Policy brief
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International Growth Centre

Bricks-and-mortar institutions matter

Project delivery and unfinished infrastructure in Ghana's local governments

In brief

- As infrastructure delivery is a priority in Ghana and other developing countries, this study highlights the importance of reviewing the implementation of projects beyond financial indicators, to monitor the physical implementation of projects. This project has constructed a database of over 14,000 projects, covering all infrastructure projects undertaken from 2011 to 2013 by Ghana's Metropolitan, Municipal, and District Assemblies (MMDAs).
- It appears that projects either get finished promptly or not at all. Estimates show that approximately one-third of MMDA projects that are started are not completed. Average projects had a 5 month planned duration, however 1 year after projects begun, only 45.8% of projects were completed and over a third of projects (35.5%) remained unfinished, 3 years after the start date of the project.
- Mid-project interruptions and delays in construction are not uncommon, however these delays can render projects unprofitable for contractors under the original contract terms, hence contributing to project non-completion rates.
- Where policy attention shifts to new projects, this can often result in project abandonment. A simple practical requirement ensuring that agencies budget to finish ongoing projects, before starting new ones, seems to be effective at deterring this inefficient practice. Constructing realistic timelines and budgets for projects can minimise mid-project interruptions

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Infrastructure projects are one of the few uses of government resources that are as popular with economists and donors as politicians and voters. Yet the actual process of construction is fraught with administrative and political challenges. Many infrastructure projects in developing countries are abandoned mid-construction and never finished.

Despite the obvious inefficiency of spending scarce resources on unusable schools and half-built bridges – and anecdotal evidence that such outcomes are widespread – there is little research about the extent and causes of this problem, or what can be done about it. To address this, I worked with several institutions in Ghana's government to digitise administrative records of project implementation. The result is a database of over 14,000 projects, covering all infrastructure projects undertaken from 2011 to 2013 by Ghana's Metropolitan, Municipal, and District Assemblies (MMDAs).

Analysis of this database shows that unfinished projects are a major problem, but that simple steps, taken by funders, can make a big difference to project completion. This policy brief presents three major insights highlighting the scale of the uncompleted construction in Ghana, its immediate causes and changes in funding that may help address the problem and improve cost-effectiveness of infrastructure investments.[1] Each insight has accompanying policy recommendations to help policymakers and project funders in Ghana and other countries improve the efficiency and reliability of infrastructure project delivery.

Policy insights

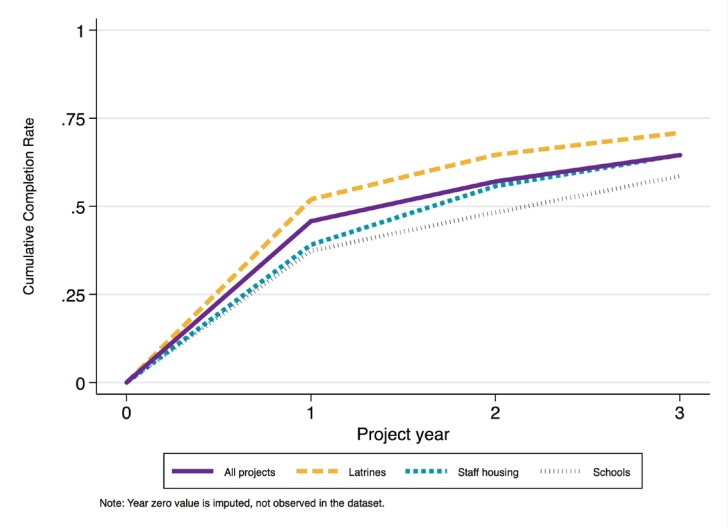
Insight 1: Unfinished projects are very common

Although policymakers and citizens frequently complain about unfinished projects, evidence on the scale and prevalence of this problem was previously limited.

Using the project database I compiled from government administrative records, I estimate that approximately one-third of MMDA projects that get started are never finished. Even though the average project was scheduled to last just five months, after one year less than half (45.8%) of projects were finished, and even after three years over a third of projects (35.5%) remained unfinished and were unlikely ever to be completed.[2]

1. This policy brief presents only selected highlights of the research. For further details of the methodology and additional results, please consult the IGC Working Paper of the same title, available online at www.theigc.org.
2. These estimates are subject to some error due to missing data and imperfect measurement, so the true percentages may be somewhat higher or lower. Please see the Working Paper for additional details.

Figure 1: Project completion rates



The costs of failing to complete projects are huge. Unfinished projects consume nearly 20% of all MMDA capital expenditure, equivalent to US $26.6 million annually. Eliminating this waste could free up enough of the local government infrastructure budget to build over 700 additional three-room schools every year in Ghana.[3]

In addition to fiscal costs and the social costs of missing infrastructure, unfinished projects also have negative economic consequences. Contractors are often not paid for work they have done on these projects. I estimate that this amounts to approximately US $6.7 million annually. These costs can be fatal for the small firms that undertake most infrastructure provision at the local level.

