Aid and the Maintenance of Infrastructure in the Pacific

Author : Matthew Dornan

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Why is it that the public infrastructure of developing countries is often decaying? Roads are in many cases littered with pot holes, wharfs are sometimes no longer operational. Infrastructure maintenance in developed countries is certainly not perfect, but there appears to be a stark difference in the maintenance and consequently the economic life of infrastructure projects in developed and developing countries. Because such infrastructure is generally the responsibility of government, this begs the question: why do governments in developing countries find it so difficult to maintain existing infrastructure?

The obvious answer is lack of funding. Governments in developing countries commonly have less financial resources, and have pressing expenditure priorities such as extension of infrastructure into both rural areas and urban squatter settlements.

But governments in developing countries do find the money for new infrastructure projects. In Fiji for example, the government recently upgraded the last unpaved section of the King's Highway, linking Fiji's two biggest cities along the northern coastal road (this was done in several stages, with the final stage funded using a loan from Exim Bank Malaysia). In the meantime, the much used Queens Highway, which was originally constructed with donor funds and links the east and west of Viti Levu along the southern coast, is decaying. Many roads in Suva are in worse condition, with potholes everywhere. Why is the government funding new highways while failing to maintain existing roads? The answer cannot solely be about funding.

A more convincing set of arguments relate to the incentives of those in government. This was the argument of Elinor Ostrom (the 2009 Nobel Prize winner), Larry Schroeder and Susan Wynne, in a book they co-authored in 1993. Governments in developing countries, they argued, have political incentives to build new infrastructure; new infrastructure is widely publicised and benefits particular constituencies. The same is not true for maintenance. Maintenance of existing infrastructure – generally built by previous governments – simply does not attract the attention of the media, nor does it win votes.

The same incentives exist for politicians in developed countries. However, due to independent bureaucracies, strict procurement rules, and the less salient nature of patron-client relations; these incentives are less pronounced. Governments in developed countries are also not recipients of aid.

The construction of infrastructure using donor funds strengthens the incentive bias against provision of maintenance. According to Ostrom, Schroeder and Wynne, governments in developing countries will not invest in maintenance if they believe that a donor will replace infrastructure once it is no longer operational.

Donor provision of infrastructure thereby creates perverse incentives for partner governments not to invest in infrastructure maintenance. These incentives flow through to different levels of government, with no incentives established for public servants to ensure that infrastructure maintenance is adequate. On the demand side, communities are less likely to lobby for maintenance of infrastructure when they perceive that infrastructure as being a gift from a foreign donor.

Similar arguments are made by the World Bank in relation to the Pacific. In the 2006 Pacific Infrastructure Challenge report, the Bank noted that: "In the Pacific, governments have often focused on building new infrastructure, rather than investing in sustainable infrastructure operations and maintenance" (p36). The report argued that donor aid is partially responsible:

> "Aid dependence … weakens accountability and risk management. When an infrastructure asset is created with aid money, the normal disciplines of valuing the asset and providing for its replacement in the future can be avoided … making capital free may have contributed to poor governance and poor management over time by removing the pressure to have to pay for valuable assets or provide for their eventual replacement in the absence of donor aid" (p25).

The implication is that aid dependence weakens governance.

The problem is also the result of the way that donors operate. Donors have traditionally funded new infrastructure projects instead of maintenance of existing infrastructure. In part this is due to the view that aid is not permanent. Donor aid for infrastructure is instead provided in order to spur economic growth, often in poor regions, with the idea being that this growth will subsequently be self-sustaining (as will maintenance of infrastructure). In the Pacific, this view of aid has recently been challenged in a discussion note by the World Bank (see this blog for a summary).

Donors also face incentives to prioritise spending on new infrastructure over ensuring maintenance of existing infrastructure. The construction of new infrastructure is an "announcable". It is a tangible asset that can be photographed and reported by the media, in a way that maintenance cannot. New infrastructure is also expensive, and provides donors with a means of spending money (the amount of which can also be reported). Maintenance does not provide the same benefit, given its low but recurrent cost over many years.

How can such problems be addressed?

Some analysts argue that involving the private sector in infrastructure provision can improve maintenance (see for example this ADB report). In the Pacific, private sector provision of services has achieved mixed results. In some cases, private sector involvement has been a success, and has led to provision of better maintenance, such as with road maintenance in Samoa. In other cases, private sector involvement has been a failure, as in the case of private sector maintenance of solar rural electrification schemes in Fiji (see this paper of mine on that scheme). Corporatisation of government entities is an alternative, although again the results have been mixed.

In all cases, the key to success involves a combination of adequate funding and establishing appropriate incentives for maintenance. Importantly, for private sector involvement to be successful, the government must have the capacity to establish appropriate incentives for private sector stakeholders. This capacity is sometimes lacking in line agencies in the Pacific – as it was in the case of rural electrification in Fiji.

Maintenance can also be incorporated into donor-funded infrastructure projects. This is being done by some donors in the region, and is consistent with the Paris Declaration's emphasis on improving the capacity of partner government bureaucracies and ensuring that aid generates sustainable results.

The Pacific Regional Infrastructure Facility (PRIF), which is co-funded by AusAID, New Zealand, the World Bank, and ADB, deserves special commendation. The PRIF provides both funding for physical infrastructure projects, as well as support for partner governments to ensure that these infrastructure works receive adequate maintenance. In some cases, this involves incentive payments to local governments that provide adequate maintenance to infrastructure (see for example this article by AusAID). The PRIF is an excellent example of how donors can ensure the infrastructure in which they invest fulfils its economic potential.

Another example of successful integration of maintenance into infrastructure programs is the transport infrastructure schedule to the Papua New Guinea – Australia Partnership for Development, which draws on PNG's Medium Term Development Plan (2011-15). The schedule states:

> "The Governments of Papua New Guinea and Australia acknowledge that, as a general rule, the returns from maintenance and rehabilitation of roads are higher than those from the construction of new roads" (p4).

It subsequently commits the Australia and PNG Governments to rehabilitating key roads in PNG and putting in place systems that will ensure their continued maintenance. No new roads are included in the document, although it does provide scope for "assessment of future transport needs".

Unfortunately, similar approaches have not yet been adopted by all donors in the region. In one of the least sustainable infrastructure projects in recent years in the Pacific, the Chinese Government provided funding for construction of the US$12.9 million Samoa Aquatic Centre for the Pacific Games – one of only three certified Olympic swimming complexes in the region (the other two are in Australia, New Zealand has none). The centre originally included a statue of a white elephant, although this has since been re-painted yellow. An article in the Samoa Observer two years after the Games laments the fact that no international competitions have since been held in the complex, and observes that the pool is beginning to rust.

Donors clearly need to ensure that maintenance is provided to the physical infrastructure that they finance.

Matthew Dornan is a postdoctoral research fellow at the Development Policy Centre.