

Using Local IT Solutions to Improve Local Government Tax Reform

Appropriate information technology systems are critical to realising the local government tax reforms that are the focus of growing international attention. The two systems frequently favoured by donors and governments are sophisticated international systems, which offer the (elusive) promise of transformation, or, tailored systems developed locally by donors themselves, which promise low cost and local appropriateness. However, international solutions are often high cost and poorly suited to local needs, while donor-led solutions risk a lack of sustainability. Using locally developed, frequently open source, private sector solutions can offer a superior option. However, their adoption requires commitment by donors and governments, including overcoming entrenched decision-making biases.

The role of IT systems in strengthening sub-national taxation

Governments and donors in low-income countries are turning increasing attention to strengthening sub-national taxation, with new IT systems featuring prominently in these efforts. This expanding engagement promises access to new resources, with significant potential to promote improved outcomes. However, the rapid deployment of new IT systems in the absence of significant policy discussion or research poses a major risk of introducing inappropriate systems – and of replicating the often-disappointing results of IT projects at the national level. Locally developed private sector solutions can offer a superior option to the sophisticated international IT systems and donor-developed local systems frequently favoured by donors and governments. They hold the potential for greater customisation, lower cost, more effective technical support, greater sustainability and a reduced risk of vendor ‘lock-in’. This policy brief reviews these potential benefits, surveys some recent experiences and aims to catalyse greater policy discussion and experience sharing.

The risks associated with international solutions and ‘in-house’ software development

Donors and governments have often been captivated by the seemingly transformative

potential of IT systems for public administration which include improved data management and sharing, increased transparency, reduced discretion, better monitoring, and more streamlined administration. However, sophisticated IT systems are also subject to major risks at the point of implementation, and research suggests that the vast majority of IT projects have failed to meet many or most of their goals. IT systems should complement rather than substitute the painstaking process of reform and capacity-building. The best systems are those that achieve core functions, while minimising unnecessary complexity that can derail reform.

Historically, donors and governments have been particularly tempted by the promise offered by sophisticated IT systems imported from the West, and this is no different when it comes to local government tax reform. Unfortunately, these solutions present severe risks at the local government level. Their complex functionality offers little value added in low capacity environments, and inhibits users with limited IT skills. The cost of adapting software to local needs and the overhead and transaction costs of working with international firms can lead to unnecessarily high costs. Additionally, technical support is likely to be more hands off, with software updating and customisation often controlled by a head office

located abroad, resulting in delays and a disconnect with local needs. Perhaps most overlooked, because international solutions imply reliance on proprietary software (where licensees have the right to use the software only under prescribed conditions), there is a major risk of vendor ‘lock-in’. So, following software implementation, governments become highly dependent on a single, remote, international provider and less able to demand effective support services and negotiate future contracts.

Recognising these limitations, a popular alternative has been to develop tailored software ‘in house’, by donors themselves. Over the short-term this can overcome many of the risks of international solutions. Donor solutions can closely match local needs, be essentially costless to local governments and can result in highly responsive in-country technical support. However, they raise important questions around sustainability, as there is a constant risk that donor priorities and staff will shift, and with them, ongoing software support. While these donors generally aim to transfer responsibility to national governments, there is little track record of national governments having either the capacity or political will to provide sustained IT support to local governments.

The Promise of Locally Developed, Open Source, Private Sector Solutions

Given the limitations of international and ‘in-house’ approaches, recent experience suggests that locally developed, open source, private sector solutions could prove to be a valuable alternative. Such solutions are particularly attractive in the low-capacity and limited resource environment of local governments, while the rapid emergence of talented young programmers in low-income countries is making them increasingly viable.

At their best, local private sector solutions can address all of the major concerns levelled against international software providers, while offering the opportunity to nurture, rather than stifle, the emergence of a dynamic local software development sector. Local solutions can offer:

1. Simple solutions that meet core needs and can be better customised to local conditions: they offer greater scope for iterative collaboration between software developers

and users in refining the software to meet local needs.

2. Dramatically lower staffing and transaction costs: solutions led by young local entrepreneurs can be particularly effective in reducing costs, while continuing to meet the modest technical requirements of local government tax systems.
3. More hands-on and timely technical support, involving extensive time in the field, while cultural proximity can also improve training and facilitate ongoing dialogue.
4. Reduced risks associated with technical “lock-in” and declining technical support: providers based in-country are dependent on their local reputation, and this can help to align incentives between governments and providers.
5. Greater reliance on open source platforms: these are increasingly supported by the World Bank, as they can further reduce risks of “lock-in” by offering governments greater scope to take on increased ownership over time.
6. Greater scope for innovation and leadership at the local level by virtue of being low cost and flexible: this allows for progress where local leadership exists and flexibility where required, while reducing dependence on centralised planning.
7. Clear financial incentives for continuous technical support: achieved by establishing contracts through which firms receive a share of revenue collection and/or receive revenue through periodically renewed technical support contracts. Coupled with reliance on open source solutions, firms can have strong incentives for effective, long-term, engagement.

