

## ESRC End of Award Report

**For awards ending on or after 1 November 2009**

This End of Award Report should be completed and submitted using the **grant reference** as the email subject, to **reportsofficer@esrc.ac.uk** on or before the due date.

The final instalment of the grant will not be paid until an End of Award Report is completed in full and accepted by ESRC.

Grant holders whose End of Award Report is overdue or incomplete will not be eligible for further ESRC funding until the Report is accepted. ESRC reserves the right to recover a sum of the expenditure incurred on the grant if the End of Award Report is overdue. (Please see Section 5 of the ESRC Research Funding Guide for details.)

Please refer to the Guidance notes when completing this End of Award Report.

<b>Grant Reference</b>	<b>RES-075-25-0006</b>		
<b>Grant Title</b>	<b>State strategies of governance in global biomedical innovation: the impact of China and India</b>		
<b>Grant Start Date</b>	<b>01-04-10</b>	<b>Total Amount</b>	<b>£38,031</b>
<b>Grant End Date</b>	<b>30-06-11</b>	<b>Expended:</b>	
<b>Grant holding Institution</b>	<b>King's College London</b>		
<b>Grant Holder</b>	<b>Professor Brian Salter</b>		
<b>Grant Holder's Contact Details</b>	<b>Address</b>	<b>Email</b>	
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		<b>Telephone</b>	
		<b>0207 8482300</b>	
<b>Co-Investigators (as per project application):</b>		<b>Institution</b>	
<b>Dr Alex Faulkner</b>		<b>King's College London</b>	

### 1. Non-technical summary

Please provide below a project summary written in non-technical language. The summary may be used by ESRC to publicise your work and should explain the aims and findings of the project.

*[Max 250 words]*

<p>Innovation in biomedicine is a global enterprise with an increasingly important contribution being made by the Rising Powers, especially China and India. Emerging innovations in</p>
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biomedicine internationally hold the promise of significant impact on global public health, healthcare systems and economic restructuring. However, the policy directions and institutional configurations for fully exploiting the scientific and innovation efforts on the global stage are currently unclear and unstable. Given this context and challenge, the aim of the project was to establish a network to develop, test and refine with academics and policymakers a robust interdisciplinary framework for the analysis of competing state strategies of governance in global biomedical innovation capable of illuminating the position of China and India and the policy implications for the UK: a framework that could serve as the platform for the development of a large, case-study based research proposal. In pursuit of this aim and utilising an initial conceptual paper, four workshops were held in China, India and the UK (2), drawing on their academic and policy catchment areas. As a result of these workshops, the original framework was revised in the light of comments and discussion, a particular suite of case studies identified to form the core of the research proposal, partner academic networks established in China and India and policymaker support for the proposal obtained to maximise its potential policy impact.

## 2. Project overview

### a) Objectives

Please state the aims and objectives of your project as outlined in your proposal to the ESRC.  
*[Max 200 words]*

The aim of the project was to establish a network to develop, test and refine a robust interdisciplinary framework for the analysis of competing state strategies of governance in global biomedical innovation capable of illuminating the position of China and India and the policy implications for the UK: a framework that could serve as the platform for the development of a large, case-study based research proposal. Within this aim the objectives were:

- To produce a conceptual discussion paper that (1) critically examines the approaches to state strategies of governance in biomedical innovation (2) advances a framework for their integration
- To test and refine this analysis through a global dialogue with academics and policy makers inclusive of both the Rising Powers of China and India and the UK and the United States
- To illuminate the implications of the Rising Powers (China/India) analysis for the UK governance of biomedical innovation, the inter-relationship of its policy components, and the engagement between UK policy and international biomedical governance
- Promoting the dialogue, to build on and further develop an existing global network of academic and policy partners willing to collaborate in a global project on state strategies of governance in biomedical innovation
- To develop a research proposal for the funding of such a project
- To test the policy relevance of the proposal against the views of UK policy makers.

### b) Project Changes

Please describe any changes made to the original aims and objectives, and confirm that these were agreed with the ESRC. Please also detail any changes to the grant holder's institutional affiliation, project staffing or funding. *[Max 200 words]*

None

### c) Methodology

Please describe the methodology that you employed in the project. Please also note any ethical issues that arose during the course of the work, the effects of this and any action taken. [*Max 500 words*]

The method was organised into six phases.

#### **Phase 1 - The conceptual discussion paper (months 1-3) (see Annex for outline of paper)**

The conceptual paper built on the work of Salter and Faulkner on the governance of global biomedical innovation by integrating Salter's political science approach to the global governance of innovation with particular reference to the state strategies of China, India and the United States with the sociological work of Faulkner on innovation and regulation of human implant technology, medical devices, tissue engineering and advanced therapies.

