Growth Research Programme

The diffusion of innovation in low-income countries

Impact case study

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Contents:

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Introduction

Since 2012, the DFID-ESRC[1] Growth Research Programme (DEGRP) has provided funding and support for high-quality social science research on inclusive economic growth in low-income countries (LICs). The case studies in this series probe the impact of these DEGRP research projects, diving deeper than previous reports to analyse how and to what extent their findings have been taken up in policy and practice.

Many factors influence research uptake, including political circumstances, stakeholder characteristics, demand for certain types of knowledge, and how knowledge is communicated and shared (Jones et al., 2013). This study, of DEGRP research project 'The Diffusion of Innovation in Low-income Countries', led by Dr Xiaolan Fu from the University of Oxford, explores these various conditions, but also pays particular attention to the deliberate and strategic actions of the project team.

In doing so, this case study serves not only as an investigation of impact for the project's stakeholders and donors; by demonstrating how certain factors, strategies, and activities can improve research impact, this case study may also provide lessons for researchers and academics interested in enhancing the impact of their own work. Researchers may rarely, if ever, be able to provoke sweeping changes, but they can engage in measured strategies that will increase the chance their findings will be taken up in policy and practice.

The case study opens with a project overview, followed by a methodology section summarising its approach and analytical frameworks. The subsequent 'Narratives of impact' section explores some of the project's impacts and how they came about. The analysis looks across these narratives to identify and interpret some of the most important factors and strategies that led to impact. The case study concludes with a reflection on the project's key lessons.

[1] DFID is the United Kingdom's Department for International Development and ESRC is the Economic and Social Research Council.

Project overview

Innovation – broadly defined as the spread and adoption of new or pre-existing knowledge, techniques and processes – is key to economic and social transformation (te Velde, 2013). This is especially true in low-income countries, where innovation can help drive job growth, raise incomes, enhance energy efficiency, and improve healthcare.

Interested in exploring these issues in greater depth, Dr Xiaolan Fu, with funding from the DEGRP, teamed up with the Science and Technology Policy Research Institute (STEPRI) in Ghana and a team of researchers and advisors to undertake a project titled 'The Diffusion of Innovation in Low-Income Countries'.

Designed with support from Ghana's Ministry of Environment, Science, Technology and Innovation (MESTI), the project sought to identify the barriers to innovation, the determinants of knowledge diffusion and the impact of external knowledge diffusion on low-income countries. It included a literature review on innovation and a cross-country economic study, complemented by a survey of over 500 Ghanaian businesses, and in-depth case studies of 23 Ghanaian firms.[2] The team made a deliberate effort to focus on informal businesses (those that are not officially registered), as many businesses in low-income countries tend to fall into the informal sector.

The DEGRP project yielded many new and nuanced findings about innovation in low-income countries. For example, the team uncovered the effects of foreign direct investment and trade on innovation, but they also identified that much innovation was taking place in low-income countries without external intervention. The team also found that patterns of innovation differ greatly from what had previously been observed in industrialised countries. Rather than emerging from established Research and Development (R&D) teams, innovation in low-income countries is generally imitation-based – that is, it relies on the adoption and adaptation of existing technologies, rather than the creation of new inventions altogether. Innovation also tends to emerge as a response to constraints in skills or resources and commonly involves changes to business models, marketing and management. In Ghana, the team discovered that there was little collaboration between industry and universities around innovation.

Perhaps most importantly, the researchers found that such innovation – especially in the informal sector – is bolstering economic development, helping to improve competitiveness, reduce costs and enhance efficiencies. For policymakers and organisations dedicated to promoting growth and development in low-income countries, these new research findings held important lessons and implications with the potential to inspire new ideas, practices and policies around the world.

In order to increase the reach and impact of their discoveries, the team systematically engaged key stakeholders at various stages throughout the project. In Ghana, for example, the team initially collaborated with the Ghanaian government then continued to meet with senior officials while collecting field data. Once they had processed the survey results, they organised a conference and a workshop in Accra to share their findings and formulate policy suggestions. At these sessions, the participants were

[2] Although now described as a low-middle-income country, Ghana was, until recently, a low-income country and still displays types of innovation characteristic in such states.

invited to engage with each other and with the findings. They also shared the findings and invited feedback from relevant UN agencies and other advisors. The team then incorporated these ideas and recommendations into the final project report.

After the research was complete, the team continued to engage in various communication and engagement activities, from producing a short video about the project to sharing their results at conferences and summits.

