

ASG White Paper:

Land Value Capture Can Finance Ukraine's Reconstruction, Reduce Corruption, and Boost Productivity

Key takeaways

- A broad consensus of economists throughout history have supported land value capture – collecting the increase in land value that results from public spending on infrastructure and other services – as the optimal method of financing public infrastructure.
- Land value capture should both increase economic productivity and generate enough revenue to significantly contribute to Ukraine's reconstruction costs, making financing reconstruction considerably easier.
- The need for reconstruction funding, ongoing land reform efforts, and an openness to new policy solutions make Ukraine an ideal place to implement land value capture, especially in areas prioritized for major reconstruction.
- Ukraine could use the following tools for land value capture:
 - *Ground Leases*: Issuing leases for land already owned or newly acquired by the state at rates periodically adjusted to the full market rental value of the land.
 - *Covenants*: Acquiring land currently in private hands, re-developing the surrounding area, and then selling the land with a covenant attached that obligates all future owners to pay an annual land value charge.
 - *Land Value Tax*: Imposing a property tax only on the rental value of the land, not counting the value of buildings or other improvements on the land, adjusted annually.
- Without land value capture, reconstruction investment will likely yield only a temporary increase in productivity and exacerbate the concentration of power among the nation's elite.

Ukraine's present and future

There is currently no end in sight to the conflict in Ukraine, with fighting expected to ramp up in the coming months as summer arrives and both Russia and Ukraine prepare for new offensives. When and how that conflict ends is a political and military matter, between the warring parties primarily, but involving external actors such as the U.S., the EU, and China as well.

While the focus now remains on the conflict itself and continued Western support for Ukraine, it is critical to look ahead to the broad contours of Ukraine's reconstruction and lay the groundwork for promising approaches. With the heaviest fighting concentrated in the East, much of the country, including some of the most populated areas, need to begin rebuilding. Discussions around financing the reconstruction have already begun, with several donor conferences and investment meetings being held over the past year. On June 21-22, the London Recovery Conference on Ukraine will continue discussions held last year in Lugano and Berlin on international donor support for Ukraine reconstruction.

According to a World Bank estimate in March 2023, the cost of reconstruction in Ukraine is over \$400 billion but will likely be even higher as the war drags on. Funding for the reconstruction will have to come from both the public and private sectors, with a key focus on areas such as agriculture, energy, infrastructure, health, housing, and manufacturing.

Corruption is a major threat to Ukraine's long-term growth and stability. Reconstruction efforts should be designed to reduce the risk that large influxes of funding will largely enrich well-connected elites.

Land is a major factor in corruption. Following independence from the Soviet Union in 1991, land privatization resulted in a small number of oligarchs acquiring large swaths of agricultural land, which bolstered their control over the nation's political institutions. The government sought to address this problem through a 2001 law which prohibited persons from acquiring over 100 hectares of agricultural land. Despite these reforms, roughly 9 million hectares, 28% of the country's arable land, is still estimated to be controlled by oligarchs, corrupt individuals, and powerful agribusinesses.

In 2021, Ukraine enacted a new land reform law easing the two-decades-long moratorium on the purchase of agricultural land. While the re-opening of land markets should improve efficiency and has been supported by international organizations such as the IMF, it has been controversial with the Ukrainian public. The major concern is that oligarchs will continue to buy up the nation's land, further concentrating landownership into the hands of elite-run monopolies, and thereby deepening inequality and corruption.

What land value capture is

Land value capture (LVC) would generate substantial revenue, offsetting cost of reconstruction, while reducing inequality, instability, and corruption.

The Concept

LVC is a process for collecting the increased value that infrastructure and other public services give to land. This is achieved by charging private landowners an annual “ground rent” equal to the unimproved market rental value of their land.

LVC is different from a property tax, which is a tax on both the value of the land *and* improvements.

- “Improvements” mean anything a landowner changes or adds to land beyond what it had in its natural state, such as office buildings, homes, and parks. Unlike a property tax, LVC ignores the value of these improvements when calculating land value, which avoids disincentivizing landowners from improving their land.
- “Land” includes not just the surface, but all natural resources existing above and below the land in its natural state. Oil, water, and minerals are part of “land” unless and until they are developed or extracted through investment.

