A review of the Hong Kong Research Grants Council

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The University Grants Committee of Hong Kong asked RAND Europe to collect evidence as part of Phase 1 of a review of the Research Grants Council (RGC), which aims to streamline RGC’s operation and enhance efficiency. Phase 1 covers macro issues such as the portfolio balance of the RGC funding schemes, the RGC and assessment panels / committees’ structure and good practice in overseas funding agencies.

This report provides the key findings of the evidence gathered and analysed by RAND Europe. The annexes contain an in-depth analysis of the data gathered. The report is intended for the RGC and, more broadly, stakeholders of the RGC in Hong Kong and may be of interest to international funding agencies and research systems.

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### Abbreviations

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<th>Full Form</th>
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<tr>
<td>A*STAR</td>
<td>Agency for Science, Technology and Research</td>
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<td>AoE</td>
<td>Areas of Excellence</td>
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<td>BBSRC</td>
<td>Biotechnology and Biological Sciences Research Council</td>
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<td>CityU</td>
<td>City University of Hong Kong</td>
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<td>CRF</td>
<td>Collaborative Research Fund</td>
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<td>CUHK</td>
<td>The Chinese University of Hong Kong</td>
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<tr>
<td>DARPA</td>
<td>Defense Advanced Research Projects Agency</td>
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<tr>
<td>DC</td>
<td>Disciplinary Committee</td>
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<tr>
<td>DC(Appeal)</td>
<td>Disciplinary Committee (Appeal)</td>
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<tr>
<td>DC(Investigation)</td>
<td>Disciplinary Committee (Investigation)</td>
</tr>
<tr>
<td>DC(Penalty)</td>
<td>Disciplinary Committee (Penalty)</td>
</tr>
<tr>
<td>DFF</td>
<td>Danish Council for Independent Research</td>
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<tr>
<td>ECFC</td>
<td>Environment and Conservation Fund Committee</td>
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<tr>
<td>ECR</td>
<td>Early career researcher</td>
</tr>
<tr>
<td>ECS</td>
<td>Early Career Scheme</td>
</tr>
<tr>
<td>EdUHK</td>
<td>The Education University of Hong Kong</td>
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<tr>
<td>EU</td>
<td>European Union</td>
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<tr>
<td>FDS</td>
<td>Faculty Development Scheme</td>
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<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
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<tr>
<td>GRF</td>
<td>General Research Fund</td>
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<tr>
<td>HDI</td>
<td>Human Development Index</td>
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<tr>
<td>HEI</td>
<td>Higher Education Institute</td>
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<tr>
<td>HKBU</td>
<td>Hong Kong Baptist University</td>
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<tr>
<td>HKPFS</td>
<td>Hong Kong PhD Fellowship Scheme</td>
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<tr>
<td>HKU</td>
<td>The University of Hong Kong</td>
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<td>Acronym</td>
<td>Full Name</td>
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<tr>
<td>HKUST</td>
<td>The Hong Kong University of Science and Technology</td>
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<tr>
<td>HSSPFS</td>
<td>Humanities and Social Sciences Prestigious Fellowship Scheme</td>
</tr>
<tr>
<td>IDS</td>
<td>Institutional Development Scheme</td>
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<tr>
<td>IIDS</td>
<td>Inter-Institutional Development Scheme</td>
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<tr>
<td>ISF</td>
<td>Israel Science Foundation</td>
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<tr>
<td>ITC</td>
<td>Innovation and Technology Commission</td>
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<tr>
<td>ITF</td>
<td>Innovation and Technology Fund</td>
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<tr>
<td>LU</td>
<td>Lingnan University</td>
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<tr>
<td>MBIE</td>
<td>Ministry of Business, Innovation and Employment</td>
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<tr>
<td>NIH</td>
<td>National Institutes of Health</td>
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<tr>
<td>NRF</td>
<td>National Research Foundation</td>
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<td>NSB</td>
<td>National Science Board</td>
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<td>NSF</td>
<td>National Science Foundation</td>
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<tr>
<td>NSFC</td>
<td>National Natural Science Foundation of China</td>
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<tr>
<td>OECD</td>
<td>Organization for Economic Co-operation and Development</td>
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<tr>
<td>PolyU</td>
<td>The Hong Kong Polytechnic University</td>
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<tr>
<td>R&amp;D</td>
<td>Research and Development</td>
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<tr>
<td>RAE</td>
<td>Research Assessment Exercise</td>
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<td>RCUK</td>
<td>Research Councils UK</td>
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<tr>
<td>RGC</td>
<td>Research Grants Council</td>
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<tr>
<td>SAR</td>
<td>Special Administrative Region</td>
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<td>TRS</td>
<td>Theme-based Research Scheme</td>
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<tr>
<td>UGC</td>
<td>University Grants Committee</td>
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<tr>
<td>UK</td>
<td>The United Kingdom</td>
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<tr>
<td>UKRI</td>
<td>UK Research and Innovation</td>
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<tr>
<td>US</td>
<td>The United States of America</td>
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Executive Summary

Context and objectives

This report explores the strengths and weaknesses of the RGC funding assessment and allocation process and identifies areas for future improvement. It is based on focus groups, interviews, survey, consultation and documentary analysis. It examines the perceptions of academics, universities and institutions, panel members and wider society who engage with the RGC. It arrives at overall judgements about the RGC processes, and discusses the potential improvements for the future.

Background to RGC

The Research Grants Council (RGC) is an advisory board on research matters to the University Grants Committee (UGC), a non-statutory advisory committee which is also responsible for advising the Hong Kong government on the needs of higher education institutions (HEIs) in Hong Kong, including both research and education. The RGC was established in January 1991, 25 years ago, in order to distribute funding for academic research projects undertaken by academic staff at UGC-funded universities. In 1991 it was responsible for HK$100 million. Over time the RGC has developed, adding new funding schemes, and adapting and developing its schemes. The government has also provided the RGC with additional funding, both to expand the schemes it was already running, and to deliver new schemes specifically initiated by the government. This has included expanding from only funding UGC-funded universities, to also funding self-financing institutions. In the period 2015-2016 the RGC distributed HK$1127 million, more than ten times as much as it was originally responsible for when it was founded; the current objective of RGC research funding is to build up research capability in Hong Kong.

Over the last 25 years, research in Hong Kong has developed considerably; five of the eight UGC-funded universities are now in the top-200 in the QS University Ranking for academic reputation, and two are in the top 50. The Government set up the Research Endowment Fund, distributed by the RGC, in 2009 with an original endowment of $18 billion and an injection of $5 billion in 2012/13 to provide long-term funding stability to support academic research in both publically funded universities and self-financing institutions. With the setting up of the Research Endowment Fund, the annual amount of funding available for allocation by the RGC increased significantly. In view of the increase in funding provision, number and variety of funding schemes as well as complexity and size of selection and monitoring panels/committees in recent years, the RGC started to work on a consultancy study proposal in 2014 with a view to formulating a strategic plan to further streamline its operation and enhance efficiency. In December 2015, the RGC decided that as part of this process they would commission an independent
review of the RGC, conducted in two phases, which cover the following macro and micro issues respectively:

- Phase I – Covering macro issues such as the portfolio balance of the RGC funding schemes, the RGC and assessment panels / committees’ structure and good practice that can be learned from overseas funding agencies.
- Phase II – Covering micro issues such as the quality of assessment and monitoring processes, means of communication among members of the panels / committees, timeline of funding schemes and arrangement guarding against conflict of interests in the assessment process.

Phase 1 of the review was overseen by an independent Task Force of international experts. RAND Europe was commissioned to provide supporting evidence and analysis to this Task Force for Phase 1. This report covers the data and evidence independently gathered by RAND Europe along with RAND Europe’s independent analysis of that data.

**Methodology**

Our study aimed to answer the following questions:

- What are the strengths, weaknesses and opportunities for improvement to the RGC funding processes and structure as perceived by RGC stakeholders (the academic community, universities and institutions, RGC panel members and broader society)?
- What can be learnt from comparable international funding bodies to inform improvements to the system?

