Innovation transfer programmes and quantifiable development outcomes

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Question

What are the development outcomes as a result of innovation transfer from India to DFID India’s target countries in Africa and South Asia1? Look for quantitative benchmarks against DFID India’s proposed outcome indicators (see Appendix A), disaggregated by the instrument used; Technical Assistance/Investments/Grant, etc.

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1 DFID India’s target countries for this piece of work are Africa - Ethiopia, Ghana, Kenya, Mozambique, Nigeria, Rwanda, Tanzania and Uganda, and South Asia - Afghanistan, Bangladesh, Burma/Myanmar and Nepal.

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1. Summary

Insufficient quantifiable data was found in this review to be able to determine the development outcomes as a result of innovation transfer from India to Africa (Ethiopia, Ghana, Kenya, Mozambique, Nigeria, Rwanda, Tanzania and Uganda) and South Asia (Afghanistan, Bangladesh, Burma/Myanmar and Nepal). Upon a rapid desk-review of available information, it was found that virtually no published data exists, instead development innovation transfer programmes appear to be instructed on the assumption that they will result in positive developmental outcomes given the individual components of the initiative(s). DFID India’s Global component of ‘Innovative Ventures and Technologies for Development’ (Global INVENT) programme made headway in addressing this gap in quantifiable data, albeit the pilots remain too immature at this stage to be able to rely on its data for the purposes of this report. It is clear that any future programming in this area must include strong monitoring, evaluation and learning to enable DFID India to continue to collate quantifiable data for future analyses.

Following the successful pilot programme on innovation transfer, Global INVENT, DFID India commissioned a rapid review to look for and report upon 19 key development outcome indicators in its target countries within Africa and South Asia as a direct result of innovation from India to support its new ‘Indian Innovation for Global Development’ (IIGD) programme. The IIGD aims to promote the achievement of the Sustainable Development Goals (SDGs) within Africa and South Asia through the transfer of inclusive Indian innovations with a focus on agriculture, health, water, sanitation, clean energy and finance – with a particular emphasis on working with women and disabled persons. IIGD will offer technical assistance, investment, capital grants and grants to fund the transfer and scaling up of innovations by both civil society organisations (CSOs) and the Indian private sector, with a particular interest in climate sensitive innovations.

The IIGD is being proposed for a number of reasons, including the positive feedback through the Performance Evaluation report of the pilot Global INVENT (University of Greenwich, 2018), which showed a number of promising results due to its focused innovation transfer efforts. Actual quantifiable evidence on the impact of innovation transfer, however, was lacking in the report due to insufficient time having passed since the pilots commenced in 2017 to be able to abstract any meaningful data.

This document is based on a rapid desk-based review of published programme evaluation reports and literature, and extensive internet research, including of organisational and governmental department websites. A detailed analysis of quantifiable data found aggregated by the instrument used (i.e. Technical Assistance, Investments, Grants, etc.) was planned. However due to the virtually non-existent quantifiable data found relating to innovation transfer between India and the target countries, this was not possible and so no evidence-based conclusions have been drawn in this regard.

This review considers the data found during the research period, reflecting on the lack of quantifiable data of developmental outcomes, and briefly touching upon existing developmental innovation transfer programmes between India and the target countries. The report concludes that the IIGD will need a robust monitoring, evaluation and learning component to ensure the outcomes of the programme are captured and analysed throughout (and indeed after) the programme period. It should be noted that this research is ‘gender-blind’ in terms of approach given the scope of the question to find quantifiable data relating to innovation transfer, and not to
specific recipient groups. Regardless, the lack of available data would have precluded a report focusing on gender-related findings.

The full list of the reports, literature and websites reviewed is listed in section 4. Please note, as instructed by DFID India, this list includes resources that were not referred to in the body of the text – to demonstrate the breadth of resources reviewed during this research period.

2. Quantifiable development outcomes and innovation transfer programmes

Considering the evidence

It is clear that innovation transfer\(^2\) from India to Africa and South Asia is not a new invention. As India made a name for itself in developing new low-cost technologies and services, private companies in particular have sought to replicate these practices in other countries. The development sector has also sought to transfer this knowledge and expertise from successful Indian innovations to their target countries, often Low-income Countries (LICs), in an effort to provide new skills and improve developmental outcomes in the recipient countries. A secondary effect of this work is a potential benefit to the Indian innovators, with the opportunity for increased business within the newly formed business relationships in the target countries.

