

Our latest note provides evidence from the first successfully implemented randomized experiment of a World Bank matching grant program, showing how it can spur innovation.

Spurring Innovation with Matching Grants: Evidence from Yemen

David McKenzie, Nabila Assaf and Ana Paula Cusolito

Matching grants are one of the most common tools used in private sector development programs in developing countries and have been included in more than 60 World Bank projects totaling over US\$1.2 billion, funding over 100,000 micro, small and medium enterprises.

Yet public subsidies to private firms can be controversial, and credible evidence as to whether these grants induce firms to undertake innovative activities that they would not otherwise do (*additionality*) is limited. Seven previous attempts to use randomized experiments to evaluate World Bank matching grant programs in sub-Saharan Africa failed, raising questions about the way these projects are implemented in practice and whether it is feasible to use experimental methods to evaluate them ([Campos et al, 2014](#)).

A matching grant for innovation in Yemen

The Enterprise Revitalization and Employment Pilot (EREP) was designed as a two year pilot project aimed at improving firm capabilities and the employability of recent graduates. The matching grant component provided firms with a matching grant of up to \$10,000 as a 50 percent subsidy towards the cost of innovation and business services like finance and accounting systems, website creation, training, marketing, participation in exhibitions, and some associated goods.

The program implementation was designed with the lessons of other matching grant programs in mind in order to overcome their problems with take-up: eligibility criteria were kept broad; the application form was not complex and could be done either

online or in paper; and the program was well-advertised.

High demand for the grants

The combination of an easy application process and the need among firms for the program meant that low demand was not an issue in Yemen. In total 820 applications were received, slightly more than four times the number of grants available for the first round (200).

Firms were selected for the program from among the eligible applicants in public randomization events held in January 2014. A reserve list was chosen in case originally selected firms withdrew from the program, giving a treatment group size of 216 firms. We chose a random sample of 200 of the applicants to be the control group for the purpose of follow-up surveys.

The median firm has 5 employees, but there is considerable variability in firm size. The most common industries are retail sales, food production, clothing, education, and computer services.

Data Collection

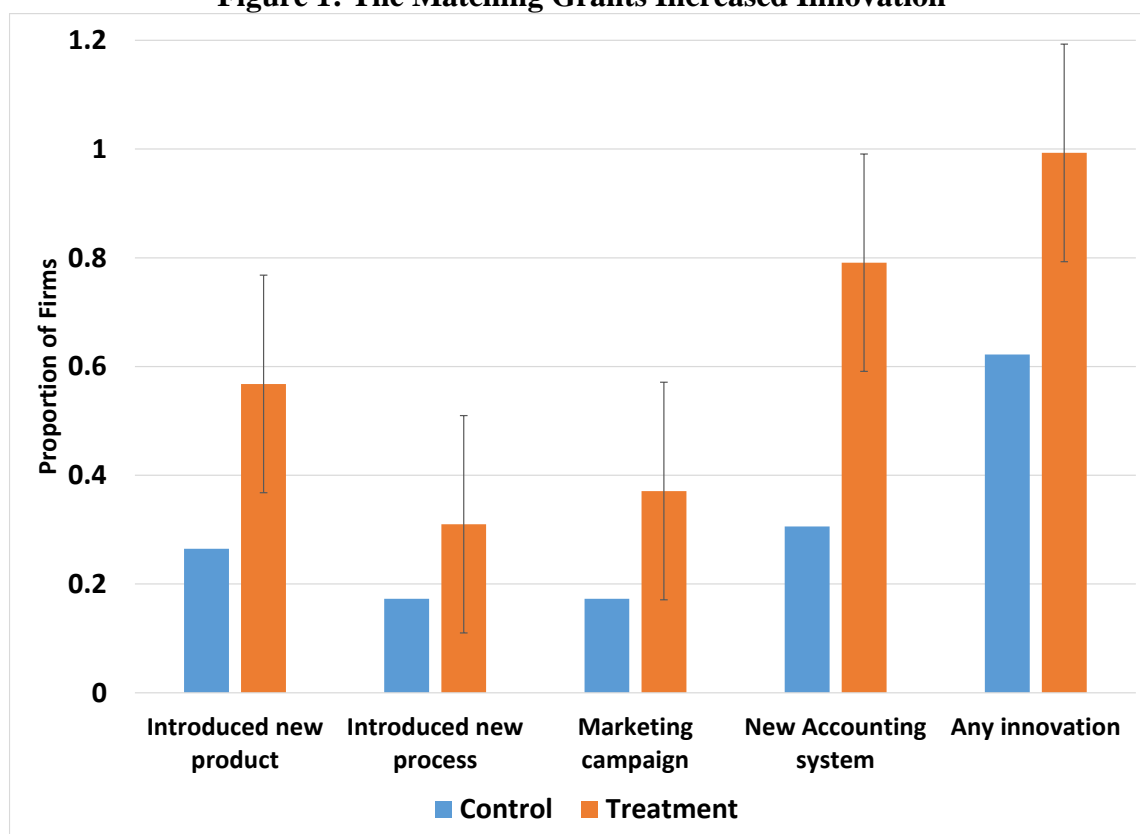
Unfortunately civil war broke out in Yemen towards the start of 2015. This led to the second year of the program being canceled. In order to measure short-term impacts from the first year we quickly conducted a phone follow-up survey of firms in March 2015. The response rate was 54%, with the security situation and gas shortages preventing further follow-up. However the treatment and control group interviewed are similar in terms of baseline observable characteristics, enabling comparison of the two groups.

Do you have a project you want evaluated? DECRG-FP researchers are always looking for opportunities to work with colleagues in the Bank and IFC. If you would like to ask our experts for advice or to collaborate on an evaluation, contact us care of the Impact editor, David McKenzie (dmckenzie@worldbank.org)

Results

The matching grants do appear to have resulted in additional innovation activities being undertaken by firms. Figure 1 shows that firms receiving the grants were 30.3 percentage points (p.p.) more likely to introduce a new product, which is more than a doubling of the 26.5 percent rate in the control group; they do more marketing (19.8 p.p. increase), introduce new accounting systems (48.5 p.p. increase), and overall are 37.1 p.p. more likely to have undertaken at least one innovative activity. Firms are also more likely to have made a capital investment or used a consultant. However, we do not have sufficient statistical power to detect impacts on employment or sales.

Figure 1: The Matching Grants Increased Innovation



Note: 95% confidence interval shown on LATE estimate of treatment effect.

Policy Implications

While there are several important caveats in this analysis due to the short time-frame of follow-up, attrition, and sample size, the evaluation still does provide some encouraging news for learning about matching grants. It demonstrates that attention in design to making the application process better for firms can lead to high take-up and make it feasible to evaluate through a randomized oversubscription design. In this context at least, these grants don't just appear to be subsidizing firms to do what they would plan on doing anyway. Further evaluation of such programs on a larger scale is needed to measure other key outcomes such as employment and sales, and whether the grants also involve externalities for other firms.

For further reading see: McKenzie, David, Nabila Assaf and Ana Paula Cusolito (2015) "The Additionality Impact of a Matching Grant Program for Small Firms: Experimental Evidence from Yemen", [World Bank Policy Research Working Paper no. 7462](#)

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