Making an Impact:  
The payback framework and determining research impacts

By Eddy Nason
The Institute On Governance (IOG) is a non-profit organization founded in 1990. Its mission is to explore, share and promote good governance in Canada and abroad, and to help governments, public sector organizations, the voluntary sector, communities and the private sector put it into practice. From our perspective, governance comprises the traditions, institutions and processes that determine how power is exercised, how citizens are given a voice, and how decisions are made on issues of public concern.

Our current activities fall within the following broad themes: Modernizing Government; Board and Organizational Governance; Aboriginal Governance; Building Strong Partnerships; Health and Innovation; and International Programming.

In pursuing these themes, we work in Canada and internationally. We provide advice on governance matters to organizations in the public, private and non-profit sectors. We bring people together in a variety of settings, events and professional development activities to promote learning and dialogue on governance issues. We undertake policy-relevant research, and publish results in the form of policy briefs and research papers.

You will find additional information on the Institute and our current activities on our web site, at www.iog.ca.

© Copyright, 2009, Institute On Governance

Institute On Governance
122 Clarence Street
Ottawa, Ontario
K1N 5P6 Canada
tel: (613) 562-0090
fax: (613) 562-0097
info@iog.ca
www.iog.ca
In 2007 Canada invested nearly $29 billion in R&D.\(^1\) Knowing how that funding has had impacts on the lives of Canadians has become a key part of the Canadian government’s science and technology strategy, *Mobilizing Science and Technology to Canada’s Advantage*.

**An internationally tested approach**

While each research area has moved on with their own evaluation and accountability frameworks, the recent work of the Canadian Academy of Health Sciences (CAHS) has placed a framework for research evaluation in the spotlight. The CAHS major assessment, *Making an Impact: A Preferred Framework and Indicators to Measure Returns on Investment in Health Research*,\(^2\) built upon the Payback Framework for research evaluation that has been widely used in evaluating the impacts of health research around the globe. Payback analyses of health research have been performed in the UK, Ireland, Hong Kong, the Netherlands, and Spain; with an international study across Canada, Australia and the UK also using the framework to determine impacts.\(^3\)

**What is the Payback Framework?**

The Payback Framework is a multidimensional analysis tool that uses a logic model of the research process and a classification system for the benefits of research (Figure 1). The logic model shows the flow of research to outputs and outcomes, while the categorization addresses impacts on: knowledge; research capacity; decision making; health; and socio-economic benefits.

![Figure 1. The Payback Framework (Buxton and Hanney, 1995)](image)

**The how and the why**

Using the payback framework is simple and can use multiple methods. Previous studies have used case studies, bibliometrics, and survey data to evaluate research. These have allowed comparisons between funding methods (e.g. fellowships, project grants and programs); research types (basic and applied); and research performed at different times (e.g. 5 years ago versus 20 years ago). The Payback Framework has even formed the basis of return on investment studies that have identified dollar returns on research funding. 2008’s *Medical Research: What’s it Worth* study built on the impacts and techniques identified in previous payback studies.

Although previous studies have looked at research performed a number of years ago (typically between 5-20 years), new work has developed an end of research survey that allows evaluation of a funding body’s entire research portfolio.\(^4\)

---

The survey provides a “research impact array”, a data presentation tool that allows amalgamation of impacts across projects, that provides a visualization of the strengths and weaknesses of a research portfolio with respect to impacts from research (such as changes to health policy, education and new products/services). This impact array can be used to compare over years, project types, funding mechanisms etc. to show in real time how research is moving to impacts. The survey underpinning the array can also be reapplied to research a number of years after it has finished (re-surveying) to identify where progress is being made in moving research to impact.

**Applying Payback to all research**

After successes in the health research field, the Payback Framework is now being applied to research more widely. In the UK, the Economic and Social Research Council commissioned a number of studies of impact evaluation for their research funding. One of these was a successful test case for applying the Payback Framework to the *Future of Work* funding stream. This project modified the impact categories and the logic model to better reflect the paths to impact, and specific impacts, that social science has.

Most recently, in Ireland the Environmental Protection Agency has used a modified version of the Payback Framework to underpin its evaluation of innovation for a green economy. In *Strive: Innovation for a Green Economy*, the EPA has performed a number of case studies of EPA funding for innovation, using a logic model approach to data collection. This data was then categorized into three modified impact categories: Knowledge production and capacity development; informing policy and environmental benefits; and wider economic benefits.

**Concluding analysis**

As a broad framework for assessing research impacts, the Payback Framework has developed into a trusted tool for evaluation of research dollars. The ability to compare the impacts of disparate types of research is a major strength in fulfilling the accountability requirements of research funders, and the simplicity and adaptability of the Payback Framework make it ideally placed to play a major role in this agenda.

**Further Reading**