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SCIENCE OF DELIVERY: IMPLICATIONS FOR MONITORING AND EVALUATION

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INTRODUCTION

The developing world has seen rapid improvements in recent years. The number of people in poverty has been cut by over half since 1990. Over the same period, 2.1 billion people gained access to improved drinking water, and the child mortality rate has dropped by 41 percent (United Nations 2013). However, rapid improvements are creating expectations for more equitable and just patterns of progress. The tensions we see in Brazil, Egypt, India and Turkey arise in part from the gap between rising expectations of citizens and their everyday experience (Woolcock 2013).

The different aspects of development are uneven, with more people in the world owning mobile phones (6 billion) than having access to toilets and latrines (4.5 billion) (UN News 2013). In addition, poverty-reduction efforts in some geographic regions have not enjoyed the same level of success as in other regions. Over the last two decades, the number of people living in extreme poverty in sub-Saharan Africa rose from 290 million in 1990 to 414 million in 2010. The failure to achieve poverty reduction goals at the regional level raises the question of why some efforts fail while similar efforts deliver quality results in other regions.

To address these challenges, many developing country governments are trying to understand why the policies put in place to reduce poverty and build prosperity are not leading

to the results they want. One way forward could be a new form of knowledge, the 'science of delivery'. This concept is borrowed from the health care field, where the previous emphasis on understanding the causes and consequences of health issues is shifting to give more attention to organizing, managing and financing health promotion (Catford 2009). Applied to the field of public management, a science of delivery should provide mechanism-based explanations of how and why the implementation capability of countries varies, as well as a guide to action (Woolcock 2013).

This approach differs from the institutional reform model that currently dominates the public management field. In the institutional reform model, 'best practice' solutions are often chosen without significant consideration being given to their external validity. In this model, the focus is on inputs delivered rather than on outputs obtained and projects are often given unrealistic expectations. The result of this approach is that projects frequently fail to achieve their goals, while the specific reasons for this failure remain unknown.

In order to remedy these issues, the science of delivery tailors project components based on local factors such as implementation capacity and political support. As problems arise, consideration is given to concerns at the political, organizational, and project levels before deciding on a solution. Project managers are encouraged to draw on aspects of past successful projects, try new concepts and adapt to changing conditions. The science of delivery approach requires intensive field research, improved data collection at the project level through the use of good monitoring systems and the diffusion of ideas to enable these changes in implementation and management.

The result of using a science of delivery approach is the creation of localized projects that provide both impactful results to the target community as well as useful data and information to the public. This data gives project managers the ability to understand how and why a project was effective rather than just whether it was or not. The science of delivery allows project managers in a region to better understand why their projects fail to achieve their desired impact, as well as give them the ability to draw on lessons learned from successful projects in other regions.

At the same time, there have been recent theoretical advances in many scholarly fields ranging from systems engineering, medicine, economics and public management that are being exploited to help countries organize the emerging evidence on successful delivery to help them improve development results (Kim 2012). These new sources of knowledge help aid managers in adapting their projects to local conditions, ultimately resulting in a higher level of success.

MAIN CONTENTS

The World Bank and other development partners can point to many examples of delivery success, drawing on a treasure trove of evidence obtained using a mix of qualitative and quantitative methods linking successful delivery of interventions with local politics, culture, capacity and other factors that affect delivery outcomes. However, some of this experience is not easily accessible, buried in lengthy reports, files, datasets and as tacit knowledge in the heads of staff and evaluators.

This deeply contextual approach to learning needs to be accessible to practitioners. Where learning is generalizable, there needs to be mechanisms for taking ideas to scale through communities of practice and other forms of diffusion and implementation. Key elements of the science of delivery are to ensure that projects or interventions have adequate M&E mechanisms built in to the project and to ensure these are linked to feedback loops that will ensure continual learning, experimentation, results monitoring and redesign based on experience.

A World Bank project example of this is the Karnataka watershed (*sujala*) project in India, which used real-time M&E to improve targeting and efficiency during delivery, and at project's end documented such huge gains that the project was replicated and scaled up (IEG 2011). Two other examples are Oportunidades (formerly the Program for Education, Health and Nutrition), a health and education conditional cash transfer programme in Mexico, and the Program of Advancement through Health and Education (PATH) in Jamaica. These programmes have built strong monitoring systems at the beginning of the programmes with short-, medium- and long-term outcomes identified.

The programmes undertook regular assessments at each step of implementation and used this in conjunction with monitoring information to make adjustments as the programmes are implemented. In the case of PATH, process evaluations and spot checks were undertaken for activities being implemented. (Rawlings 2009). This enabled the identification of a number of problems, including: stakeholders saw the application process as burdensome and were not clear on programme rules; the system for verifying the eligibility of new beneficiaries was weak; and there was a strong unmet demand for jobs and training. This process led to a decision to revamp the management information system, revise the operations manual, use social workers as focal points to access social services, and create a 'STEPS to Work' programme focused on skills development and employment.

Both programmes demonstrate that implementation of a strong M&E system where information is used for decision-making can yield better development results. Evaluations of PATH showed that it was better at reaching the poor than other Jamaican safety net programmes, while evaluations of Oportunidades showed the programme had a significant positive impact in improving health and education. Both programmes have been lauded for reaching their target populations and yielding better results than other programmes.