The project helped generate numerous impacts, from sparking new ideas and conversations about innovation, to influencing national and UN-level policy, and expanding networks around innovation. This case study explores some of these impacts as well as the factors and strategies that helped produce them.

Approach and methodology

DEGRP research projects aim to influence policy and practice in various ways. They may produce new knowledge, shift debates, influence policies, transform behaviours, or bring about new networks. In order to increase the likelihood of these various kinds of impact, the DEGRP Evidence and Policy Group offers guidelines for researchers looking to plan or analyse their engagement and communication strategies. The guidelines include frameworks for categorising the different types of impact and communication strategies. Described below, these frameworks provide the starting point for this case study.

IMPACT TYPES

In its promotion of rigorous, influential research, the DEGRP defines four different types of impact. While some forms of impact may fit more easily into these categories than others, this framework provides researchers with a vocabulary to recognise and describe the many ways in which their research may influence the societies and governments with which they are working.

Conceptual impacts are changes made to knowledge, understandings, and attitudes. This type of influence can be noticed in changing perceptions or by the internalisation of new ideas about the research among societies and stakeholders.

More concrete influence would fall under the category of **instrumental impacts**, which comprise changes in either policy or practice. This type of impact is generally embodied in something tangible such as a policy document.

Capacity building impacts refers to changes in the ability of researchers, partners, or end-users to carry out similar work in the future. Research that influences capabilities and competencies can be said to have capacity building impact.

Finally, **connectivity impact** refers to a project's ability to strengthen or create networks of people and organisations that can both understand and utilise the research. These networks and connections may be formal or informal.

Projects may help bring about one or more of these impacts in any combination, either through direct, observable influence or by making a plausible contribution to them. Moreover, since shifts in policy and practice often take place over long stretches of time, the impact of a single piece of research may be felt long after its findings have been communicated.

This case study, produced a year and a half after the official DEGRP project was complete, aims to capture some of its more immediate impacts. In fact, the project team and the contacts they forged are continuing to carry out additional work in the field – efforts that can be seen as diffuse and ongoing effects of the original project. A broader investigation that seeks to identify and assess these long-term impacts remains a topic for future study.

COMMUNICATION AND ENGAGEMENT ACTIVITIES

What can researchers do to increase the impact of their research? DEGRP's Evidence and Policy Group (EPG) suggests that for research to have an impact, simply publishing findings is not enough: researchers must deliberately employ a range of communication and engagement strategies to help ensure their findings are transformed into effective policies and practices. There are many approaches and techniques researchers can use, from disseminating research results to the right audiences, to co-producing policy recommendations with influential partners.

The EPG recommends the KStar (K*) framework as a tool to help researchers visualise and classify some of the ways in which their research can be disseminated, shared, exchanged, or mobilised (Shaxson and Bielak et al., 2012). As with the impact types already mentioned, it provides a common vocabulary for discussing and examining activities that are described in many different ways across sectors (ibid).

The framework defines four interconnected knowledge-sharing strategies or 'K* activities' that researchers can employ:

Information intermediation includes those activities that help enable access to information. Examples include creating, collecting, and communicating ideas and information and putting them into the public domain.

Knowledge translation entails rewording or reworking information so that a range of different audiences can make sense of it.

Knowledge brokering, the quintessential 'relational' activity, includes strategies like networking and match-making that help connect individuals or organisations and encourage relationship building.

Innovation brokering comprises activities that aim to improve knowledge-sharing at a systems level, such as putting structures in place to empower other knowledge practitioners in the future.

The framework does not stipulate how researchers should implement these activities, nor does it capture all the potential strategies that project teams can employ. Nonetheless, it provides a standard language to explore and describe some common approaches.

CASE SELECTION

As with the others in this series, this case study constitutes what Seawright and Gerring (2008) call an 'influential case', one that provides a rich opportunity for learning. We have selected this project from the DEGRP portfolio for two reasons. First, the project has emerged as a particularly successful example of research impact, with the project team reporting different types of impact at both the national and international level. Thus, analysing this project will enable us to draw lessons for subsequent DEGRP projects. In addition to the project's reported success, several members of the team pointed to common approaches, strategies, and factors that fuelled this success. Thus, this case provides rich ground for exploring the role of engagement strategies as well as other important factors in bringing about impact.

DATA COLLECTION AND METHODS

A combination of qualitative approaches was used to collect and analyse data for this case study. Preliminary desk research included reading and analysing relevant project documents, including: reports written by the researchers, the DEGRP's Research in Context brief on the project, and an impact log, a document in which the team recorded their observations about the project's impacts.

