where each works best is critical to governments implementing value capture effectively. This report considers eight main types of value capture: a) Property related taxes (PBB and BPHTB); b) Betterment levies; c) User Charges and Developer charges; d) Impact Areas and leveraging government land; e) Development impact fees; f) Developer contribution; g) Concession; h) Other potential revenues such as Income Tax, Value Added Tax, Excise, Hotel and Restaurant Taxes, Advertisement Tax, and Entertainment Tax.

By exploring their distinct characteristics, it becomes clear that there are no absolute rules for how and when to use value capture. In different circumstances, each mechanism will provide different outcomes. Governments should make decisions on a case-by-case basis, and apply

⁵ Abdul Abiad, Kathleen Farrin, and Chris Hale, 2019. Sustaining Transit Investment in Asia's Cities A Beneficiary-Funding and Land Value Capture Perspective. p 11.

mechanisms according to their effectiveness, efficiency and delivery risk in each circumstance. This list does not preclude the development of 'new' forms of value capture in future. However, the mechanisms listed cover the range of stakeholders from which funding can be raised (that is, developers, businesses and the community). Any other form of value capture would still need to draw funding from one of these groups, so the capacity for another approach to unlock a major new source of revenue is limited.

Local taxes. This revenue source is of strategic importance, as its control usually pertains to subnational governments that can employ it as they see fit. Therefore, the more effectively and reliably these taxes are collected, the greater will be local fiscal autonomy. For this very reason, it is extremely important for subnational entities to have the necessary technical and administrative capacities to manage these resources effectively.⁶ The theoretical literature also suggests that land value capture can control land prices. This is clearer in inelastic real estate markets since under these conditions, developers will have greater difficulty transferring the additional cost from land value capture to the final demand, and, therefore, will have to compensate by insisting on lower land prices. There are few conclusive empirical studies on this subject due to the methodological difficulties involved. Nonetheless, the high price of the land relative to the average incomes in Latin America Countries makes this a possible way of controlling speculation. Finally, some authors consider that another benefit of land value capture is that it can reduce private developers' uncertainty concerning project approval and timely infrastructure provision, since the value capture payments are, in fact, going to make the project viable. Thus, land value capture could reduce transaction costs and the risks associated with real estate development. There are several instruments for capturing the value generated by investments and other public sector interventions that affect the land price. According to their characteristics, these instruments can be classified as: (i) taxes, such as differential property tax rates or Tax Increment Financing (TIF); (ii) fees, such as betterment levies; and (iii) regulations, such as exactions, sale of building rights or land readjustment charges. At present, many countries local governments are using these instruments to capture value, and in some countries, their application is even regulated by national laws. Nevertheless, the current level of use does not reflect value capture's full potential, either because the legal frameworks do not exist, or if they do, they are not regulated or consistently applied. The reasons for this lack of implementation include inadequate transfer systems that discourage local fiscal effort. For example, automatic transfers from higher government levels can be so high that they significantly reduce the need to recover local public investment costs. If transfers include discretionary subsidies, many mayors prefer to pressure the national government for such transfers instead of facing the political cost of charging their constituents. Fortunately, several governments in the region are moving towards stable revenue transfer systems, based on pre-established formulas and limiting discretionary grants. As a result, land value capture is becoming a more attractive option for those municipalities interested in improving their infrastructure. Moreover, misconceptions about fiscal risk at the municipal level impede efforts to strengthen the legal framework for local public finances.

⁶ Sidik, Machfud, A New Perspective of Intergovernmental Fiscal Relations: Lessons from Indonesia's Experience

