



Oxford Policy Management

Development Innovation Fund – Health

Executive Summary of the Summative Evaluation

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This final summative evaluation report of the Development Innovation Fund – Health (DIF-H) was prepared by Luize Guimaraes, Frank Atherton, and Sam Franzen, under the leadership of Orvill Adams.

This evaluation was independently conducted. The information and views contained in this report are those of the authors and do not necessarily reflect the opinions of the IDRC or other DIF-H consortium members. Responsibility for the information and views expressed in this report lies entirely with the authors.

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Executive summary

Purpose of the evaluation

This report provides a summative evaluation of the Development Innovation Fund – Health (DIF-H). The primary user of this evaluation is the Government of Canada, which by Treasury Board decision, required that a retrospective assessment of DIF-H relevance and performance be conducted and presented to the Government of Canada after five years of program existence.

The Development Innovation Fund – Health

The Government of Canada established the DIF-H in 2008 when it pledged \$225 million over five years to support breakthrough research on critical global health problems with the aim of bringing lasting improvements to the health and lives of people in low-income countries (Government of Canada, 2008).

DIF-H's main objectives are

1. Identify and prioritize profound health challenges facing the developing world.
2. Mobilize scientific communities in Canada and the rest of the world, including the developing world, to address these health challenges through competitive selection and funding of projects.
3. Facilitate the affordable implementation and commercialization, in developing regions of the world, of solutions that emerge.

DIF-H is realized through the combined efforts of a consortium made up of the International Development Research Centre (IDRC), the Canadian Institutes of Health Research (CIHR), and Grand Challenges Canada (GCC). GCC is the implementing body, and is responsible for organizing grant calls and overseeing funded projects. CIHR is responsible for reviewing applications in response to GCC grant calls. IDRC is responsible for accountability to the Canadian government, disbursing funds to GCC, and managing evaluations and audits of DIF-H.

Methodology

A comprehensive evaluation approach was developed, inspired by contribution analysis (Mayne, 2009), an internationally accepted, theory-based methodology. The evaluation used a mixed-methods design drawing on multiple sources of data, such as program documents and project databases, academic and grey literature, interviews, focus group discussions, field-based case studies, and an online survey of both successful and unsuccessful applicants to DIF-H. A range of perspectives were considered from DIF-H consortium staff, GCC applicants and grantees, DIF-H stakeholders, and external experts. A framework analysis (NatGen Learning, 2012) approach was used to triangulate, cross-check, and analyze the results to ensure they were robust and sufficiently comprehensive.

A draft of this report was reviewed by all members of the consortium, an external oversight committee, and an independent reviewer contracted by Oxford Policy Management.

Findings

Evidence was assessed with reference to the requirements of the Treasury Board of Canada Secretariat. Five core issues were considered, following the Policy on Evaluation (Centre of Excellence for Evaluation, 2009), to assess whether the program has demonstrated value for money as a Canadian public investment. The Treasury Board of Canada defines value for money as the degree to which a program demonstrates relevance and performance (Centre of Excellence for Evaluation, 2013).

Relevance

Continued need for the program

Global health continues to be a priority in international development and is highlighted in the Sustainable Development Goals (SDGs) as needing further investment. DIF-H addresses demonstrable needs for Canada, as well as the international community, and in so doing provides a significant contribution to several SDGs (2, 3, 6, 9, and 17). There is a continuing need for financing to support innovations while resolving barriers to global health and safety, and promoting development and equity in low- and middle-income countries (LMICs). Innovation is recognized as a relevant and cost-effective way to address health challenges in LMICs. DIF-H has increased the opportunities for Canadian researchers and innovators to engage with LMIC innovators and research institutions. This work, supported by DIF-H, has contributed to positioning Canada at the forefront of international efforts to rethink development modalities.

The Canadian public recognizes the importance of this national support for development and global health, both from a humanitarian perspective and in terms of reducing the potential dangers of global health risks, and appreciates the value it adds to Canada's international reputation.

Alignment with government priorities

Global health is a priority for Canadian official development assistance (ODA), and within that, maternal, newborn, and child health is a key priority. DIF-H is aligned with the Department of Foreign Affairs, Trade and Development's Report on Plans and Priorities.

DIF-H is also broadly aligned with other Canadian government sectors, such as industry and trade and the renewed science and technology strategy (Government of Canada, 2015).

DIF-H supports projects in 54 countries, many of which are classed as priorities for Canadian ODA. DIF-H aims to expand relevant innovations developed in these countries to benefit more ODA priority countries.

