

Public Private Partnership in Land Readjustment Project: A Case Study of Nepal

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Abstract

Rapid urbanization demands the expansion of infrastructures. The land is a prerequisite to expand those facilities and services; however, urban lands are underutilized, fragmented into smaller pieces, and higher in price. This makes land acquisition lengthy, costly, and ignites social and political issues. Since land acquisition for infra projects demand higher upfront project cost that increases project cost, so this research examines the effectiveness of the innovative method to supply urban land for housing and other infrastructure without land acquisition. This study illustrates the concept of land readjustment with the case study from Nepal, which is implemented in partnership with a private partner (landowners). The study also examines some challenges in project implementation and provides a recommendation for speedy implementation. The result shows that major beneficiaries are both landowners and the government. The value of land increases for landowners, and the government can value capture since the public goods such as roads, drainage, water supply, parks, and other facilities are provided through landowner's contribution. The self-financing, innovation and cost-recovery characteristics of land readjustment make it an excellent example of public private partnership (PPP) at a smaller scale for sustainable urban development. The findings from this study are important for experiences sharing in the regional context, and the issues identified draws the attention of further researchers and policymakers.

Keywords: PPP; land readjustment; land acquisition; infrastructures.

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INTRODUCTION

Urban areas are the core area of economic and social growth. It is the place for agglomeration of economics, innovation, and a hub for development that make a significant contribution to national Gross Domestic Product (GDP), revenues, and taxes [1]. Today, over half of the world's population lives in urban areas, and by 2050, it is estimated that 70% of the world's population will be living in urban areas [2], which is basically triggered by a combination of births and rural to urban migration. It is expected that most of this increase will be in developing countries, whose built-up urban area could triple from 200,000 to 600,000 square kilometers (sq.km). This 400,000 sq. km. the increase would be equal to the world's total combined urban area in 2004 [3]. Despite high rates of urbanization, it has been difficult to achieve high levels of economic growth. Recently, attention has been given to the potential of urbanization in stimulating growth. The concentration of population and infrastructure offers opportunities to increase productivity through

economies of scale, creativity, and knowledge spillovers [4].

Infrastructures promote economic and social benefits in society; however, with the unplanned urbanization, many governmental bodies are struggling to provide basic and reliable facilities to the public. There is a lack of adequate access to roads, electricity, communication, water supply, and drainage facilities. The urban areas are also prone to traffic congestions, food security, environmental degradation, and disaster due to lack of infrastructure. The infrastructures in developed countries are aging and underfunding; similarly, in developing countries, there is a lack of basic infrastructure for clean water, sanitation, and energy [5, 6]. According to the Global Infrastructure Hub, the world will be facing a \$15 trillion gap between projected investment and the amount needed to provide adequate global infrastructure by 2040 [7]. Since the funding is limited, and there is a tendency of resource wastage; so, there is a need to do more with less.

One of the major hindrances in providing infrastructures in the urban area is the supply of adequate land. This can also prevent efforts to plan and deliver the infrastructure and services conducive to economic growth and poverty reduction [3]. The unregulated land price due to speculation, imperfect land market, and lack of a comprehensive land-use plan has resulted in more frequent land transactions in urban areas, and it increases pressure to subdivide land into smaller parcels to increase supply and to gain financial returns, which have also contributed to increasing the cost of land and housing [3, 8]. The construction of infrastructures requires the purchase or acquisition of land which requires high upfront cost, takes time, and creates social issues. Since the delivery of infrastructures and services provides a favorable environment to economic growth and urban poverty reduction, there is a need for a new approach that minimizes these issues. Recent methods such as land readjustment focus on overcoming the problems where all landowners in a community pool their land and redistribute so that land is acquired for infrastructure and no landowner is displaced, which has offered successes in some countries [9, 13]. The land readjustment process avoids land acquisition, addresses social, economic, and political issues. It also has the characteristics of cost recovery and provides public goods such as urban infrastructures through landowners' investment; however, there has been little discussion about it in the existing literature.

This study, therefore, analyses the characteristics of the land readjustment project and investigates whether it has the characteristics of PPP. Furthermore, it also aims at identifying the issues, interfaces, and providing a possible solution to the problem. The paper begins by introducing the concept of land readjustment and PPP. Then it examines a mechanism of supplying urban land and infrastructures through land readjustment in Nepal and scrutinizes its characteristics. The significance of this study lies in providing an excellent example of PPP in land development.