User charges, should encourage levels of usage that make sense for the community as a whole. For example, public transport fares and road tolls should neither be so high that they discourage people from using infrastructure to its capacity, nor be so low that roads and rail lines become overcrowded and unworkable for those who most need or want to use them. There is a case for almost all infrastructure being paid for by users, at least in part, rather than through general tax revenue. User charges have two particularly attractive characteristics: people can choose whether they value the service enough to pay for it, and people receive a specific service in return for paying a public transport fare or a road toll. User charges are only workable if people can be prevented at reasonable cost from using the new infrastructure if they don't pay. In practice, it is much more viable to apply a user charge on a new railway line than a new road. Of course, it is certainly possible to apply a toll to a new road, but with only 16 roads in Australia tolled, the overwhelming majority are accessible without a user charge, and where tolls are charged, they are set to recoup costs and generate a profit for the operator, rather than to encourage efficient use of the road. User charges should vary according to the time of day, because an extra user in peak hour has much more impact on other users than an extra user at a quiet time of day. They should also vary according to location, since an extra person on a crowded train or road has more impact on other users than an extra person on an empty train or road. And those who take up more space (a truck on a congested road; a passenger with a large suitcase on a crowded train) should also pay more. It is important to note that the discussion above has no regard to the cost of building the road. For the purpose of setting user charges that induce optimal usage of a road, capital cost is irrelevant. User charges may not therefore be sufficient to pay for the road. User charges can capture some of the value created by a new piece of infrastructure. But much infrastructure either has no user charge, or its user charge raises less revenue than the cost of the infrastructure. Beneficiary taxes, betterment levies and other taxes on landowners can capture some of the extra value that is created by a new piece of infrastructure above and beyond what is captured by a user charge. They tax that part of the increase in the value of land near the new infrastructure which exceeds the increase in value of similar land that is further away.

There are several factors limiting the potential for the use of own-source revenues at the local level. One is the level of fiscal decentralization in Indonesia. Poor quality and inefficient infrastructure investments as a major obstacle for the Indonesia's economic growth. Given the infrastructure financing deficits, the Government of Indonesia (GOI) is encouraging local governments to explore leveraging sources of private sector finance through instruments such as land value capture. Overview of key enabling conditions and implementation factors for various LVC tools: land and property markets, access to capital markets, macroeconomic conditions, fiscal decentralization, legislative and regulatory provisions (land use controls, property records and cadaster, and property appraisal systems), public consent etc.; review those for each LVC tool analyzed. In the future, the development of infrastructure will be faced by the limited capability of the government to deliver. For some of the infrastructure, the government is still responsible for their construction and maintenance, such as the construction of roads and rail tracks, irrigation networks, clean water and sanitation facilities in rural areas, sea-ports and air-ports in underdeveloped regions, and rural electricity. For other parts, the supply and construction of various types of infrastructure can actually be fully carried out by the

private sector, such as toll roads, Mass Rapid Transportation, commercial air-ports, oceanic ports, electricity generating stations, and telecommunications.

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 four different national government agencies, 34 provincial governments and 514 districts and cities governments conduct valuations for their own purposes. A unique record of land values is used for national taxation (DG of Taxes), land conversion (National Land Agency), private property expropriation (Ministry of Public Work and Human Settlement, among other uses, with disparities across these various records. Moreover, individual records are not always complete and well-organized. For example, while the DG of Taxes maintains a seemingly comprehensive database of zonal values for the country's revenue regions, these zonal values are not collected consistently. Value or 'betterment' capture refers to a taxation, regulatory, partnership agreement or other public policy initiative designed to reserve, for community use, part of the uplift in land value which is created when the scope or intensity of development permissible or achievable on a site is increased by a development approval and/or infrastructure authority. Unlike other forms of —development contribution||, the rationale for value capture payments has nothing to do with charges for beneficial infrastructure, or with compensating for the unanticipated adverse effects of development. It relates to the fact that the uplift in value is conferred by the wider community as opposed to being generated by the efforts of the development proponent or land holder per se. In this sense, the uplift in value is —unearned||.

A broad-based land tax is highly efficient, because land is an immobile tax base. And while it would not zero in on the beneficiaries of a new piece of infrastructure, it would capture the effects of all infrastructure, old and new, as they translated into land values. This means it would satisfy a requirement of horizontal equity to a greater extent than a value capture tax, because it would treat people in similar circumstances in a similar way, even if the new infrastructure close to one person's home was a good candidate for value capture while that close to someone else's was not. Like a value capture tax, it would not address vertical equity concerns, and it is likely that a mechanism such as deferred liability would be needed for those who were asset-rich but income poor. A broad-based land tax would be simpler to administer than a value capture tax, because there would be no requirement to police the geographic boundary of the catchment area. Regional governments should therefore consider implementing a land tax with a significantly broader base than those currently in place. Most importantly, there should be no exemptions.