In order to answer these questions, this study used a multi-method approach consisting of document review, interviews, surveys, an online consultation and face to face focus groups (Figure ES1). With each step, we collected and added more evidence, adding further detail and nuance in order to build as complete a picture of the RGC as possible. In particular, the survey and consultation, which was circulated to as broad a set of stakeholders as possible, was used to identify areas of dis-satisfaction, or lack of consensus, and these areas were concentrated on in the focus groups.
Firstly, in order to better understand the RGC we reviewed a series of public and private documents describing its funding schemes, structures and processes. To place this into context, we also compared the RGC’s funding schemes and processes against eight comparator countries, chosen based on international significance to Hong Kong, or similarity to Hong Kong. The comparator countries used were: the UK, the US, China, South Korea, Singapore, New Zealand, Israel and Denmark. For each country we reviewed publically available documents for one major funding body in order to compare its funding schemes and structure with the RGC.

Having built a picture of the RGC and how it compares internationally we designed online surveys and an online consultation to collect views and experience of the RGC from as wide a range of stakeholders as possible. The online surveys were developed for stakeholders directly involved with the RGC including successful and unsuccessful applicants and RGC panel and committee members. The consultation was publically available and open to all, with the aim of allowing wider stakeholders, such as other government bodies, the Legislative Council, research users and other stakeholders to input into the review. The surveys received a response rate of between 38 and 48 per cent, and 111 people filled in the online consultation. The survey was made up predominantly of closed questions, with five open-test questions included. Quantitative analysis of the survey data was conducted in R. Qualitative analysis of open-ended questions was carried out by coding the responses to broad analytical categories covering all of the questions.

Finally 18 face to face focus groups lasting one and a half hours each were carried out in Hong Kong in December 2016 in order to develop a more nuanced understanding of the performance of the RGC. Through the focus groups we met with 115 people, with an average size of six people per group. Face-to-face focus groups were carried out with representatives from: the UGC-sector including both researchers

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1 There were 1143 respondents from the UGC-sector, 143 respondents from the self-financing sector, and 288 respondents from panel/committee members.

2 R is a statistical programming language https://cran.r-project.org/
and institutional management, the self-financing sector including both researchers and institutional management, panel members for both sectors, and RGC members. The majority were carried out after the online surveys had closed, and were used to build on the results of the surveys, focusing on questions best explored through dialogue, and in particular on areas where survey respondents disagreed most with statements. Following the focus groups we wrote up memos using notes and audio recordings taken during the focus groups. These were uploaded into QRS NVivo 11 software, and coded into 88 categories within four broad categories: parts of the process, the needs of researchers and broader society, perceptions of the process, and interviewee type.

To develop the key findings, each member of the project team independently came up with five messages for consideration by the Task Force. These overarching messages were developed taking into account the different views of stakeholders, as well as the wider context of the funding system in Hong Kong and available evidence from other jurisdictions on international practice and experience. These were then clustered, resulting in a number of key messages which drew the results from each of the methods together. These data were considered by the international Task Force and, taking into account their expert opinion, resulted in their conclusions and recommendations for improvements to the RGC to ensure funding is used and managed efficiently and is fit for purpose for Hong Kong.

Key messages and themes
Our analysis has produced 10 key messages, under four key themes. These are summarized below, and discussed in more detail in Chapters 2 - 5:

Achievements of RGC Grant giving
Over the last 25 years the RGC has allocated funding to the research community in universities and institutions across Hong Kong. Focus group participants and survey respondents reported a number of strengths of the RGC. In summary we found that:

- The RGC is Hong Kong’s primary research grant funder and has established a positive reputation
- There were many positive views articulated about what the RGC and associated funding have achieved since its inception

Processes of RGC Grant Allocation and Review
Our interviewees discussed many aspects of the process of allocating funding and reviewing applications which are core to the function of the RGC. In discussing these, they highlighted a number of perceived weaknesses of the RGC grant allocation and review process, including how they relate to the wider Hong Kong system, and how aspects such as size of grant relate to comparable jurisdictions. Specific points include:

- The overall value of the funding available is a source of concern to all stakeholders
- There is a lack of agreement as to whether the current value and duration of awards are correct
• Grant metrics are now used by the sector as a measure of success to reward both researchers and universities

**Review of the Role of RGC in Strategic Research Directions**

The RGC has a published mission and aims; however it does not have a published strategy. This theme focuses on perceptions of stakeholders on RGC’s decision making processes and aims, and different potential strategic areas that were mentioned or discussed in the focus groups, survey and online consultation. The key findings are:

- The RGC’s decision making is devolved to panels and the aims of the RGC are not well understood by the sector
- Participants identified a number of areas for future strategic consideration

**Areas for Improvements of Grant Review Processes**

In discussing many aspects of the process of allocating funding, and reviewing applications, stakeholders highlighted perceived weaknesses in RGC processes and hence opportunities for improvement, with comparisons made to other jurisdictions. Specific points include:

- Processes are felt to be overly burdensome and could be streamlined
- Many researchers don’t think the grants application and review process is transparent, while panel members were much more positive about transparency
- The mixed views on the transparency of the process and system could be improved through greater engagement.

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3 These are discussed in further detail in Section 4.2 of the report
1. Introduction

1.1. Background to the Hong Kong research funding system

Hong Kong has eight publicly-funded universities, funded by the University Grants Committee (UGC), and 13 local self-financing degree awarding institutions. It performs well in international rankings of research with five of the eight UGC-funded universities in the top-200 in the QS University Ranking, and 2 in the top 50.4

UGC-funded institutions

The eight publically funded universities in Hong Kong are primarily funded by the UGC, a non-statutory advisory committee which is also responsible for advising the Hong Kong government on the needs of higher education institutions (HEIs) in Hong Kong, including both research and education, and the Research Grants Council (RGC), an advisory board on research matters to the UGC responsible for the provision of competitive earmarked research grants. The bulk of the government funding is distributed by the UGC through a block grant, covering both teaching and research activities; 23 per cent of this block grant is allocated for research (the Research portion/ R-portion).5 The R-portion corresponds to 65 per cent of the research funding for UGC-funded institutions, and can be used to cover a variety of costs including: salaries, infrastructure such as buildings and equipment, and other overhead costs. The rest of the research funding comes from: competitive grants managed by the RGC (10 per cent); other government sources (8 per cent); and private funding (17 per cent) (Figure 1). Although these figures indicate a diversity of sources for research funding, as later sections of this report will demonstrate, the RGC is widely perceived as the primary grant funder of research within academic institutions.

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4 https://www.topuniversities.com/university-rankings

5 While this money is allocated for research, there is no requirement placed on the universities for it to be spent entirely on research, not on other activities such as teaching. Equally there is no requirement that other money from the block grant is not spent on research.
In Hong Kong, similar to in the UK, a Research Assessment Exercise (RAE) is run at an interval of about 6 years; this is then used to determine the amount of funding each university gets as the R-portion of the block grant over the next triennium/triennia. The allocation of the R-portion of the block grant to each university was initially based entirely on the results of the RAE. However, from 2012/2013 onwards, in a move designed to increase competitiveness, a decision was made to reduce the proportion of the money awarded based on the results of the RAE, and instead distribute some of the money based on each university’s success in gaining RGC Earmarked Research Grants (similar to the system used in Australia). This link between the R-portion and competitive grant funding magnifies the importance and significance of RGC funding within the eco-system. By 2020/21, 50 per cent of the money in the R-portion of the block grant will be distributed based on the RAE, the other 50 per cent of the R-portion will be distributed based on success in RGC Earmarked Research Grants.