Semi-structured interviews were also conducted with three project stakeholders: project lead Dr Xiaolan Fu, Professor at the University of Oxford and Director of the university's Technology and Management Centre for Development (TMCD); Dr George Owusu Essegbey, Director of the Ghanaian Science and Technology Policy Research Institute (STEPRI); and Pierre Mohnen, Professorial Fellow at the United Nations University Maastricht Economic and Social Research Institute on Innovation and Technology (UNU-MERIT). The interviews ranged from 20 to 50 minutes and consisted of open-ended questions about the observable impacts of the research and how they were brought about. The insights and findings from the interviews were analysed and cross-referenced with the desk research.

While additional interviews with other stakeholders would have enhanced the scope of this research, time and budget restraints forced us to keep the total number of interviews to a minimum. As a result, we chose to focus on internal stakeholders – those who were intimately involved in the project, whether in their capacities as researchers, engagement leaders, and networkers. This case study thus takes an **internal perspective on impact**, as its findings have not been validated by people external to the project. Further research may entail broadening and expanding this analysis with alternative voices and viewpoints, including from those individuals and organisations on the receiving end of the project's engagement strategies. Furthermore, as this case study was conducted only a year and a half after the project officially ended, it must be seen as a preliminary look at impact.

Narratives of impact

The following narratives showcase some of the impacts this project achieved across a range of metrics. The project's far-reaching influence helped shape understandings about innovation, inform national and international policy, and connect individuals and organisations from around the world.

CHANGING UNDERSTANDINGS OF INNOVATION

The project has uncovered new knowledge about innovation in low-income countries that is helping to shift understandings among policymakers.

When the team began their project, interest in innovation had been growing, but little attention had been paid to innovation in low-income countries specifically. Through its exploration of this relatively under-researched topic, the project provided the first comprehensive, evidence-based study on innovation in low-income countries. According to Anne Miroux, Director of the Technology Division for UNCTAD and research advisor, 'the project contributed to filling a vacuum' with 'valuable, coherent and consistent data.'

By contributing new, in-depth knowledge about what innovation looks like and how it occurs in low-income countries, especially Ghana, the project is helping to shape new understandings in the field of international development.

Compared to pressing issues like extreme poverty and poor health systems, innovation has often been treated as a secondary priority for low-income countries. But by demonstrating how innovation fosters economic development, this project has helped debunk common conceptions: it has provided evidence to support the claim that innovation is a means of international development, not a by-product of it, and should therefore be made a priority among businesses, development communities, and policymakers.

What evidence is there for the project's contribution to these changing understandings? Essegbey pointed to the Ghanaian government's growing interest in promoting innovation. After regular consultations between the project team and the government, 'We now have a Ministry serious about matters of innovation and strategizing to promote innovation,' he explained. With the Ghanaian officials expressing interest in the project and its findings throughout the process, Essegbey believes that the project made a strong contribution to this observable shift.

Fu suggested that the project contributed to changing ideas about innovation on the international level, too. As evidence, she pointed to the various invitations she received to share her research at international events and conferences, including at the UN General Assembly, UN Conference on Trade and Development (UNCTAD), UN Development Cooperation Forum, UN Industrial Development Organization (UNIDO) and UN Department of Economic and Social Affairs (UNDESA). Traditionally, Fu explained, development conversations at the UN have focused on immediate concerns such as food scarcity and conflict resolution. But Fu noticed that conversations were increasingly turning to advances in science and technology as fundamental solutions to these problems. By sharing the research at these high-level conferences, the team contributed to what Fu calls 'a policy priority shift.'

Perhaps the most significant indication that the project is helping to influence global thinking is that the findings were incorporated into the 2030 United Nations Sustainable Development Goals (SDGs). This and other instrumental impacts will be explored further in the next section.

INFLUENCING NATIONAL AND INTERNATIONAL POLICY

The project's findings and recommendations have made significant contributions both to national policy in Ghana and the United Nations SDGs.

In Ghana, where much of the team's research took place, the project brought about a significant instrumental impact: it helped enable the introduction and implementation of a new policy initiative to promote innovation. The survey findings indicated that there were few links between universities and industry in Ghana – links that are critical for innovation. While this finding was not unknown, the project provided rigorous evidence to support it. Drawing on this finding, Ghana's Ministry of Environment, Science, Technology and Innovation (MESTI) introduced a $500,000 programme to strengthen university-industry collaboration in order to encourage innovation. Essegbey, who helped drive the programme in his position at STEPRI, described the direct link between the DEGRP research and the policy initiative: 'Some of the findings of our ESRC-DFID research formed the basis of the formulation of the new MESTI programme'.

