

Title:

Measuring and Managing Societal Impact of Research: Understanding Research Impact Frameworks' Building Blocks

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Summary (maximum of 150 words):

The societal impact of research is not only a fundamental part of academic contribution but also a complex goal that needs to be achieved and assessed. Several different frameworks are in place worldwide. Nevertheless, given their variety of areas, goals, and approaches, it is unclear which fundamentals they are based on. Thus, this developmental paper aims to identify the building blocks that constitute the key characteristics of project-level societal impact frameworks. In doing so, we will give particular attention to how frameworks conceptualise, measure, manage, and evaluate research impact in different contexts.

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Introduction

The societal impact of research refers to how research contributes to fostering positive changes across various domains, such as improving individual and community well-being, promoting social cohesion and equity, and informing evidence-based policymaking (Penfield et al., 2014). This concept focuses on contribution rather than attribution; it recognises that while research plays a role in creating impact, assessing direct causation is often challenging. Instead, it highlights how research adds value and influences outcomes within a broader context of multiple factors at play (Morton, 2015).

Although the societal impact discussions are more recent (for the last 15 years), in Business & Management (B&M), the tension between rigour and relevance is a longstanding debate. In the 1950s and 1960s, particularly in the United States, literature advocated for a more scientific approach to management, promoting the idea that management should be considered a science (McLaren, 2019). This spurred a movement towards more rigorous research and robust methodological approaches (Koskela, 2017). While this evolution has addressed prior criticisms, it may have inadvertently widened the gap between academic research and its practical application. Suddaby (2024, p. 21) captures this fundamental challenge in B&M field: "The more scientific our research has become, the less impact it has," a view similarly echoed by McLaren (2019), who notes the growing disconnect between academic research (centred on writing for itself) and real-world applications.

In recent years, there has been a growing recognition of the importance of societal impact, prompting a renewed interest in research that addresses pressing social, organisational, environmental, and other societal issues. Recent research has focused on understanding and analysing the societal impact of research and on producing frameworks to help assess this impact (Apgar et al., 2023). Evaluating this type of impact presents a considerable challenge due to its complex nature, the variability in the time frame over which it occurs, the multitude of influencing factors, and the difficulty of providing quantifiable and comparable indicators without oversimplification (Viana-Lora & Nel-lo-Andreu, 2021).

Research Impact Assessment (RIA) frameworks are driven mainly by the need to demonstrate the value of science to governments and taxpayers who are funding public research (McLean et al., 2022). These frameworks have evolved from simple bibliometric measures to more comprehensive approaches that consider both academic and societal impacts to demonstrate the benefits of research in terms of health, economic, social justice, and other types of outcomes. (Greenhalgh et al., 2016). These frameworks operate at multiple levels within the research ecosystem: at the project level to guide individual research initiatives, at the program level to assess departmental or themed research clusters, at the institutional level to evaluate organisational impact, and at the national level to demonstrate broader research value (Adam et al., 2018). While national frameworks like the Research Excellence Framework (REF) have captured significant attention, project-level frameworks play an essential role by specifying categories and areas of evaluation for individual research projects, providing a structured approach to assessing research impact.

The increasing number of project-level impact frameworks has resulted in a varied landscape of methodologies, each with distinct focuses and approaches. Some frameworks concentrate on specific impact domains or disciplines, while others provide more generalised methods suitable for various fields. A recent review by Razmgir et al. (2021) identified 47 models and frameworks, of which 70% were created for health-related areas. In this review, no frameworks

designed for B&M were captured, although there is a recent one by Wood Jr. and Wilner (2024), who created a framework and tested it in a Business School.

Given this context, there is an apparent need to understand the building blocks of these frameworks meta-framework to help synthesise and analyse the various approaches to assessing societal impact, especially in social sciences and B&M. Such a framework would help not only to understand the commonalities and differences between existing frameworks but also to guide the development of more coherent and comprehensive approaches to impact planning and assessment (Cruz Rivera et al., 2017). This paper's contribution, therefore, is to synthesize findings from foundational studies to identify a comprehensive set of building blocks. In doing so, it proposes a conceptual meta-framework (still in development) to guide future analysis of project-level societal impact frameworks.

Methods

This study employs a targeted review and synthesis. The methodology consists of two phases: first, a targeted review of key publications that systematically analyze multiple impact frameworks, and second, a synthesis of the core categories—or building blocks—proposed within these foundational articles. To achieve this, we conducted a search for articles that investigated different impact frameworks. While many articles address this topic, our analysis is primarily based on a foundational study by Raftery et al. (2016), along with three recent publications (Pfeifer & Helmig, 2024; Razmgir et al., 2021; Fowle et al., 2021) that not only explain the frameworks but also propose categories that aid in comprehending the fundamental concepts of each one.