This system has not been without its critics. A 2015 report from the Our Hong Kong Foundation, for example, calls for increased independence for the RGC. The report’s authors argue that de-linking research funding from core support would increase the competitiveness of research. If this happened, the RGC would be more akin to a UK research council. This, the report argued, along with a move to full economic costing, would also make the system more transparent. This view has backing at least in principle from some senior academics. However some would argue against an independent RGC due to

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6 Note that, the R-portion is allocated to universities to use as they wish, and is often used to pay for infrastructure and overhead costs.
7 The next assessment exercise is likely be in 2020 and to include an impact element, similar to the Research Excellence Framework carried out in the UK in 2014
9 http://www.ugc.edu.hk/eng/ugc/faq/q303c.html
10 Prof. Lap-Chee Tsui, Rita Lue and Edwin Cheung. December 2015. The Ecosystem of Innovation and Technology in Hong Kong. Our Hong Kong Foundation.
11 Personal communication
the comparatively small size of the research community and the relatively modest pot of money currently allocated to research in Hong Kong. The Our Hong Kong Foundation’s answer to this argument is to argue that all publicly funded research money should be channelled through the RGC along with evaluation instruments that would encourage greater focus on social and economic impact and strategic aims.

Of the competitive funding from government, more than half is distributed by the RGC. The majority of this funding is response mode funding (80 per cent), with no set area and with full autonomy given to academics to set the research agenda. Even with regard to large collaborative calls, such as the Collaborative Research Fund (CRF) or the Areas of Excellence (AoE) Scheme, the majority of funding is designed to be curiosity led rather than shaped by strategic aims (see Table 1). The amount of funding distributed is based on interest earned on the Research Endowment Fund, a government endowment established in 2009 in order to provide continuous research funding to the UGC sector.12 This has the benefit of providing a relatively stable stream of income for research but also constrains the available resource.

A number of other government departments also provide competitive research funding; these calls for funding tend to be more targeted and applied. The largest of these are:

- The Innovation & Technology fund (ITF), administered by the Innovation and Technology Commission (ITC), which aims to support midstream/downstream research and development, foster an innovation and technology culture, and increase industry university relations.
- The Health and Medical Research Fund, administered by the Research Council and under the purview of the Research Office of the Food and Health Bureau, which supports advanced medical research.
- The Environment and Conservation Fund, a fund established under the Environment and Conservation Fund Ordinance and overseen by The Environment & Conservation Fund Committee (ECFC), which provides funding for educational, research and other projects and activities in relation to environmental and conservation matters.
- The Quality Education Fund, administered by the Quality Education Fund Steering Committee under the Education Commission and supported by the Education Bureau, which funds non-profit making initiatives focussed on basic education, i.e. kindergarten, primary, secondary and special education.

17 per cent of research funding at UGC-funded universities comes from private funding.

Self-financing institutions
The self-financing degree-awarding institutions finance themselves in large part through their teaching activities. They tend to be more teaching-focused institutions, and the majority of them are also younger and still establishing themselves. Until 2014 they did not have any access to UGC or RGC funds; however in January 2012 the Government injected an amount of HK$3 billion into the Research Endowment Fund. The investment income from the HK$3 billion provides competitive research funding

for the local self-financing degree sector to enhance academic and research development.\footnote{http://www.ugc.edu.hk/eng/rgc/sf/sf.htm} This funding is administered by the RGC.

1.2. Background to the RGC

The RGC was established in 1991 in order to distribute funding for academic research projects undertaken by academic staff at UGC-funded institutions. In 1991 it was responsible for HK$100 million which was distributed through two schemes, the general research fund, (GRF) which covers individual research grants, and the Collaborative Research Fund (CRF) (formerly known as Central Allocation) which in 1991 funded large pieces of equipment. Over time the RGC has developed, adding new funding schemes, such as the Early Career Scheme (ECS), which provides individual research grants specifically for early career researchers, and the Humanities and Social Sciences Prestigious Fellowship Scheme (HSSPFS), which provides funding specifically for senior humanities and social science researchers. It has also adapted and developed its schemes over time, for example expanding the remit of the CRF to cover group research as well as equipment.

The objective of RGC research funding is to build up research capability in Hong Kong. The terms of reference of the RGC are:\footnote{http://www.ugc.edu.hk/eng/rgc/about/term_rgc.htm}

- To advise the Special Administrative Region (SAR) Government, through the UGC, on the needs of the institutions of higher education in Hong Kong in the field of academic research, including the identification of priority areas, in order that a research base adequate for the maintenance of academic vigour and pertinent to the needs of Hong Kong may be developed; and

- To invite and receive, through the institutions of higher education, applications for research grants from academic staff and for the award of studentships and post-doctoral fellowships; to approve awards and other disbursements from funds made available by the SAR Government through the UGC for research; to monitor the implementation of such grants and to report at least annually to the SAR Government through the UGC.

Over time, the government has also provided the RGC with additional funding, both to expand the schemes it was already running, and to deliver new schemes specifically initiated by the government, such as the Theme-based Research Schemes (TRS), which provides funding specifically for research within predefined themes chosen due to their strategic importance to the long-term development of Hong Kong, and three schemes specifically designed and available to the self-financing sector: the Faculty Development Scheme (FDS), Institutional Development Scheme (IDS) and Inter-Institutional Development Scheme (IIDS). In the period 2015-2016 the RGC distributed HK$1127 million, more than ten times as much as it was originally responsible for when it was founded, across sixteen different schemes (Table 1).\footnote{http://www.ugc.edu.hk/eng/rgc/}
## Table 1: Funding schemes administered by the RGC

<table>
<thead>
<tr>
<th>Sector</th>
<th>Type</th>
<th>Scheme</th>
<th>Details</th>
<th>Aim</th>
</tr>
</thead>
<tbody>
<tr>
<td>UGC sector</td>
<td>Individual project</td>
<td>General Research Fund (GRF)</td>
<td>Small scale, 2-3 year projects, 57 per cent of 2015/16 budget for UGC sector</td>
<td>To fund as many worthy projects as possible across a broad front within the funds available</td>
</tr>
<tr>
<td></td>
<td>grants</td>
<td>Early Career Scheme (ECS)</td>
<td>Small scale, 2-3 year projects, 9 per cent of 2015/16 budget for UGC sector</td>
<td>To nurture junior academics and to prepare them for a career in education and research</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Humanities and Social Sciences Prestigious Fellowship Scheme (HSSPFS)</td>
<td>1 year fellowship to employ relief teachers/administrators, 1 per cent of 2015/16 budget for UGC sector</td>
<td>To recognise excellence in the Humanities and Social Sciences</td>
</tr>
<tr>
<td>Collaborative research</td>
<td>Collaborative Research Fund (CRF)</td>
<td>Medium scale, 3-5 years, 10 per cent of 2015/16 budget for UGC sector</td>
<td>To encourage research groups to engage in collaborative research across disciplines and/or across universities with a view to enhancing the research output of universities in terms of the level of attainment, quantity, dimensions, and/or speed; and to enable the acquisition of major research facilities or equipment for collaborative research”</td>
<td></td>
</tr>
<tr>
<td>Theme-based Research Scheme (TRS)</td>
<td>Large scale, up to 5 years, four themes set by government, 18 per cent of 2015/16 budget for UGC sector</td>
<td>To focus academic research efforts of the UGC-funded universities on themes of strategic importance to the long-term development of Hong Kong</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Areas of Excellence (AoE) Scheme</td>
<td>Large scale, up to 8 years, conducted every 2 years, not awarded in 2015/16 for UGC sector</td>
<td>To build upon research areas of strength in Hong Kong and develop them into Areas of Excellence (AoE)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Joint research schemes</td>
<td>National Natural Science Foundation of China (NSFC) / RGC Joint Research Scheme</td>
<td>5 per cent of 2015/16 budget for UGC sector</td>
<td>To promote and further encourage research co-operation and exchanges with regions outside Hong Kong. These can be divided into project grants, and travel/conference/ exchange grants.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>French National Research Agency (ANR) / RGC Joint Research Scheme</td>
<td>They vary in size of the scheme, and in competitiveness.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Germany / Hong Kong Joint Research Scheme</td>
<td>In all cases the RGC funds the researcher from the UGC-funded university, and the partner funds the individual from the partner institution.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sector</td>
<td>Type</td>
<td>Scheme</td>
<td>Details</td>
<td>Aim</td>
</tr>
<tr>
<td>-----------------</td>
<td>-----------------------</td>
<td>---------------------------------------------</td>
<td>-------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>Self-financing</td>
<td>Individual project</td>
<td>Faculty Development Scheme (FDS)</td>
<td>Small scale 2-3 year projects, 32 per cent of 2015/16 budget for self-financing sector</td>
<td>To develop the research capability of individual academic staff in the local self-financing degree-awarding institutions so that they can transfer their research experiences and new knowledge into teaching and learning.</td>
</tr>
<tr>
<td>Self-financing</td>
<td>Capacity building</td>
<td>Institutional Development Scheme (IDS)</td>
<td>Large scale projects of up to 3 years, 64 per cent of 2015/16 budget for self-financing sector</td>
<td>To build up the research capacity of local self-financing degree-awarding institutions in their strategic areas.</td>
</tr>
<tr>
<td>Self-financing</td>
<td>Collaborative project</td>
<td>Inter-Institutional Development Scheme (IIDS)</td>
<td>Small scale funding for up to 1 year, 3 per cent of 2015/16 budget for self-financing sector</td>
<td>To enhance academics’ research capability in the local self-financing degree-awarding institutions and keep them abreast of new developments and challenging research topics in relevant fields.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