Reflecting on how the research was able to influence Ghanaian policy, Fu explained that the team didn't simply give the findings to the government; the project itself was designed in collaboration with policymakers. In the early stages of project, the team's contact at UNCTAD introduced them to the Ministry (MESTI), and after successful consultations with officials, the team began their research.

But contact with the government didn't end there; the team continued to engage officials in the project from start to finish through meetings, consultations and, after the results came out, workshops. Their local partner, government think tank STEPRI, was pivotal in brokering these meetings, facilitating communication between the researchers and government officials throughout the project. For example, they invited policymakers to participate in the conference and workshop they organised to share and debate the findings.

Essegbey believes that the local workshop in Ghana in particular was critical in helping to prompt national policy change for several reasons. First, many influential players in Ghana's government attended, including high-level individuals from MESTI, the Ministry of Trade and Industry, and STEPRI's sister organization the Institute for Industrial Research. Powerful industry representatives also participated in the workshop, including representatives of the Association of Ghanaian Industries and the Garment and Textiles Cluster Initiative. Second, STEPRI invited Ghanaian media outlets to cover the workshop, which led to greater publicity and helped raise awareness of and support for their work among the general public.

With its strong implications for international development more generally, the project also made a significant contribution to international policy. According to Fu, a precise path to getting the research to influence the highest levels of global policy initiatives is difficult to anticipate or plan for. As the director of a well-known research centre at Oxford, Fu had previously been invited to speak at UN summits and conferences. During this time, her network expanded to include high-level staff at several UN agencies. She explained that after sharing information about the project through the centre's mailing list, news of the project made its way some of these connections at the UN. As a result, she was invited to share the results with the UN General Assembly.

The publicity gained from her talk led other relevant agencies, including UNDESA, UNIDO and UNCTAD, to invite Fu to serve as a consultant and participant in meetings throughout 2014 and 2015. (Some of these meetings also boosted the project's influence on the national level, too, as ambassadors and representatives from Ghana were often in attendance. Fu explained that sometimes they would express support and relay information back to national government officials).

After consultations with UNIDO and UNDESA, during which Fu shared the results and implications of the DEGRP project, the findings were incorporated into the preparatory documents for the 2030 Sustainable Development Agenda. In turn, these documents contributed to the formulation of a new goal: SDG9. Aiming 'to promote industrialisation and foster innovation,' this SDG places innovation and technology at the centre of global development.

The project's impact continued beyond the formulation of this SDG and into its implementation phase. In July 2015, a UN Technology Facilitation Mechanism was established to support implementation of SDG9. Fu was appointed to the mechanism's ten-member advisory group to advise on relevant policies and activities. Affirming the project's instrumental impact, Director General of UNIDO Li Yong said at an event in 2015, 'the project has provided very important knowledge and evidence about innovation in low-income countries to strengthen the implementation of the SDGs.'

STRENGTHENING CONNECTIONS, BUILDING CAPACITY

The project strengthened networks of researchers, policymakers and organisations working in the fields of innovation and international development. The project, and the connections it enabled, helped build the skills and capacities of its collaborators.

When the team began conducting research, they already had a solid base of contacts. In particular, Fu, as Director of Oxford's TMCD, publicised the project through the centre's existing networks and mailing lists. Thanks to this medium, the team received many follow-up emails, including requests for meetings and invitations to speak at conferences. These meetings, in turn, helped the team build and strengthen connections with various individuals and organisations, including several UN agencies.

While it's difficult to pin down how, exactly, the project helped bring about these connections, Fu described it as a kind of snowball effect, whereby presenting the project results at one conference led the team to meet other individuals and organisations, which led to further speaking engagements, and so on. Fu said that after each speaking engagement, audience members – often well-connected individuals or leaders of other organisations and agencies – would invite her to speak at an upcoming event.

Essegbey also described the connectivity impact the project had on STEPRI in particular: 'It contributed to widening our network, our partnerships with other institutions,' he explained. In addition to forging new connections, the project also helped STEPRI deepen its existing relationship with policymakers in Ghana's government, MESTI in particular.

