REPUTATIONAL IMPACTS OF INTERNATIONAL RESEARCH AND INNOVATION

Professor Muthu De Silva
Dr Maryam Ghorbankhani
Birkbeck, University of London

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Chapter 3: Research Organisation-focused international R&I generating reputational impacts

Research Organisations include universities and research organisations such as government and not-for-profit research organisations, Public Sector Research Establishments, National Academies, Government Departments, and Arm's-length bodies (ALB)[1]. These organisations engage in knowledge transfer, exchange, and co-creation with international actors and are involved in international research networks. Rankings, such as the international ranking of UK universities, consider the research reputation of these organisations among other criteria. These engagements enhance the reputation of UK research organisations as world-leading, neutral, and trusted experts in research, impact (economic, social, and environmental), and education, influencing the direction of the global research and higher education sector. A positive reputation results in increased financial, relational, research, innovation, social, and environmental impacts. This chapter discusses how each of the research organisation-focused international R&I activities generates reputational impacts, along with relevant case study examples.

Since there's extensive literature on universities, this chapter predominantly draws on such literature but the insights could equally apply to other research organisations. This chapter discusses how, using four different types of international R&I, UK research organisations generate reputational impacts for themselves, which in aggregate improve the UK's reputation. The categorises of activities are based on the review of literature conducted in this study.

[1] which is a specific category of central government public bodies that are administratively classified by the Cabinet Office

Research Organisation focused International R&I

- International R&D collaboration and co-creation
- International knowledge transfer, exchange and networks
- International ranking of UK universities

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).

