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COMMENTARY



Research-Practice-Collaborations in International Sustainable Development and Knowledge Production: Reflections from a Political-Economic Perspective

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Abstract

The cooperation between researchers and practitioners during the different stages of the research process is promoted as it can be of benefit to both society and research supporting processes of 'transformation'. While acknowledging the important potential of research—practice—collaborations (RPCs), this paper reflects on RPCs from a political-economic perspective to also address potential unintended adverse effects on knowledge generation due to divergent interests, incomplete information or the unequal distribution of resources. Asymmetries between actors may induce distorted and biased knowledge and even help produce or exacerbate existing inequalities. Potential merits and limitations of RPCs, therefore, need to be gauged. Taking RPCs seriously requires paying attention to these possible tensions—both in general and with respect to international development research, in particular: On the one hand, there are attempts to contribute to societal change and ethical concerns of equity at the heart of international development research, and on the other hand, there is the relative risk of encountering asymmetries more likely.

Keywords Knowledge co-production · International sustainable development · Research-practice-collaborations · Collective action · Interests · Power

Résumé

La coopération entre chercheurs et praticiens au cours des différentes étapes du processus de recherche est encouragée car elle peut être bénéfique à la fois pour la société et pour la recherche qui appuie les processus de « transformation». Tout en reconnaissant l'important potentiel que représente la collaboration entre recherche et pratique (CRP), cet article adopte un point de vue politico-économique dans sa réflexion sur la CRP afin de prendre également en compte les potentiels effets négatifs sur la création de connaissances que peuvent avoir des intérêts divergents, des informations

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incomplètes ou une répartition inégale des ressources. Les asymétries entre acteurs peuvent induire des connaissances déformées et biaisées et peuvent même contribuer à produire ou exacerber des inégalités existantes. Il convient donc d'évaluer les mérites et les limites potentiels de la CRP. Si l'on souhaite prendre la CRP au sérieux, il convient d'être attentif à ces tensions éventuelles – de façon générale ainsi que dans la recherche qui porte sur le développement international, en particulier: d'un côté, il y a les tentatives de contribuer au changement sociétal et les préoccupations d'ordre éthique liées à l'équité, qui se trouvent au cœur de la recherche sur le développement international; d'un autre, il y a le risque relatif, qui devient plus probable, de se trouver face à des asymétries.

Introduction

Research collaborations between academia and non-academic sectors are no new phenomenon. Examples include somewhat interrelated concepts such as 'transdisciplinary research', 'co-production of knowledge', 'participatory action research' and 'post-normal science'. However, the so-called 'Third Mission', i.e. endeavours to strengthen the impact of science in society by fostering collaborations between academia and non-academic sectors, has been gaining new momentum in higher education policies in Europe in recent years.

The cooperation between researchers and practitioners during the different stages of the research process is promoted as it can be of benefit to both society and research supporting processes of 'transformation'. A recent policy report published by the European Commission defines 'fostering knowledge transfer and collaboration between academia and non-academic sectors' as one of the seven transformation modules in the field of research and innovation (European Commission 2020). Furthermore, in some European countries, grant requirements are becoming more and more stringent to include forms of cross-sectoral collaboration. Collaborative research is also increasingly institutionalised in global research processes and agendas, a prominent example being the Global 2030 Agenda (Sustainable Development Goal 17). This development is a pervasive feature encompassing multiple research areas and epistemic communities, and is being implemented in various disciplines spanning the social, technical, natural and medical sciences. It also includes, but is not limited to, research under the broad umbrella of global sustainable development.

¹ For example, the original definition of the term 'co-production of knowledge' can be traced back to Elinor and Vincent Ostrom, who developed the approach in the 1970s, although at this time, it did not refer to collaborative research, but to the realm of public service delivery (Miller and Wyborn 2018). Transdisciplinary research was also starting to emerge during the 1970s (Bernstein 2015). The theoretical and historical origins of participatory action research can also be traced back to the 1970s, emerging in Southern America and being strongly influenced by radical social movements. Yet, some of its early origins can even be traced back to the 1940s (Macaulay 2017). The concept of 'post-normal science' was introduced by Silvio Funtowicz and Jerome Ravetz in the 1990s (Funtowicz and Ravetz 1993). Interdisciplinarity is another shared characteristic of the aforementioned approaches.