1.2.1. Structure of the RGC

The RGC itself is made up of local and non-local academics (11 and 13 respectively as at 1 March 2017) and local lay members (four as at 1 March 2017); it also has about 30 non-academic staff (the Secretariat). It is headed up by a chairman who is a local academic from a UGC-funded university working part-time for the RGC. The chairman is responsible for appointing members of steering committees and assessment panels, including chairs, chairing RGC meetings, and representing the RGC at external meetings. The chairman does not participate in the assessment of research proposals.

The RGC largely operates through steering committees and assessment panels/committees. There are three steering committees to oversee the development and operation of particular funding streams:

- The Major Projects Steering Committee
- The Hong Kong PhD Fellowship Scheme (HKPFS) Steering Committee
The Steering Committee on Competitive Research Funding for the Self-financing Degree Sector. In general, each scheme also has at least one assessment panel/committee. Committees and panels are almost all chaired by a member of the RGC, with the rest of the membership made up of a mix of local academics, local lay members, and non-local academics. For all UGC-sector schemes the chair of the committee is non-local. Each funding scheme has one round of application a year (except for the AoE Scheme which is available once every two years), and most of the assessment panels/committees meet in person in Hong Kong in order to distribute funding/select awardees for the fellowship. Except for the HKPFS, peer review by researchers external to the assessment panels/committees is carried out for RGC schemes. 95 per cent of these reviewers are non-local to Hong Kong, although Hong Kong reviewers are used where it is felt to be appropriate for the application.

1.3. Background and purpose of the review

In view of the increase in funding provision, number and variety of funding schemes as well as complexity and size of selection and monitoring panels/committees in recent years the RGC started to work on a consultancy study proposal in 2014 with a view to formulating a strategic plan to further streamline its operation and enhance efficiency. In December 2015, the RGC endorsed that a review of the RGC be conducted in two phases, which would cover the following macro and micro issues respectively:

- Phase 1 – Covering macro issues such as the portfolio balance of the RGC funding schemes, the RGC and assessment panels/committees’ structure and good practice in overseas funding agencies.
- Phase 2 – Covering micro issues such as the quality of assessment and monitoring processes, means of communication among members of the panels/committees, timeline of funding schemes and arrangement guarding against conflict of interests in the assessment process.

In order to safeguard the independence and credibility of the review, a Task Force was set up under the Research Group, a standing committee of the University Grants Committee, to oversee the Phase I Review in July 2016. RAND Europe were also engaged as an external consultant to assist the Task Force in the review.

RAND Europe’s research aimed to address the following questions:

- What are the strengths, weaknesses and opportunities for improvement to the RGC funding processes and structure as perceived by RGC stakeholders (the academic community, universities and institutions, RGC panel members and broader society)?
- What can be learnt from comparable international funding bodies to inform improvements to the system?

16 The GRF and ECS schemes have five panels organised by discipline: business studies (B), biology and medicine (M), physical sciences (P), engineering (E), and humanities and social sciences (H)
A mixed method approach, using document review, surveys, an online consultation and focus groups was employed to gather data to address these two questions. Each question was addressed through multiple methods, (Table 2) allowing for triangulation of results and increased confidence in findings. The different methods allow us to approach different stakeholders groups of relevance to the RGC (Table 3). These two research questions are addressed by method in the annexes to the report.

Table 2: Mapping of research method to research question

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Document review</th>
<th>Survey</th>
<th>Consultation</th>
<th>Focus groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>What are the strengths, weaknesses and opportunities for improvement to the RGC funding processes and structure as perceived by RGC stakeholders (the academic community, universities and institutions, RGC panel members and broader society)?</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>What can be learnt from comparable international funding bodies to inform improvements to the system?</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

Table 3: Mapping of stakeholder type to research method

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Survey</th>
<th>Consultation</th>
<th>Focus groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic community</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Universities and institutions</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>RGC panel members</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Broader society</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The methods built on each other to inform the subsequent stages of the study. In particular, the survey and consultation, which was circulated to as broad a set of stakeholders as possible was used to identify areas of dis-satisfaction, or lack of consensus, and these areas were concentrated on in the focus groups.

To develop the key findings, each member of the project team independently came up with five key messages for consideration by the Task Force. These overarching messages were developed taking into account the different views of stakeholders, as well as the wider context of the funding system in Hong Kong and available evidence from other jurisdictions on international practice and experience. These were clustered resulting in a number of key messages which drew the results from each of the methods together. These key themes were then arranged into headings which are detailed with a summary of the supporting evidence in the main body of the report (Chapter 2 -5) and related conclusions (Chapter 6). The key themes are: the achievements of the RGC (Chapter 2), which outlines outlining the strengths of the RGC as perceived by stakeholders, and building on available comparative data; the processes of the RGC grant allocation and review process (Chapter 3), which highlights perceived weaknesses of the RGC grant allocation and review process, including how they relate to the wider Hong Kong system, and how aspects
such as size of grant relate to comparable jurisdictions; the role of RGC in strategic research directions (Chapter 4), which perceptions of stakeholders on RGC’s decision making and aims including both strength and weaknesses; and areas for improvement of grant review processes (Chapter 5), which highlights weaknesses in RGC processes as perceived by stakeholders in the system, and hence opportunities for improvement, with comparisons made to other jurisdictions.

1.4. Overview of evaluation approach

1.4.1. Approach

This study used a multi-method approach consisting of document review, interviews, surveys, an online consultation and face to face focus groups. With each step, we collected and added more evidence, adding further detail and nuance in order to build as complete a picture of the RGC as possible.

Firstly, in order to better understand the RGC we reviewed a series of public and private documents describing its funding schemes, structures and processes. To place this into context we also compared the RGC’s funding schemes and processes against eight comparator countries, chosen based on international significance to Hong Kong, or similarity to Hong Kong. The comparator countries used were: the UK, the US, China, South Korea, Singapore, New Zealand, Israel and Denmark. For each country we reviewed publically available documents for one major funding body in order to compare its funding schemes and structure with the RGC. The results of this review can be found in Annex A.

Having built a picture of the RGC and how it compares internationally we designed online surveys and an online consultation to collect views and experience of the RGC from as wide a range of stakeholders as possible. The online surveys were developed for stakeholders directly involved with the RGC including successful and unsuccessful applicants and RGC panel and committee members. The consultation was publically available and open to all, with the aim of allowing wider stakeholders, such as other government bodies, the Legislative Council, research users and other stakeholders to input into the review. The surveys received a response rate of between 38 and 48 per cent, and 111 people filled in the online consultation. The survey was made up predominantly of closed questions, with five open-test questions included. Quantitative analysis of the survey data was conducted in R. Qualitative analysis of open-ended questions was carried out by coding the responses to broad analytical categories covering all of the questions. The results of the surveys and online consultation can be found in Annex B.

