

# REPUTATIONAL IMPACTS OF INTERNATIONAL RESEARCH AND INNOVATION

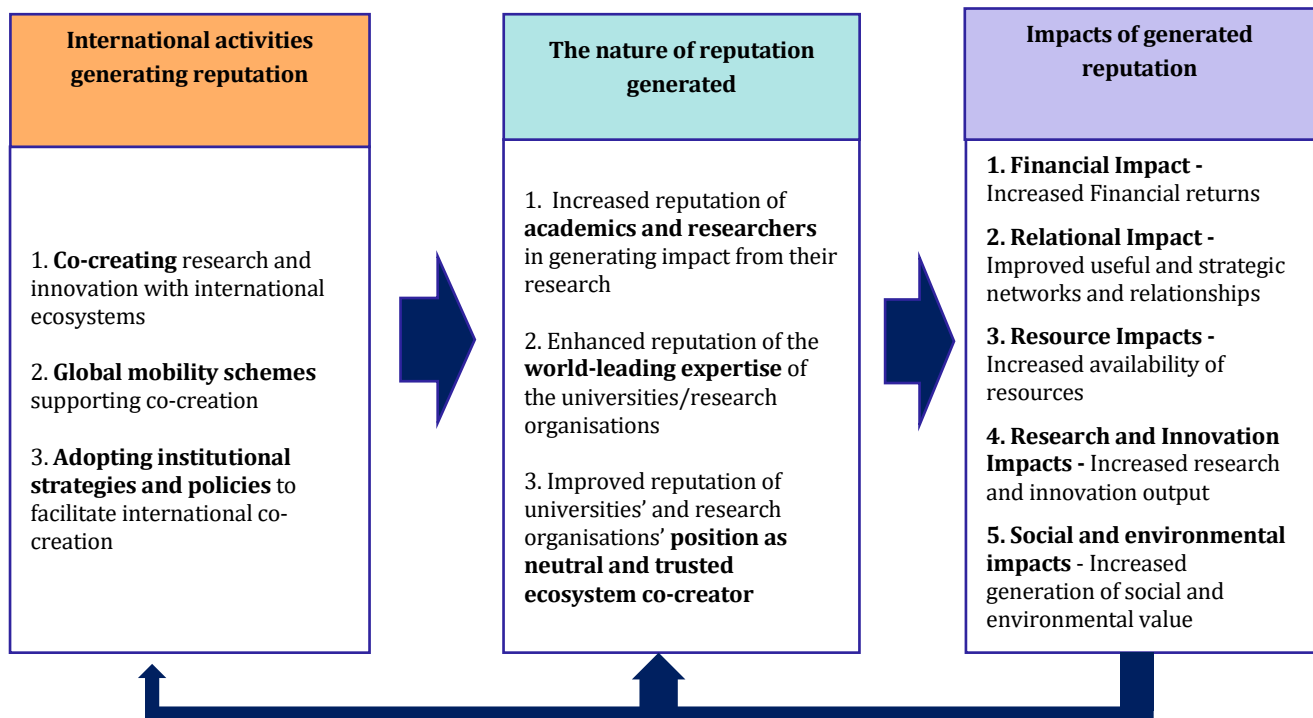
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## 3.1. Research Organisation-focused international R&D collaboration and co-creation

Research organisations collaborate with global partners, and in order to facilitate such collaborations, they implement required institutional changes, provide collaboration platforms, and create a conducive culture. As a result of these international activities for collaboration and co-creation, academics and researchers are perceived as having the ability to simultaneously generate research output and associated impacts. This has significantly enhanced the global standing of universities and research organizations. This world-leading expertise not only elevates their prestige but also solidifies their position as neutral and trusted co-creators within the ecosystem. Such reputation-building results in generating financial, relational, resource, research and innovation as well as social and environmental impacts (Figure 3.1).



**Figure 3.1: Research Organisation-focused international R&D collaboration and co-creation generating reputational impacts**

### 3.1.1 International activities



#### **Co-creating research and innovation with international ecosystems**

Co-creation entails research organisations integrating their knowledge, skills, resources and networks with other actors of the international ecosystem in order to address a challenge or seize an opportunity that they are not able to within a single organisation. As a result, together they are able to simultaneously generate academic, business and social value (De Silva et al 2021). Such co-creation activities may entail traditional low TRL, ground-breaking international research projects collectively engage in with by research organisations as well as higher TRL projects research organisations engage in with closer to market partners. The former involves working with global partners on groundbreaking projects (Fulop & Couchman, 2006). The latter combines traditional academic activities with entrepreneurial and commercial approaches to simultaneously generate research output, impacts, commercialization and education. Considering the scale of global challenges and limitations of funding, co-creation by research organisations becomes more important (Ackerly et al., 2011). Also, considering funding constraints, co-creation offers a mechanism for research organisations and other actors to pool their resources to gain more access to funding to achieve mutually beneficial outcomes (Nieminen & Auranen, 2010). In the UK, universities work closely with international partners with

over half of country's research resulting from international partnerships (Universities UK, 2017). For example, the University of Birmingham through a collaborative investment developed a co-creation partnership with Fraunhofer Institute for Environmental Safety and Energy Technology (UMSICHT) in Germany and Jiangsu Industrial Technology Research Institute (JITRI) in China, with a focus on Energy, Waste and Recycling. This initiative connects three countries to create a robust research and innovation pipeline, spanning from fundamental research to near-market innovations ([UKRI.ORG](https://www.ukri.org)).