Why Do Donors and Government Make the Wrong IT Choices?

While local private sector solutions hold significant promise, specific features of donor and government decision-making may bias them against adopting effective local solutions. These include:

1. **Planning Timelines:** International software solutions are ready-made and can be deployed rapidly within donor or government project cycles, while the timeline for ‘in-house’ development remains under donor control.

“Features of donor and government decision-making, such as planning and impact timelines, can bias them against adopting effective local solutions”

2. **Impact Timelines:** The major risks associated with international and 'in house' software solutions are long-term, whereas donor and government planning processes frequently focus on short-term impacts.
 3. **Search Costs and Cultural Distance:** International and 'in-house' solutions allow donors to interact with firms that 'speak their own language', in contrast to the complexity and novelty of identifying and contracting local firms.
 4. **Visibility for Reporting:** The sophisticated promise of international systems is attractive for the short-term reporting of project goals and impacts.
 5. **Self-Interest:** Donors may prefer international solutions as a means to support IT firms in the home country, while government actors may prefer large budget international projects that offer more extensive patronage opportunities.
- Local, open source, private sector software solutions are not a panacea. Like any IT provider, poorly chosen local firms can be ineffective, while local procurement poses risks of politicisation. However, the potential for local IT solutions is growing, and is particularly compelling for local government reform, though there is scope for much greater experience sharing and research about what works.

“Local private sector solutions offer the opportunity to nurture the emergence of a dynamic local software sector.”

Experiences from Sri Lanka, Nigeria and Sierra Leone

Although there is little research on the role of IT solutions for local government tax reform, recent experiences indicate the potential of local, private sector, solutions.

Sri Lanka

The Asia Foundation recruited a local technology firm, led by two young college graduates, to develop the software platform for a local government tax reform project. The software developers spent about a month in each of three urban councils during the two years of program and software development, building close relationships and engaging in iterative customisation of the software. The total cost of the initial software was only about \$15,000, while the developers entered into technical support contracts, at around \$1,500-\$2,000 annually, with each of the local councils after implementation. The end result has been a successful implementation of the software in the pilot urban councils, along with the construction of a cooperative and ongoing relationship between the software developers and end users. As importantly, the private firm now has strong incentives to ensure continued support and to work with the Asia Foundation to encourage broader adoption.

Nigeria

The development of an IT system to manage the Lagos State Land Use Charge was similarly outsourced to a private firm run by young local entrepreneurs. They likewise worked closely with the local tax administration over two years in the iterative development of the software, and provided continuous, hands-on technical support in exchange for a small share of total collections. The Lagos Inland Revenue Service has outsourced IT support for other taxes to a separate local private firm and has similarly experienced impressive revenue gains. However, the case also reveals the risk of politicisation in local contracting, as the latter company is owned by a former Governor, and collects what some consider a controversially large share of revenue (10%) as a service fee.

Sierra Leone

The local United Nations Development Programme (UNDP) office undertook software development for a property tax reform programme. The results were initially very positive. The software was developed quickly, fully adopted and rapidly underpinned expanding property assessment and revenue collection. However, despite early gains, sustaining the software has proven problematic. Donor priorities have gradually shifted, while the national government has shown limited willingness to take over full responsibility for upgrading and technical support. This has left local reform leaders to finance software upgrading directly, and on an *ad hoc* basis. While this experience demonstrates the potential effectiveness of customised local IT solutions, it also highlights potential risks associated with donor-led solutions, and the potential for private sector solutions to offer greater sustainability.

Policy recommendations

- Realising the potential of local IT solutions will require a commitment from donors and governments to proactively search for and support local options.
- Donors and governments must plan far enough in advance to engage local providers, and must consciously work to avoid decision-making biases related to timelines, familiarity, reporting or self-interest.
- Donors and governments should support further research and encourage greater experience sharing about what works.
- Donors and governments must address the following questions at the outset of any project when selecting an IT solution:
 - Is the cost of the IT solution consistent with local revenue constraints after donors have withdrawn?
 - Does the solution being considered – including the financial model – ensure high quality, timely and affordable technical support over the long-term?
 - Is there a risk of technical “lock-in” and misaligned incentives over the medium- or long-term?
 - Are there open source solutions that can meet core needs, while increasing flexibility and security for local governments?
 - Is the complexity or cost of the software solution driving excessive centralisation of planning, or does it allow for necessary local leadership, flexibility and innovation?
 - Are there local solutions available that can meet the realistic needs of local governments at lower cost and complexity than international solutions?

Further reading

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Credits

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