Though new and stronger connections can be seen as impacts in and of themselves, they also contributed to the project's capacity building impacts – of which there were many. According to Essegbey, for instance, the project and the connections it brought about helped bring the think tank 'into the limelight' – raising its profile among Ghanaian policymakers and internationally. The project also helped the team at STEPRI build on their skills and capabilities. 'It enhanced our toolsets,' said Essegbey. One example of this was the adoption of personal digital assistants (PDAs) for data collection. After nearly a week of training as part of the project, the survey assistants at STEPRI learned to employ the electronic devices in their research, allowing them to enter data more efficiently than before.

The heightened publicity and new skills STEPRI acquired through the course of the project helped the think tank secure and carry out new projects. For example, following the completion of the DEGRP project, STEPRI was tasked with developing and implementing the new programme with MESTI designed to strengthen the link between universities and businesses. STEPRI used the data collection techniques they had learned during the DEGRP research to conduct a survey of over 2,500 firms.

The project, and the connections it reinforced, also gave rise to other internal capacity building impacts, empowering the project team to take on additional work. For example, thanks to the project's success as well as its ability to strengthen communities around innovation, STEPRI is now working on a follow-up research project in Tanzania. The DEGRP team has also agreed to collaborate with a separate team conducting research in Uganda based on the DEGRP project's data. These new projects, which enabled researchers to continue carrying out similar work in the field, also helped foster new connections through the involvement of think tanks and universities in Kenya, Ethiopia and South Africa.

The team also received an invitation to join a multinational EU-funded research project with a budget of over 2.5 million euros to study how multinational enterprises operate in developing countries. This new assignment, which was based on the research conducted under the DEGRP project, also prompted further connectivity impacts: led by a Finnish institute, it brought together collaborators from the UK, Belgium, Ghana, India, and Brazil.

Strategies for impact

Drawing from the three preceding narratives, this analysis highlights some of the most important factors and strategies that helped bring about impact.

GENERATING NEW AND PERSUASIVE EVIDENCE

Producing original, evidence-based research informed by local knowledge was an essential first-step to influencing attitudes and policies.

The quality of a piece of research is not usually a reliable indicator of whether or not it will have impact. In this case, however, the specific character and quality of the research is worth acknowledging. All three team members interviewed believe that their research had strong conceptual and instrumental impacts because of the research itself: it was novel because it was informed by local knowledge and evidence-based, and thus more likely to convince and resonate with key stakeholders.

First, the team identified an existing gap in the literature and made a strategic decision to fill it. Their subsequent research revealed new knowledge about innovation and international development that few in the field had been studying. Next, relying on support from local partner STEPRI and consultations with the Ghanaian government, the research was informed by local knowledge. For example, the team leveraged STEPRI's familiarly with Ghana's business landscape to ensure that half of all firms surveyed were 'informal' (not officially registered). This was significant as it provided insights into an important sector that has previously been neglected. Finally, by combining thorough surveys with in-depth case studies, the research was rigorous enough in its data and methods to persuade policymakers.

Of course, there is still plenty of new and rigorous research that never makes its way into policy or practice, so this alone cannot account for uptake. But Fu is convinced the project would not have been able to influence the thinking or actions of high-level officials – especially not at the UN – if the team did not have persuasive evidence on an under-researched topic area to back up their policy recommendations.

CONTINUOUSLY ENGAGING STAKEHOLDERS

From collaboratively designing the research project to soliciting feedback on the findings, the researchers engaged with a variety of stakeholders from start to finish.

The team believes that involving key individuals and organisations throughout the project was critical to achieving all types of impact. This process began right at the start, as the project itself was designed with input from key stakeholders, including members of the Ghanaian government (MESTI). Before they began their project, the team sent a proposal to MESTI for guidance and approval. After several consultations, they incorporated the government's feedback into the project design and got started.

At various stages during the research, the team continued to convene high-level officials and other industry players in workshops and dissemination activities. For example, STEPRI organised a workshop where local business leaders and national officials discussed the findings and co-produced policy recommendations. Similarly, Fu shared and discussed the research at meetings with UN officials. Through deep engagement with the research findings, the stakeholders were more likely to shift their attitudes and

ideas in accordance with the research (thus strengthening the project's conceptual impact). Moreover, through these interactions, the project team was able to gain and incorporate the feedback of the stakeholders. This, in turn, made it more likely that the policymakers and UN officials would be willing to incorporate these ideas into policy and practice.

Finally, by encouraging interaction throughout the course of the research, the project team was continuously strengthening their networks and connections – which helped bring about the project's connectivity impacts.

LEVERAGING EXISTING CONNECTIONS

The project team reached out to their existing contacts and connections both to conduct and promote their research and expand their networks.