The frameworks' building blocks

To synthesize the identified building blocks, this paper proposes a classification based on three core questions: WHOM (source), HOW (methodology), and WHERE (geographical level). WHOM refers to the Assessment Source Types, identifying the entities or individuals responsible for conducting the assessment, such as researchers, policymakers, funding agencies, or external evaluators. HOW represents the methodological and procedural aspects of the assessment, divided into the planning and execution stages. In the planning phase, elements such as Assessment Objectives define the purpose of evaluation, while Philosophical Roots establish the theoretical foundations that guide the approach. The Time Dimension specifies when the assessment occurs (ex-ante, ongoing, or ex-post), and the Impact Dimensions categorise the domains affected by research (scientific, economic, social, environmental, etc.). Research Domains define the disciplinary scope, while Assessment Approaches determine whether the evaluation is process-based, outcome-based, or integrative. Impact Categories classify the types of change being assessed, such as instrumental, conceptual, or capacity-building impact. The execution phase includes Evaluation Tools, encompassing methods like bibliometric analysis, expert panels, or case studies, and stakeholder engagement, ensuring participatory evaluation and mobilisation of results by incorporating diverse perspectives. Lastly, WHERE refers to the Geographical Influence Level, identifying the scale at which research impact occurs—local, regional, national, or global. This structured categorisation ensures a systematic and multidimensional approach to research impact assessment.

Table 1. Assessment Sources

Category	Definition	Subcategories
Assessment Source Types	The origin or entity conducting the research impact assessment	1. National evaluation systems 2. Research funding organizations 3. Research projects assessing their impact 4. Research projects reflecting on approaches 5. Research organisations developing approaches

Source: Pfeifer & Helmig (2024)

The category of Assessment Source Types relates to the origins or entities responsible for conducting research impact assessments, categorising them based on their institutional affiliations and objectives. This classification highlights the diverse institutional perspectives that shape the evaluation of research impact and reflects the growing emphasis on demonstrating societal value in academic and applied research (Pfeifer & Helmig, 2024).

Table 2. Assessment Objectives

Category	Definition	Subcategories
Assessment Objectives	The primary purpose and intended outcomes of the impact assessment	1. Assessment & evaluation 2. Impact improvement 3. Accountability (e.g., justifying funding, government reporting) 4. Analysis 5. Resource allocation (e.g., guiding future research funding decisions) 6. Advocacy 7. Summative 8. Formative

Source: Pfeifer & Helmig (2024)

The category of Assessment Objectives relates to the primary goals and expected outcomes of research impact evaluations, which vary according to institutional priorities and stakeholder needs (Pfeifer & Helmig, 2024). As highlighted by the authors, analysis and accountability are the most prevalent aims. An important feature here is whether the assessment is formative or summative, created by Reed et al. (2021). Evaluation designs can either take a summative approach, which emphasises evidencing and claiming impacts while ensuring accountability, or take a formative approach, concentrating on ongoing monitoring, learning, adaptation, and taking responsibility for the effects research creates.

Table 3. Philosophical Assumptions

Category	Definition	Subcategories
Philosophical Roots	Different assumptions about the nature of knowledge.	1. Positivist 2. Constructivist 3. Realist 4. Critical 5. Performative

Source: Raftery et al. (2016).

The philosophical roots of research impact models embody many assumptions regarding the essence of knowledge, engaging critical ontological and epistemological viewpoints that

influence scientific investigation. These assumptions inform researchers' conceptualisation of knowledge (ontology), their understanding of its comprehension (epistemology), and the connections between study and practice. These paradigms can affect impact assessment in its choices of objectives, categories, and approaches to evaluation (Raftery et al., 2016).

Table 4. Time Dimension

Category	Definition	Subcategories
Time Dimension	When the assessment takes place concerning the research	1. Ex-ante (before) 2. Ongoing/monitoring 3. Ex-post (after)

Sources: Pfeifer & Helmig (2024) and Razmgir et al. (2021)

The Time Dimension in research impact assessment refers to the temporal perspective applied to evaluate research contributions. This aspect is essential for understanding when an assessment concerning the research process occurs: before research begins (ex-ante), during the research process (ongoing), or after (ex-post). Scholars argue that a greater focus on ex-ante evaluations could enhance the alignment of research with societal needs by incorporating foresight and impact planning from the outset (Pfeifer & Helmig, 2024; Razmgir et al., 2021). Most frameworks focus on ex-post assessment (41% in Pfeifer & Helmig, 2024).

Table 5. Impact Dimensions

Category	Definition	Subcategories
Impact Dimensions (Areas)	The different aspects or areas where research creates change. These are broad areas where research impact occurs. They categorise the fields or sectors affected by research outcomes.	1. Scientific & Knowledge Production (e.g., new theories, methodologies) 2. Economic (e.g., increased productivity, job creation) 3. Environmental (e.g., climate policies, conservation) 4. Health & Well-being (e.g., new treatments, public health initiatives) 5. Policy & Governance (e.g., evidence-based decision-making) 6. Social & Cultural (e.g., behavioural change, social justice movements) 7. Technology & Innovation 8. Organizational (Enhancing institutional decision-making, governance structures, strategic planning, and operational efficiency within organisations)

Sources: Pfeifer & Helmig (2024) and Razmgir et al. (2021)

The Impact Dimensions category specifies the extensive domains in which research produces significant change, including scientific, economic, environmental, health, policy, social, technical, and organisational implications. These dimensions illustrate, for example, the role of research in knowledge production via novel theories and methodologies, its impact on economic productivity and job creation, and its contribution to environmental policy formulation (Pfeifer & Helmig, 2024). One of the first papers to define these dimensions was Godin and Doré (2005). These have also been adopted by national assessment frameworks, such as the Research Excellence Framework (REF) in the UK and ERA in Australia.