#### **Phase 2 – The networks (months 1-3)**

In parallel to the writing of the conceptual Discussion Paper, the investigators' existing academic and policy networks were activated and further developed in preparation for Phases 3 and 4. KCL's institutional partnerships with Jawaharlal Nehru University (JNU), New Delhi and Hong Kong University (HKU) were accessed and enhanced through collaborative work with Professor Ramesh (Department of Public Policy, HKU) and Professor Desai (Centre for Studies in Science Policy, JNU), both of whom were visiting fellows at KCL for 2 weeks during the project. In addition, they organised the project workshops of Phase 4 at their respective institutions.

#### **Phase 3 - Refining the analysis: commentaries on paper (months 4-5)**

The paper was circulated to the members of the applicants' global academic and policy networks with a request for comments to include: additional literature and empirical areas to be considered, particular regional and national policy dimensions, emerging economies issues, the impact of the global financial crisis. The paper was then revised and used as the platform for the workshop discussions.

#### **Phase 4 – Workshops (months 6-8)**

Three one day workshops were organised in the UK, China and India drawing on their academic and policy catchment areas to test the revised analytical framework, explore the dimensions of a project proposal that utilises this framework, and secure potential academic and policy partners. Selected participants made their own presentations on the framework, explaining how and why their own approach differed, the specific lessons to be drawn from the experience of their individual regions and countries and the nature of their contribution to the potential project. The workshops were held at King's College London, the International Centre for China Development Studies at the University of Hong Kong (HKU), and the Centre for Studies in Science Policy at Jawaharlal Nehru University (Delhi – JNU).

#### **Phase 5 – UK policy workshop (month 9)**

A workshop for UK policy makers drawn from bodies including the Office for Life Sciences (OLS), the Department of Business, Innovation and Skills (BIS), the Nuffield Council on

Bioethics, MHRA and OECD considered the implications of the Rising Powers analysis for UK governance of biomedical innovation in terms of: first, interrelationships of the contributing policy fields and, second, the design of the planned global project on state strategies of governance in biomedical innovation.

#### **Phase 6 – Write up and outputs (months 10-12)**

A revised version of the project's conceptual paper was published in *Globalisation and Health* and a project proposal prepared for submission to the ESRC Rising Powers programme.

#### **d) Project Findings**

Please summarise the findings of the project, referring where appropriate to outputs recorded on the ESRC website. Any future research plans should also be identified. *[Max 500 words]*

##### **Conceptual framework**

The consultation with the academic networks combined with the three workshops in the UK, China and India resulted in the conceptual paper and framework being revised to take into account a number of theoretical issues, including the following.

1. The concept of 'globalisation' needed to be directly related to the concept of 'biomedical innovation' through a focus on components including multinational/industry involvement; inter-state partnerships, agreements and competition; civil society actors including NGOs, publics, citizens; scientific labour force; transnational regulation and regulatory competition; internationalisation of clinical trials.
2. Comparative/national analysis should take into account: the mapping of governance patterns or profiles in relation to economic development and innovation systems, the historic regulatory capacities and practices of states, the importance of scientific-technological projects, and the different patterns of hard and soft governance at national and local levels.
3. The governance structures of particular sectors, zones, scientific fields or technologies should be explored in terms of their articulation with international and national innovation-governance profiles.
4. The supply side focus of innovation studies should be supplemented with the issue of 'demand' for knowledge and products and the construction of 'need' through vision framing and awareness of the construction of alternative routes to access global value chains. Are 'known markets' or new market-building the objective for different states at different points in their innovation trajectory?
5. The particular character, emphasis, policy orientation and stage of development of biomedical innovation in China and India should be explicitly recognised and incorporated into the conceptual framework to avoid a 'Western-centric' approach.

The final version of the paper was published: see Salter B and Faulkner A (2011). 'State strategies of governance in biomedical innovation: aligning conceptual approaches for understanding 'Rising Powers' in the global context.' *Globalisation and Health*. 7(3).

##### **Project partners**

The project consolidated its relationship with its partners at Jawaharlal Nehru University and Hong Kong University through their contribution to the development of academic, industrial and policy networks in India and China as a platform for further research. In particular, the visiting fellowships of Professor Desai and Professor Ramesh were valuable in creating a supporting infrastructure of activities through seminars and discussions in addition to the workshops themselves.

### **Project design – Full proposal**

The final workshop with UK policy makers in May 2011 focused on the specifics of the project design and its relevance to their concerns. Issues discussed and subsequently incorporated into the project proposal for the final stage of the Rising Powers initiative were as follows.

1. The policy issues addressed by the project should include differences in models of innovation in context of ‘open global innovation’, implications for specific policy domains (science, market, society), intergovernmental agreements, Intergovernmental alliances with regard to transnational governance, implications for EU governance of biomed innovation, UK as resource for policy learning by China and India.
2. The selection of the case studies should be informed by criteria based on type of governance, type of biomedical sector and type of innovation.
3. The policy engagement component part of the method should include a range of modes of interaction with policy makers (video conferencing, telephone discussions) as well as formal workshops.