Alignment with federal roles and responsibilities

Innovation must be based on good science, yet be adaptive and responsive to local needs. Good management is essential in balancing the risks inherent in investing in innovation. By leveraging the expertise of all consortium members, DIF-H addresses all these issues and, therefore, the consortium mechanism is well suited to managing an innovation fund and providing a funding delivery vehicle.

In the absence of any suitable independent not-for profit organization, the decision to create GCC as a new organization within the consortium was also appropriate, and still remains valid.

DIF-H offers a valuable contribution to Canada's diplomatic agenda and GCC has established an impressive set of formal and informal international partnerships and networks. However, DIF-H lacks a clear strategic vision for coordinating with, and working alongside, the wider governmental aid effort.

Performance

Achievement of expected outcomes

Ultimate outcomes have been achieved. DIF-H-funded projects have saved and improved lives through innovative interventions. This evaluation estimates that in the region of 8,689 lives have been saved (range: 209 to 16,415) and 160,000 lives improved (range: 136,905 to 252,452).

Intermediate outcomes have been achieved. Around 3.69 million people in developing countries (range: 3.69 million to 5.28 million) now have access to innovative health products and services developed through DIF-H funding. Projects funded by DIF-H have had a positive impact on health policies, training practices, and health systems, improving the lives of end-users.

Immediate outcomes have been achieved. Around 7,600 jobs and funding opportunities in addressing global health through innovation have been created both in Canada (estimated 578) and in LMICs (estimated 7,018). An estimated 78% of DIF-H-funded projects were specifically developed in response to GCC grant calls, supporting the idea that DIF-H is addressing a market gap and, indeed, creating new opportunities, rather than funding adapted or repurposed projects.

As current investments mature, further beneficial outcomes are expected.

GCC has successfully promoted organizational and project partnerships, building networks and developing capacity in supporting health innovation projects. It has also leveraged and secured venture capital funding in excess of the original DIF-H investment.

These activities have contributed to increased knowledge and awareness of a positive international Canadian brand related to global health innovation. Plans to further promote the Canadian government's involvement in DIF-H will further boost Canada's reputation.

Outputs have been produced. According to the most recent data available (GCC Annual Report 2013–2014), 346 innovations have been developed, including prototypes, service delivery models, and models developed through economic modelling. Grantees have published results in peer-reviewed papers and have secured patents for innovations.

In addition, there is a high success rate in expanding the development of small-scale projects. Caution is needed in interpreting this result; it may suggest a conservative approach to funding advanced projects with little risk. A more risk-tolerant approach could see the funding of even more innovative projects that offer a fresh and novel perspective.

These are significant accomplishments for a research and innovation program that has only been operational for five years. It is our independent assessment that the Government of Canada (by action

of IDRC, CIHR, and GCC) has demonstrated international leadership in the use of science and human creativity to improve the health of those who need it most.

Still, GCC monitoring of projects and reporting of results requires improvement. These findings represent a triangulation of the best available evidence from multiple GCC documents, and primary data independently collected by the evaluators. More precise and reliable presentation of results was not possible due to deficiencies and limitations of the GCC monitoring and reporting system.

These limitations result from attempting to develop a monitoring and reporting system that requires minimal effort, can be easily used by grantees, and requires little technical expertise to interpret reports. The system is not sufficiently systematic, and indicators need to be strengthened. In addition, GCC's reporting of results requires greater attention to scientific rigour, transparency, and consistency. The current approach damages the credibility of claims by allowing skepticism of genuine results.

GCC has improved this system since the formative evaluation, but further work is still needed.

Demonstration of efficiency and economy

DIF-H has been an efficient investment for the Government of Canada, in terms of both the results achieved in relation to resources utilized (allocative efficiency) and the processes that have translated inputs into outputs (operational efficiency).

The evaluation found that the establishment and implementation of DIF-H was economical, with minimization of procurement costs, mechanisms to leverage technical support through networking, and restricting inputs to only those that were needed. However, some of the DIF-H economies may not actually be net savings for the Government of Canada, because the services provided by CIHR and IDRC have been undervalued. The exact funding shortfall incurred by these organizations due to insufficient funding allocation is not known because resource outputs assigned to DIF-H were not tracked.

The allocative efficiency of DIF-H is acceptable, especially since more results from current investments will be achieved in the future. The findings of this evaluation provide benchmark data for future assessments of the DIF-H or similar programs.