Insight 2: Mid-project delays and interruptions in construction lead to non-completion

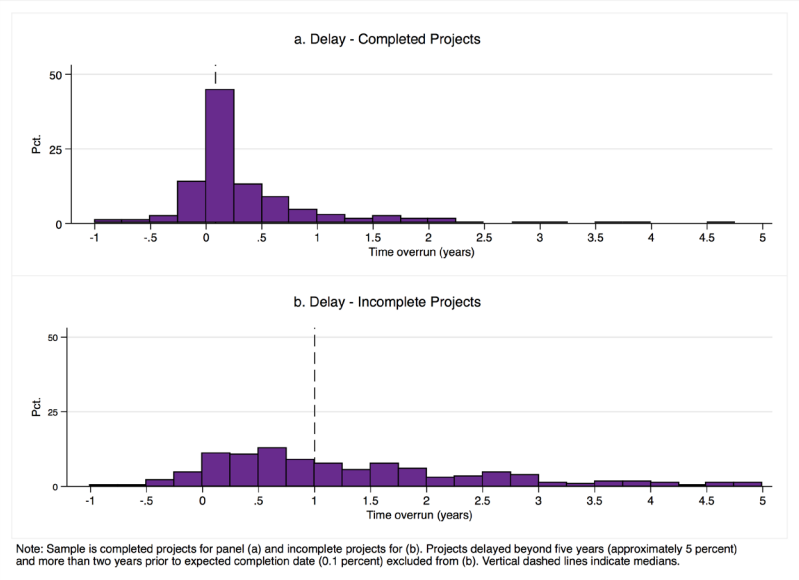
It is common knowledge that infrastructure projects often encounter delays in construction, but these delays are more than an annoyance – they can actually lead to projects being abandoned altogether. Contractors lose money and incur interest costs when their equipment and staff are sitting idle, so they may abandon the site and move on to a different project. The prices of materials may also change over time and thus make finishing the project unprofitable under the original contract terms. Mid-project interruptions can also lead to weather damage to partially completed buildings, making it even more difficult to complete projects later.

These effects are revealed in the project database. Figure 2 shows an interesting pattern. Completed projects tended to be completed quite promptly, on average most finished just one month behind schedule. Whereas incomplete projects were an average of twelve months beyond expected completion dates – a delay of 200%.

3. These figures cover infrastructure expenditure by MMDA governments only, and do not include expenditures by central government or donors. The total financial cost of unfinished projects in Ghana is thus likely to be even higher, although estimating this figure is beyond the scope of this study.

There is a long tail of over a quarter of incomplete projects more than two years late. It is only a slight exaggeration to say that projects either get finished promptly or not at all.

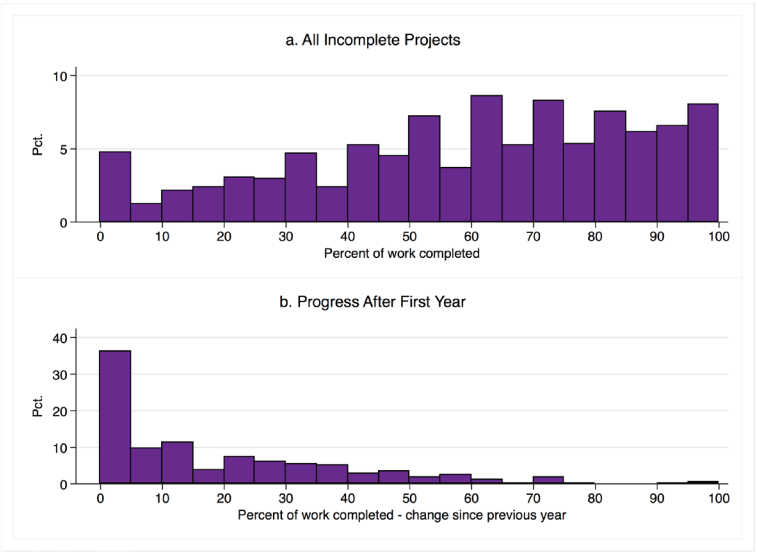
Figure 2: Delays by project completion status



Note: Sample is completed projects for panel (a) and incomplete projects for (b). Projects delayed beyond five years (approximately 5 percent) and more than two years prior to expected completion date (0.1 percent) excluded from (b). Vertical dashed lines indicate medians.

Figure 3 shows further evidence of the negative consequences of mid-project delays. The top panel shows that most incomplete projects have had a significant amount of work done on them – 60 percent, for the median. However, the lower panel shows that nearly half of projects are not touched after their first year. This illustrates that once projects are interrupted, there are often obstacles to finishing the project later, even if this was the original intention.