### **e) Contributions to wider ESRC initiatives (eg Research Programmes or Networks)**

If your project was part of a wider ESRC initiative, please describe your contributions to the initiative’s objectives and activities and note any effect on your project resulting from participation. *[Max. 200 words]*

The project workshops, discussions, conceptual development and network building contributed directly to two of the three Rising Powers themes: ‘Causes, sustainability and competitiveness’ and ‘Global and regional governance and the balance of power’. The project held regular meetings with the most closely related project also funded under the Rising Powers initiative: ‘India’s challenge in a globalizing healthcare economy: social science directions’ led by Dr Susan Murray, also of King’s College London.

## **3. Early and anticipated impacts**

### **a) Summary of Impacts to date**

Please summarise any impacts of the project to date, referring where appropriate to associated outputs recorded on the ESRC website. This should include both scientific impacts (relevant to the academic community) and economic and societal impacts (relevant to broader society). The impact can be relevant to any organisation, community or individual. *[Max. 400 words]*

The project has raised the international profile of the ESRC as a lead agency in the exploration of governance issues associated with the advent of the Rising Powers, in particular China and India. Through the New Delhi and Hong Kong workshops, a new network of social scientists (sociologists, political scientists and economists) drawn from China and India has been established as a vehicle for the examination of the governance of biomedical innovation. In the case of China where social science, particularly political science and sociology, applied to biomedicine, is still in its early stages of development, the workshop provided Chinese academics with access to theories and concepts of governance with which they were frequently unfamiliar but with which they proved keen to interact. In the case of India, the focus was more on engaging with a wide range of industrialists and high-level policy makers and academics, especially with an economics background, to explore and test our theoretical framework and demonstrate its relevance to their practical problems of innovation.

In the UK case, the academic workshop consolidated and expanded our existing network of social scientists interested in developing the analysis of biomedical innovation governance with respect to China and India. The UK policy workshop, meanwhile, established a group of policy makers associated with the governance of the life sciences who are prepared to debate the novel governance issues raised by impact of the Rising Powers on the position of the UK in global biomedical innovation. In particular, the policy discussions demonstrated the importance of different models of 'open global innovation', the implications for specific policy domains (science, market, society), intergovernmental agreements, intergovernmental alliances with regard to transnational governance, the implications for EU governance of biomedical innovation, and the capacity and potential advantage of the UK acting as a resource for policy learning by China and India.

#### **b) Anticipated/Potential Future Impacts**

Please outline any anticipated or potential impacts (scientific or economic and societal) that you believe your project might have in future. *[Max. 200 words]*

The project facilitated and informed the development networks of academics, policy makers and industrialists interested in debating the appropriate forms of governance for biomedical innovation. Given the continuing research and activities of the applicants in this field, the ideas and concepts generated will continue to be disseminated through their involvement in a range of projects.

You will be asked to complete an ESRC Impact Report 12 months after the end date of your award. The Impact Report will ask for details of any impacts that have arisen since the completion of the End of Award Report.

#### **4. Declarations**

Please ensure that sections A, B and C below are completed and signed by the appropriate individuals. The End of Award Report will not be accepted unless all sections are signed. Please note hard copies are NOT required; electronic signatures are accepted and should be used.

**A: To be completed by Grant Holder**

Please read the following statements. Tick ONE statement under ii) and iii), then sign with an electronic signature at the end of the section (this should be an image of your actual signature).

**i) The Project**

This Report is an accurate overview of the project, its findings and impacts. All co-investigators named in the proposal to ESRC or appointed subsequently have seen and approved the Report.

**ii) Submissions to the ESRC website (research catalogue)**

Output and impact information has been submitted to the ESRC website. Details of any future outputs and impacts will be submitted as soon as they become available.

**OR**

This grant has not yet produced any outputs or impacts. Details of any future outputs and impacts will be submitted to the ESRC website as soon as they become available.

**OR**

This grant is not listed on the ESRC website.

**iii) Submission of Datasets**

Datasets arising from this grant have been offered for deposit with the Economic and Social Data Service.


**OR**

Datasets that were anticipated in the grant proposal have not been produced and the Economic and Social Data Service has been notified.

**OR**

No datasets were proposed or produced from this grant.

**Signature:**



**Name: Prof Brian Salter**

**Date: 23-08-11**

**B: To be completed by Head of Department, School or Faculty**

Please read the statement below then sign with an electronic signature to confirm your agreement.

This Report is an accurate overview of the project, its findings and impacts.

**Signature:**

**Name:**

**Position:**

**Date:**

**C: To be completed by Finance Officer of Grant-Holding Research Organisation**

Please read the statement below then sign with an electronic signature to confirm your agreement.

ESRC funds have been used in accordance with the ESRC Research Funding Guide. All co-investigators named in the proposal to ESRC or appointed subsequently have seen and approved the Report.

**Signature:**

**Name:**

**Position:**

**Date:**