The policy-driven discussion on research-practice-collaborations (RPCs) frequently establishes a rather idealistic view of RPCs, albeit while assuming a 'quasi-automatic' beneficial societal impact, or at least assuming a greater beneficial societal impact than 'standard' research approaches. While acknowledging the important potential of RPCs in terms of knowledge generation within and beyond academia, this paper reflects on RPCs from a political-economic perspective to also address potential unintended adverse effects on knowledge generation. This paper argues that this is key to providing a better understanding of social interactions within RPCs and how the specifics of the relationships between the actors involved can influence outcomes—for better or worse.² Drawing on institutional economic analysis and interpreting RPCs as a problem of collective action,³ the paper seeks to identify key mechanisms of social interactions and structural constellations within RPCs, and demonstrate how these may influence knowledge generation within RPCs and, ultimately, the capacity of RPCs to contribute to societal change. In particular, it highlights the fact that once asymmetries in the relationships among actors are considered, for example, with regard to the distribution of information or resources, unintended biases in knowledge generation may occur, thus, diminishing their potential for generating beneficial societal change.

Understanding the implications of internal dynamics of social interactions within collaborative research practices is of general relevance but seems to be even more important for RPCs in an international context and for Global South–North partnerships, particularly, as these types of partnerships often inhibit inequalities, as has been frequently pointed out in debates on decolonising international research.

Collaborative approaches to research and knowledge production are also objects of research, with a vast amount of literature available on the subject. Recent literature reviews have, for example, been provided by Oliver et al. (2019), Wyborn et al. (2019), and Djenontin and Meadow (2018). Empirical research—mostly single-case studies or comparative case studies involving a small number of projects—has flourished over the past two decades, providing us with a better understanding of collaborative processes or producing guidelines on how to (or how not to) design and implement such projects (e.g. Filipe et al. 2017; Lux et al. 2019; Pohl 2008; Pohl et al. 2010; Rosendahl et al. 2015; Zingerli et al. 2009). Yet, little empirical knowledge is actually available about the impact of RPCs on social change, how they bring about change (or not) and how they compare to alternatives (Oliver et al. 2019; Wyborn et al. 2019). Ultimately, it is not clear how processes for generating co-produced knowledge look in terms of actor constellations and interactions, what happens during the process and how processes are linked to outcomes or impacts (Lux et al. 2019; Schneider et al. 2019; Thompson et al. 2017). Furthermore, a

³ Collective action refers to activities that require the coordination of efforts by two or more individuals to achieve a set of mutual goals.



² Funding initiatives often stipulate the explicit definition of expected social impacts or the design of social impact chains identifying the sequence of envisaged effects. This is a helpful exercise as it requires researchers to think beyond their immediate academic context and to deliberately link research to those empirical phenomena which are supposed to be changed. Yet, within these impact chains, the dynamics within research collaborations and their influence on intended outcomes remain a black box.

repeated finding from studies on RPCs is their high associated costs, for example, in terms of time, funds, conflicts and management requirements (Keller and Bender 2020; Oliver et al. 2019), even inducing criticism that the cost may even outweigh the benefits (Oliver et al. 2019). In addition, while many studies observe the positive implications of collaborative projects, such as the generation of trust, mutual learning and improved communication between different actors, they also highlight the relevance of political aspects, including, for example, interest constellations or power considerations, albeit without systematically addressing or exploring these aspects (e.g. Lux et al. 2019; Schneider et al. 2019).

In this context, Turnhout et al. (2020) criticise a strong tendency to "depoliticise" co-production and Wyborn et al. (2019) stresses that (Wyborn et al. 2019, p. 339). Bartunek and McKenzie (2017) even argue that "...the academic-practitioner relationship, including aspects of conflict and power, is key to understanding why some research collaborations fail to attain knowledge co-production".