Without LVC, investments in public infrastructure will ultimately benefit landowners at the expense of workers and owners of (non-land) capital assets. This happens because public investments increase demand for a fixed supply of land. For instance, new and improved utilities, roads, metro stations, and schools may all attract people to a community – people who need land upon which to live and work. Because the supply of land is fixed (i.e., the market cannot respond to this increased demand by producing more land), landowners in the area respond by raising prices – either by charging tenants more in rent or by selling property at higher prices. This means that, without LVC, the value of public investments ultimately accrues to landowners, regardless of whether or how much they use their land.

Land can be taxed at up to 100% of its rental value without diminishing investment or economic growth. This means that, unlike personal income tax, corporate taxes, and value-added tax, it has *no* deadweight loss. It does not deter people from buying land to make productive use of it, it merely removes any incentive to buy land for speculative gain. With high rates of LVC, the only reason to buy land is make economic use of it; with no investment in improvements, the land value charge will erase any gains the landowner would have received from the passive increase in the value of land from new infrastructure and other investments in the area.

In fact, LVC *increases* productivity by nudging landowners to build on and maximize the economic utility of their land. This aspect of LVC - that it has *negative* deadweight loss - has earned it support from a wide and varied range of leading economists throughout history, including Adam Smith, David Ricardo, Henry George, Milton Friedman, and Joseph Stiglitz.

Implementation

LVC has been implemented in limited form in many parts of the world at different times. Hong Kong collects a significant share of its revenue from ground leases of public land; Singapore uses LVC indirectly through its vast property holdings; Denmark, Estonia, and Lithuania all impose a land value tax. Danish municipalities also impose levies based on the estimated land value appreciation resulting from new public infrastructure and facilities, such as parks and metro stations. In these examples, land value taxes have not been passed from landowner to renters, but rather fall entirely on the landowners' unearned economic rents.

Nevertheless, LVC has rarely been used to its full potential. Typically, land value charges are applied either indirectly or at very low rates – such as through a property tax (imposed on the value of buildings *and* land) or a tax on undeveloped land.

LVC has not been implemented more directly and fully because the circumstances in which it is politically feasible are rare. Those circumstances now appear to be present in Ukraine, especially for those areas anticipated for redevelopment.

Why Land Value Capture is the Right Approach for Ukraine

Immediately after the end of a conflict, a window of opportunity opens for a conflict-affected country and the international community to establish security, rebuild, and consolidate peace – or risk conflict relapse. This window also presents the opportunity to reform the distribution of rents from land and other natural resources in ways that would otherwise be politically difficult to achieve.

In Ukraine, that window of opportunity is now, despite the ongoing nature of the conflict. One way to galvanize reconstruction, while not worsening corruption, and to reduce inequality and promote long-term stability, is through LVC.

Reconstruction Finance and Economic Development

Rebuilding Ukraine will require an unprecedented surge of investment in infrastructure. LVC would make financing this effort much easier because it would provide a stream of revenue that would match or even exceed the cost of new infrastructure projects. This would enable official development institutions, such as the World Bank and EBRD, as well as commercial financiers, to mobilize considerably more capital to cover upfront costs of reconstruction.

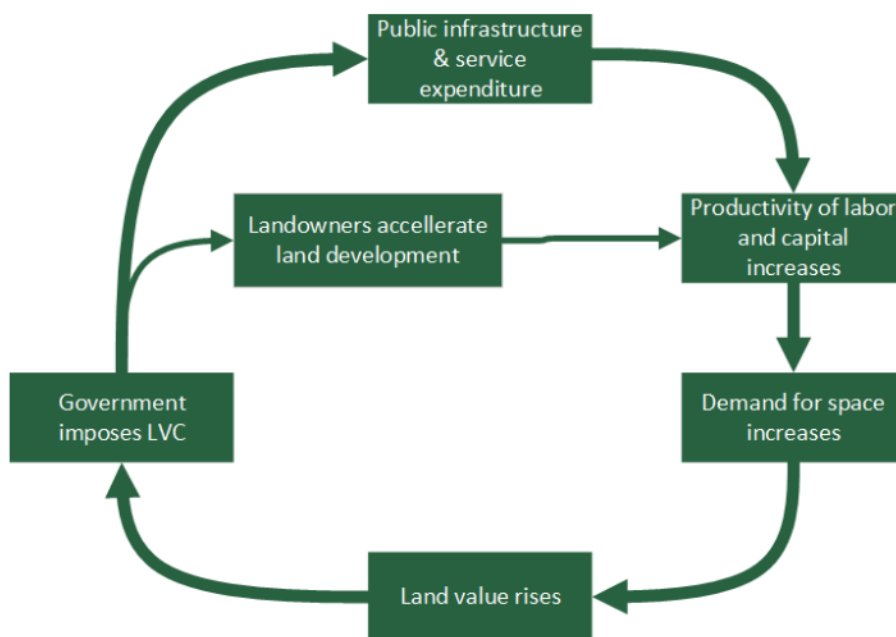


Diagram 1: LVC Produces a Virtuous Cycle of Self-Funded Public Investments and Economic Growth