One of the most effective strategies for ensuring the successful dissemination and promotion of the research was leveraging existing networks and connections. For example, the team circulated news of their project through TMCD's newsletter mailing list, which included many influential individuals such as staff from several UN agencies. Similarly, the researchers were able to sustain contact with Ghana's government by leveraging their existing connections with UNCTAD and STEPRI, whose connections with the officials enabled them to act as effective knowledge brokers.

Reaching out to these existing networks contributed to bringing about many different types of impact. First, it strengthened existing connections and, in the case of the Oxford centre's mailing list, led to new ones. This strategy also helped spread the team's findings among new and long-standing connections, thus helping to shape new understandings about innovation. Together, these impacts also set the findings on a path to having a greater impact on policy later down the line.

FOSTERING A COLLABORATIVE ETHOS

By cultivating a spirit of cooperation and respect in all their interactions, the team helped to ensure their project would be carried out and disseminated successfully.

All three team members interviewed stressed the importance of strong and effective collaboration between the researchers and partners. Without it, they believe, conducting the research would have been much more difficult if not impossible. Thus, the team's collaborative ethos bolstered project's ability to bring about all types of impact.

Speaking about the coordination between STEPRI and Oxford University, Essegbey said, 'We were able to build one team from the two institutions.' For Essegbey, this teamwork was especially important when it came to connectivity and capacity building impacts. He explained that all individuals and partners involved in the project exhibited a willingness to learn and an openness to what others had to teach them. This helped to create an atmosphere of mutual respect, which, in turn, strengthened their connections and fostered greater learning and capacity building.

INSTITUTIONALISING KNOWLEDGE

The inclusion of the project's findings into the SDGs is helping to perpetuate the project's conceptual and instrumental impacts.

The DEGRP project's contribution to the formulation and implementation of SDG9 is one of its most significant instrumental impacts. But this impact can also be seen as a strategy for further impact itself. Through its contribution to the SDGs, the project's findings and ideas may continue to shape understandings, policy and practice around the globe.

Although the SDGs are not legally binding, all UN member states are expected to use these goals to design and shape their policies until 2030. Thus, the SDGs, and the ideas they contain, are designed to shape understandings and inform policy for years to come. In this way, the incorporation of the DEGRP research into the SDGs has helped to institutionalise the project's findings, stimulating uptake in both the present and future. As such, it is a strong example of innovation brokering. Though we cannot predict what continued conceptual and instrumental impact the research will have over the next decade, SDG9 will likely continue to inform how global policymakers understand and deal with questions of innovation and development.

Conclusion

The DEGRP project analysed in this case study demonstrates how a single research project can bring about various types of impact. Conceptually, it helped shape understandings about innovation among policymakers. These new ideas made contributions to policy in Ghana and the international SDGs – examples of the project's instrumental impacts. The project's connectivity impacts can be seen in its strengthening and expanding networks of people and organisations working on innovation. And the ways in which the project helped bolster the abilities of its collaborators illustrates its capacity building impacts.

Delving into the stories of these impacts reveals that that there were many factors and strategies that made them possible. By engaging in deliberate communication and engagement strategies from across the K* spectrum, the team was able to strengthen the reach, resonance and influence of their findings. Looking across these narratives and strategies, it's possible to draw out some important lessons.

First, this project demonstrates the importance of conducting comprehensive, evidence-based research designed to fill a demand for knowledge. After identifying a gap in the literature, the team set out to fill it with rigorous research that was informed by local understandings. Now armed with new and sophisticated evidence they didn't previously have, national and international policymakers were more likely to use the findings to inform their policy plans.

Second – and most importantly – the project team remained open to possibilities for impact beyond what they had initially imagined. For instance, even though the team had hoped their project would affect Ghanaian policy, they did not anticipate the influence their project would have on policy at the United Nations. 'I had not envisioned such a wide impact when I drafted the proposal,' Fu said. But throughout the course of the project, she and the rest of the team remained open to new opportunities and willing to talk to anyone who was interested. They were also open to how others might understand and interpret their work. It was this open-minded approach to unanticipated possibilities that led to invitations to high-level meeting invitations and conversations with UN officials. These meetings, in turn, helped bring the project's findings onto the drafting table of the UN SDGs.

Identifying a research gap and filling it with persuasive evidence is a crucial first step for a researcher wishing to influence ideas, policy and practice. But the various impacts of a project may not always be those the researchers first envisage. By remaining open to unanticipated pathways to impact, researchers may find powerful and unexpected opportunities for expanding the reach and uptake of their work.

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