

## GUIDELINES FOR RESEARCH TRANSPARENCY IN GIF-SPONSORED IMPACT EVALUATION

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## Introduction

Research advances GIF's goals via two channels. First, research results can feed into project-specific decisions on funding, scaling, and payment. Second, research findings and data contribute general learning on development issues.

To maximise these benefits, GIF funds research in a manner that reflects the core principles of credibility, transparency and accessibility while minimising the reporting burden on researchers. This note provides guidelines on how to do so.

This policy should be read in conjunction with GIF's Global Access and Intellectual Property Policy (IP Policy), which sets out GIF's approach to ownership, use and licensing of Project IP (intellectual property created as a result of GIF's funding) and its related Background IP (intellectual property that is needed to maximise use of the Project IP).

## Scope

These guidelines focus on formal impact evaluation, which features in many GIF projects. This includes experimental, clinical, and nonexperimental studies. It pertains to studies that are contractually described as an output or objective of GIF support and are intended to result in published papers. An addendum describes how the principles of credibility, transparency, and accessibility apply to other types of formal evaluations or research. However, the guidelines don't apply to internal operations research.

## Guiding principles

### *Credibility*

GIF's research results inform sometimes-contentious decisions on investments or public policy. So, results must be credible to decision-makers and stakeholders. This means that the research must have, and be perceived as having, the highest degree of integrity, at a time when research integrity is increasingly questioned<sup>1</sup>. The prime concern is not inappropriate practices by the researchers, whom GIF carefully vets. It is to defend them against pressures from investees and claims of improper practice from other stakeholders.

### *Transparency and accessibility*

Research transparency increases the impact of GIF-funded research by exposing it to a broader audience. GIF's research will often have implications beyond the project to which it is attached. In addition, transparency brings more eyes to bear on the research, providing additional quality assurance and the potential for additional insights on the research question.

Transparency has limited value unless the work is easily and freely accessible. This means that it should be accessible at no charge via the internet, it is machine-readable (e.g. data is in a database format rather than published as a pdf file), and that it is indexed and findable via search engines.

### *Minimisation of the reporting burden*

GIF understands that fostering transparency and accessibility can involve additional time and effort. GIF seeks to balance the costs and benefits of documentation requirements. In

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<sup>1</sup> For evidence of widespread problems with replicability or adherence to good practices see: Open Science Collaboration, "Estimating the Reproducibility of Psychological Science" *Science* 349.6251 (2015). Necker, Sarah. "Scientific misbehavior in economics." *Research Policy* 43.10 (2014): 1747-1759.

general, larger research efforts with more consequential implications will require greater documentation and preparation. Because the benefits and burdens will differ between cases, this note sets out minimum requirements together with general guidelines to inform GIF's grant and investment documents.

Reasonable costs associated with complying with these standards can be built into research budgets. GIF investment team members should work with investees and associated researchers to set clear expectations early-on about what is required and budget appropriately. Team members will also ensure that these guidelines are included in GIF contracts where required.

## Practices

Below are guidelines on five practices to promote transparency and credibility. GIF may choose to modify these practices for specific cases when justified.<sup>2</sup> The guidelines will evolve as GIF gains experience and the research community continues to improve its practices.

### 1. Pre-registration

Pre-registration of studies helps to avoid publication bias—the tendency for published studies to reflect an unrepresentative sample of significant results.<sup>3</sup> Also, by creating public, searchable databases with basic information on all ongoing and completed studies, secondary researchers can get a more comprehensive picture of the research landscape. This facilitates meta-analysis and literature reviews and increases the likelihood that a given study will be referenced, regardless of the result.

GIF requires pre-registration of all impact evaluations either on the American Economic Association registry (for RCTs) or the 3ie registry (which includes both experimental and non-experimental studies). On a case-by-case basis, other registries (for instance, Evidence in Governance and Politics) may be used to reach the right audience. (Clinical trials should follow standards associated with leading journals in the appropriate field.) Pre-registration should generally occur before the intervention begins. It may precede or follow GIF funding decisions.