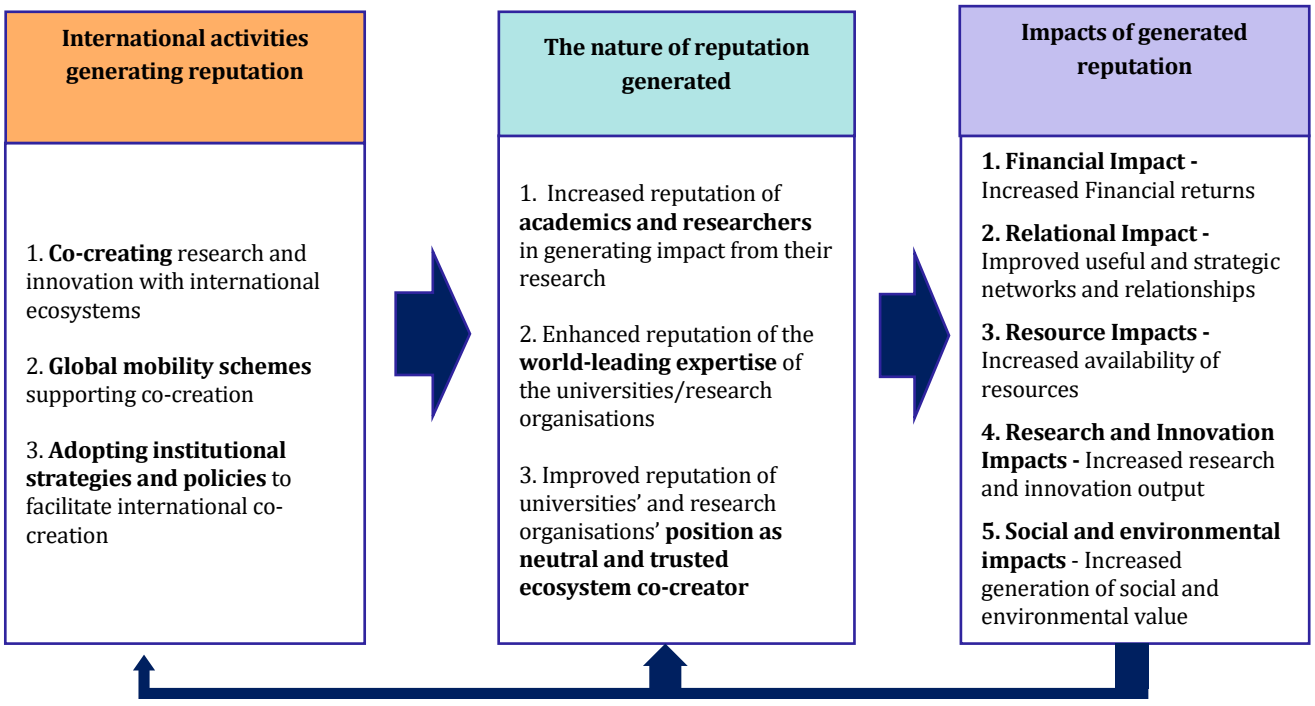

Figure 3.1: Research Organisation-focused international R&D collaboration and co-creation generating reputational impacts

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 at 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).

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 ouput (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[2] 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.

[2] 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).

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).

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

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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3.2. Research Organisation-focused international knowledge transfer, exchange and networks

Research organisations engage with international ecosystem for knowledge transfer or exchange using mechanisms such as engaging with international research networks, publishing in academic and practitioner journals, exchanging knowledge at international conferences, commercializing (e.g. selling IP and licensing patents), providing international consultancy and advisory services and educating the international workforce.

Knowledge transfer or exchange, unlike co-creation, mostly involves the transfer of knowledge or resources from one organisation to the other rather than closely working together. Such engagements enhance the reputation of the UK's research organisations and universities as world-leading knowledge producers and influencers has significantly bolstered their standing as premier research hubs. This enhanced status not only highlights their expertise but also improves their legitimacy as key members of the global network, further solidifying their role in advancing knowledge and innovation. Such positive reputation building improves financial, relational, resource, research, and innovation as well as social and environmental impacts [Figure 3.2].