Few taxes on existing stock are sensitive to increases in land or property values. The principal mechanism available to capture value uplift on existing stock is land and property taxation. Our review suggests that current taxes on land and property are relatively poor value capture instruments because they are not very responsive to increases in values: Stamp Duty Land Tax is directly linked to actual market values of land and property (at the time of disposal or sale). It covers both freehold and leasehold transfers. The highest rate at which Stamp Duty taxes any residential property transaction, but the average rate (based on the average 2019 house price in Jakarta of IDR 1,5 billion. Income Tax is applied at 5% of the Sales Value of property and

Duty on Land and Building Acquisition is applied 5% of the sales value. However, this value growth is 'neutralized' at the national level by reducing the tax rates so that the overall national yield from rates is unaffected (in real terms).

Land and Building Tax (PBB). In the case of the development of the transportation system in the central business district and hinterland areas, the property value as a tax base on Land and Building Tax will increase significantly. In this case, the city government must re-assess the object of Land and Building Tax according to the prevailing Market Value. Hence, the LVC can be recovered through an increase in the Market Value of PBB Tax Object as the basis for imposition of PBB. The Municipal Government will enjoy adjusting the Selling Value of PBB Object within the project's live time period. The proceeds of PBB revenues will give benefit not only for City government, but also the owner of respective properties. Property taxes could potentially be channeled towards Tax Increment Financing by updating the statutory base value (—NJOP||) affected by improvements and using the proceeds to fund upfront investment.⁷ An upfront tax increment is not possible, as the NJOP should be based on the current value. Hence, a robust NJOP value projection should be estimated when the government plans for the project to be refinanced through this (Value Capture Channel)⁸

Acquisition Duty of Right on Land and Building (BPHTB). Based on Law No 28 Year 2009 on Local Taxes and Levies, the local government has the right to impose BPHTB (Bea Perolehan Hak Atas Tanah dan Bangunan, Acquisition Duty of Right on Land and Building), which is imposed by Local Government on every transfer of right on land and building with the rate of 5% (expected to decrease become 2.5%) of Market Value of the taxable property. This type of local tax potentially one of major source of Owned revenues of city/district government.

Betterment levies. In general terms, betterment levies are charges on real estate property owners who benefit from infrastructure improvements. This instrument is classified as a fee because the beneficiaries of the infrastructure project are responsible for its payment. There are different ways to structure this instrument. For example, its collection can be ex-ante (i.e., before the work's construction) or ex-post. Moreover, the amount charged can be defined based on the cost of the project being financed or on the full valorization that the project will produce. Finally, the impact can be defined as general (when the project benefits the whole the city) or local (when it impacts only a specific area), the most common case. The effectiveness of this instrument depends on its structure. Structuring involves the definition of (i) the impact area of the public investment, (ii) the amount to be collected, and (iii) the criteria used to determine the distribution of these payments. In theory, the impact area should correspond to the spatial scope of the project's benefits. For this, there are some different methodologies that can be used that we will discuss in greater detail in the next chapter. The amount to be collected can be defined as the project's cost or as a percentage of the expected benefits regarding valorization, or a combination of these two. The distribution criteria can include

⁷ Sidik, Machfud, A New Perspective of Intergovernmental Fiscal Relations: Lessons from Indonesia's Experience

⁸ PT PricewaterhouseCoopers Indonesia Advisory ("PwC") Jakarta, Indonesia. Regional: Asia Infrastructure Insights

(Financed by the ADB's Technical Assistance Special Fund 6), p185.