LITERATURE REVIEW

Land Readjustment

Many countries use land expropriation tool to develop old areas, but this tool causes a high financial burden on the government to buy and develop land plots [9]. In Turkey, the land expropriation cost for ring road is as high as 98.8% of construction cost [10]. Since the aim of the expropriation is only to acquire relating areas, it does not consider the geometry of the surrounding parcels; therefore, these remaining lands stay unsuitable for other purposes. The owners whose real estates have been expropriated cannot benefit from the value increase caused by road investment. Owens estimates the cost of compensating landholders for the development of satellite cities in Dar es Salaam, Tanzania could easily exceed the US \$400 million,

almost all of which would need to have to be paid upfront [11]. The land expropriation is generally lengthy because people refuse to leave their property. It also takes time to negotiate with owners, which led to difficulty in implementing the process. Besides, the infrastructural development plans are often met with strong opposition from local landowners who believed that the planning and development of projects would lead to the loss of their land without reasonable compensation.

A major blockage to implementing planning lies in the lack of resources to compensate landowners. In Tanzania, there is some hope offered by recent experiences of changing the mechanism so that land required for roads is provided by landholders through a land readjustment [3]. Land readjustment is a very useful tool in urban regeneration projects and development of new areas involving private land and fragmented land ownership, requiring state intervention, population approval, and the financial contribution of the private sector to achieve a compatible division of new land plots division with sustainable development requirements [9]. Through, land readjustment processes the government pools or consolidates the various privately owned land parcels in a given area and prepares a land-use plan, which includes spaces for developed plots, sales plots, and public infrastructures such as roads and open spaces. At the end of the process, the government returns to each landowner a land parcel proportional to their original parcel but of a smaller size with the necessary trunk infrastructure that increases private land values. The government sells reserved plots at market rates for cost recovery [12, 14]. Thus, land readjustment is an alternative tool that addresses the negatives of expropriation by involving each resident, government, and private sector in developing areas to minimize costs, retain property rights and achieve development returns without any burden on the state.

Many terms are used to describe the process of land development such as land readjustment, land pooling, and land consolidation. The first term (land readjustment) refers to an important tool in the field of urban planning which aims to re-divide the land for the development of old and new urban areas by supplying it with infrastructure and services following planning and design standards. While the other terms (land pooling and consolidation) are used to illustrate the tool in which the landowners participate in integrating their contiguous lands to serve their land plots with infrastructure, roads, and services and they share the costs and the benefits of these developments [9]. Figure-1 shows the process of land development using land pooling [13]. The substandard roads, parcels, and open spaces are consolidated as a single parcel, which is again divided into developed plots and areas for community services and infrastructures. Figure-2 illustrates the detailed process of land pooling with its

characteristics [14]. The land adjustment tool has many advantages, but some challenges impede its application

[9]. This can be illustrated in the following points:

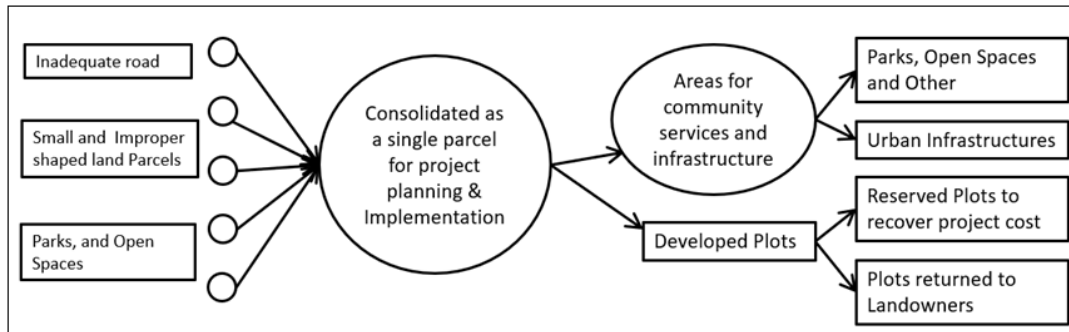


Fig-1: Land Development Process by Land Pooling

Source: Modified from Karki 2004 [13]