Finally 18 face to face focus groups lasting one and a half hours each were carried out in Hong Kong on the week of 5th December 2016 in order to develop a more nuanced understanding of the performance of the RGC. Through the focus groups we met with 115 people, with an average size of 6 people per group. Face-to face focus groups were carried out with representatives from: the UGC-sector including both researchers and institutional management, the self-financing sector including both researchers and institutional management, panel members for both sectors, and RGC members. The majority were

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17 There were 1143 respondents from the UGC-sector, 143 respondents from the self-financing sector, and 288 respondents from panel/committee members.

18 R is a statistical programming language https://cran.r-project.org/
carried out after the online surveys had closed, and were used to build on the results of the surveys, focusing on questions best explored through dialogue, and in particular on areas where survey respondents disagreed most with statements. Following the focus groups we wrote up memos using notes and audio recordings taken during the focus groups. These were uploaded into QRS NVivo 11 software, and coded into 88 categories within four broad categories: parts of the process, the needs of researchers and broader society, perceptions of the process, and interviewee type. The results of the focus groups can be found in Annex C.

To combine the results from the methods into key messages, each member of the project team independently came up with five key messages for consideration by the Task Force. These were reviewed and clustered around key emerging themes, and then emerging findings were stress tested using the data collected through the various methods used in the study which resulted in the messages evolving and changing. Due to the differing nature of data types the quantitative results from the survey are used to emphasise the consensus or divergence in views around a key point and the qualitative analysis from the focus groups, surveys and online consultation provide additional detail and context to points raised.

To protect the anonymity of our respondents and ensure confidentiality, data are presented by type of respondents (e.g. researcher, senior institutional manager, panel or council member). Where possible we have attempted to provide detail by discipline, part of the sector and career stage. We recognise that HEIs do not have one perspective on the issues discussed and therefore the data cannot be quantified at this level.

Further details on each of the methodologies can be found in methods sections in the relevant annexes.

1.4.2. Limitations and caveats

Whilst we carried out a document review and conducted some comparative work, the study we have done is predominately based on analysis of RGC data and the views of RGC stakeholders. In particular, the study relies heavily on analysis of feedback from Hong Kong’s academics. We believe that the study we have done is useful in informing future decision making but the following limitations need to be recognized.

The study did not include detailed comparison of RGC management and organisation against the other research funders. This analysis would involve interviews with funders in comparator jurisdictions and access to internal documents from those funders.

The study was not an audit and did not assess issues of comparative effectiveness and efficiency in detail.

Whilst we had good engagement overall from a variety of RGC stakeholders, response rates from academics to the survey varied across universities. We have checked that the responses overall for these institutions are similar to those from other institutions, and that the sample matches with available demographic data for universities, and in our assessment the varying response rates do not appear to have compromised research findings. Clearly however, widely varying response rates from different institutions

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19 The annexes are: Annex A: Background and context; Annex B: Results from the online surveys and consultation; Annex C: Results from the focus groups
was not ideal. In addition, as with many surveys, it is possible that individuals with particular views would be more likely to fill in the survey than others, for example those who are particularly positive, or particularly negative, may be more inclined to fill in a survey.

Finally we should note possible bias in focus group findings. The purpose of the focus groups was to explore areas of improvement determined from the survey data, i.e. where there was least satisfaction in the current processes, therefore less time was spent discussing elements that worked well.

A list of further caveats for each method is provided in the relevant Annex.

1.5. Outline of the report

This main report describes the key findings of the review. As described in Section 1.3 the key findings from the analysis were clustered into four themes. Each of chapter 2-5 presents one of these themes. Chapter 2 presents our findings around the achievements of the RGC; Chapter 3 presents findings about the current RGC grant allocation and review processes; Chapter 4 presents related to RGC strategy; and Chapter 5 presents possible areas of improvement for RGC grant review processes. Finally Chapter 6 presents the conclusions.

Following the main report are three annexes presenting the detailed results from each of the methodologies used during the review. Annex A presents the results from the document review and review of comparative jurisdictions; Annex B presents results from the online surveys and consultation; and Annex C presents results from the focus groups.

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Further detail can be found in Annex B, Section 8.2.1
2. Achievements of RGC Grant giving

Over the last 25 years the RGC has allocated funding to the research community in universities and institutions across Hong Kong. This chapter provides information from all four methodologies outlining the strengths of the RGC as perceived by stakeholders. The key findings within this section are that:

- The RGC is Hong Kong’s primary research grant funder and has established a positive reputation.
- There were many positive views articulated about what the RGC and associated funding has achieved since its inception.

2.1. The RGC is Hong Kong’s primary research grant funder and has established a positive reputation

2.1.1. The RGC has allocated HK$15,491 million over the last 25 years

The RGC has been awarding grant funding to the academic community since 1991. In this time, the total amount of funding allocated by RGC to support research projects increased from HK$100 million in the academic year 1991/92 to HK$1,127 million in the academic year 2015/16 (Figure 2). Over this time the RGC has expanded from funding two funding schemes for academic staff in the UGC sector, to funding 16 schemes, covering a range of schemes for academics and PhD students in the UGC sector, three schemes for academics in the self-financing sector.
2.1.2. The funding system in Hong Kong has a strong reputation internationally

The Hong Kong research system has also developed substantially in the last 25 years. Hong Kong universities are now recognised worldwide through rankings. Five of the eight UGC-funded universities are in the top-200 in the QS University Ranking for academic reputation, and two are in the top 50. Another measure that can be looked at is citations per faculty, where three universities in Hong Kong are in the top 200.\(^\text{22}\) The research funding distributed to these universities, 10 per cent of which is distributed by RGC, and a growing proportion of which is distributed as part of the block grant based on success in RGC grants, has contributed to the development of a competitive research system in Hong Kong.\(^\text{23}\)

The RGC’s strong reputation globally is also evidenced by its ability to recruit and retain international panel and committee members, including from a number of prestigious universities: 53 per cent of RGC panel members and 95 per cent of their external reviewers are from overseas. In focus groups, a number of international panel members made positive comparisons between the RGC and other funding bodies such

\[^{21}\] This graph does not take into account inflation.
\[^{22}\] https://www.topuniversities.com/university-rankings
\[^{23}\] From 2012/2013 a decision was made to reduce the proportion of the R-portion (which accounts for 65 per cent of research funding) awarded based on the results of the RAE, and instead distribute some of the money based on each university’s success in gaining RGC Earmarked Research Grants. This decision was designed to increase competition and promote research excellence. Subject to the UGC’s future deliberation, 50 per cent of the R-portion will be distributed in this way by 2020/21, accounting for approximately 32.5% of research funding.
as China and Australia. They felt that the RGC system is particularly fair, working to minimise conflict of interest through its processes, and that using external peer reviews from relevant experts across the globe helps to ensure that panel members have appropriate levels of influence.

2.1.3. Many grant recipients perceive that the RGC has facilitated their individual careers

When asked in an open text question in the survey if the RGC funding had enabled researchers to develop their work and career beyond the lifetime of the individual grant or project, 50 per cent of researchers who answered the question felt the RGC funding had a positive impact on their career.24 The most common benefit mentioned in the survey was that the research led to further research projects and ideas, followed by enabling particular research projects to be carried out – particularly those of larger scale or longer duration – and a general development of research profile and track record, which allowed researchers to be successful and productive going forwards (Table 4). Other benefits included enabling research experience and expertise to be developed in a particular area, and collaboration, which researchers felt enabled them to progress their research careers.