Analysing the 'micropolitics' of RPCs is an emerging area of research, which is why the number of studies available on the subject is limited. This paper adds to the current literature by providing an overview framework on how to address the dynamics of social interactions within RPCs and their implications for knowledge generation, while also drawing on and incorporating available research into this framework.

The remainder of the paper is structured as follows: "Defining 'Research-Practice-Collaborations'" section defines the term 'RPC as it is to be understood throughout this paper. "Rationales for Research-Practice-Collaborations, Research Quality and the Benefits of Collective Action" section introduces the notion of 'research quality' in the context of collaborative research, subsuming the various rationales for RPCs and exploring the beneficial aspects of collective action in RPCs. "Interlude: Perceptions of Researchers in International Development on the Role of Research-Practices for Research Quality—Anecdotal Evidence" section presents anecdotal evidence on development researchers' perceptions of the impact of RCPs on research quality. "The Political Nature of RPCs and the Risks of Collective Action" section considers the political nature of RCPs, framing them as collective action problem and illustrating how divergent interests, information problems and power asymmetries may weaken or distort the beneficial influence of RPCs on research quality. "Concluding Remarks" section concludes.

Defining 'Research-Practice-Collaborations'

As mentioned above, research–practice collaborations (RPCs) feature in various approaches, each presenting a variety of terminologies, underlying concepts and normative implications (for an overview, see Wyborn et al. 2019, pp. 322–323). Despite all the differences in these approaches, the direct social interaction between academia and other societal domains outside the world of academics serves as a common reference point. Here, RPC are understood as any research activity that proactively involves practitioners at any given stage in the research chain. Here, practitioners are understood very broadly as organised groups or entities from any



field outside academia, such as governments and public authorities, civil society organisations, communities or enterprises. This definition excludes research activities which assign a passive and non-influential role to non-academic actors, for example, involving practitioners as mere informants (i.e. respondents in data collection processes) or recipients of final research outputs (i.e. as in traditional scientific advice models). Yet the type or intensity of involvement may vary: practitioners may, for example, be directly involved in a research group or cooperation, both formally and informally. They may support and shape research as intermediaries or represent the intended 'end users' of research findings, commenting on and forging research in so-called stakeholder workshops. They may be involved in various stages of the research process, such as defining research topics or questions, developing or selecting concepts and methodologies, collecting data or validating results.

Research conducted as part of RPCs is often applied research, as it is directed at facilitating the process of finding 'solutions' to societal problems. It does, however, need to be stressed that it is by no means limited to non-theoretical, purely empiricist and small-scale 'practical' research. Albeit it involves empirical research in the vast majority of cases, it neither excludes theoretical reasoning (theory-led or theory-generating research) nor fundamental research in terms of extending current academic knowledge. Co-produced knowledge may be embodied in various forms and the outputs of collaborative research may vary. Examples include oral presentations, debates or publications, but also specific products or services (e.g. energy products, medicines, mobile applications, medical services).

Rationales for Research-Practice-Collaborations, Research Quality and the Benefits of Collective Action

Although primarily collaborative research has a "... clear normative objective to support societal change" (Wyborn et al. 2019, p. 321), a variety of rationales underlie the debates surrounding RPCs (see Oliver et al. (2019) and Wyborn et al. (2019) for a summary of arguments found in the literature). RPCs have also inspired a discussion about what constitutes 'research quality' in the context of collaborative research and how to expand the primary criteria applied in disciplinary research, i.e. scientific excellence and scientific relevance (see Belcher et al. 2016, p. 2). When defining research quality in collaborative research, Cash et al. (2003) and Belcher et al. (2016) suggest considering the following dimensions: salience or relevance, credibility and legitimacy.

⁶ The objective here is not to critically discuss the adequacy of extending traditional notions of research quality, but to link these dimensions to the various rationales underlying RPCs and identify the relevant mechanisms which are supposed to bring about the desired results.