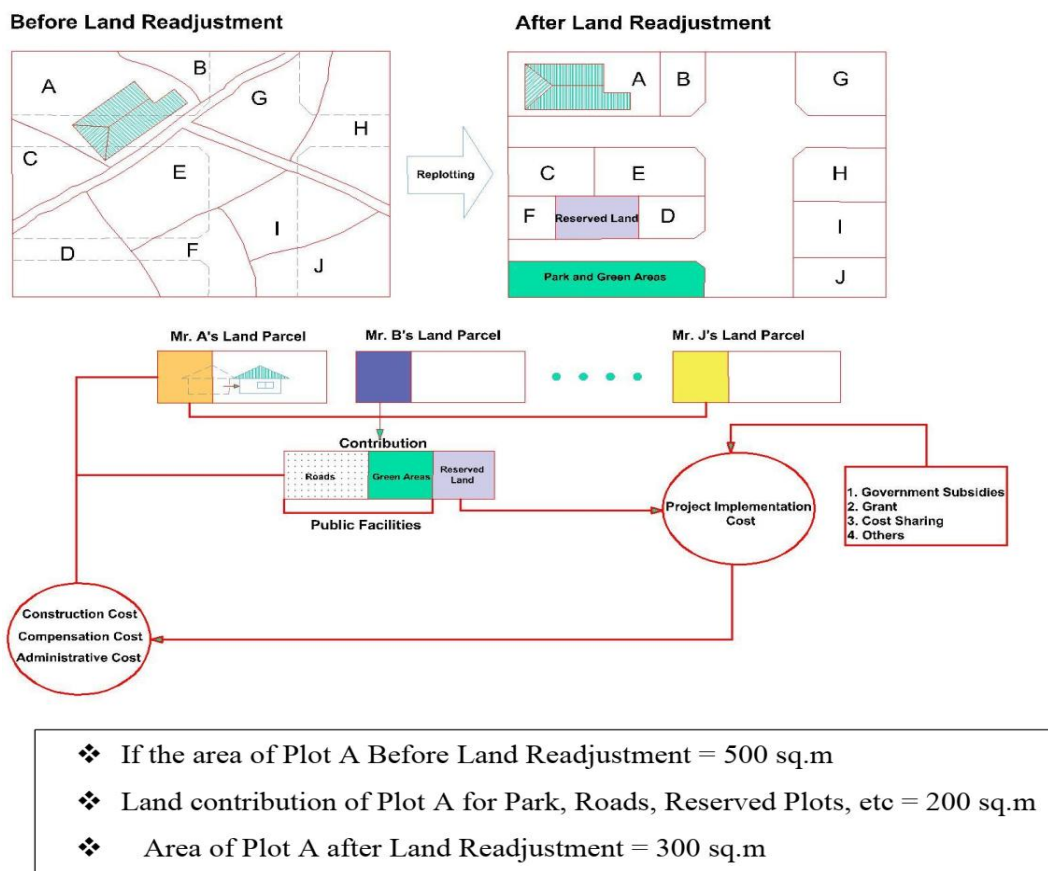


Fig-2: The Mechanism of Land Readjustment in Japan

Source: Souza et al., 2018 [14]

Advantages

- Land readjustment does not require expropriation, which reduces land development cost through limited adjustment in land properties; thus, it reduces government upfront financial liabilities.
- Land readjustment helps to achieve optimal use of land to meet the demand of urban land and offers positive benefits to owners and residents after development.
- Land readjustment increases the price of land and generates a high level of profit to landowners that

increase the economic value of the project area and promotes economic activities.

- Land readjustment forms a partnership between different stakeholders such as government, private, and other non-governmental organizations to supply urban land and infrastructures.
- It promotes a participatory approach in planning, design, implementation, operation, and maintenance that helps to achieve balanced regional growth.

- The subdivision of plots is better which addresses environmental, social, and economic requirements to meet sustainable development goals.
- It helps in the process of land registration of a modified plot and increase tax revenues through land transaction and registration.

Challenges

- Multiple landowners in the area, so it is difficult to get a consensus.
- Implementation inefficiency due to delay and insufficient investment in infrastructure.
- Displacement of the poor with small landholdings.
- The re-adjustment process takes a long time.
- The available land for development may not be connected with roads and infrastructure, which led to an increase in the cost of the land re-adjustment process.
- Sometimes, it is difficult to get equitable cost and benefit-sharing among landowners. Some owners get more benefits using this tool.
- Landowners refuse to pay for the construction cost of urban infrastructures such as roads and parks because they argue the government should provide public goods; thus, they want to lower their contribution to a reserved plot that makes delay in project execution.
- Lack of expertise in local governance, and lack of databases to implement land readjustment.
- The high initial cost of implementation if compensation is paid to landowners.

Public Private Partnership

Public Private Partnership (PPP) is a “long-term CONTRACT between a private party and a government entity, for providing a public asset or service, in which the private party bears significant risk and management responsibility, and remuneration is linked to performance” [15]. PPPs help the government to get funds, innovate management and business technologies, increase benefits from cost savings and delivers projects on time. Involving the private sector in infrastructure projects will also lead to higher quality service delivery, lower administrative costs, transfer of risks to private sectors, and can generate value-for-money [16]. Even though the private sector is involved, public-sector partners hold mandates or powers, which enable them to target special issues, such as situations of market failure. Figure 3 shows the typical structure of Public Private Partnership, which shows the consortium between public and private parties [15]. The major stakeholders involved in the PPP project are described as follows [15, 17]:

Government Contracting Authority is responsible for contracting with a private agent for the Design Build Finance Operate and Maintain (DBFOM) of a new (or upgrading) infrastructure. The government would usually award the contract to a corporation or a group of companies (consortium). Once, the contract

has been awarded, the consortium will be required to establish a new entity, the Special Purpose Vehicle (SPV), in compliance with the relevant legislation. The SPV signs the contract with the procurement authority, and the members of the consortium execute the shareholder’s agreement. The private partner carries out contract agreement and assumes the obligations set out in the contract, which is as follows:

- To finalize the infrastructure design, construction including obtaining all permits necessary if obliged to do so.
- To finance the works and other construction costs, which may be full costs or a portion of the contract has a government co-financing structure.
- To operate and maintain the asset after commissioning.

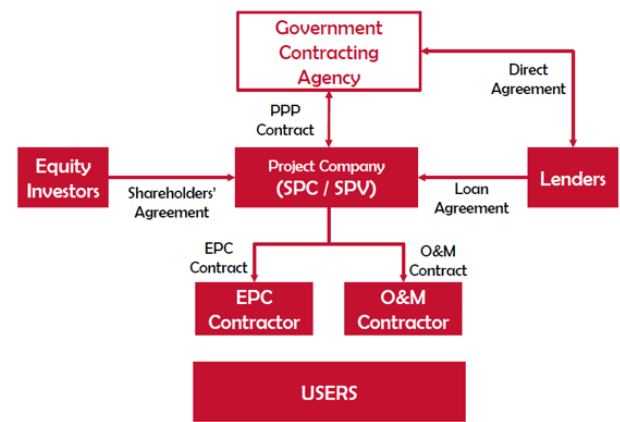


Fig-3: Typical Structure of Public Private Partnership

Source: World Bank 2017 [15]

Special Purpose Company (SPC)/ Special Purpose Vehicle (SPV)

In most PPP contracts, the private party is a specific project company formed to develop and manage the project for a specific purpose, which is called SPC/SPV. Special Purpose Vehicle is formed as a consortium of a construction company, operation company, and financial investor. This project company raises finance by a combination of equity, which is issued by the project company’s shareholders, and debt provided by banks, bonds, or other financial instruments. The SPV is responsible for shareholders agreements, financial or debt agreements, Engineering, Procurement, and Construction (EPC) contracts, operation and maintenance (O & M) contracts, Insurance contracts, and guarantees.

Equity Investors

Typically, the initial equity investors, who develop the PPP proposal, are called project shareholders. The equity investors may be project developers, engineering or construction companies, infrastructure management companies, and other private equity funds.

Lenders

In developing, countries Lenders to PPP projects may include commercial banks, multilateral and bilateral development banks, and financing institutions, such as pension funds and insurance companies.

EPC Contractor

The project company contracts with firms to manage the design and construct, which is usually referred to as an Engineering, Procurement, and Construction, or EPC contract.

Operations and maintenance (O&M) Contractor

The project company contracts with firms for operation and maintenance until the contract period.

Users: The stakeholders who use the facilities and pay tariffs for it.

The most common financing arrangements for PPP is Project Financing, which consists of about 80% of debt financing and 20% of equity financing. The sources of funding infrastructure projects are user charges, treasury bonds, foreign Aids, value capture, and special tax such as transport tax on gasoline. Figure 4 shows the extent of private sector participation in a different contract. In DBFOM, design, build, finance, operate, and maintain contract are bundled together that considers the life cycle of the project, so it is considered as PPP contract.

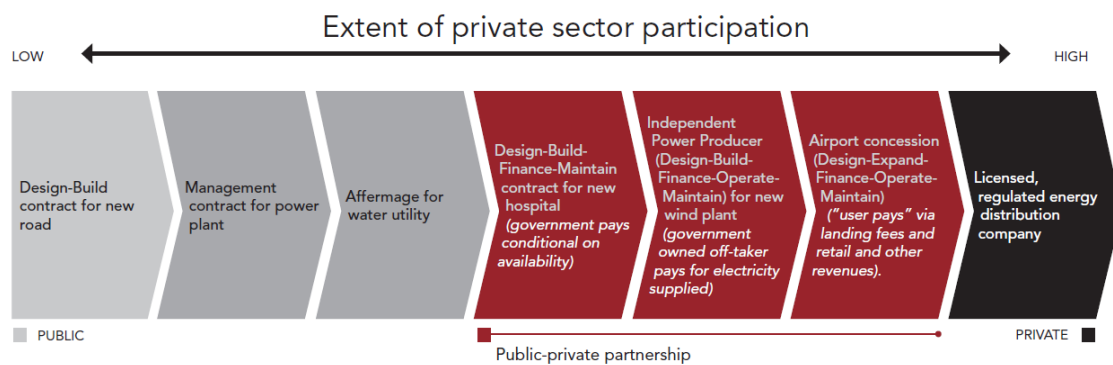


Fig-4: Example of PPP Contracts Types
 Source: World Bank 2017 [15]