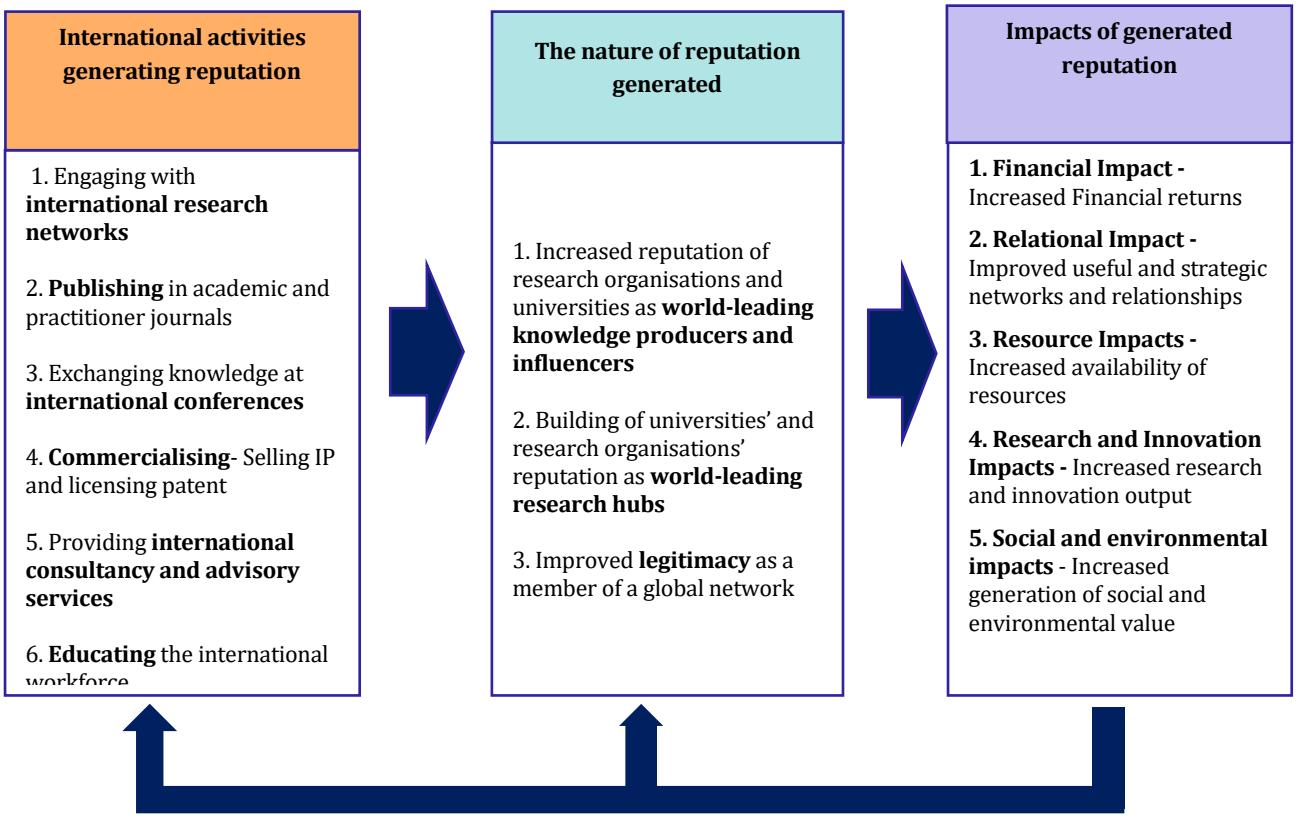

Figure 3.2: Research Organisation-focused international knowledge transfer, exchange and networks generating reputational impacts

3.2.1 International activities

Engaging with international research networks

The exchange of resources and individuals within an international research network is crucial in enhancing collaborative efforts and leveraging institutional strengths. Research networks are composed of various research organisations, often higher educational institutions, and are structured based on the exchange of research facilities, libraries, specialized equipment, and other resources as well as personnel including researchers and academic staff across organizations, independent of political, social, and geographical boundaries (Lepori et al., 2013; Seeber et al., 2012; Glänzel & Schubert, 2005; Jones et al. 2008; Heller-Schuh et al., 2011). This exchange enhances the collaborative potential and output of research organisations by pooling resources and expertise. It allows institutions to undertake more ambitious research projects and educational programs, which are visible indicators of institutional capability (Lepori et al., 2013). In the context of UK universities, collaborative initiatives within European networks have demonstrated how shared resources and joint research efforts can bolster the research and educational outcomes of participating institutions (Eurydice, 2020).

Publishing in academic and practitioner journals

Publications are a means of knowledge exchange with academic and non-academic communities. Geographical proximity is not necessarily required for accessing publications, which enhances the potential for international knowledge exchange. Since the evidence for some established economies suggests that publications with international co-authors have more than doubled over 30 years, these publications are likely to share new knowledge produced through international R&I and of relevance to more than one country. While the domestic research output (i.e. those with authors from a single country), including that of the UK (47,500 papers per year), Germany (45,000) and France (30,000), have not shown a dramatic change since the mid-1990s, their publications through international collaboration has increased more than ten-fold, further indicating the value of publications as a source of knowledge exchange of relevance to more than one economy (Adams & Gurney, 2018; Adams & Gurney, 2016).

Exchanging knowledge at international conferences

Another means used by research organisations to exchange knowledge with academic and non-academic communities are presenting at conferences and research seminars. International conferences and events enhance knowledge exchange and networking opportunities and increase visibility within the academic and non-academic communities (Lepori et al., 2013). In particular, these events offer a platform for institutions to present their latest research findings and innovative projects, and discuss funding opportunities and the

relevance of research to academic and non-academic communities (Glänzel & Schubert, 2005; Jones, Wuchty, & Uzzi, 2008; Dolmans et al., 2022). For instance, The International Congress of Immunology (IUIS) is an international conference in the field of immunology, bringing together immunologists from universities, health providers, independent research organisations and industry, each year. The congress aims to extend knowledge exchange among all attendees – from early-career professionals to globally recognized key opinion leaders (IUIS 2023). Another example is the University of Oxford's Innovation Forum Leaders Conference which attracts top national and international leaders from industry, academia, and government, as well as early-stage venture investors and researchers. The conference brings together over 1,300 delegates, stimulates conversations and catalyses numerous partnerships for the next generation of innovative technology. The conference provides a platform for Oxford's researchers to share their latest advancements in science, technology, and innovation.