⁴ The focus of this paper is less on citizen sciences which, broadly speaking, refers to research conducted by or together with non-professional scientists based on voluntary participation by members of the general public.

⁵ Furthermore, collaborative research may simply be considered as a more 'satisfying and enjoyable' way of conducting research (Oliver et al. 2019, p. 2).

Firstly, RPCs are seen to improve upon the *saliency* or *relevance* of research. This dimension captures the importance or usefulness of knowledge generated outside the realm of academia (Cash et al. 2003, p. 4; Belcher et al. 2016, p. 8).⁷ RPCs are considered 'instrumental' in that they increase the likelihood of research uptake and utilisation, thus, strengthening the direct societal relevance of research. This may result from being able to meet the needs of stakeholders more effectively by having more information about and gaining a better understanding of relevant research themes and contexts. The direct and recurrent social interaction between researchers and non-academic actors may also lead to higher levels of trust, fostering empowerment, and a sense of ownership, and eventually increasing the propensity of practitioners to accept research results. (Oliver et al. 2019, p. 2).

Secondly, RPCs may improve the quality of research by strengthening its *credibility*. Credibility refers to the act of meeting standards of scientific plausibility and technical adequacy (Cash et al. 2003, p. 4, Belcher et al. 2016, pp. 8, 12). This dimension relates to collaborative research being classed as 'substantive', as the inclusion of multiple perspectives from different actors may improve upon the quality of research by allowing for a better and more holistic understanding of the research itself, such as its contexts, relevant questions or suitable methodologies (Oliver et al. 2019, p. 2). Additional merits also relate to positive impulses for the generation of new research questions, even potentially contributing to theory development.

Thirdly, legitimacy refers to the ethical standards and fairness of representation in the research process and requires the inclusion and consideration of multiple perspectives, based on the idea that results will be perceived as legitimate depending on "who participated and who did not, the process for making those choices, and how information is produced, vetted, and disseminated" (Cash et al. 2003, p. 5). In this context, RPCs may be of intrinsic value and simply an end to themselves. The sharing of expertise, which can be considered of one form of power, and increasing the 'voice' of other groups may be seen as 'fairer' and, thus, 'more ethical', thereby moving away from a paternalistic science advice model (Oliver et al. 2019, p. 2). RPCs may enhance the legitimacy or fairness of research by strengthening direct inclusion, representation and the voice of persons, groups or local communities who would otherwise be excluded or involved to a lesser extent. In this sense, RPCs may contribute to the redistribution of power and reduction of power imbalances. Practitioners such as community-based organisations and non-governmental organisations might also be able to help prevent conflicts with local communities triggered by researchers being unaware of (or ignorant to) the social conduct required in a given context (e.g. during data collection).

⁷ Relevant research may eventually translate into 'effective' research. Effectiveness is defined as a fourth dimension of research quality in Belcher et al. (2016). According to Belcher et al. (2016), effective research is understood as research that contributes to positive social, economic or environmental change either through learning or capacity building or by directly contributing to a change in policies or practices. Effectiveness is, therefore, a result of changes in relevance, credibility or legitimacy, and in terms of the order effects, it is seen a superior to the three aforementioned dimensions.



Interlude: Perceptions of Researchers in International Development on the Role of Research-Practices for Research Quality—Anecdotal Evidence

Little is known about how researchers themselves perceive the influence of RPCs on research quality. A study conducted by Keller and Bender (2020) aimed to generate a better understanding of how researchers see the role of RPC in international development. Based on a survey and individual interviews providing anecdotal empirical evidence, the study analysed, among other things, the perceived impact of collaborations on dimensions of research quality (credibility, saliency, legitimacy) and underlying processes.⁸

Of the three dimensions, the strongest impact was found for saliency, with a total of 92% of respondents indicating that RPCs have a positive or strongly positive impact on saliency and 6% indicating a neutral point of view. Even when considering the dimensions of 'credibility' and 'legitimacy', the results were still favourable, with 51% and 59% of respondents, respectively, indicating that RPCs have a positive or strongly positive impact on these dimensions, directly followed by 39% of respondents who viewed the impact of RPCs as neutral. Only a small minority of respondents felt that RPCs have a negative impact on research quality (Keller and Bender 2020, pp. 26–29).