Whilst undertaking this research, the majority of programmes and innovative governmental (Indian) departments were found to be focused on the transfer of innovation at the regional or national level (within India) only (Department for International Development, 2016). This demonstrates the overwhelming focus of innovation transfer remaining within India, with very few programmes, and even less so developmental, focusing on the transfer of innovation outside of India including to Africa and South Asia. Where search results for “innovation transfer” did find projects that sought to transfer ideas or technologies to Africa or South Asia, they were often initiatives developed by for-profit companies or social entrepreneurs who have seen a gap in the market and an opportunity to help people address a specific need, rather than with a focus on developmental outcomes. For example, Koh, Hegde and Das (2016) report on BanaPads\(^3\) that was set up by Richard Bbaale as a social entrepreneur project, using machines of the innovative Indian-based company, Jayaashree Industries, to manufacture sanitary pads to provide affordable sanitaryware, not to improve specific developmental outcomes. No quantifiable data on the developmental outcomes of these programmes could be found, including the methods of instruments used for set-up, likely due to the objective being more social entrepreneurship focused rather than developmental.

The lack of quantifiable data found on innovation transfer programmes is echoed in Connect to Grow’s, one of Global INVENT’s pilot programmes, 2016 baseline report ‘Supporting SME growth through innovation and partnership – a review of the landscape’. It commented: “one of the most important findings in this review for Connect is the lack of evidence on how innovation uptake happens by those adopting and adapting innovation.” (Connect to Grow, 2016, pg.3). This

\(^2\) The IIGD ‘Concept Note for Approval’ (2019) states that it seeks to transfer inclusive innovations; “the creation of new, or modification of existing, technologies, products or services to better meet the needs of lower income and excluded groups – from India to Africa and South Asia” (pg. 3, DFID India, 2019).

\(^3\) BanaPads - [http://banapads.org](http://banapads.org)
finding is reinforced in the 2018 evaluation of the Global INVENT programme by the University of Greenwich, which reached a similar conclusion.

Innovation transfer programmes with developmental aims

Some examples of external innovation transfer programmes from India to Africa and South Asia are listed below, together with what limited quantifiable data is available. Materials from a number of institutional donors including DFID, USAID (the U.S. Agency for International Development), DFAT (Australia’s Department of Foreign Affairs and Trade) and the World Bank were identified and explored during the course of this rapid review. However, given the time limitations, it was not possible to reach out to teams within the same organisations to request relevant programme evaluations, or for extensive internet research on each donor. It may therefore be that other donors are undertaking similar programmes to those listed below, albeit data is not publicly available.

Global INVENT (DFID funded)

Whilst no usable quantifiable data is available yet, it is worth noting some of the outcomes mentioned in the 2018 ‘Performance Evaluation of the Global Component of ‘Innovative Ventures & Technologies for Development’ (Global INVENT)’ given it is the precursor to the proposed IIGD programme.

The Evaluation (University of Greenwich, 2018) reported on the pilot to IIGD which included innovation transfer from India to African and South Asian countries. The pilot innovations are still in their infancy (most innovation partnership pilots were less than a year old at the time of the evaluation), precluding reliable quantifiable data from being included in the evaluation report. Whilst the developmental anticipated outcomes are impressive, including an anticipated 7,500 new jobs, the evaluation notes some potential limitations on the pilots’ ability to scale up, including some pilots (GHI and Zingira) that do not have a clear plan of the affordability of their products for the local market. Furthermore, it remains uncertain if local Governments (in Uganda and Afghanistan) will be willing to step in and pay for the development of an app by ZMQ to provide better healthcare for patients with tuberculosis in-country once Global INVENT’s financial assistance has been depleted. Hence, the longevity of some of the pilots, and therefore the potential to achieve the desired developmental outcomes, remains in question - which is to be expected of pilots of this nature. Lastly, it should be noted that the development indicator of ‘ensuring a focus on women’ was realised in Global INVENT, with a large number of the predicted 300,000 beneficiaries being women, due in part to the health pilots specifically targeting women and girls.