several aspects, such as the relative level of benefits received for specific areas, the area or cadastral value of the property, or the payment capacity of the families. One of the cities with a long tradition of using this instrument is Bogota, Colombia, where it is called *contribución por valorización*. In the 60's, collections for this levy amounted to 16% of the city's total revenue. By the mid 90's, they had reached 24%. In the last 20 years, Bogota has collected about a billion dollars from these levies, and it plans to collect a similar amount in the coming years. Colombia has had specific legislation for this instrument since 1921, which allows various structures for collecting them. In the case of Bogota, although there have been general levies based on the valorization for the entire city, most have been for local areas. For local levies, impact areas (also called 'zones of influence'), are defined based on proximity and accessibility criteria, as well as other factors, including the type and location of the civil works, the kinds of benefits generated, and land uses. Betterment levies for specific subject areas (and not beyond) levied on beneficiaries of a major transit upgrade (particularly based on increases in property value due to enhanced connectivity).⁹

The methods used in calculation and definition of the amounts charged vary according to the specifics of the instrument, but they generally involve appraisals by third parties or calculation of the value of the approved increase in the area at market prices. A simple illustration of this method for an approval of permitting 1,000 square meters of additional space would be that the value of the approval would be more or less equivalent to buying 1,000 square meters of additional land in a similar location. Although this method is inexact, given that it is difficult to estimate the impact on valorization, it is a way of assuring consistency in the definition of the charges for building rights.

Impact area. A project's impact area is usually defined as the area of influence in which citizens (users or not) will be benefitted. In our case, this area corresponds to the geographic space in which the project will influence land prices. As discussed in the previous chapter, this is important, as it is precisely the existence of valorization generated by a public intervention that justifies the use of value capture. It is important to maintain the principle that the one who benefits is the one who pays. In this way, if the benefits of the project encompass the whole city, land value capture should be general and cover all land in the urban area. Estimating the benefits of a project in terms of its impact on land price is not easy, as will be discussed later. Defining the geographic limits of this impact is also complex, especially in the case ex-ante value capture, where the project has not yet been fully defined. In cases in which the benefits are contained to the area occupied by the project itself, defining the impact area can be more straightforward, as could be the case of real estate projects in peripheral areas financed by exactions and building rights charges or in land readjustment. In cases in which the intervention involves infrastructure or public facilities in relatively populated areas, the challenge is greater. In this case, the definition of the impact area will depend not only on the type of project but also on multiple factors, such as the quality of existing alternatives in the city, real estate market conditions, transport connections, and citizens' preferences, etc.

⁹ Ibid, p. 50.

Development Impact Fees. Development impact fees (DIFs) are one-time charges levied on new development in order to provide new or expanded infrastructure needed to serve the development. The fees are typically paid prior to the completion of construction, with the amount based on the cost of the facility and the nature and size of the development. Impact Fees differ from other forms of value capture in that they can be used to fund off-site improvements such as local roads, schools, or parks. Development impact fees are typically determined through a formulaic process, rather than through negotiations as done for developer contributions. Local governments throughout the country are increasingly using impact fees to shift more of the costs of financing public facilities from the general taxpayer to the beneficiaries of those new facilities. Impact fees can be an effective tool in ensuring that infrastructure systems are able to accommodate growth where and when it is anticipated. Many States require that municipalities demonstrate a —rational nexus|| between the fee and the needs created by the expanded development, as well as the benefit the infrastructure improvements provide to the new development. Transport-related DIFs are used by numerous public entities throughout the United States. Roughly half of all U.S. States have enacted enabling legislation for impact fees. Some also have additional language governing how development impact fee programs are implemented.

Developer Contributions. Developer contributions are voluntary payments made by to local governments by private businesses and developers to support the cost of implementing transportation improvements. Under the right conditions, the benefits of public improvements can be used to attract private contributions to transportation improvement projects. Also known as proffers, developer contributions involve a private firm or individual benefiting from the project, giving money, land, or other services to the project sponsor to help expedite project implementation. Developer contributions often involve improvements to highway entrance and exit ramps that provide improved access to facilities or land owned by the donors, or possibly the extension or expansion of an existing road. Developer contributions may change the anticipated schedule for advancing transportation improvements into construction. If an agency receives an offer of money or other contribution in-kind for a project, it must weigh the benefits of receiving the private contribution and accelerating the implementation of the project in question against the possible delays in implementing other improvements it had intended to advance instead. This is an issue of project programming and prioritization, and it is up to the project sponsor and regional planning officials to weigh the pros and cons introduced by the proffer and decide whether or not it is in the region's best interest to accept the offer.