LVC would set in motion a virtuous cycle of financing for infrastructure development, without taxing productive assets or labor. As shown in Diagram 1, public investment would yield increased demand for land and thus higher land values. If the government implements LVC, it will both motivate landowners to develop their land (to make their land purchase worthwhile) and provide a steady income stream

for the government to continue investing in infrastructure and services.

Research indicates that the value of public goods translates one-to-one with increases in the value of land. This suggests that, with LVC, the Ukrainian government should be able to recapture most of what it spends on reconstruction, effectively making these expenses self-funding.

Without LVC, development in Ukraine would be slower and harder to finance. As shown in Diagram 2, instead of the government capturing the rise in land value that its investments generate, landowners would capture this value as an economic rent, charging higher prices to tenants and property buyers. Higher prices would eat into the returns to labor and capital generated by the public expenses. This would then force the government to rely more on ordinary taxes or borrowing to fund further infrastructure spending.

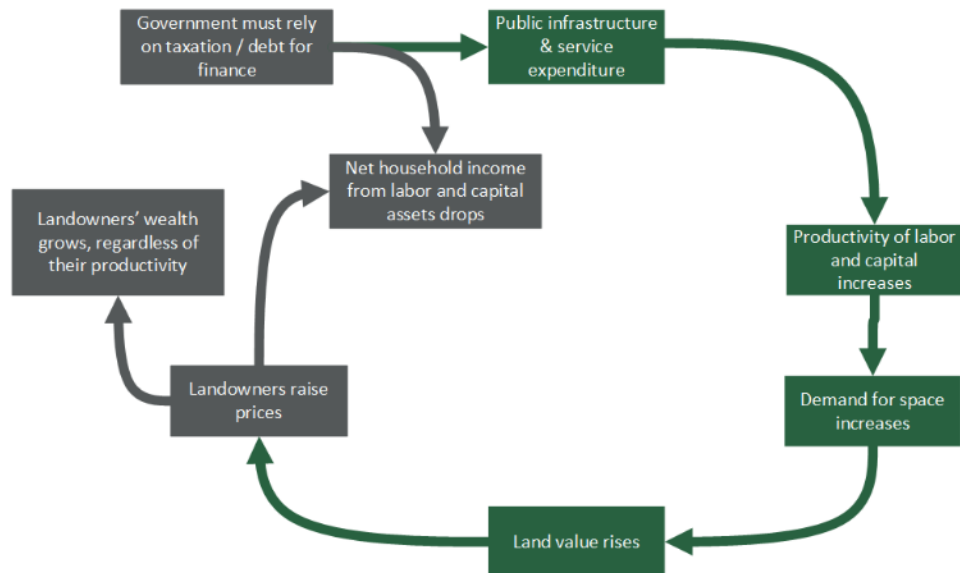


Diagram 2: Not Using LVC Undermines Economic Productivity

As a result, LVC would direct more private wealth toward productive sectors of the Ukrainian economy rather than toward landownership, resulting in faster and more inclusive economic growth.

Corruption

As illustrated in the simplified diagram here, in the absence of LVC, landowners use the economic rents derived from land to buy up more of the nation's land and major industries, further consolidating power and wealth into the hands of elites. These elites then use their influence in government to support policies that entrench their status at the expense of the broader society.

It is not hard to see why, in this situation, a land value tax becomes increasingly less and less politically feasible. Landowning elites would much prefer the tax burden to fall on