The operational efficiency of DIF-H is good, but there is room for improvement. DIF-H and GCC compare well to international benchmarks, but it appears that GCC underinvests in its own operations. Efficiency could be increased, for example, by hiring more specialist staff to improve the rigour of monitoring and evaluation. While DIF-H's management and reviewing practices are good, internal knowledge transfer throughout the consortium has at times been inefficient.

All DIF-H consortium members performed their specified roles proficiently. DIF-H is adequately directed by the GCC board, which includes representatives from IDRC and CIHR. However, current governance mechanisms do not provide the Government of Canada with a system to proactively steer DIF-H activities, which renders the government vulnerable to risks that it has no ability to mitigate.

The evaluators note that there has been limited scientific input throughout project life cycles and in relation to recent DIF-H management decisions. This means that opportunities to guide program

developments scientifically have been missed and the scientific rigour of projects cannot be guaranteed.

Conclusions and recommendations

The Government of Canada’s investment in DIF-H has provided value for money. Investing in DIF-H remains relevant, and DIF-H has produced significant results. These outcomes have been produced economically, with acceptable levels of allocative efficiency and good levels of operational efficiency. Still, this evaluation has uncovered several issues that require attention.

If further investment is allocated to DIF-H in its current form, a key consideration will be determining the extent to which the Government of Canada wishes to steer the strategic direction of these funds. As the financing of GCC by external sources increases and its accountabilities diversify, the Canadian government’s stewardship influence will be weakened. However, increasing government control risks undermining the purposes for which GCC was created: independence, flexibility, and responsiveness.

Regardless of the future form that DIF-H takes, the following recommendations are presented to improve program relevance and performance.

Recommendation 1: Better strategy. DIF-H should develop an applied and dynamic, consortia-level strategy for outlining coordination with Canadian aid and other governmental initiatives in global health and development. A DIF-H strategy should also formalize expected visibility arrangements and improve internal knowledge transfer and cooperation between consortium members. The same is recommended of any DIF endeavour into other fields of innovation (e.g., environment, agriculture, education, etc.).

Recommendation 2: Strengthen scientific oversight. Although CIHR peer review ensures that funded projects are scientifically rigorous at their earliest stages, there are few mechanisms to ensure that scientific standards of projects are maintained post-implementation. Mechanisms should be put in place to guarantee the scientific integrity of funded projects throughout their life cycle. While the Scientific Advisory Board does review the outcomes of the top performing projects, it is afforded insufficient time and data, and it lacks sufficient resources and mandate to do this for all projects. Therefore a more systematic, but efficient, mechanism is needed. GCC’s formation of specialist platforms to support the targeted challenge and Transition to Scale grand challenges is a step in the right direction, but GCC should pay greater attention to the Stars projects.

The decision that the Scientific Advisory Board should work through subcommittees has resulted in reduced scientific leadership and input. Accordingly, opportunities were missed for engagement with the strategic direction of GCC and DIF-H (as opposed to the operational work of the individual grand challenges). DIF-H must consider these implications and work to ensure that management decisions continue to be supported by expert scientific thinking.

Recommendation 3: Optimize metrics. The results indicators used by GCC require further refinement to make them more precise and objective. Adopting international measures of efficacy that better reflect age-weighted health gains would also enable international comparisons of efficiency. The evaluators appreciate that there are advantages and limitations of different measurement methodologies, but the use of common metrics and benchmarks could help facilitate reporting, and form the basis for target setting.

Recommendation 4: More rigorous monitoring and reporting. GCC should undertake a comprehensive review of its monitoring and reporting arrangements. These need to be more systematic, transparent, and consistent, so as to balance the externally facing promotional approach with the need for scientific rigour. To ensure credibility, there should be an audit trail connecting raw data to final results claims.

Recommendation 5: Seize efficiency opportunities. GCC is an efficient organization. However, further operational investment would increase efficiency to a greater extent and avoid the risk of underperformance. Although this represents a trade-off with cost minimization, investment in areas such as more comprehensive monitoring and additional specialist staff could improve results and reporting that will balance the allocative efficiency ratio of inputs to outcomes—in simpler terms, doing more with more.

DIF-H should review the funds allocated to IDRC and CIHR to ensure that they cover the actual costs incurred in providing services to DIF-H. This allocation should be based on an estimation of previous resource use. Future resources provided to DIF-H should be tracked to prevent under- or over-allocations.