Rezoning fees in return for the value increase achieved where allowable floorspace is increased substantially (and/or transitioned to higher and better uses)¹⁰.The redevelopment of Hudson Yards is one of New York's most important responses to the demand for new office space to keep New York competitive with other global markets and to maintain agglomeration economies within the highly concentrated jobs areas in Manhattan.¹¹

¹⁰ Ibid, p.50.

¹¹ PT PricewaterhouseCoopers Indonesia Advisory ("PwC") Jakarta, Indonesia. Regional: Asia Infrastructure Insights

Concession. Concessioning (or franchising) is a common method of facilitating competition for the market. The concession holder is granted an exclusive right to operate a service for an agreed period of time. There is a range of possible models, with the variations related to the responsibilities of, and degree of risk passed to, the concession holder. Release of the concession to the market at regular intervals allows ongoing contestability of the service, with the benefits of improved efficiency and innovation. The contract duration is a key consideration for concessioning. If too short a period is chosen, then the significant costs of bidding for a potential concession and the relatively short period of time in which benefits from operation of the service can accrue means that less competition for the franchise is likely. If too long a period is chosen, then there is less ongoing competitive tension and the risk that the government and community may have to put up with a poor operator for an extended period. A balance must be struck between two positions, namely: The contracting process must attract sufficient interest from bidders to ensure non-collusive competition, and should occur regularly enough to represent a realistic level of competition for the market. Concession bidders will seek a contract length that is sufficient to allow them to extract value from the bid submitted, to recoup capital invested, and to ensure that there is sufficient time for benefits from the award of the contract to outweigh the costs of bidding (which are likely to be significant).

In case of Indonesia, concession applied in the form of a grant of economic rights to a public asset in an administrative law jurisdiction to a private party by the government, including the legal title to possess the site of the land. It may also refer to a PPP contract, that is generally reserved for contract where the majority of revenue comes from users. The conventional focus is on granting concessions for land plots to certain companies, which intrinsically limits integration and thus limits the scope for value realization. There is a significant reliance on attracting anchor investors to create a core for an industrial hub.

Other potential revenues. Other potential revenues can be collected from the implementation of mass rapid transportation system such as Income Tax, Value Added Tax, Excise, Hotel and Restaurant Tax, Entertainment Tax and Advertisement Tax especially in hub station which supported by office, shopping mall, hotel, restaurant and other modern buildings as well as value for money.

6. Concluding Remarks

- 1) Metropolitan cities and large cities in Indonesia face various needs for urban infrastructure services including mass rapid transportation systems to serve public transportation in downtown areas and hinterland areas. Urban regional governments face a dilemma of limited funding in providing services for increasing urban service needs, especially due to urbanization and increasing urban services, including as centers for financial and digital transactions.

(Financed by the ADB's Technical Assistance Special Fund 6), P 210.

- 2) Land Value Capture (LVC) is an alternative solution that must be developed by city governments in Indonesia, especially from the perspective of taxation, other forms of return on investment costs and value for money.
- 3) Value capture can take various forms, each suited to different contexts. There are a range of value capture mechanisms, each with their own benefits, risks and implications for project funding and the economy more broadly. Understanding how these mechanisms work, and where each works best is critical to governments implementing value capture effectively. This report considers eight main types of value capture: a) Property related taxes; b) Betterment levies; c) User Charges and Developer charges; d) Impact Areas and leveraging government land; e) Development impact fees; f) Developer contribution; g) Concession; h) Other potential revenues such as Income Tax, Value Added Tax, Excise, Hotel and Restaurant Taxes, Advertisement Tax, and Entertainment Tax.
- 4) Institutional strengthening, collaboration between agencies, legal certainty and robust regulations are the main prerequisites for implementing LVC in Indonesia.

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