Table 6. Research Domains

Category	Definition	Subcategories
Research Domains	The field or sector where the impact assessment is applied	1. Health 2. Industry 3. Social Science 4. Public sector 5. Environmental 6. All areas

Souce: Razmgir et al. (2021)

The domains of research that can be evaluated using the framework vary significantly. Some frameworks are tailored specifically to health research, while others may encompass environmental studies or adopt a more comprehensive approach across various disciplines. For instance, the framework developed by Edwards and Meagher (2020) primarily concentrates on forestry research.

Table 7. Assessment Approaches

Category	Definition	Subcategories
Assessment Approaches	The methodological orientation used to evaluate the impact	1. Process-based 2. Outcome-based 3. Integrative (both process & outcome)

Souce: Razmgir et al. (2021)

The Assessment Approaches category refers to the methodological framework used to evaluate research contributions. Razmgir et al. (2021) identify three distinct assessment approaches: process-based, outcome-based, and integrative, combining process and outcome elements. The process-based approach perceives impact generation as a continuous journey, focusing on the steps required to achieve research impact. In contrast, the outcome-based approach emphasises the outputs and tangible results of research. The integrative approach, on the other hand, considers both the processes that lead to research impact and the concrete outcomes produced. Razmgir et al. (2021) note that most frameworks (40% in their sample) are outcome-based.

Table 8. Impact Categories in Research Assessment

Category	Definition	Subcategories
Impact Categories	Types of changes or effects being measured	1. Instrumental Impact (direct applications of research, like policy changes) 2. Conceptual Impact (influencing thinking, shaping debates) 3. Capacity-building Impact (enhancing skills, research literacy) 4. Symbolic (as an instrument of persuasion to support a position)

Sources: Pfeifer & Helmig (2024) and Razmgir et al. (2021)

The Impact Categories illustrate the various changes or consequences resulting from research. Initially developed in the context of evidence-based policy to enhance understanding of research utilisation (Nutley et al., 2007), these categories serve a distinct purpose. While some articles and frameworks may pair them with Impact Dimensions, which focus on the targets of the impact, the categories themselves represent the processes through which research facilitates

change. As emphasised by Nutley et al. (2007), these categories are intended to be fluid and dynamic rather than static.

Table 9. Evaluation Tools

Category	Definition	Subcategories
Evaluation Tools	Specific methods used to measure and assess impact	1. Scoring scale 2. Rating system 3. Expert panel 4. Impact toolbox 5. Balanced scorecard 6. Bibliometric analysis 7. Case studies 8. Stakeholder interviews 9. Multidimensional theoretical models

Sources: Fowle et al. (2021) and Razmgir et al. (2021)

The Evaluation Tools category encompasses various methodologies utilised to assess the impact of research across multiple dimensions. These tools provide systematic means to analyse research outcomes, integrating both qualitative assessments and quantitative measures. They are crucial for enhancing accountability, guiding policy decisions, and optimising research funding strategies (Razmgir et al., 2021). In a review of these different evaluation tools, Boaz et al. (2009) noted that interviews and case studies are among the most frequently employed methods.

Table 10. Stakeholder Engagement

Category	Definition	Subcategories
Stakeholder Engagement	How different stakeholders are involved in the assessment process	1. Priority setting 2. Assessment component selection 3. Evidence gathering 4. Impact evaluation 5. Results validation

Source: Pfeifer & Helmig (2024)

The category of Stakeholder Engagement refers to the extent and manner in which different stakeholders participate in the research impact assessment process. These subcategories highlight the collaborative nature of impact assessments and underscore the importance of stakeholders in developing meaningful and actionable evaluations (Pfeifer & Helmig, 2024).

Table 11. Geographical Influence Level

Category	Definition	Subcategories
Geographical Influence Level	The spatial reach or scope of impact	1. Local 2. Regional 3. National 4. International All levels

Source: Pfeifer & Helmig (2024)

The Geographical Influence Level denotes the spatial scope of research impact assessments, delineating the degree to which research outcomes affect various levels of governance in

society. Comprehending the diverse levels guarantees that research assessments are consistent with the spatial scale of the evaluated research (Pfeifer & Helmig, 2024).

The identification of these building blocks is the foundation for a broader research project that will use this proposed meta-framework to: (1) analyse research impact frameworks focused on social sciences, B&M, or multidisciplinary approaches; (2) analyse impact reports from Brazilian research programs focused on B&M; (3) interview program coordinators to understand their perspectives and actions regarding research impact; (4) propose a new framework applicable to B&M, emphasizing a formative, learning-based approach. As a philosophical assumption of the research group, this new framework should account for the context, since several contextual factors might influence how the research process is conducted, either from the research field or the region where the research is conducted (McLean et al., 2022).

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