Commercialising- Selling IP and licensing patent

Research commercialisation involves commercially exploiting intellectual property through market mechanisms, including patenting, licensing, and spin-outs (Siegel et.al., 2003; Siegel et.al., 2007; Siegel & Wright, 2015). A Europe-wide study demonstrated that patenting in universities is on the rise, although it remains heterogeneous across institutions and disciplines (Geuna and Nesta, 2006). In UK universities, IP-related income accounted for 2-3% of total income coming to the HE sector between 2003- 04 and 2012-13 (Source: HE-BCI Report 2014), and this is especially attributable to STEM disciplines (Moutinho et al., 2007; Owen-Smith & Powell, 2001; van Rijnsoever et al., 2008). Universities share their expertise by successfully selling and licensing patents, showcasing their ability to translate research into practical applications (Gong et al., 2020).

Providing international consultancy and advisory services

Universities and research organisations provide international consultancy services, leveraging their faculties and researchers' expertise to address global challenges. This positions the institution as a trusted advisor and opens collaborative opportunities across various sectors, enhancing its status as a thought leader (Perkmann et al., 2013). Organizations that engage with academia benefit from accessing cutting-edge scientific knowledge, innovative equipment, academic networks, and diverse perspectives on problem-solving (Guan & Zhao, 2013; Arza, 2010; Broström, 2012; Heidrick et al., 2005). These interactions can lead to significant technical, economic, input-related, and intangible improvements such as learning, training, and knowledge sharing (Nuñez-Sánchez, et al. 2012; Perkman et al., 2013).

Academics and researchers who secure industry grants and contracts are significantly more involved in industry-related activities and policy advisory roles compared to those without such funding. Those with industry grants are twice as likely to be approached for their research expertise by private industry and to be hired as paid consultants for industry projects as well as for policy-related roles (Bozeman & Gaughan, 2007). In a similar vein, universities participating in European projects like Horizon 2020 work together to shape research and innovation policies at the European level (Heller-Schuh et al., 2011). Universities positioned at the core of these networks have a greater influence on leading policy discussions due to their central role in the flow of information and resources (Borgatti & Everett, 1999).

Educating the international workforce

Universities and research organisations also offer education and training for industry and future workforce. Considering the UK universities' role as prominent international knowledge providers, many beneficiaries of these educational provisions are international. According to the latest data from HESA, international students make up a significant portion of the student population in UK universities. In the 2022/23 academic year, international students accounted for 26% of the total student population (Bolton et al 2024). The engagement by students in collaborative projects with industry offers an excellent opportunity for students to benefit from both academic rigour and industry applications. Similarly, universities offer numerous executive training programmes, the graduates of which are equipped with cutting-edge knowledge and skills. Universities also offer tailored training programmes to the industry. These educational activities enable universities and research organisations to share knowledge and skills with the international workforce (Guan & Zhao, 2013; Arza, 2010; Broström, 2012; Nuñez-Sánchez et al., 2012).

3.2.2 Nature of the generated reputation

Increased reputation of research organisations and universities as world-leading knowledge producers and influencers

Recognition through numerous knowledge exchange mechanisms establishes the university's and research organisation's status as leaders of global knowledge, enhancing their prestige and competitiveness (Ulrichsen, 2018; Ambos et al., 2008). Universities and research organisations known for cutting-edge research and staying in frontiers of various fields due to various knowledge exchange efforts, build a reputation for excellence and innovation. These engagements enhance visibility among stakeholders and reinforce the institution's global reputation as world-leading knowledge producers and influencers (Bozeman & Gaughan, 2007).

Building of universities' and research organisations' reputation as world-leading research hubs

Due to the engagement in knowledge exchange activities, recognised as neutral sources of expertise, universities and research organisations earn the trust of the general public, stakeholders, and partners of their research capabilities to address societal challenges and contribute to economic growth (Fulop & Couchman, 2006). Participation in knowledge exchange activities reinforces their status as global leaders in research (Lepori et al., 2013) of value to scholars, industry, governments, and the public, further improving their reputation as world-leading research hubs (Sengupta & Rossi, 2023).