Table 4: Ways that the RGC funding facilitated careers of individual researchers25

<table>
<thead>
<tr>
<th>Ways that the RGC funding facilitated careers of individual researchers</th>
<th>Number of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leading to further research projects and ideas</td>
<td>66</td>
</tr>
<tr>
<td>Enabling particular research projects – e.g. large scale or longer duration ideas</td>
<td>51</td>
</tr>
<tr>
<td>Developing research profile and track record</td>
<td>48</td>
</tr>
<tr>
<td>Facilitating collaboration with other researchers, institutions or stakeholders</td>
<td>42</td>
</tr>
<tr>
<td>Developing infrastructure through providing resources which can be used after the project</td>
<td>21</td>
</tr>
<tr>
<td>Developing skills and expertise</td>
<td>15</td>
</tr>
</tbody>
</table>

24 50 per cent, 289/578.

25 Some respondents described multiple impacts; these respondents have been counted for each impact type they mentioned. Some respondents also said that the RGC funding had facilitated their research career, but did not describe how.
2.2. There were many positive views articulated about what the RGC and associated funding has achieved since its inception

2.2.1. Researchers valued the fact that the majority of funding provided by the RGC is response mode

The majority of the RGC funding (80 per cent) is allocated through a response mode, rather than a targeted approach.\(^{26,27}\) Researchers in focus groups highly valued the breadth of topics covered in the schemes, particularly the GRF, and the freedom to propose research, as they feel it provides everyone with equal opportunities. However, a small number of online consultation respondents and focus group participants, including senior managers and panel members, felt that the responsive nature of the schemes limits the creation of strategic research directions, and the ability to create critical mass, and thus research fragmentation exists.

2.2.2. A number of researchers and panel and committee members provided positive comments and examples about the RGC, and welcomed the review

The survey asked for respondents’ opinions on the extent to which they agreed with aspects of the RGC funding schemes e.g. inclusivity; correct balance, duration, and value of awards.\(^{28}\) Panel members who responded to the survey in general have a high opinion of the system, with at least 50 per cent of them agreeing and fewer than 20 per cent disagreeing with each aspect (Figure 36). In addition, a third of the online consultation respondents, spanning researchers as well as government and associations, commented positively on the fact that the RGC provides funding support and should continue to do so.\(^{29}\)

The survey asked, based on their personal experience, what respondents would recommend to the RGC from other national systems.\(^{30}\) A number of recommendations were provided (more detail provided in Section 8.2.10), but 12 panel members and three researchers commented that they felt the RGC compares well to other systems they know of. Seven of these panel members and one of the researchers described it as better than other funding bodies, with four of these eight respondents commenting they

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26 The funding available is separated into a range of separate schemes (the general research fund, the early career scheme, the collaborative research fund etc.), but within these schemes any research topic can be submitted.

27 For the purpose of this calculation, we have classified the following schemes as responsive: GRF, ECS, CRF, and the AOE Scheme; and the HSSPFS and TRS as directed.

28 Survey respondents were asked their opinion on the following aspects of RGC funding schemes: inclusivity, balance of awards across disciplines, balance of basic and applied research, balance of research topics of local relevance and international significance, balance of awards between new investigators and experienced investigators, appropriate integration of research and education, whether they reflect the needs of the research community, the monetary value awarded compared to the scope of the projects, and the duration compared to the scope of the projects.

29 36 per cent, 40/111

30 This question was asked to UGC-sector researchers, self-financing sector researchers, and RGC panel members/committee members
felt it was better than the NSF and NIH.³¹ In other open-ended questions on the survey, 11 panel members and 10 researchers commented that they felt the RGC is effective for purpose and works well for Hong Kong.³²

Positive elements of the RGC funding processes were mentioned in all focus groups, for example:

- The ability of the programme to meet the needs of researchers, in particular promoting culture and excellence within universities
- Confidence in the assessment process, in particular its reliability
- Fairness in reviewing created by mainly using international assessors rather than local assessors
- Academic freedom to suggest research topics
- Volume of researchers supported by the system, compared to funding overseas
- Prestigious nature of RGC funding
- Well-funded nature of some schemes, such as the collaborative one
- Integrity of the UGC as an organisation, and the credit due to the staff working there in maintaining this

A number of participants in focus groups stressed the importance of valuing the system in place. For example when discussing a wish for a larger investment, one participant nevertheless recognised that the system delivers a lot with the resource available to it.

When conducting the focus groups in Hong Kong, participants invited were keen to attend and provide their views. Without being asked, a small number of participants across the majority of the focus groups stressed to us that they were pleased this review was happening. In particular, they felt it was timely to conduct a review at this point and reflect after 25 years taking into account changes and developments in the Hong Kong and global research system over time. Participants were forthcoming in providing their opinions and perspectives to improve the system going forwards, but stated that incremental improvements were needed rather than an overhaul of the system.

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³¹ The survey received responses from: 1143 UGC-sector researchers, 143 self-financing sector researchers and 288 RGC panel members/committee members. This question was answered by 396 UGC-sector researchers, 20 self-financing sector researchers, and 127 RGC committee/panel members.

³² The survey received responses from: 1143 UGC-sector researchers, 143 self-financing sector researchers and 288 RGC panel members/committee members.
3. Processes of RGC Grant Allocation and Review

Our interviewees discussed many aspects of the process of allocating funding, and reviewing applications which are core to the function of the RGC. In this chapter we highlight perceived weaknesses of the RGC grant allocation and review process, including how they relate to the wider Hong Kong system, and how aspects such as size of grant relate to comparable jurisdictions. In this chapter we draw from all four methodologies. The key findings are:

- The overall value of the funding pot is a source of concern to all stakeholders
- There is a lack of agreement as to whether the current value and duration of awards is correct
- Grant metrics are used as a measure of success to reward both researchers and universities

3.1. The overall value of the funding available is a source of concern to all stakeholders

3.1.1. The percentage of GDP that is spent on research in Hong Kong is low compared to other countries

The percentage of Gross Domestic Product (GDP) that is invested in Research and Development (R&D) in Hong Kong is lower than all other comparator countries at 0.7 per cent (Figure 3). There has been no increase in the percentage of GDP spent on research in Hong Kong since 2005. This was raised as a point of contention in our focus groups by all types of respondents: researchers from all disciplines, university management, panel and council members. In over 50 per cent of focus groups this was the first point raised when participants were asked whether the system meets the needs of researchers and Hong Kong, with comparisons made to international benchmarks, such as European countries, US, China and Singapore, and suggestions that levels should be comparable to other countries regionally such as Taiwan, Japan and South Korea, which were all above 2 per cent in 2014. In addition, the value of the overall funding available from, and distributed by, the RGC was the second most mentioned topic for UGC-sector researchers when asked in the survey if there was anything not covered in the survey questions that should be considered in the review.

All the international data in Figure 3 includes spending on defence research. It should be noted that Hong Kong do not carry out any defence research.
3.1.2. The RGC is the sole source of grant funding available for a large number of researchers in the system

For a large number of researchers in the system, the RGC is the sole source of grant funding. Only 40 per cent and 18 per cent of UGC-sector and self-financing sector researchers respectively who responded to the survey said that they had funding from sources other than the RGC or their HEI (Figure 4).

In the UGC-sector, of those that do have other funding, 46 per cent of researchers responding to the survey have funding only from other government sources (predominantly the Innovation and Technology Commission, the Health and Medical Research Grant and the Environmental Conservation Fund).

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Another 17 per cent have funding from other government sources and other sources, such as international funders, industry, or local foundations or charities. 23 per cent reported funding from overseas only (including government and industry funding) and 4 per cent have money from local foundations and charities only; 10 per cent have funding from other sources such as local or international industry.\textsuperscript{35}

Figure 5: Breakdown of different funding sources for UGC-sector survey respondents reporting funding from sources other than the RGC or their HEI

In focus groups senior managers and many researchers stressed that the RGC was one of the only sources of funding for a large number of researchers in the system, with senior managers reporting that money from industry and philanthropy was minimal. In the case of many in the academic community, RGC grants were felt to be the only option for basic research. This combination of the survey and focus group data highlight the importance of RGC grants in the Hong Kong funding system.

