The State has exclusive responsibility to provide trunk infrastructure in Papua New Guinea’s (PNG) housing industry.

The barriers and delays associated with public sector provision of trunk infrastructure in the housing sector motivates the private sector to provide the trunk infrastructure.

EDAI Town Development Limited is one of the private developers in PNG that provides and manages the trunk infrastructure in its housing estate.

To sustain private provision of trunk infrastructure, it is necessary to provide private developers tax credit as well as monitor the quality of the infrastructure.

Tax credit can reduce the cost of constructing houses and consequently reduce house sales prices.

Private provision of trunk infrastructure should be promoted in PNG if the benefits outweigh the costs.
This article focuses on one of the findings from a recent article by Ezebilo and Hamago (2017) regarding prospects and challenges of private provision of housing in Papua New Guinea (PNG). The paper stated that the State has exclusive responsibility to provide trunk infrastructure. However, EDAI Town Development Ltd (ETDL) is a private developer and provides trunk infrastructure such as clean piped-borne water, sewerage, electric power and access road in its housing estate. This then “pushes up” the house sales price. The study was conducted in August 2016 and involved data collected from interviews of ETDL Management. In this paper, we will focus on the importance of private developers providing trunk infrastructure and potential strategies for its sustenance. During the time of this study, ETDL spent almost K13 million on trunk infrastructure, which in turn has contributed to pushing up the cost of building a house in the housing estate. In order to reduce the cost of building houses, the State should establish a tax credit scheme for private developers who provide trunk infrastructure. It is also necessary for the State to monitor the quality of trunk infrastructure provided by the private developers to ensure adherence to the minimum standard. The State will benefit a lot from such an arrangement, as it will shift the resources from housing to other sectors of the economy that require urgent attention.

It is important to note that other factors such as the high cost of materials for constructing houses, high land prices and high labour costs could also contribute toward “pushing up” house prices. However, these are excluded from the analysis provided in this article.

Lessons learnt from provision of trunk infrastructure by ETDL

Lack of trunk infrastructure is one of the biggest challenges faced by the private sector in providing housing in PNG. This is why ETDL developed a strategy to address the situation, which includes the establishment and maintenance of trunk infrastructure in its housing estate. The following lessons could be drawn from ETDL:

**ETDL spent K2.5 million to provide clean potable piped-borne water and sewerage.** To privately operate the water and sewage treatment plant, ETDL received approval from Water PNG. It also received a permit from PNG Conservation and Environmental Protection Authority for the discharge of sewage. The waste water is discharged through normal water catchment channels. To sustain the piped-borne water and sewerage project, the residents pay a service charge for water supply based on the quantity that they consume. All the houses have a water meter installed which records water usage.

**ETDL spent approximately K10 million for constructing the road network within EDAI Town.** The road network in EDAI Town is linked to the Port Moresby–LNG road, allowing EDAI Town residents easy access to Port Moresby city. Approval from governmental agencies for constructing road networks and drainage systems in a housing estate is not required. To sustain the maintenance of roads and drainage systems, each household pays a corporate services fee depending on the size of the house.

**ETDL paid K200,000 under capital advance contribution to provide electric power.** The main grid is supplied by PNG Power, in which ETDL purchased 1 megawatts at K200,000 under capital advance contribution. In this arrangement, ETDL provided all the materials for installing power such as electric cables, which PNG Power could not provide. However, EDAI...
Town must use up the 1 megawatts power it purchased within 5 years. All houses in EDAI Town have post-paid electric meter, which records power usage. Residents pay for power each month. Residents that do not pay the service charge when due are often given 14 days to pay up or risk power cut. The post-paid meter helps ETDL to capture costs associated with power sourced from the power generating set and that from the main grid.

**EDTL provided trunk infrastructure before constructing houses so that the houses are liveable upon completion.** A requirement for a house to be liveable upon completion is for basic trunk infrastructure such as clean potable piped-borne water and sewerage to be available. ETDL ensured that the trunk infrastructure was provided so potential house buyers could move into their houses upon payment. This could be one of the reasons why houses at EDAI Town are often in high demand and easily sold off upon completion.