### 2. Pre-analysis plans

#### *Background*

Pre-analysis plans allow researchers to pre-commit to the analysis that they will conduct before seeing the final data.<sup>4</sup> This provides several benefits, the most often cited of which is by enhancing the credibility of the research findings by avoiding actual or perceived specification searching or data mining. It also enables researchers, investees, and policymakers to identify and resolve disagreement beforehand (for example, choosing which among multiple indicators is the most relevant measure of a particular outcome).

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<sup>2</sup> These guidelines were drawn up around the typical research that GIF has funded—large-scale experimental field studies. Other types of research may require different approaches—though many of the same principles, and some of the same practices will still apply. See, for example, similar initiatives toward research transparency in the sciences (<https://cos.io/our-services/top-guidelines/>) and political science (<http://www.dartstatement.org/>).

<sup>3</sup> Significant empirical evidence exists for publication bias. See, for example, Card, David, and Alan B. Krueger. "Time-series minimum-wage studies: a meta-analysis." *The American Economic Review* 85.2 (1995): 238-243.

<sup>4</sup> This section was informed by a more thorough discussion of the benefits and costs of pre-analysis plans as discussed in Olken, Benjamin A. "Promises and perils of pre-analysis plans." *The Journal of Economic Perspectives* 29.3 (2015): 61-80.

However, pre-analysis plans have disadvantages. They are time-consuming to construct. Journals may reject the idea of ‘pre-analysis with *ex post* flexibility’ and reject papers that deviate from pre-analysis plans. This could discourage valuable exploratory data analysis and pursuit of insights from unexpected findings.

### *GIF guidelines*

Balancing these pros and cons, GIF’s minimum requirement for non-clinical research is consistent with the information required by the AEA registry. (<https://www.socialscienceregistry.org/site/instructions>) The researchers should describe at least:

- at least one primary outcome, including how it is constructed
- definition of the treatment or intervention
- main control variables (e.g. stratification variables)

These plans should be registered in the same time-stamped registries as where the trial is pre-registered. As with pre-registration, pre-analysis plans should be registered before the intervention begins.

GIF encourages researchers to do more complete pre-analysis plans where this could contribute to the credibility of the research. Olken provides a general list of common features in pre-analysis plans, whereas BITSS provides a more detailed template.<sup>5</sup>

### **3. Independence and contracting**

Self-evaluation or independent evaluation? There is a tension between the goals of learning and of external credibility. Hence there is no general rule on whether GIF, or the investee, should be responsible for funding and approving an evaluation of the investee’s innovation. In many cases GIF will want to promote an investee’s capacity to evaluate its own work. This can help build a learning culture, promote feedback and incorporate operational and local insights into assessment. In these cases, GIF will typically build the evaluation into the investee’s funding and assign contracting and management of the evaluation to the investee. This approach will rely on the other tools described in this note – including pre-analysis plans and transparency – to protect the credibility of results. In some cases, GIF may want to specify, in advance, a mechanism for arbitrating disputes between investee and evaluator regarding the acceptance of evaluation reports.

When evaluations are aimed at informing key economic or policy decisions by external stakeholders, avoiding perceptions of evaluation bias may be paramount. In these cases, it may be advisable for GIF to directly contract for the evaluation.

### **4. Open access publishing**

Open access publishing ensures that research results and the methodology by which those results were derived are broadly accessible regardless of ability to pay. For maximum impact, GIF would like results to be as broadly available as possible.

GIF requires that all papers produced from GIF-funded research:

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<sup>5</sup> See Olken, Benjamin A. "Promises and perils of pre-analysis plans." *The Journal of Economic Perspectives* 29.3 (2015): 61-80 and <http://www.bitss.org/>

- a) Be published initially, in an open-access, search-engine indexed working paper version. On a case by case basis, GIF may exempt papers that are aimed for publication in certain journals that disallow submissions that have had prior preprint or working paper versions.
- b) Be submitted for publication in a peer-reviewed journal. If accepted, the paper should be published under a licence which allows free access to all. In accordance with the IP Policy, the preferred licence is an open access licence agreed with GIF, which may be the [Creative Commons Attribution 4.0 Generic License](#) (CC BY 4.0). The paper should be immediately accessible to all (without embargo) upon publication.