Improved legitimacy as a member of a global network

Engagement in international knowledge exchange activities offers opportunities for universities and research organisations to be valuable members of global networks, which enhances the credibility and legitimacy of these organisations on the global stage, fostering trust with institutions worldwide (Lepori et al., 2013). Through the formation of ties during these knowledge exchange activities organisations build identity (i.e. belonging to the same social space) (Rivera et al., 2010), seek legitimacy (i.e. preferentially linking to high-status organizations) (Cattani et al., 2008), and facilitate resource mobilization (i.e. connecting with organizations that control a large share of resources) (Lepori et al., 2013).

3.2.3 Impacts of the generated reputation

Table 3.2: Impacts of reputation generated through international knowledge transfer, exchange and networks

Types of Impact	Specific Impacts
1. Financial Impact - Increased Financial returns	Increased opportunities to generate income through knowledge/technology transfer and exchange e.g. patents, commercialisation, training, and consultancy Enhanced access to funding
2. Relational Impact - Improved useful and strategic networks and relationships	Increased acceptance within the broader international scientific community Enhanced opportunities to access, strengthen, collaborate with, and develop new, useful networks Improved attractiveness to recruit and collaborate with high-profile academics Increased international student enrolments
3. Resource Impacts - Increased availability of resources	Enhanced opportunities to access and develop new national and international resources, funding, capabilities, knowledge, and networks
4. Research and Innovation Impacts - Increased research and innovation output	Enhanced opportunities to extend transfer/exchange to co-creation
5. Social and environmental impacts - Increased generation of social and environmental value	Increased generation of social value and impacts Increased opportunities for research organisations and academics to engage in policy-making and advisory roles

Case Study: Ten U- an international collaboration in research commercialization

TenU is an international network formed to capture effective practices in research commercialisation and enhance the societal impact of research and brings together leading HEIs in the UK, US and Belgium to develop and share best practices on research commercialisation.

International R&I activities:

TenU is engaged with International Research Networks of Higher Educational Institutes (HEIs) through its research commercialization offices of ten leading universities including Cambridge (UK), Oxford (UK), MIT(US), Columbia (USA), Leuven (Belgium), University College London (UK), and Stanford (US). TenU leverages collective knowledge and experience to promote innovation and economic growth through university-led research.

TenU has established itself as a leader in research commercialization through several key activities, including securing a £4 million grant from UKRI's Research England for funding for its programmes over five years. This funding supports TenU's mission to gather international evidence on best practices in ecosystem building and strengthen partnerships with investors, developers, and local communities. Through its partnership with Research England and its collaboration with top-tier universities, TenU acts as an advisor on best practices for research commercialization, intellectual property management, and ecosystem building. TenU's members provide consultancy to various stakeholders, including governments and private sector partners, on how to create resilient networks and support economic growth through university-led innovation. As Quoted by David Sweeney, then executive chair of Research England: "I am pleased to provide Research England funding to support TenU's ambitious international collaboration which is already leveraging its combined knowledge of research commercialization to inform the UK and wider policy and practice. We look forward to working further with TenU in the future, building on its insights on international best practices in university intellectual property management, as well as sharing experiences across continents on building ecosystems and developing talent."

The TenU members have a strong track record of successfully commercializing their research outputs. For instance, Oxford University's partnership with AstraZeneca led to the rapid development and global rollout of a COVID-19 vaccine, which has reached 180 countries and accounted for over 25% of COVID vaccinations worldwide. Other examples include innovations like rapid whole genome sequencing (Cambridge), fiber optics (Imperial), and the page rank algorithm technology (Stanford).

TenU strives to expand its initiatives such as organizing training programmes, and sharing effective practices across cultures internationally. Through its collaborative efforts and strong relationships with governmental bodies, such as the UK Department for Science, Innovation, and Technology [DSIT], TenU actively contributes to shaping policies that support research commercialization.