### **Global mobility schemes supporting co-creation**

The international mobility across academic, business and other organisations has been reported to be extremely useful to facilitate the co-creation among universities and other ecosystem actors for research, development and innovation. The UK government has introduced many schemes in support of international mobility that include the covering of the expenses of [international co-investigators](#), funding [UK researchers with overseas travel and vice versa](#), and [funding overseas academics to spend time at a UK higher education or other research institution](#). The UK also offers [funding and support to build international collaborations with governments, societies, enterprises, institutions, and people](#). These global mobility schemes and universities and other associated organization's support and encouragement for researchers to capitalise on these opportunities are reported to increase opportunities to co-create new products, services, technologies and processes for local, national and global markets, in addition to traditional research output (MORE4 Europe 2021).



### **Adopting institutional strategies and policies to facilitate international co-creation**

Adopting comprehensive institutional strategies and policies that facilitate, reward, and manage international partnerships is important to make co-creation initiatives successful. Research institutions should be prepared for the complexities of global partnerships and able to effectively navigate them (Fulop & Couchman, 2006).

Cross-sector international collaboration is considered high risk. Companies could pass on various forms of risk to public organizations, and thus it is important to ensure that their exposure is properly managed on a risk-and-return basis (Fulop & Couchman, 2006; Turpin et al., 2004). Also, when engaging in cross-sector international co-creation, the differences in IP strategies, institutional support mechanisms, and incentives could make the interaction further difficult (Yin and Jamali 2021). Since universities and public research organisations have a specific mission for research and education, their engagement in co-creation and associated social and commercial value creation should not be expected to be similar to that of profit-

oriented R&D companies. Therefore, by adopting necessary institutional strategies and policies, universities and research organisations can effectively manage the complexities of cross-sector international collaborations (De Silva et al 2021).

These strategies should ensure that universities and research organisations manage financial, relational, and institutional risks, thereby maintaining their reputation as neutral<sup>1</sup> sources of expertise (De Silva et al., 2023). Trusted Research plays a crucial role in supporting the integrity of the UK's international research collaboration. Trusted Research helps secure international scientific collaboration, protecting intellectual property, sensitive research and personal information. It provides guidance on mitigating potential risks such as theft, misuse or exploitation of research outputs, and assists researchers, UK universities and industry partners in building trust in international collaborations and making informed decisions about potential risks (npsa-trusted-research). Research institutions should also develop their own strategies and policies when co-creating with diverse range of for-profit and not-for-profit actors.

### 3.1.2 Nature of reputation



#### **Increased reputation of academics and researchers in generating impacts from their research**

When academics and researchers engage in international co-creation, especially across diverse disciplines and institutions, it enhances their reputation as global experts. If managed appropriately, co-creation offers opportunities to enhance both academic output and impacts (De Silva 2016). For instance, participating in global research co-creation networks improves access to resources, funding, cutting-edge technologies, industrial-scale R&D facilities, and commercial insights that would not have been possible without co-creation (Bozeman & Gaughan, 2007). International co-creation initiatives enable academics to showcase the international reach of research and its impacts, which is important to demonstrate the value of academic research and thus enhance the researcher's reputation in both academic and non-academic communities (De Silva 2016; De Silva et al 2012). Access to data and resources further increases their ability to publish, and joint publications with international collaborators lead to higher citation impacts (Highman, 2018), indicating broader recognition and influence of their research findings within the academic community (Adams & Gurney, 2018).

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<sup>1</sup> universities are seen as neutral entities because their core missions are the production and dissemination of knowledge and understanding, and preparing students for meaningful lives. This neutrality is essential for fostering an atmosphere of open inquiry and academic freedom (Shaw 2024). The position of universities is compared with the profit-driven motives of businesses and it has been argued that the neutrality is essential in maintaining an environment conducive to open inquiry and unbiased research (Post 2012).