Even though the sample reflected a positive perception of RPCs, respondents were more critical when asked about the process of collaboration, indicating that, not only were RPCs more resource intensive and more difficult to manage than 'normal' research projects, but they were also laden with conflicts, even threatening project success to a certain extent (Keller and Bender 2020, pp. 17–19). The need to examine processes more closely was also mirrored and critically discussed by the interview respondents. As one interviewee summarised:

Thinking about impact can be problematic.[...]. It [research-practice collaboration] is actually quite confrontational, and internally quite political, and what people think of as what their collaboration should look like will vary. [...] So what kinds of effects you want to have externally will be mitigated by what you can actually achieve internally (Keller and Bender 2020, p. 26).

The Political Nature of RPCs and the Risks of Collective Action

The quote above illustrates that RPCs are not a technocratic matter or an idealised interest-free concerted effort to 'improve upon the social world', but are instead political in nature: like all collaborative efforts, RPCs entail a series of problems inherent to collective action.

 $^{^8}$ The study is based on the descriptive statistical analysis of data derived from a non-random online survey (n = 52) targeted at researchers at member institutions of the European Association of Development Research and Training Institutes (EADI). Semi-structured follow-up interviews (n=11) were carried out with a selection of European senior-level researchers with extensive experience in the collaboration with practitioners and the interface between research and practice.



Multiple and Diverging Interests

Even though collective action is motivated by expected gains from cooperation, which constitute shared interests, such as achieving a social change desired by all parties, it is not to be taken for granted that individual interests of actors involved converge on all matters. Actors may have multiple goals or interests and conflicting or diverging interests may induce actions that could cause conflicts and frictions, and eventually induce deviations from intended outcomes. Diverging interests can, of course, also occur among researchers, which is particularly relevant in the case of RPCs as, by definition, they comprise a series of actors who are embedded in different social or professional realities, thus, facing different incentive structures (e.g. Schmidt and Pröpper 2017; Shapiro et al. 2007).

The following examples illustrate the argument that conflicts may result from differences in time horizons. Rigour in scientific empirical analysis requires reliable and often comprehensive datasets. The collection, compilation and analysis of data are time consuming and, thus, cannot be achieved in a short period of time. However, the day-to-day work of practitioners often involves the need for quick decisions. Interests may also differ with respect to the role of abstraction and the relevance of research: theoretical reasoning is an essential component of scientific knowledge. Practitioners may, on the other hand, disregard elaborations of theoretical reasoning, classifying them as dispensable and offering limited practical value (Bender and Kaltenborn 2011, p. 2). Different weightings may also be attached to the specifics of social outcomes (Perlman and West 2015): while practitioners may favour tangible outcomes which are of immediate practical use, for example, new products or technologies, researchers may attach more weight to intangible outcomes, such as an improved understanding of the subject matter or publications.

The presence of conflicts renders RPCs more resource intensive and increases transaction costs. Having said that, it has been pointed out that the exploitation of these differences and the integration of different perspectives to achieve a better understanding is the fundamental motivation for RPPs (McCabe et al. 2021, p. 607). In this sense, the presence of conflicts could even be considered a constituting feature of RPCs. As such, the notion of a 'researcher–practitioner' gap has also been questioned (Bartunek and Rynes 2014).

What does, however, frequently underpin perceptions of 'co-production' and 'transdisciplinary research' is the notion that (sufficiently) complete and symmetric information results in 'better' knowledge. Furthermore, approaches seem to rely on an ethic of equality and reciprocity, which assume that, despite differences or diverging interests, social relations within RPCs are characterised by symmetrical power relations (Turnhout et al. 2020; Antonacopoulou 2009). Equality, though, is by no means assured.