In terms of Return on Investment (ROI), the Evaluation reports that Global INVENT “show positive returns over the first five years…. deliver[ing] an annualised rate of return of 14%, or 89% over the whole period [5 years].” (pg. 29, Natural Resources Institute, University of Greenwich, 2018).
Feed the Future India-Africa Agriculture and Natural Resource Management Innovation Sharing Platform (USAID funded)

The programme seeks to build, demonstrate and test scalable models of agricultural innovation transfer from India to Africa. The only quantifiable data found relates to the pilot of five agricultural innovations from India to Kenya and Malawi by the international non-profit organisation TechnoServe. The pilots include the construction of Seepage Wells in Malawi (TechnoServe, n.d.), and dams to benefit the agricultural livelihoods of Masai Women in Kenya (Pajevic, 2015). Note, it is not known if the below data is based on immature or matured pilots, which may affect the reliability of the data being used as a measure of success for future DFID programming:

- 0.8 ROI
- $2.87 million [£2.26m] in increased revenue for enterprises or increased wages for employees generated as a result of the project
- 3,750 beneficiaries who generated increased wages and revenue as a result of the project
- 83% of the beneficiaries were female
- Note: project budget was $3,800,000 (TechnoServe, 2019).

Feed the Future India Triangular Training Programme (USAID funded)

The programme promotes Indian agricultural training programmes for agricultural professionals from Africa and Asia – focusing initially on Kenya, Malawi and Liberia (National Institute of Agricultural Extension Management (MANAGE), 2019). The success of Phase I of this programme, which saw the trainees go on to implement the new farming practices learnt to improve food and nutritional security in their home countries, resulted in a Phase II being rolled out to extend the training programme to additional countries within the target regions (USAID, n.d.).

Agricultural Innovation Partnership (AIP) Programme – part of Feed the Future initiative (USAID funded)

The aim of the AIP programme is to facilitate knowledge transfer to improve livelihoods of deprived farming communities through education, improved productivity and economic returns. Initially India focused, the AIP is now being rolled out in Nepal at the Agriculture and Forestry University and Malawi at the Lilongwe University of Agriculture & Natural Resources (LUANAR) (USAID, n.d.) (Uppuluri, et al., 2013) which sees best-practice from the AIP being introduced to the target countries.

Summary of quantifiable data

Available quantifiable data from these programmes is replicated below in Table 1 for the reader’s ease. The lack of available data precludes a meaningful analysis.
Table 1: Quantifiable data found on the above innovation transfer programmes from India to Africa and South Asia

<table>
<thead>
<tr>
<th>Programme Name</th>
<th>Quantifiable data found</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global INVENT (DFID India)</td>
<td>No quantifiable (actual) data available</td>
</tr>
<tr>
<td>Feed the Future India-Africa Agriculture and Natural Resource Management Innovation Sharing Platform (USAID funded)</td>
<td>- 0.8 ROI&lt;br&gt;- $2.87million (£2.26m) in increased revenue for enterprises or increased wages for employees generated as a result of the project.&lt;br&gt;- 3,750 beneficiaries who generated increased wages and revenue as a result of the project&lt;br&gt;- 83% of the beneficiaries were female (TechnoServe, 2019).&lt;br&gt;* Not known if data is based on mature pilots which can be used as an evidence-base for IIGD, or if on early-stage pilots, in which case the statistics may be unreliable</td>
</tr>
<tr>
<td>Data from TechnoServe’s agricultural five pilots in Kenya and Malawi*</td>
<td>No quantifiable data found</td>
</tr>
<tr>
<td>Feed the Future India Triangular Training Programme (USAID funded)</td>
<td>No quantifiable data found</td>
</tr>
<tr>
<td>Agricultural Innovation Partnership (AIP) Programme (USAID funded)</td>
<td>No quantifiable data found</td>
</tr>
</tbody>
</table>

The vast majority of Indian innovation Governmental departments, for example the Foundation for Innovation and Technology Transfer, appear to be Indian-innovation focused. The India-Ethiopia Centre for Innovation, Technology Transfer and Commercialization, as part of the India-Ethiopia bilateral partnership in the area of science and technology (Yimer, 2019), is the only department found with an aim of achieving job creation and economic growth in Africa and South Asia. Whilst no quantifiable data was found during this research relating to this partnership, it should be monitored for any future evidence.