3.2. There is a lack of agreement as to whether the current value and duration of awards are correct

3.2.1. RGC grants have lower value and shorter duration than many grants in comparator countries

Table 5 shows the length and value of average single investigator grants for the UGC and comparator funding bodies (where data is available). In comparison to other comparator funding bodies, RGC grants are shorter, with the exception of the NSF, and on average lower in value.

\textsuperscript{35} For the self-financing sector researchers, all had funding from other government funding sources and one also had funding from mainland China.
Single investigator grants funded by the RGC have an average value of 87,000 USD, and an average duration of two to three years. It is worth noting, though, that arguably longer grants could be requested, as the proposal comes from the awardee and is approved by the RGC, but this seems not to be requested in practice. Reasons could include a perception in the sector that a ‘standard grant’ is between two and three years in length, and deviation from this may result in funding not being awarded, or that the balance between value and duration may also restrict individuals from asking for more time.

Table 5: Length and value of average single investigator grants from the RGC and comparator funding bodies

<table>
<thead>
<tr>
<th>Funding body</th>
<th>Country</th>
<th>Grant length (years)</th>
<th>Funding value in thousand USD per year</th>
</tr>
</thead>
<tbody>
<tr>
<td>RGC</td>
<td>Hong Kong</td>
<td>2-3</td>
<td>30</td>
</tr>
<tr>
<td>DFF</td>
<td>Denmark</td>
<td>3.5</td>
<td>225</td>
</tr>
<tr>
<td>ISF</td>
<td>Israel</td>
<td>5 maximum</td>
<td>46-75</td>
</tr>
<tr>
<td>NSF</td>
<td>US</td>
<td>2.5</td>
<td>118</td>
</tr>
</tbody>
</table>

In focus groups, researchers, university management and administrators said that they felt that over time the value of funding, across the system and for individual awards had not kept pace with inflation, nor reflected the increase in the cost of resource, such as staff salaries for posts like research assistants and post docs.

3.2.2. In general, researchers are more concerned with the value of awards than their duration

In the survey, researchers were asked whether they agreed that the RGC grants are the correct duration and monetary value for the scope of the projects proposed (Figure 6). At least 50 per cent of survey respondents agreed with the statement that the duration of awards is appropriate (50 and 70 per cent for UGC-sector and self-financing sector researchers respectively), whereas only 35 per cent and 55 per cent of UGC-sector and self-financing sector researchers respectively agreed with the value of the awards.

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36 Schemes including the GRF and ECS allow project duration up to five years, though the majority of the projects are of 2-3 years.
37 This data was also available for South Korea, where grants range from 45,000 USD to 715,000USD over 3-9 years. As the range of values is very large this an average could not be calculated, so it has not been included in the table http://www.nrf.re.kr/nrf_eng_cms/show.jsp?show_no=90&check_no=89&c_relation=0&c_relation2=0
38 Calculated as a function of available data, for example dividing the overall average value of awards by the average grant length.
40 Annual Report 2015/16. Israel Science Foundation
41 Report to the National Science Board on the National Science Foundation’s Merit Review Process Fiscal Year 2012. May 2013. National Science Foundation
3.2.3. Researchers from different disciplines have different needs in terms of value and duration

In the survey, researchers from all disciplines except business studies had a higher level of disagreement with the statement that the RGC funding schemes offer the right monetary value for the scope of the projects, compared to the statement that awards are the right duration for the scope of the project.

Researchers from business studies however had a higher level of disagreement with the statement that awards are the right duration for the scope of the project (Table 6).

Table 6: The percentage of UGC-sector respondents from each discipline who responded ‘disagree’ or ‘strongly disagree’ with each statement

<table>
<thead>
<tr>
<th>Statement</th>
<th>Percentage of respondents who disagree with the statements</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Biology and medicine</td>
</tr>
<tr>
<td>Awards are right monetary value for the scope of projects</td>
<td>57 (n=162)</td>
</tr>
<tr>
<td>Awards are right duration for the</td>
<td>30 (n=151)</td>
</tr>
</tbody>
</table>

42 This is researchers from biology and medicine, engineering sciences, physical sciences, and social sciences and humanities.
The business studies focus group was also the only disciplinary focus group which did not comment on awards being too small. They did comment that awards are too short, as did participants in focus groups from medicine and humanities and social sciences.

3.2.4. While researchers would like grants to be both larger and longer, many only want this if the total funding available can also be increased.

In the survey, 88 per cent of researchers (in both the UGC-sector and the self-financing sector) said that if the total funding level is fixed they would want the current funding distribution to be maintained, rather than awarding fewer but individually larger awards (Figure 7). The literature shows that there is no clear correlation between value or duration of awards and level of outcome (Wooding et al. 2004).

Figure 7: Survey respondents’ preferences on award distribution if the total funding level is fixed

Researchers, senior managers, panel and council members in our focus groups recognised the tension between value of awards and number of successful grantees, accepting that without increasing the overall pot it was not possible to increase both of these elements (length and value). In response to this, focus group participants stressed the importance of RGC funding for sustaining the research community in Hong Kong, which they felt was a primary aim of RGC funding. Therefore the majority of focus group participants were in favour of retaining the current value and duration if the total funding allocated was fixed; whereas a minority of researchers and council members felt the length should be extended, resulting in a reduction of grants, and potentially grant holders.

3.2.5. Providing awards which are perceived to be low value and short time frame was thought to have consequences on the research conducted

In focus groups, researchers felt that the low value of funding available through the RGC has a variety of consequences on the research system. In particular they felt it affected the direction of research undertaken in Hong Kong, and the type of research that researchers think it is possible to conduct. For example, one researcher felt it was cheaper to conduct theoretical work, using computational simulations or theoretical algorithms, rather than experimental design and therefore this was easier to fit within the available budget; this point was also made by several panel members in focus groups. Senior managers felt that the low value of individual awards, and the lack of other options to apply for, resulted in individuals applying for funding year on year. Panel members mentioned that the large number of lower value awards led to a greater burden on the applicants and reviewers.
Researchers in focus groups were concerned that the short duration of the funding, and the requirement to publish to secure subsequent funding, affected the type of research questions that could successfully be addressed. In particular they felt that researchers were addressing research questions which were incremental advances in knowledge and societal benefit rather than attempting transformational changes. A panel member mentioned that with shorter duration of funding it may be harder to produce research with an impact or benefit on society.

Researchers in focus groups also felt that the short duration of funding made it difficult to recruit to ongoing positions, such as supporting PhD students when the initial funding won’t cover the full length of training. In the survey, online consultation and focus groups a number of researchers raised particular concerns for early career researchers regarding the duration of funding; the NSF and the NIH were given as examples from overseas where early career researchers (ECRs) had longer funding than other award recipients.43

3.3. Grant metrics are now used by the sector as a measure of success to reward both researchers and universities

3.3.1. The use of GRF grants in the calculation of the block grant is perceived to have led to GRF awards being used as a university metric in promotion and tenure

The number and funding amount of GRF grants, amongst other RGC’s earmarked research grants that an HEI holds, are used in the calculation of part of the research element of the UGC’s block grant allocation.44 Focus group participants felt, because of this linkage, GRF grants are used as a key measure of individual success within an institution and a metric at an individual level for staff. In particular, focus group and survey respondents (25 UGC-sector researchers and one panel member in response to open survey questions)45 felt that GRF success is used within HEIs as a key criterion for promotion and tenure of individuals. They directly attributed this to its use in the block grant allocation.

3.3.2. Use of GRF grants as a university metric increases pressure on staff and inefficiency in the funding system

Use of earmarked RGC grants as a university metric, in particular GRF grants, led to focus group participants expressing concern that the consequences of a failed application goes beyond a lack of funding from the RGC and the lack of ability to conduct the project proposed, and has serious potential career implications. Taking this use into account, a number of focus group participants suggested inclusion of the category ‘fundable but not funded’ so that staff can prove the value of their work within their institution, even if they do not receive a funded award from their application.

43 It was reported that NSF provides five years for early career compared to three years for other schemes, and NIH gives five years for early career researchers and four years for researchers who already have an independent award. This should be confirmed and a reference included in this footnote.