Incomplete and Asymmetric Information

The availability and distribution of information among actors in RPCs are important for understanding the quality of knowledge generated. If information is selective



and skewed, it is not taken for granted that knowledge generated as part of RPCs is socially more relevant, credible or legitimate than knowledge generated through traditional research.

All stakeholders relevant to a specific research endeavour should ideally be represented in RPCs, including those actors that are relevant to a specific cultural context (e.g. village elders) and marginalised groups (Wyborn et al. 2019, p. 334). There are several reasons to suggest that full representation is, in all likelihood, rarely achieved. For example, due to limited resources, it is frequently impossible to include all relevant actors. Furthermore, it is also understandable that there is more of an inclination to form partnerships with actors who know each other and have cooperated in the past than to enter into completely new partnerships.

The problem is amplified if a partnership involves the distribution of asymmetric information in combination with multiple and diverging interests. The actors may then seize the opportunity to engage in opportunistic behaviour, promoting their individual agendas. Asymmetric information may reduce societal relevance and decrease credibility if individual agendas conflict with the requirements stipulated for the ethical conducting of research and induce biases: policymakers or public officials, for example, may want to use research to support their own political agendas and exploit RPCs to pursue their aims. This risk increases if researchers are not familiar with the political context. Practitioners may harness their informational advantage and function as gatekeepers in collaborative research projects, perhaps by hand-picking respondents and pressuring them to give certain answers. Researchers may collude simply to 'obtain their data sample', allowing them to implement their research. Furthermore, if the actors included are supposed to represent or act on behalf of others, asymmetric information can affect legitimacy. NGOs, for example, do not automatically represent the plurality of local interests but tend, instead, to prioritise their own. Although these may, indeed, overlap to a certain extent with local interests, the inclusion of NGOs does not necessarily increase the legitimacy of research.

Resource Asymmetries and Elite Capture

Resources may also be distributed unevenly among actors in RPCs, with some having more time, funds or decision-making rights than others. These elite actors might, therefore, be better positioned to shape processes in such a way so as to better serve their own interests. For example, right from the start, researchers may be able to invest more time and possibly even have more expertise in developing research proposals, which may enable them to incorporate their perspectives and ideas more effectively. Research funding initiatives that exclusively or predominantly provide funding and leadership roles to academics and practitioners from the Global North increase asymmetries. Large NGOs or government actors have a higher visibility and are more likely to be included, whereas small NGOs might not have sufficient resources to render themselves visible. By the same token, larger actors have more resources to invest in the development of ideas or for participating in joint workshops. Schmidt and Pröpper (2017) present a case study of a multi-country research



project finding, which suggests that issues of power and interests hamper processes of knowledge production. Turnhout et al. (2020) provide an insightful literature review into how elite actors may influence collaborative community-based and local research processes by also drawing on the wealth of available literature on participatory development. They also stress that these problems become even more pronounced when considering North–South relationships, and may create or promulgate an inherent Western bias. In this context, Chilisa (2017) discusses how power imbalances are detrimental to and exclude indigenous and local knowledge holders from transdisciplinary research projects.

Concluding Remarks

RPCs have the potential to foster research quality in many ways: they may not only increase the societal relevance of research but may also strengthen its credibility and legitimacy. However, considering RCPs as collective action problems contributes to avoiding fallacies and better understanding the beneficial, but also the potential, adverse impacts on research quality.

Notably, the following characteristics of social interactions in RPCs are considered as beneficial for improving research quality and ultimately increasing the potential for bringing about social change: the inclusion of multiple perspectives of heterogenous actors, enabling better information, increasing trust resulting from personalised relationships and strengthening social inclusion and the sharing of information, thereby reducing power imbalances.