Where not otherwise funded, GIF will provide funding to pay open access journals' publication fees. Because journal acceptance may come one or more years after other project activities finish, GIF will usually pay these fees outside the investee's grant or contract.

In addition, depending on the project, GIF may also support the translation of research results into digestible policy notes or other communication material. If GIF funds such material, GIF expects those dissemination materials to be made publicly accessible.

There may be rare exceptions to open access in the case of proprietary and commercially-sensitive or politically sensitive studies.

## 5. Open data publication

### *Content*

When GIF uses public or charitable money to gather data on development topics of wide interest, that data is presumed to be a public good. Consistent with the policy of top-tier journals, GIF requires that anonymised, machine-readable, and clearly documented data will be made publicly available for the purposes of replication of the research results and for further analysis or meta-analysis.

At a minimum, GIF applies the data availability policy of the American Economic Association (AEA), which requires that "the data used in the analysis are clearly and precisely documented and are readily available to any researcher for purposes of replication." Specifically, it requests submission of:

"the data set(s) and programs used to run the final models, plus a description of how previous intermediate data sets and programs were employed to create the final data set(s). Authors are invited to submit these intermediate data files and programs as an option; if they are not provided, authors must fully cooperate with investigators seeking to conduct a replication who request them. The data files and programs can be provided in any format using any statistical package or software." (<https://www.aeaweb.org/journals/policies/data-availability-policy>).

This requirement applies to the entire originally-envisioned impact evaluation. The data should be made available even if the complete analysis is not finished or published.

Preferably *all* data directly relevant to the impact evaluation should be made available (subject to the anonymisation, proprietary and confidentiality exceptions). GIF may require this in the case of evaluations that are big-budget, high-profile, or are the result of self-evaluation. Coverage would include all variables, observations, and treatment conditions collected by survey instrument or sensors, together with documented code that describes how raw data was filtered and transformed into variable used for analysis. In the case of voluminous

instrumented data (e.g. remote or ground sensors), some degree of pre-processing of raw data may be acceptable, with documentation on methods. Where public datasets have been used, the data source and code used to access the data should be fully documented. Internal operational data would be excluded unless central to the analysis.

#### *Proprietary and confidential data*

Exceptions are made to the disclosure rule in the case of confidential, proprietary, or commercially sensitive data.

GIF recognises that some data elements may be covered by third-party confidentiality agreements, including with governments, commercial data suppliers, or the respondents themselves. GIF encourages its investees to obtain licences to make this data available for non-commercial reanalysis/replication purposes, where it is an essential component of the impact evaluation. Likewise, it recognises that some data may be proprietary and sensitive but encourages investees to find ways to make the data accessible without jeopardising proprietary interests. For instance, techniques are emerging that allow computations to be performed on confidential data without revealing the data itself.

**GIF's investment policy emphasises willingness to share lessons as a criterion for project selection. Inability of a proposed evaluation to provide access to essential third-party data (for non-commercial reanalysis/replication) would make the proposal less attractive.**

#### *Anonymisation*

Private data including all personal data (of individuals, firms and households) must be anonymised. Anonymisation should protect the confidentiality of respondents' personally identifiable information, while minimising information loss. Anonymisation should consider the possibility of re-identification via combination with other datasets. Documentation should record the way data was anonymised and any impact that this may have on the ability to replicate subsequent analyses. GIF will provide guidance on acceptable anonymisation standards.

#### *Data publication*

Data and accompanying documentation and code should be published on a publicly accessible, free-to-use, indexed, secure data warehouse site. To ensure data is secure, accessible and easily discoverable, GIF requires primary publication on a reputable repository acceptable to GIF such as the Interuniversity Consortium for Political and Social Research (ICPSR) (<https://www.icpsr.umich.edu/>) or Dataverse (<https://dataverse.org>). Published papers should provide a DOI (digital object identifier) reference to the storage location.

Data should be published under a licence which allows users, at a minimum, to replicate the original analysis and to perform new analyses for non-commercial purposes. As set out in the IP Policy and these guidelines, this may be the [Creative Commons Attribution 4.0 Generic License](https://creativecommons.org/licenses/by/4.0/) (CC BY 4.0).