Oportunidades is a great example of improved science of delivery through the use of both a strong M&E system and of information learned from past projects that warrants a closer look. The programme began in 1997, providing monetary educational grants to poor rural families for each child less than 22 years of age who was enrolled in school between the third grade of primary and third grade of high school. In addition to education, Oportunidades also has health and nutrition components. Government health institutions provide families with preventative health care. Families also received, in addition to a fixed monthly transfer to improve food consumption, nutritional supplements for young children and their mothers. Where Oportunidades truly shines is in quality at entry.

At implementation, project managers planned to have an independent evaluation done by the International Food Policy Research Institute. They also drew on lessons learned from past projects, recognizing that giving money to female heads of families results in better

financial outcomes. These steps taken during the implementation stages translated into quality results that were reflected in the independent evaluation. The evaluation reported that improvements had been made in increasing school enrolment, nutritional quality and access to medical care. At the time of the evaluation, Oportunidades was said to have increased secondary school enrolment rates by over 20 percent for girls and 10 percent for boys (Parker 2003). This was the first randomized controlled trial of a large programme used in developing country social policy.

The success of Oportunidades caught the eye of the Mexican federal government, although the evaluation methodology has been criticized for its sampling design, inadequate treatment of selective attrition and sample contamination (Faulkner 2012). As of 2003, 46.5 percent of Mexico's federal annual anti-poverty budget was devoted to Oportunidades. This increase in funding allowed Oportunidades to expand to urban areas and to provide high school students with education grants. In summary, steps taken at implementation to improve the science of delivery were crucial in the success and subsequent expansion of Oportunidades. Learning from past projects and having quality external evaluation ultimately led Oportunidades to become one of the most successful conditional cash transfer programmes to date. The close involvement of scholar-practioners helped to design new conceptual approaches, ensure technical soundness and rigorous monitoring, protect the programme during changes of administration and spread the approach around the world (Lustig 2011).

OTHER EXAMPLES FROM BRAZIL, INDIA AND NIGERIA

In 2008, Brazil began its Second Minas Gerais Development Partnership Project, a sector-wide approach project of over $1.4 billion aimed at improving the efficiency of public resource use, supporting innovations in public management, and supporting the State Government of Minas Gerais in strengthening its M&E system (World Bank 2008). Funds were disbursed to ten eligible expenditure programmes in five sectors.

To better utilize learning loops in this project, an extensive results monitoring framework was built into the programme at implementation. Individual projects were subject to monthly monitoring and quarterly management meetings were made accessible to the press. The government made yearly implementation data available on the Internet to increase programme transparency. In order to increase its focus on outcomes delivered, the World Bank supported the project by developing a household survey, quality assurance surveys and a series of impact evaluations in the education, health and transport sectors.

These monitoring systems gave managers constant feedback and allowed them to work towards achieving medium-term goals on their way to achieving long-term objectives. The latest Implementation Status and Results Report rated progress towards achieving project development objectives and implementation progress as satisfactory (World Bank 2013a). So far, the programme has succeeded in reducing the amount of time needed to start a business at Minas Facil in Belo Horizonte from 26 to 7 days. The Poverty Reduction Program has already exceeded its initial objective by benefiting over 26,000 rural families.

Projects that provide quality M&E frameworks and learning loops are only one aspect of the science of delivery. The community must utilize this data to understand the specific aspects of projects that contribute to their success. The Social Observatory project in India is a learning organization that works to make effective use of the data that is collected on the project level (World Bank undated). Their learning system consists of the following components. First, they look at real time monitoring to deliver change at the project level. Second, they facilitate long-term learning through quantitative and qualitative impact evaluations. Third, they conduct special case studies to understand key issues for project implementation and design. The result of this research is a better understanding of the impact of a specific intervention on the desired outcomes. Project managers are able to build upon the results found by the Social Observatory to localize their projects and improve the science of delivery.

A very different approach is evident when considering recent road construction in Edo State, Nigeria. Coming out of an intense civil conflict in 2009, the newly elected governor wanted to deliver critically needed roads quickly to gain the confidence of citizens that his government, unlike past regimes, could be effective in delivering public goods. His solution was to depart from standard good practice norms and processes. He set up a centralized team under his direct control charged with contractor selection, budgeting, fiscal management and monitoring. Five contractors won 83 percent of the total value of the contracts because they were the ones that the Governor trusted the most. Unlike standard procurement tenders, this one was based on only sketchy designs and estimates that needed to be fleshed out as the project proceeded.

There were uncertain timelines caused by a highly erratic cash flow to the governorate from central government transfers. The central team developed a project-monitoring dashboard, and used it to work with contractors to change contract budgets and other parameters as designs became more complete and as cash became available. Getting this system to work relied on harnessing the private sector's capacity to enhance the ability of the Ministry of Works to supervise project contractors and to orient project procedures to deliver rapid results. As a result, Edo State's capital spending quadrupled from 2008 to 2012, 85 percent of the roads were completed, and engineering design analysis found that the roads were built to acceptable standards and cost (World Bank 2013b).

CONCLUSIONS

The examples of Oportunidades and the sector-wide approach in Brazil demonstrate how M&E systems can be improved through the use of independent evaluations and household surveys. The Social Observatory project in India stresses the importance of real time data usage and the exploitation of learning loops. The example in Edo State demonstrates that taking context into account is key in improving delivery. For Nigeria, a highly centralized approach allowed for a greater level of project monitoring. By creating better M&E systems, making available user-friendly evidence, linking evidence from monitoring information and evaluation to feedback-loops in learning, and enhancing the diffusion of information, researchers and evaluators can make greater contributions to advancing the science of delivery and, ultimately, lead to well-informed, evidence-based decision-making.

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