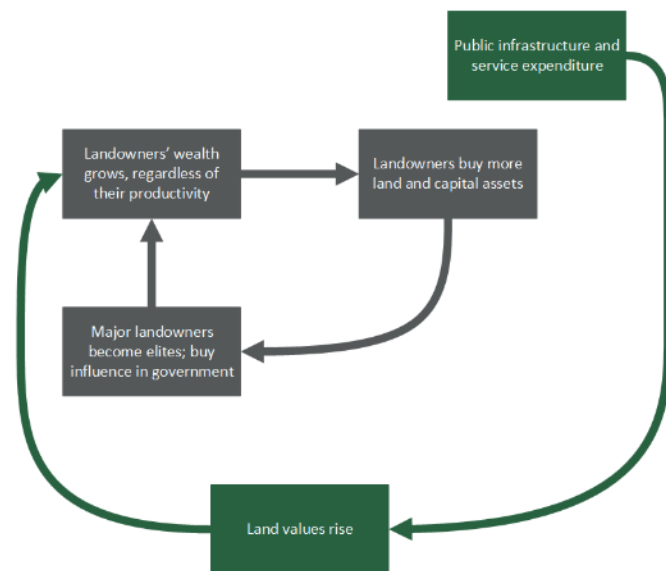


Diagram 3: Not Using LVC Will Increase Corruption

labor (e.g., through income taxes) or capital (e.g., through corporate taxes and taxes on dividends) than on the unearned economic rents they derive from land.

This is why new greenfield developments or circumstances involving a major reset to land markets are generally the ideal time to introduce LVC.

Post Conflict Stabilization and Land Reform

LVC would also play an important role in promoting political and social stability. Land reform as a post-conflict stabilization measure has a long history in at least 52 countries since the end of World War II. While in many countries post-conflict land reform involved the forcible breakup and transfer of large landholdings, several countries have used LVC as a way of ensuring a more just distribution of land rents, without resorting to expropriation.

For instance, Taiwan greatly reduced instability between 1950 and 1980 by introducing three types of LVC – a land value tax, a land value increment tax, and a house tax. These addressed problems arising from heavy land ownership concentration among a small elite class and laid the foundation for the country's impressive rates of inclusive economic growth in the 1980s and after.

While LVC is perhaps most effective as a financial tool in destroyed urban areas, it can also be introduced for agricultural land as an additional feature of Ukraine's ongoing land reform program. If LVC were made part of land reform, it would address concerns on all sides of the ongoing debate over that issue. On the one hand, LVC would not interfere with the opening of land markets or distort the ability of private individuals to transact with one another and thereby allocate land more efficiently.

At the same time, LVC would eliminate the incentive for wealthy elites to engage in rent seeking – i.e., to profit from increases in the value of land that do not result from productive activities – and thereby reduce land-price inflation. This would result in even more efficient land use and make more land available for lower and middle-income families and small and medium-sized enterprises. It would channel more of the country's economic rents into projects that support broad-based economic and social development. Therefore, LVC would encourage a more equitable and efficient distribution of wealth than would occur under the status quo.

How to Implement Land Value Capture in Ukraine

We propose adopting LVC in at least those areas of Ukraine that have faced severe destruction and are targeted for major reconstruction but where military fighting is no longer taking place. LVC should be more practically and politically feasible in these areas than in other areas of the country.

The U.S., E.U., and international financial institutions like the World Bank and EBRD, can encourage the adoption of LVC as part of their support to Ukraine. For instance, some loans used for infrastructure finance could be conditional upon one or more of the LVC options discussed below. It might also encourage LVC to be part of agricultural land reform.

Option 1: Land Value Tax

Ukraine, like many governments, imposes property taxes on the value of both land and improvements. Ukraine also has a land tax, but in many cases, it is not assessed on the full market rental value of the land, nor is the revenue used directly for infrastructure redevelopment.

To introduce LVC in areas targeted for redevelopment, the property tax could be amended so that it is imposed only on the value of the land, not on the value of the buildings or other improvements, and adjusted to the full assessed annual market rental value of the land.

Alternatively, the property tax could be entirely exempted in areas slated for re-development and the land tax could be reformed to upgrade the assessment process, improve administration, and adjust the rate to the full market rental value of the land. The annual rental value of land is equivalent to the capitalization rate for land, which is typically 8%-11% or more of the total market value of land in rapidly redeveloping areas, though the exact rate needs to be determined by the market.

Option 2: Covenant Attached to a Land Sale

Another approach for implementing LVC is to sell parcels of government-owned land in an area prioritized for re-development on the condition that owners agree to pay an annual land-value charge. The charge would be included in a title covenant running with the land, so that it is binding on all subsequent owners. The charge would be set at the increase in the appraised fair market rental value of that parcel each year. As re-development projects are completed, the revenue from this charge should grow rapidly and exceed the amount paid to develop the infrastructure. After the cost of the initial infrastructure development has been recaptured, the LVC will finance maintenance and future improvements.