**EDTL developed a framework for sustaining the maintenance of trunk infrastructure.** The lack of maintenance culture is one of the factors that often results in the deterioration of trunk infrastructure in PNG. However, ETDL has developed a framework that stipulates a potential strategy to sustain the maintenance of its established trunk infrastructure which is likely to stand the test of time.

**A potential strategy to sustain private provision of trunk infrastructure**

- **Establish a tax credit scheme for private developers that provide trunk infrastructure.** Huge funds are required to develop trunk infrastructure, some of which are public goods, making it difficult for users to pay fully for its use. The cost for providing infrastructure contributes to the cost of constructing a house and consequently determining the house price. Trunk infrastructure should be provided by the State but because the private developers provide it, they have the economic incentive to include the cost into the final house price. For example, the cost of trunk infrastructure could be up to 30 percent the value of the house construction cost. This indicates that house sales price will reduce significantly if the State provides trunk infrastructure. For this reason, the State should establish a tax credit for an agreed period to private developers that provide trunk infrastructure. This will enable the developers to capture some costs that they incur for providing trunk infrastructure and also help reduce the cost of constructing the houses and consequently reduce the house price. This will result in a “win-win” situation for the State, the developer and the society. The State would have the opportunity to shift some resources from the housing sector to other sectors of the economy that require urgent attention. The State would also benefit from the Goods and Services Tax (GST) collected from the sale of houses and service charges. The developers would benefit from the reduced cost of constructing a house and consequently enabling them to construct more houses, corresponding to an increase in revenue. As a result of the reduced house price, more people would have the opportunity to buy a house, which translates to improving the welfare of the society.

- **Regulate the quality of trunk infrastructure provided.** To promote the provision of quality trunk infrastructure, government agencies such as the building board must ensure quality assurance checks on the infrastructure established. This will help reduce the risk of infrastructure failure and pollution of groundwater. The developers should be granted tax credit when the infrastructure they provide pass the quality test.

- **Assess cost of providing trunk infrastructure.** To reduce the tendency for inflated costs associated with the provision of trunk infrastructure by private developers, experts must evaluate the potential costs of providing trunk infrastructure before determining the tax credit to offer. In conducting the evaluation, it is necessary to consider the geography of the area where the infrastructure has been provided.

- **There is a need for an entity to administer private provision of trunk infrastructure.** In order to promote orderliness, it is important to establish an entity whose primary role will be to administer the activities of private developers associated with providing trunk infrastructure. The entity will help to see that developers comply with procedures and requirements for providing quality and safe infrastructure.
Conclusion remarks

The private sector has the potential to provide trunk infrastructure, which is often the exclusive responsibility of the State. EDAI Town is an example of a housing estate where private developer provision of trunk infrastructure has been successful. The ETDL provided the infrastructure at EDAI Town without government support and has developed an effective framework for maintaining it. This shows that the private sector could be more effective and efficient in provision of housing than the public sector. However, private provision of trunk infrastructure increases the cost of constructing a house, which then “pushes up” the house price. In addition, the quality of the infrastructure provided by the private sector may not be guaranteed in the absence of appropriate quality checks. To sustain private provision of trunk infrastructure, developers that are involved in the provision of the infrastructure could be compensated through a tax credit scheme and through monitoring the quality of the infrastructure. This has the potential of reducing house prices and providing trunk infrastructure where it is lacking. However, before promoting private provision of trunk infrastructure, it is important to weigh its benefits and costs. Private provision of trunk infrastructure should be promoted if its benefits to the society outweighs its costs. I hope that this paper will contribute to policy discussions on how best trunk infrastructure should be provided in PNG.

References


Acknowledgements

The author would like to thank the Directors of EDAI Town Development Ltd, especially Kym Yong and Robert Cheah for their valuable time used to attend to the interviews. Appreciation goes to Dr Justin Ondopa, a former researcher at PNG NRI and Lucy Hamago, Project Officer at the PNG NRI, for being part of the interviewers.

About the Author

Eugene Ezebilo is an Associate Professor of Economics, specialising in Environmental and Resource Economics. He is the Program Leader of the Property Development Research Program at the Papua New Guinea National Research Institute. (E-mail: eugene.ezebilo@pngnri.org).