### **Enhanced reputation of the world-leading expertise of universities/research organisations**

UK research organisations and universities, owing to the reputation built through international co-creation and innovative research projects, position themselves as global leaders in research, impact, and education (Highman, 2018). This enhanced reputation stems from consistent contributions to global knowledge and cutting-edge advancements in research and innovation (Lepori et al., 2013). Activities such as co-creating research with international ecosystems elevate the global perception of UK research organisations and universities as centres of excellence. This prestigious standing attracts global talent, increases funding opportunities, and fosters partnerships with leading institutions worldwide (Altbach & Salmi, 2011)



### **Improved reputation of universities' and research organisations' position as neutral and trusted ecosystem co-creators**

Research organisations and universities that effectively manage the complexities of international collaborations and adopt comprehensive strategies and policies to support these partnerships build a reputation as neutral and trusted co-creators. This involves demonstrating transparency, ethical standards, and a commitment to mutual benefits in their collaborations. Such a reputation as a reliable and impartial partner assures stakeholders, including industry partners, citizens, and governmental bodies (Fulop & Couchman, 2007). This trust is crucial for sustained and productive partnerships, enhancing the role of research organisations and universities in fostering innovation and societal development.

### 3.1.3 Impacts of generated reputation

Table 3.1: Impacts of reputation generated through international R&D collaboration and co-creation

Types of Impact	Specific Impacts
1. <b>Financial Impact</b> - Increased Financial returns	Enhanced access to national and international funding
2. <b>Relational Impact</b> - Improved useful and strategic networks and relationships	<p>Increased acceptance within the broader international scientific community</p> <p>Enhanced opportunities to access, strengthen, collaborate with, and develop new, useful networks</p> <p>Improved attractiveness to recruit and collaborate with high-profile academics</p> <p>Increased international student enrolment in UK universities</p>
3. <b>Resource Impacts</b> - Increased availability of resources	Enhanced opportunities for UK universities and research organisations to access and jointly develop resources and infrastructure
4. <b>Research and Innovation Impacts</b> - Increased research and innovation output	<p>Improved research output</p> <p>Increased willingness of international ecosystem actors to collaborate with UK research organisations</p> <p>Increased establishment of international (and often interdisciplinary) co-creation projects and associated centres</p>
5. <b>Social and environmental impacts</b> - Increased generation of social and environmental value	<p>Enhanced opportunities to generate impacts from research (i.e. economic, social and environmental value)</p> <p>Increased opportunities for academics and research organisations to engage in policy-making and advisory roles</p>

## Case Study: International collaboration between Manchester and Beijing in Genomic Medicine

The University of Manchester in partnership with Central Manchester University Hospitals NHS Foundation Trust embarked on a collaborative initiative with Peking University Health Science Centre (PUHSC), the most prestigious and oldest medical school in China.



### ***International R&I activities:***

This collaboration fosters large-scale studies aimed at advancing research in genomic medicine, particularly in addressing diseases such as cancer, blindness, and inherited heart disorders. Genomic medicine involves studying DNA sequencing to understand the function and structure of genes that enable personalising treatments based on genetic information.

The partnership allows for the pooling of resources, expertise, and data for collaborative R&I. The Manchester-Peking Alliance also provides a platform to explore opportunities for international collaborations by establishing training programs for genetic counsellors, doctors, and diagnostic scientists in both Manchester and Beijing, along with regular knowledge exchanges. This collaboration coincides with the launch of the new Manchester Centre for Genomic Medicine by The University and The Trust, which unites internationally renowned researchers.



### ***The nature of reputational impacts generated:***

The strategic partnership has significantly contributed to the institution's reputation by demonstrating its ability to transform healthcare using new technologies to personalise medicine, improve diagnosis and treat people based on their genetic make-up. It also underscores the world-leading expertise of UK universities as Professor Weigang Fang, Vice President for PUHSC, said: "The University and the Trust have the expertise, world-leading minds and the track record in medical education and training to be the ideal partner for PUHSC. We are particularly impressed with the strong partnership between clinicians and doctors in the Manchester Academic Health Science Centre who are working together to develop an effective strategy for the rapid translation of health research into practice."

Not only institutional reputation it also enhances the reputation of academics and researchers in generating impacts of their research. For example, University of Manchester's Professor Graeme Black's research within this collaboration led to breakthroughs such as cost-effective genetic tests for patients with inherited blindness, which are now available in hospitals across the UK.

Source: <https://www.manchester.ac.uk/about/news/health-experts-from-manchester-and-china-join-forces-on-genetic-research/>

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## About the Innovation and Research Caucus

The IRC supports the use of robust evidence and insights in UKRI's strategies and investments, as well as undertaking a co-produced programme of research. Our members are leading academics from across the social sciences, other disciplines and sectors, who are engaged in different aspects of innovation and research system. We connect academic experts, UKRI, IUK and the ESRC, by providing research insights to inform policy and practice. Professor Tim Vorley and Professor Stephen Roper are Co-Directors. The IRC is funded by UKRI via the ESRC and IUK, grant number ES/X010759/1. The support of the funders is acknowledged. The views expressed in this piece are those of the authors and do not necessarily represent those of the funders.

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