Potential Benefits and limitations

There are several benefits of PPP with some limitations [15, 17]. Firstly, it increases fiscal space. The government faced with a budget constraint can take PPP as a financial option to fill the infrastructure gap. Secondly, it has potential efficiency gains. It minimizes the life cycle cost of a project by integrating DBFOM (Design-Build-Financing-Operation-Maintenance) works into a single contract. PPP has also little optimism bias since there is little possibility of time and cost overruns. It also allocates risk each party manages risks that they are better able to handle. These increase the efficiency of public investment. Moreover, private operators tend to be more responsive to the preference of consumers since a fraction of government payment is subtracted as a penalty when operators do not meet pre-specified output quality. Finally, PPP reforms the public sector. There is a competition between public and private parties. PPP Provide expertise and experience not readily available in public agencies. PPPs are an alternative method for financing the new development or upgrading of infrastructure. It may allow for the acceleration of infrastructure development; however if the PPP option does not show evidence of value for money (VfM), a PPP can significantly reduce the project cost-benefit outcome.

Case Study

The level of urbanization in Nepal remains low but the pace of urbanization has been rapid and is likely to remain so in the future [8]. In 2012, Thakur & Choi examines the characteristics of the urban land market in Kathmandu valley. Their results show that land values have significantly increased between 2002 and 2009 and confirm that urban land supply is in a shortage in Kathmandu Valley [18]; thus, this section elaborates on the government of Nepal's efforts to supply urban lands and infrastructures via land pooling. This study also examines whether the project delivery of land pooling has the characteristics of public private partnership. Finally, this study discusses the issues and interfaces on land pooling and provides policy recommendations.

Nepal's Land Pooling Characteristics

Land pooling in Nepal consists of pooling of land into a single parcel, which is also called as 'virtual acquisition' of land with a commitment of providing developed urban land as compensation. Developed land is returned in proportional to the original land after deducting its development cost, and urban infrastructures such as roads and drainages are provided in the self-financing approach by landowner's contribution. The land contribution is made in proportional to service improved, and it is made

proportional to the value of the land. Therefore, land pooling in Nepal is considered as a tool for promoting efficient, sustainable, and equitable land development in urban fringes.

Land Pooling Process in Nepal

The land pooling in Nepal is delivered by forming a collaboration among the public entity and private landowners. The following section describes the land pooling process and its project delivery method in Nepal [19, 20].

Project Appraisal

The project appraisal comprises of pre-feasibility and feasibility study of the land pooling project.

Pre-Feasibility Stage

Step 1: Selection of project area as per land use plan of the city

Step 2: Delineation of the project area in consensus with landowners

Step 3: Promote or Market Land Pooling

Feasibility Stage:

Step 4: Application from landowners with 51% consensus for land pooling, then detailed data on landowners including their name, type of land, and area of each parcel is collected.

Step 5: Formation of Project Governance Model: It comprises project support staff (Project Implementor), users committee, and project management committee as per the Town Development Act to execute Land Pooling.

Step 6: Detailed project report is prepared with a project portfolio with a standard of infrastructures and a tentative work schedule. During this stage, the block plan is prepared, which has roads, open spaces, reserved plots, and undivided land. Also, economic and financial analysis is carried out.

Step 7: Approval of the block plan, land contribution, and land return policy from the user committee and land pooling project. The contribution of a reserved plot

depends on the valuation of land. The contribution for roads and open spaces depends on the existing road and open spaces adjacent to the plot before and after land pooling.

Step 8: Issuance of Public Notice for restriction on land fragmentation and building construction

Step 9: Approval of land pooling project from the government of Nepal.

Implementation Stage

Step 10: Replotting Work: Once the government approves the block plan, the land pooling project office subdivides the blocks into a standard parcel. The landowner's contribution is usually proportional to the area of land. The landowners will get their land after deducting their area for roads, community infrastructures, and reserved plots.

Step 11: Discussion with landowners and other related stakeholders on land pooling design, and to take their suggestions, grievance hearing, and modification of a design

Step 12: Public Notice on the approval of land pooling project

Step 13: Demarcation on the ground as per new plot/parcel

Step 14: Distribution of temporary landownership

Step 15: Award of Contract for the development of infrastructures

Step 16: Sales of a reserved plot to recover the construction cost of road, water supply, drainage, and other infrastructures

Step 17: Issuance of permanent land ownership certificate from Land revenue office

Step 18: Handover of the project including infrastructures to user's committee

Land Pooling Project Delivery Method in Nepal

Figure-5 shows the financing modality of the land pooling project, which resembles with world bank's typical PPP project. The following section explains the characteristics of the land pooling financing model.