To implement this approach, the Ukrainian government would purchase large parcels of land in areas just before it redevelops them. It would then rebuild infrastructure in the area and sell the parcels at their new (much increased) value. This act would achieve a one-time LVC by capturing the increase in land value caused by area redevelopment between the time of acquisition and sale. When it sells the land, it would attach a covenant obligating all future owners to pay the land value charge discussed above. This would enable the government to continue capturing increases in land value after the sale.

The government might also adopt this approach when it sells agricultural land under its land reform agenda. Privatized land would include a title covenant implementing LVC, which would eliminate land speculation and rent-seeking by the nation's elite.

Option 3: Land-Value Based Infrastructure Levies

For privately owned land around publicly funded redevelopment projects, the government can impose infrastructure levies designed to capture the increase in the value of land resulting from the project. Importantly, this levy should be equivalent to the full appreciated market rental value of the land, not counting the value of improvements on the land. Copenhagen is a useful example of this approach, as noted above.

This approach is also somewhat similar to tax-increment financing (TIF). TIF uses future property tax revenues to finance current infrastructure projects.

Option 4: Leases of Public Land

In cases where the government owns undeveloped land or destroyed real estate, one LVC approach is to lease parcels of land to private developers. Ukraine already issues leases on public land, but the rental price often does not match the full market rental value of the land.

The annual lease payments should be adjusted periodically to reflect the full market rental value of the land. The developers could be allowed to own the buildings they build on the land, but their land rental payments would go to fund infrastructure and other services paid by the government.

Assessment Techniques

Land value is relatively straightforward to assess. There is a consensus among property tax assessors around a common set of basic principles.

First, all assessors use the following formula for deriving land value:

$$\text{Land Value} = \text{Total Value} - \text{Improvements Value}$$

“Total Value” is whatever the property sells for and “Improvements Value” is the selling value of all the buildings and other permanent structures and investments that sit on top of the land. The remaining land value includes the value of all natural endowments, including its location and undeveloped natural resources.

To determine these values, three approaches can be used:

- *The market approach* – the assessor gathers data on comparable properties, including past selling prices and rents, with adjustments for differences.
- *The cost approach* – the assessor estimates the cost of the buildings minus depreciation.
- *The income approach* – the assessor looks at the net income (rent minus expenses) that a commercial or residential property generates and then divides it by the prevailing capitalization rate in the area. The assessor then uses either the market approach or the cost approach to extract land rental value from building rental value.

The assessed values are then tested for accuracy by comparing the assessed values against ongoing transaction data from the market and by tracking complaints from property owners.

Technological advancements over the past two decades have made land assessment techniques far more efficient and accurate. These include GIS mapping visualizations, multiple regression analysis, nonparametric kernel regression analysis, and a variety of other innovative land valuation models.

Importantly, accurately assessing land value for purposes of LVC is significantly less burdensome and costly than assessing and enforcing other types of taxes, such as corporate and personal income tax. Moreover, unlike capital, land cannot be hidden or moved out of the country. This all makes LVC highly efficient from a fiscal perspective.

What is the Optimal LVC Rate?

While LVC is possible at up to 100% without a loss of economic efficiency, for pragmatic reasons we recommend that Ukraine target an LVC rate of 85% to 90% of the full unimproved market rental value of land. This approach ensures that the government does not tax land at more than 100% because of assessment errors. If LVC were to accidentally exceed 100%, unowned land would become difficult to sell to persons wishing to make productive use of it, and some current productive landowners would begin to abandon their land. This result would slow reconstruction and politically jeopardize continued use of LVC.

Don't Ignore Land Use Regulation

LVC must go hand in hand with zoning reform. LVC would be much less effective if the local land use regulations do not allow for high-density uses of land. To see productivity gains from LVC, landowners must be allowed to respond to the charge by developing their land. If the zoning code or master plan for the community does not allow for taller buildings and flexible uses, landowners will not be able to generate more revenue from their land, resulting in slower growth in both land values and overall economic growth.

At the same time, zoning reform without LVC would result in further wealth transfers to elite landowners. This would happen because expanding the allowable uses of land would raise the value of land, which, as noted in Diagram 2, above, would expand the power of entrenched interests and deepen corruption.

About ASG

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ASG's Europe & Eurasia and Special Economic Zones practices have decades of experience in institutional design and helping clients navigate markets across the region. For questions or to arrange a follow-up conversation please contact Michael Castle-Miller (mcastlemiller@albrightstonebridge.com) or Phil Reeker (preeker@albrightstonebridge.com).