The repository should enable immediate public access to the data upon publication of the associated research paper. In addition, all project-related data should be published no more than 36 months after closure of the contract. GIF may extend this deadline at its discretion.

#### *Documentation*

Data must be in a machine-readable format and include appropriate documentation and meta-data. Both IPA as well as the International Household Survey Network (IHSN) have recommended guidelines for microdata documentation.

#### *Assistance in data preparation*

GIF understands that the process of data publication can often be time-intensive. Both J-PAL and IPA currently offer services to make data publication easier for researchers. These services include cleaning, curation, validation and publication of datasets.<sup>6</sup> These costs can be included in GIF funding.

### **Guidelines for research other than impact evaluations**

GIF sponsors other research that assesses the performance of an investment or contributes to general knowledge about development. GIF will distinguish between purely internal studies (for instance, to guide implementation) and those intended for external dissemination. The principles of credibility, transparency, and accessibility apply to the latter. As with impact evaluations, the degree of documentation should be proportionate to the scale of the effort and should take appropriate note of confidentiality and anonymity concerns. Publication of reports in open-access format and of data in a reputable data repository remain requirements.

Here are two illustrative examples.

#### *Impact or cost-effectiveness analysis from a pilot project*

Pilot projects may include low-budget (<\$50K) efforts to assess take-up, impact, or cost-effectiveness of an innovation, often via non-random sampling. Minimum appropriate documentation for this analysis might, for instance, include a description of the data collection procedure, definitions of principal variables, and descriptive statistics on treatment and comparison groups.

#### *Qualitative research and evaluation*

Reports of this kind should include at a minimum appropriate methodological documentation, including for instance, how interviewees were selected, interview guidelines, and coding protocols. For instance, it could explain how focus groups or respondents were chosen and how interviews were conducted.

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<sup>6</sup> See, <https://www.povertyactionlab.org/rt> and <http://www.poverty-action.org/researchers/research-resources/research-transparency>

## APPENDIX: ONLINE RESOURCES FOR RESEARCH TRANSPARENCY

### General resources on research transparency

- **Berkeley Initiative for Transparency in the Social Sciences (BITSS)** – Includes best practices for research transparency, pre-analysis plan templates, and free statistical and methodological consulting for reproducible research. <http://www.bitss.org/>
- **International Household Survey Network (IHSN)** – Provides guidance and best practices on data archiving and dissemination particularly for household surveys. Guidance includes the documentation, anonymisation, cataloguing, dissemination and preservation of household data. <http://www.ihsn.org/guidelines>
- **J-PAL Transparency & Reproducibility** – Provides guidance and services for research transparency <https://www.povertyactionlab.org/research-resources/transparency-and-reproducibility>  
<https://www.povertyactionlab.org/rt>
- **IPA Research Transparency** – Provides guidance and services for research transparency. <http://www.poverty-action.org/researchers/research-resources/research-transparency>
- **The Open Science Framework’s Transparency and Openness Guidelines (TOP)** – A set of 8 modular standards that 787 journals and 68 organisations (including funders) are signatories. <https://cos.io/top/>
- **UK information commissioner’s office.** <https://ico.org.uk/for-organisations/guide-to-data-protection/anonymisation/>
- **UK Anonymisation Network.** <http://ukanon.net>

### Registries

- American Economic Association RCT Registry - <https://www.socialscienceregistry.org/>
- 3iE Registry of International Development Impact Evaluations (RIDIE) - <http://ridie.3ieimpact.org/>
- Evidence in Governance and Politics - <http://egap.org>

### Data Warehouses and Catalogs

- DataVerse - <https://dataverse.harvard.edu/>
- Inter-university Consortium for Political and Social Research (ICPSR) - <https://www.icpsr.umich.edu/icpsrweb/index.jsp>

- World Bank Microdata Library: Contains datasets that have been produced by the World Bank, and other international organisations.  
<http://microdata.worldbank.org/index.php/about>
- IHSN  
<http://catalog.ihsn.org/index.php/catalog>