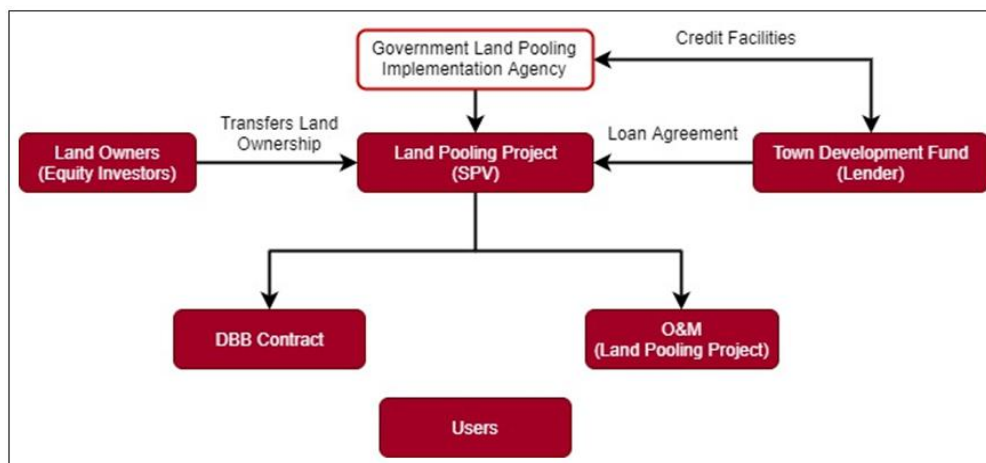


Fig-5: Project Delivery Method of Land Pooling in Nepal

Government Land Pooling Implementation Agency

On the top, there is a government entity, which can be the Project Implementation Offices under the ministry, Development Authorities, and Local Government. The government land pooling implementation agency is responsible for providing guidelines, checking compliance of land pooling projects as per the Town Development Act, and facilitating land pooling project for acquiring seed money. Also, it is responsible for providing recommendations for project approval to the government of Nepal.

Land Pooling Project (SPV)

Government land pooling implementation agency forms a land pooling project that comprises Management Sub-Committee, Project Implementor, and User's Committee as shown in figure 6, which

governs the project and acts as a Special Purpose Vehicle (SPV). The management sub-committee is the representatives from the government side which comprises government officials from land pooling implementation agency and related line agencies or ministries, and mayors from local government. The user's committee consists of elected representatives from landowners and representatives from the local government. The project implementor consists of project staffs to provide support for project execution. Usually, the Project Manager is appointed by the government, however, the land pooling project can appoint a project manager itself. The Land Pooling project is responsible for project appraisal, implementation, and operation and maintenance, and it is also involved in decision making and dealing with the issues related to the project.

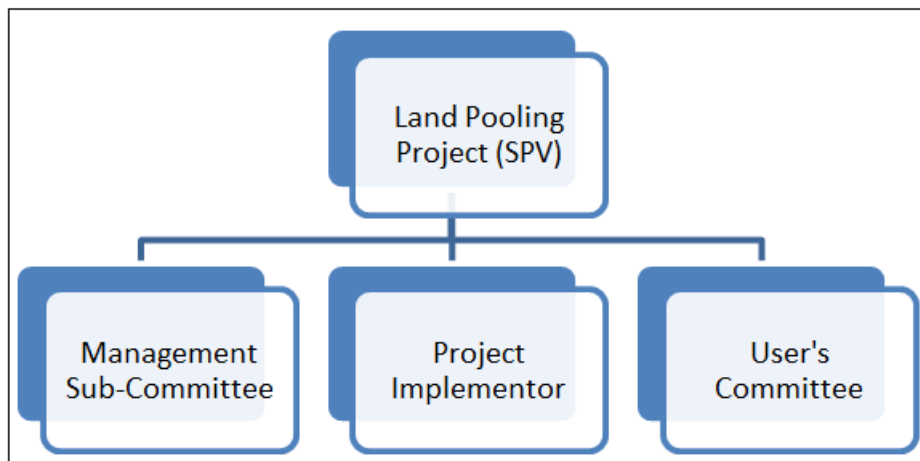


Fig-6: SPV in Land Pooling Project in Nepal

Financing

The land pooling project is appraised as a self-financing project, with a cost recovery mechanism. The project is generally financed by equity investors, loans, and subsidies.