Figure 3: Work done on incomplete projects

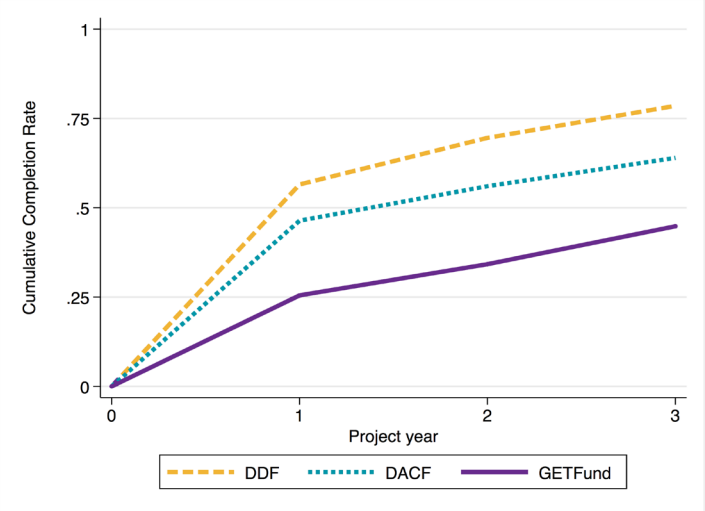


Insight 3: Project funding institutions can affect completion

Does finishing projects depend only on MMDA governments at the local level, or is there something that central-level funding institutions – such as the District Assemblies Common Fund (DACF), District Development Facility (DDF), and Ghana Education Trust Fund (GETFund) – can do to encourage efficient spending?

Figure 4 suggests that how a project is funded is associated with significant differences in its likelihood of completion. After three years, 78.5% of DDF projects have been completed, compared to just 64% of DACF projects and 44.8% – less than half – of GETFund projects. These differences persist even after controlling for the types of projects being built, the districts and locations they are being built in, and which contractor is building the project.

Figure 4: Project completion by fund source



Why are DDF projects so much more likely to be finished? While most attention goes to the issue of delays and shortfalls in resource delivery, I find something different: DDF has a higher completion rate because it requires MMDAs to budget to finish ongoing projects, before budgeting to start new ones. This simple requirement appears to be effective in giving MMDAs an incentive to plan realistically and execute their budgets well, even with relatively light enforcement and monitoring.

Policy recommendations

Recommendation 1: Monitoring project completion is important, simple, and cost-effective

It is striking that project non-completion is so common even in a country like Ghana with a relatively strong governance record and where infrastructure delivery is a priority for government, donors, and citizens alike. Given the huge amount of money governments spend on infrastructure, it is startling that very few developing-

country governments could answer the question: what percentage of your projects get completed?

This research has also shown the importance of going beyond financial monitoring to monitoring the physical implementation of projects. It has also shown that this can be simple, easy, and inexpensive: creating the database of over 14,000 projects cost less than US $20,000 and took just a few months.

Since the database is built on existing government systems, using reports that are already generated by the government, it is simple and financially sustainable to maintain and update each year. Other governments should consider collecting this type of physical completion data more systematically, especially when they are already investing heavily in improving financial management, auditing, and aid tracking systems.

Recommendation 2: Plan and budget realistically to minimise mid-project interruptions

Delays don't just mean a project will be delivered late, they may mean it will never be delivered at all. The best way to deal with the problems created by mid-project interruptions is to avoid them altogether. In many cases delays are the result of poor planning, either because MMDAs plan and budget too many projects or because they deviate from their plans and budgets during execution. Even if they intend to come back and finish these projects later, the dynamics of project implementation make it unlikely that they will do so.

Realistic planning and sound budget execution are not just a technical-level matter, they also require buy-in from political leaders and other stakeholders in society. MMDAs are often under immense pressure to deliver development projects to as many communities as possible, but these findings demonstrate that this can be counterproductive if it leads to resources being spread too thinly or to deviations from agreed plans and budgets. Rather than building many projects at once, political leaders should try to agree to realistic delivery schedules that will eventually spread development projects across all communities.

Recommendation 3: Prioritise finishing ongoing projects before starting new ones

This research has shown that project abandonment often occurs when implementation gets interrupted, often because policymakers have political or personal incentives to shift their attention to a new project. The DDF's requirement that MMDAs budget to finish ongoing projects before starting new ones seems to be effective at deterring this inefficient practice.

Other funding institutions – such as the DACF in Ghana, or donor budget support schemes in other countries – may also be able to encourage efficiency gains by adopting similar requirements. There are, of course, several considerations that should go into the design and implementation of any such rule, such as the means of monitoring and the political feasibility of enforcement. However, this is an example of a way that policymakers can use institutional rules and processes to ensure that short-term political incentives do not derail efficient policy

implementation and service delivery, for the long-term benefit of all.

Conclusion

This project has provided the most comprehensive evidence to date of the scale and causes of unfinished infrastructure projects in any developing country. It shows that this problem is common and extremely costly, but that simple actions by governments and donors can reduce it. Further research is needed to understand how the situation may differ in other countries, to shed light on the diverse causes of project non-completion, and to identify more ways that governments, donors, and citizens can improve the efficiency of infrastructure delivery.

About the author

Martin Williams is a PhD student in the Department of Government at the London School of Economics and Political Science. Martin previously worked as an economist in Ghana's Ministry of Trade and Industry as an Overseas Development Institute Fellow (2009-11) and was a Senior Researcher at the Economic Policy Research Institute in Cape Town (2005-09). He holds MSc degrees in African Studies and Economics for Development from Oxford University, and a BA in Economics from Williams College.

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