It should not, however, be taken for that granted RPC 'do better' than mere research collaborations. Once asymmetries between actors are considered, disincentives may emerge for all groups of actors involved, researchers and practitioners alike: while divergent interests may also have a constructive element in that they foster debates and, thereby, the generation of knowledge, when combined with incomplete or asymmetric information and the unequal distribution of resources,

¹⁰ Schmidt and Pröpper (2017) also make a link to the literature on participatory development by referencing Cooke and Kothari (2001) when concluding that "transdisciplinarity should not suffer a similar fate to that of issues of gender equality or sustainability which, on paper, are acknowledged as needing to be addressed, but are rarely touched upon in practice; nor should it become a *new form of participation tyranny*". In fact, as the main idea behind RPCs is actually participatory (knowledge) development, the literature on participatory development seems to be able to offer many relevant insights for transdisciplinarity research or other related approaches.



⁹ In addition, McCabe et al. (2021) argue that, beyond resource power, more covert types of power, such as structural power, i.e. who is controlling the decision-making agenda, and normative power, i.e. shaping the beliefs or perceptions of the controlled parties in a way contrary to their interests (McCabe et al. 2021, pp. 607–611), are significant. Structural power may result from exploiting information asymmetries and withholding information from other concerned parties to foster individual interests as discussed above, or it may also result from existing rules or protocols (e.g. funding requirements). Normative power is difficult to detect, as it needs to be distinguished from a change in beliefs or perceptions due to having access to different or better information and resulting changes in knowledge. It may occur more easily in contexts where a particular group of actors has a specific set of characteristics which are held in high regard. Academic knowledge (and titles), for example, are highly valued in some contexts, transferring higher normative power to researchers.

conflicting interests may induce distorted and biased knowledge and even help produce or exacerbate existing inequalities due to selective information, opportunistic behaviour, elite capture or collusion.

Potential merits and limitations of RPCs, therefore, need to be gauged. Taking RPCs seriously requires paying attention to these possible tensions—both in general and with respect to international development research, in particular: on the one hand, there are attempts to contribute to societal change and ethical concerns of equity at the heart of international development research, and on the other hand, there is the relative risk of encountering asymmetries more likely.

In this context, more research is required analysing the incentive structures of the actors involved, including the impact of differences in governance structures—including the broader institutional environment—on actors, social interactions and knowledge generation in RPPs and their implication for the design of RPCs. Furthermore, for the sake of providing an overview, the term 'practitioners' as understood in this paper is obviously very broad, including very different actors and incentive structures. The specifics of different actor constellations should also be addressed.

Naturally, academic research itself is no interest-free arena with homogenous actors, aligned interests, independent of social contexts and producing 'objective' results. Non-objectivistic theories of science are a firm fixture of epistemological discussions. The question is not whether RPCs distort otherwise objective and non-biased research outcomes, but to what extent and in which direction they influence the quality of knowledge *in relation* to 'traditional' research. A better comparative understanding of collaborative and non-collaborative research appears to be another promising area of future research, allowing an assessment to be made as to when RPCs are appropriate and when 'normal science' is appropriate.

The paper concludes with a number of practical implications emerging from a political-economic perspective: first, as has repeatedly been mentioned elsewhere, at the individual level, RPCs require mutual awareness and acceptance of different working 'realities', as well as an openness to new perspectives through mutual learning. Second, regarding the design of collaborations, it has frequently been mentioned and is reiterated here that ceteris paribus due to their complex nature, RPCs require longer timeframes, more personnel and, thus, involve higher funding requirements than disciplinary research. Research funding initiatives also need to be carefully designed to avoid producing or exacerbating adverse asymmetries. Third, considering the inherent political nature of RCPs, it comes as no surprise that it is repeatedly observed and almost 'conventional wisdom' that RPCs involve high transaction costs and generally tend to be more resource intensive than 'pure' academic projects. It does, however, seem less acknowledged that these high transaction costs also increase the *opportunity costs* of RPCs: high transaction costs entail researchers having less time to invest in other activities, such as teaching or other types of research. It seems to be rare for these opportunity costs attached to collaborative research efforts to be truly accounted for in political decision making on different options for designing higher education policies. Last but not least, another important and powerful channel for directly creating social impact is and has always been firmly entrenched in academia: teaching and engaging in debates with students.



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