Equity Investors

In this modality, the equity shareholders are landowners. They transfer their land ownership of undeveloped or raw land to land pooling project (SPV). The equity shares are proportional to land area, so there is equity in cost and benefit sharing.

Lenders

To initiate the land pooling project, SPV can borrow a loan from banks and funds such as the Town Development Fund (TDF). The TDF has a revolving fund for land pooling project. Generally, it is provided as seed money at the prevailing market interest rate on the recommendation of the land pooling implementation agency. Sometimes, central and local government provides subsidies to land pooling project to develop trunk infrastructures because it delivers public goods and makes a project viable.

Replotting

After raising finance, SPV pools all the fragmented parcels into a single plot. Then it carries replotting works, which subdivides, a land into Service Plots, Open Spaces, Roads, and Reserved (Sales) Plots. The landowners usually get 50% to 60% of their land, which is regular in shape, and each plot has access to road, water supply, drainage, electricity, and other facilities [13, 14, 19, 20]. The land contribution is proportional to land size, service provided, and valuation of land. The landowners must contribute at least 20 % for road, at least 5% for open spaces, and around 5%-10% is allocated as reserved plots, which are sold to recover project cost [13, 14, 19, 20]. However, landowner's land contribution depends on several factors such as standard of infrastructure, access road before and after land pooling, and topography of the land. The most critical issue is to determine the percentage of reserved plots. Landowners want to keep it low since they think infrastructures should be provided by the government. The percentage for reserved plots mostly depends on the valuation of developed land. Higher the valuation, the lower is the contribution for a reserved plot.

Engineering, Procurement, and Construction (EPC)

Engineering, Procurement, and Construction works are not bundled in a single contract. The SPV develops the infrastructure by Design Bid Build (DBB) procedure. The planning and design are usually carried out by the consultants or project staff. The construction works are carried either by a contractor or user committee that depends on the nature of works and project estimated cost. The SPV must abide Public Procurement Act & Regulation of Government of Nepal in the invitation and awarding of the bid.

Cost Recovery

Once SPV completes construction work, it invites a bid or auction to sell the reserved plot to recover the project cost. In some circumstances, SPV sells reserved plots after replotting work or before infrastructure development to raise finance for the project.

Operation and Maintenance

The money obtained as a profit from the sales of reserve plot after recovering project cost will remain in the name of the User Committee that cannot be distributed among individual landowners. It remains as property of the community, which is often used for operation & maintenance.

DISCUSSION

The land pooling project delivery mechanism in Nepal is the partnership between the public party (government land pooling implementation agency), and the private party (landowners) to supply urban land as shown in figure 5. Land pooling provides service plots with the necessary infrastructure to users on the expenses of landowners' contribution. It is often viewed as an excellent example of collaboration between public and private parties. The observation from the case study in reference to the APMG PPP Certification Guide [17] are as follows:

Land pooling as an Alternative Method for Financing Infrastructure (private financing)

Land pooling is viewed as an alternative method to supply urban lands and infrastructure either by new development or upgrading. Funds to finance land pooling projects come from landowners in the form of equity share and debt from Town Development Fund or other financial institutes. All of which are raised by the land pooling project (SPV), instead of the government budget.

Land Pooling Expands Government Fiscal Space

Land pooling project has no land acquisition cost, and it is self-funding in nature. Public goods such as parks, roads, etc are provided by private parties (landowners). So, the government can avoid the huge upfront costs in land acquisition, and development cost in providing other basic infrastructures, which allows

the government to use that fund to expand other infrastructures.

Project Delivery of Land pooling considers Life-Cycle Cost Management

Land pooling is long term in nature and covers the life cycle of the project from planning, design, construction, operation, and maintenance. It is solely responsible for the overall life cycle management of the project; thus, it can generate value for money.

Land pooling transfers project risk to landowners

Land pooling project is fully funded by landowners. Most of the projects are scheduled to finish in two years, but it is not uncommon to have a substantial time over in land pooling project in Nepal. There is also a risk of whether landowners will be able to sell their property at higher rates. Since there is a significant risk on private parties, the rate of return is as high as 600% on developed land [19]; however, the government can value capture on public goods without bearing any major risk.

Land pooling as Innovation

Land pooling is self-financing and avoids the land acquisition process, which not only saves upfront cost but also promotes the early delivery of infrastructures.

Land pooling has Reliability

Land pooling promotes economic, social, and environmental sustainability. It provides urban land and infrastructures at a lower cost than a traditional land development project. It also makes urban area denser, and minimizes urban sprawl, avoids land acquisition, prevents displacement of people from the vicinity of the project area. All these features improve sustainability and performance.