The nature of reputational impacts generated:

By participating in TenU, universities demonstrate their commitment to global collaboration and innovation. This enhances their reputation as leaders in research and technology transfer, attracting top-tier faculty, researchers, and students from around the world. Sharing of best practices helps them improve their own processes and outcomes, further enhancing their reputation for excellence in research and innovation. Being part of an influential network like TenU provides universities with greater visibility and recognition in the global academic and research communities. This can lead to increased funding opportunities, partnerships, and influence in shaping research policies. The UK's involvement in TenU highlights its leadership in research commercialization and innovation. This strengthens the country's reputation as a hub for cutting-edge research and technology transfer. TenU's activities and insights influence national and international research policies. The UK's active participation in shaping these policies through TenU reinforces its role as a key player in the global research landscape

SOURCES: TenU ; https://techfundingnews.com/tenu-with-members-from-top-global-universities-gains-4m/; Introducing TenU, a new international tech transfer collaboration — TenU

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3.3. International ranking of UK universities

There are different global indices – such as the Times Higher Education ranking, Guardian Ranking, and QS Ranking - that rank universities based on their engagement in teaching, research, and third-stream activities. Even though these rankings are subjective and sometimes criticised for the lack of consideration of the unique characteristics of certain universities and the difficulties in measuring many areas in which universities make a contribution, the rankings are generally perceived by potential students and their employers, potential collaborators and employees of universities, and other stakeholders as a measure of reputation. Unlike other mechanisms discussed so far, ranking does not involve international R&I but ranking does generate reputational impacts, such as financial, relational, resource, research and innovation, which are discussed in this section of the report [Figure 3.3].