USAID as a donor actively pursuing innovation transfer between India and Africa / South Asia

As can be seen above, USAID is actively promoting Indian innovation to Africa and South Asia. Its Country Development Cooperation Strategy (CDCS) includes Development Objective 4; ‘Innovations proven in India increasingly adopted in other countries’ which has seen it explore varying models of innovation transfer through both grant and fee mechanisms for end-users. Despite searching on USAID’s Development Experience Clearing House website https://dec.usaid.gov/dec/home/Default.aspx and completing a wider internet search, it was not possible to find quantifiable development indicator data relating to the above-mentioned innovation transfer programmes. In terms of gender, the ‘USAID/India Country Development Cooperation Strategy Development (CDCS) Objective 4 Mid-term Performance Evaluation’ (2017) mentions that some of the innovative solutions have shown positive gender outcomes, albeit gender outcomes are not a specific focus in many of its programmes (International Development Group LLC, 2017).
A further consideration, as noted by the USAID/India CDCS Objective 4 Mid-term Performance Evaluation, is that USAID’s control over innovation transfer is limited, suggesting less focus on direct support of projects. This could help explain the lack of published quantitative data found during this review.

3. Conclusions

The main focus of this paper was to find quantifiable data, including Return on Investment, on developmental outcomes within target countries in Africa and South Asia as a result of innovation transfer from India. It is clear that published quantitative data in this area is virtually non-existent. It may be that this information does exist but is not easily accessible in publicly available programme evaluation reports. The availability of data (albeit not overwhelmingly quantitative) for regional and national innovation transfer programmes within India echoes DFID India’s position that innovation transfer programmes, such as IIGD, are unique and offer a new opportunity to build upon the well-regarded Global INVENT to explore further the developmental benefits of transferring proven innovations from India to Africa and South Asia.

Given this lack of data, it is interesting to note that where innovation transfer from India to Africa and South Asia is recommended, for example in business cases for new development programmes or evaluation reports, the statements are rarely backed up by quantifiable evidence, but rather appear to be based on an assumption that it must be a positive development approach to take.

It was not possible to provide a comprehensive literature review of innovation transfer, or indeed to uncover every programme (private and governmental) that sought to transfer innovation from India. Given the time available, the review may not have examined every piece of data relating to innovation transfer from India to Africa and South Asia. Nevertheless, the literature found and utilised covers the main body of evidence available and provides a best assessment of what is accessible.

The lack of available quantifiable data, as echoed in Connect to Grow’s 2016 baseline report and the 2018 Evaluation of the Global INVENT programme, emphasises the need for rigorous monitoring, evaluation and learning to form an integral part of the IIGD programme going forward to be able to capture all social, economic and environmental impacts of the programme in terms of innovation transfer to targeted countries within Africa and South Asia to enable future analysis.

4. References


**Additional references**

These documents were found during the course of the research but not referred to in the main report; this is to demonstrate the breadth of research undertaken.


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5. Appendix A

Key outcome indicators proposed for the ‘Indian Innovation for Global Development’ (IIGD) programme

Key outcome indicators currently being considered by DFID India for the proposed ‘Indian Innovation for Global Development’ (IIGD) programme include:

- Number of additional jobs created
- Number of people with improved income
- Number of jobs saved because of the intervention
- Number of direct jobs (green) created
- Number of poor people (earning <1.9 $/ day) benefited as customer, producers, employees, employers - disaggregated by total, women and marginalised
- Number of people supported to cope with the effects of climate change
- Number of poor people who have had improved resilience to climate or otherwise
- Number of people with improved access to clean energy
- Number of people with improved access to goods and services
- Number of people with increased access to financial services - disaggregated by total, women and geography
- Number of people with improved skills/ training
- No. of innovations/ technologies/ companies supported, number of innovations/ start-ups converted into viable businesses
- Amount of additional finance leveraged or mobilised
- Volume of public finance mobilised for climate change purposes (GBP)
- Amount of CO2 emissions or green-house gasses avoided
- Number of new entrants into the market as a result of the IIDG’s investment
- Price reduction in goods used by poor people as a result of the IIDG’s investment
- Number of policy changes adopted by institutions - disaggregated by Government, Public sector, Private sector and Donor community
- UK trade and investment increases in at least three sectors that benefit the poor.

Suggested citation


About this report

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