Land pooling promotes Asset Utilization

It consolidates underutilized land and increases the efficiency of land in terms of its utilization. Most of the land plots produced from land pooling are regular in shape, which increases urban density. Most road networks are in grid and iron patterns, which decreases the length of linear infrastructure so the per capita cost for providing infrastructure is minimum.

Land Pooling Promotes Transparency

Land pooling has public participation, which promotes transparency. There is the direct involvement of landowners in planning, design, construction, operation, and maintenance.

All these benefits of land pooling increase efficiency and effectiveness in project delivery which are the characteristics of public private partnership with the exception that there is no legally abiding contract between government, land pooling implementing office, and landowners. Figure 7 shows the cash flow for the

land pooling project in Nepal. The project is self-financing and covers the life cycle cost of the project. The major beneficiaries are the Landowners. The value of land increases by up to 600%. It is the long term in nature and covers the life cycle of the project from planning, design, construction, operation, and maintenance. The government shares the benefit, such as the upfront cost in land acquisition is saved. The government is also able to capture the value of the land. Since, the public goods such as road, drainage, etc are

provided through landowner's contributions. Also, this project develops social values, because it supplies urban land and prevents the negative consequences of urban sprawl, and no landowners are displaced from the project area. Some planning areas even provide plots to low-income people. There is the direct involvement of landowners in planning, design, construction, and Maintenance; so, it is called People-Public-Private Partnership (4P) modality in Nepal.

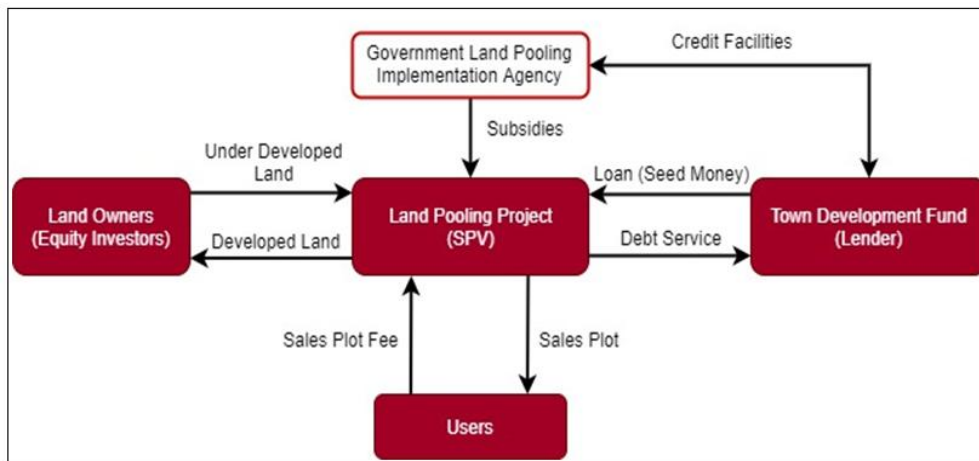


Fig-7: Cash Flow of Land Pooling Project in Nepal

CONCLUSION

In most cities, with rapid urbanization and population growth, urban areas are susceptible to traffic congestion, environmental degradation, climate change, and other natural and man-made disasters. Urban land is needed to expand existing infrastructures to solve urban issues; however, the land is sparse with a higher price. The land acquisition process is not only tedious but also increases project cost with high initial investment. Recent researchers are suggesting providing a favorable environment to promote public private partnerships to fill the investment funding gap; therefore, this study examined the government of Nepal's efforts in providing urban land and infrastructure in partnership with landowners through land pooling. The project delivery method, performance, and efficiency of the project resembles with typical public private partnership identified by the literature review; thus, land pooling in Nepal is considered to have characteristics of public private partnership project.

Nevertheless, most of these land pooling projects in Nepal are small in scale and susceptible to time and cost overrun due to poor project appraisal, lack of clear commitment for funding, and difficulty in getting consensus from landowners. The land pooling project (SPV) comprises representatives of landowners, project officials, and governmental officials, which lacks the consortium of professional developers, who are financially capable to fund the project. Therefore, it is recommended to upscale the project with a financial

commitment from governments with the arrangement of loan, the revolving fund with the minimum spread, credit guarantee facilities, and subsidies. Furthermore, most of the landowners only concern about their land contribution rather than the increased value of returned plots, and there are also no clear mechanisms for risk-sharing between government and landowners; hence, the government must establish a dedicate unit that recognizes consensus building, information dissemination, and project financing as one of the main objectives to make land pooling success. Future researchers can examine the challenges on the implementation of a land pooling project in Nepal and provides policy recommendations with the objective of the upscaling project, optimization of cost and benefit, speedy implementation, and easy consensus building.

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