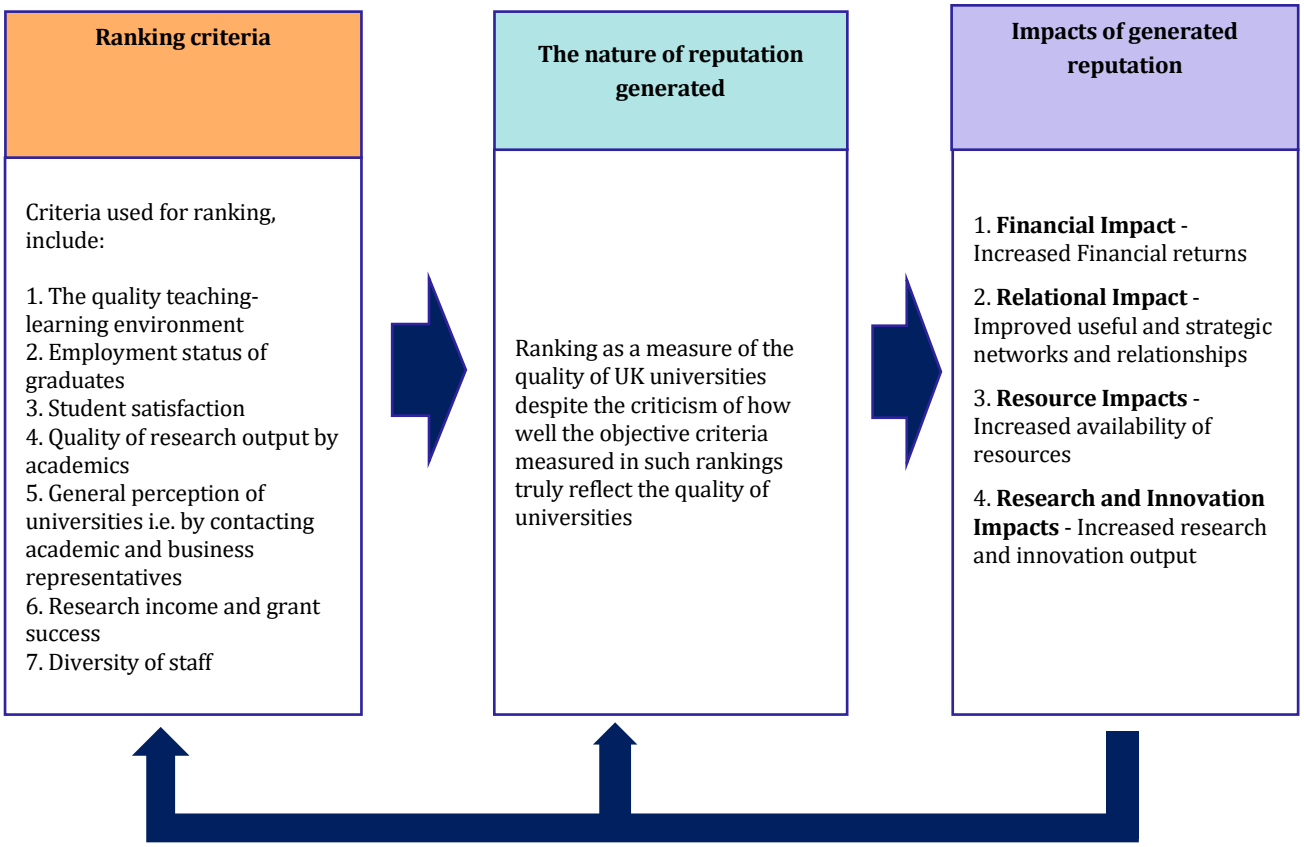

Figure 3.3: International ranking of UK universities generating reputational impacts

3.3.1. Reputational Impacts of UK University Ranking

The UK has built a robust reputation for its Higher Education Institutions (HEIs) by excelling in various global ranking criteria that highlight the quality and effectiveness of teaching and research rigour and enhance their competitiveness to establish themselves as esteemed centres of learning and research. Numerous agencies undertake the ranking of institutions using various criteria, fostering healthy

competition and helping identify premier institutions for prospective learners (Aithal & Kumar, 2020). This reputation through ranking has been built on several key factors including the quality of the teaching-learning environment, employment status of graduates, student satisfaction, quality of research output by academics, general perception by academic and business representatives, research income and grant success, and the diversity of staff (Times Higher Education ranking, Guardian Ranking, and QS Ranking).

The UK's reputation as a leading destination for international students is reflected in its ranking as the world's second most popular destination for international students, following the US (Hubble & Bolton, 2021). During the academic year 2019/20, non-European Union international students comprised 22 per cent of the total student body in UK universities, marking a threefold increase since the start of the twenty-first century (HESA 2021; Universities UK, 2022). Yet, after Brexit since EU students were considered international and required to pay international fees, there was a significant drop in EU students. In the 2022/23 academic year, EU students made up approximately 3.2% of the total student population in UK universities (HESA 2024).

Both ranking and long-term perception of the prestige of universities seem to have a collective influence on reputation (Hazelkorn 2015). Despite annual fluctuations in rankings, reputational prestige has an anchoring effect, suggesting that longstanding reputations continue to influence student enrolment (Bastedo & Bowman, 2011; Taylor & Braddock, 2007). While the long-term prestige affects national student attraction, the perception of quality and prestige attached to high rankings attracts international students, who lack knowledge of prestige and local perception (Soysal, et al., 2024). High-quality academics tend to join institutions with better rankings for strong research outputs and reputational prestige (Enders, 2015; Taylor & Braddock, 2007), which, in turn, enhances the quality of the university's academic environment and research capabilities and leads to maintaining a higher ranking and competitive advantage for UK universities. Highly-ranked universities such as Oxford, Cambridge, and Imperial College are often seen as the most desirable partners for international collaborations, which further enhance their global influence and reputation (Mamrginson, 2014).

Data from the Complete University Guide (CUG) indicates that while rankings influence international student mobility, the role of ranking may be overestimated, implying that other factors such as general perception of universities are also crucial (Soysal, et al., 2024). As a proxy for reputation, rankings have become an integral part of ‘status culture’ (Mamrginson, 2014).

Table 3.3: Impacts of reputation generated through international ranking of UK universities

Types of Impact	Specific Impacts
1. **Financial Impact** - Increased Financial returns	Improved student enrollment and research collaboration opportunities, positively associated with rankings, increase income of universities and research centres
2. **Relational Impact** - Improved useful and strategic networks and relationships	International student enrolment is significantly positively associated with university ranking Better ranking attracts international, high-quality academics to respective universities
3. **Resource Impacts** - Increased availability of resources	Global university rankings are used by collaborators when inviting for joint infrastructure development
4. **Research and Innovation Impacts** - Increased research and innovation output	Global university rankings are used when identifying universities invited for collaborations

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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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