44 http://www.ugc.edu.hk/eng/ugc/faq/q303c.html

45 The survey received responses from: 1143 UGC-sector researchers, 143 self-financing sector researchers and 288 RGC panel members/committee members.
Another effect described by focus group participants across all disciplines, and mentioned in open-ended questions in the survey, was an expectation within HEIs that all researchers would apply for funding annually, regardless of whether a researcher felt they needed that funding for their research. This expectation was described by early and mid-career researchers as a pressure they were under, and senior researchers who said they were responsible for encouraging this expectation. Anecdotally a number of focus group participants provided examples of where grants were applied for whether the funding was specifically required or not, particular in business studies and social sciences. One implication of this is on the efficiency of the system. A recent study showed that 80 per cent of time in grant processes is spent writing the application, and a higher number of proposals will also result in an increased burden on the reviewers and panel members.

In addition there are also potential long term consequences to the coupling of GRF grant success with the allocation formula of the R-portion of the block grant. Due to the small number of other funding sources available the RGC already has high importance in the Hong Kong funding system. The coupling threatens to increase the focus of researchers and institutions on receiving competitive grant funding from the RGC, and reduce effort put into receiving funding from other sources, which is unlikely to encourage other funding options to be further developed.

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Guthrie S, Ghiga I, and Wooding S "What do we know about grant peer review in the health sciences?" Forthcoming
4. Review of the Role of RGC in Strategic Research Directions

The RGC has a published mission and aims; however it does not have a published strategy. This chapter focuses on perceptions of stakeholders on RGC’s decision making and aims, and different potential strategic areas that were mentioned or discussed in the focus groups, survey and online consultation. In this chapter we draw from all four methodologies. The key findings are:

- The RGC’s decision making is devolved to panels and the overall aims of the RGC are not well understood by the sector
- Participants identified a number of areas for future strategic consideration

4.1. The RGC’s decision making is devolved to panels and the overall aims of the RGC are not well understood by the sector

4.1.1. The majority of the strategic decisions are devolved to the panels, and therefore it is possible for different panels to have different strategies

Panel members in focus groups noted that the panel have autonomy to decide how the funding is allocated between the applications submitted to their panel. For example, the panel actively determine the success rate of applications to the panel, and hence the balance between size and number of awards. As they have control of strategic decisions, they also control the balance of basic and applied research funded and the balance of research of local relevance and international significance funded, however panel members noted that they award based on excellence and do not specifically aim for targets of types of research.

For example, when looking at the balance between research projects of local focus and those of international significance across the portfolio of research funded by the RGC, overall 9 per cent of the applications equating to 7 per cent of the successful proposals, and 10 per cent of unsuccessful ones have a local focus. Interestingly 75 per cent of these are submitted to the Humanities panel, and across the portfolio there is a 50:50 split between those classified as basic and applied.

Figure 8 shows the difference in success rate between different panels. Physical sciences has the highest success rate for both the ECS and the GRF; it is also the subject with the fewest academic staff in the UGC-sector (Figure 27). Humanities, the subject with the highest number of academic staff in UGC-

47 Local focus determined by the mention of Hong Kong in the application title.
funded universities has the lowest success rate for both the ECS and the GRF. In focus groups, researchers commented on these differences in success rates, and suggested that panels had different assessment practices, which led to the differing success rates. This appeared to lead to an impression that the system was not always fair.

**Figure 8: Success rate for individual award schemes broken down by panel**

When comparing internationally, the individual grant success rate for RGC grants is the highest individual grant success rate (Table 7). The ISF and NSFC also have high success rates, whereas the BBSRC and the NSF both have success rates of around 25 per cent, and the European Research council and MBIE have success rates of around 10 per cent.
Table 7: Success rates for individual grants in comparator countries

<table>
<thead>
<tr>
<th>Funding body</th>
<th>Success rate (per cent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RGC (Hong Kong)</td>
<td>32.42</td>
</tr>
<tr>
<td>ISF (Israel)</td>
<td>33-35 ( ^{49} )</td>
</tr>
<tr>
<td>NSFC (China)</td>
<td>25-30 ( ^{50} )</td>
</tr>
<tr>
<td>BBSRC (UK)</td>
<td>25 ( ^{51} )</td>
</tr>
<tr>
<td>NSF (US)</td>
<td>24 ( ^{52} )</td>
</tr>
<tr>
<td>European Research Council</td>
<td>10 ( ^{53} )</td>
</tr>
<tr>
<td>MBIE (New Zealand)</td>
<td>7 ( ^{54} )</td>
</tr>
</tbody>
</table>

4.1.2. The goal of RGC funding is not clear to many stakeholders

During the focus groups the majority of researchers across all disciplines and panel members could not articulate what the RGC research funding is trying to achieve overall for Hong Kong, and were keen to understand the direction the RGC was planning to take.

Each scheme has an objective (as previously detailed in Table 1), however there was a lack of clarity expressed in focus groups as to what each scheme is trying to achieve. Examples are provided below:

- There was confusion among HKPFS administrators and some researchers about the purpose of including international students, i.e. whether there is an expectation of capacity building for other countries through this training, or whether it is encouraged for students to remain in Hong Kong after their training.

- Self-financing senior managers had a range of views on whether the Faculty Development Scheme (FDS) was only for early career researchers that required development, or available for all faculty.

- Some researchers and panel members were unclear of the purpose of the Collaborative Research Fund (CRF) as it funds both large equipment and collaborations, and not all equipment would require collaboration between institutions.

\(^{48}\) All data is most recent available; data not available for Singapore and South Korea. Note that this draws on a specific selection of funding bodies in the comparator countries for our desk research. See Annex A for more information on the methodology for this element of the study.

\(^{49}\) Annual Report 2015/16. Israel Science Foundation

\(^{50}\) http://www.nsfc.gov.cn/publish/portal1/tab285/

\(^{51}\) http://www.bbsrc.ac.uk/funding/post-application/success-rates/

\(^{52}\) Report to the National Science Board on the National Science Foundation’s Merit Review Process Fiscal Year 2012. May 2013. National Science Foundation


There was also confusion among researchers in focus groups, and raised in open questions in the survey, about where the funds distributed by the RGC come from and which streams of funding the RGC has control over the budgetary distribution of (i.e. which money RGC can move between schemes, and which money has been specifically assigned to schemes by the government). For example, in the survey a small number of respondents (6 respondents) commented that they felt RGC should get rid of the AoE Scheme and TRS in favour of greater investment in the GRF. However, as described in the introduction (Section 1.2), specific funding for the AoE Scheme has been provided by the government to deliver these schemes, on top of the use of the interest earned on the endowment.

4.2. Participants identified a number of areas for future strategic consideration

4.2.1. Encouraging genuine collaboration

A key aim of specific streams of funding from the RGC is to foster and encourage collaboration. The RGC supports collaboration at a number of levels and through specific schemes. These schemes are: the collaborative research fund (CRF), Areas of Excellence (AoE) Scheme and Theme-based Research Scheme (TRS) in the UGC-sector.

We have identified four main levels of collaboration: within an institution, between disciplines, between institutions, and with international partners. Over 50 per cent of survey respondents for the UGC-sector agreed that the schemes which aim to increase collaboration promote collaboration within institutions, between institutions and within Hong Kong; over 40 per cent agreed that they promote collaboration between disciplines and internationally, demonstrating the support for these schemes (Figure 9).

Figure 9: Survey respondents’ opinions on the promotion of collaboration by the RGC collaborative schemes

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55 The survey received responses from: 1143 UGC-sector researchers, 143 self-financing sector researchers and 288 RGC panel members/committee members.

56 The respondents who selected don’t know are not shown and therefore the n value differs for each part of this question.
In focus groups, researchers from the UGC-sector and the self-financing sector agreed that the collaborative schemes were effective in supporting collaboration, and examples were given where funding had stimulated collaboration within Hong Kong or internationally. For example, a number of researchers in focus groups stressed those schemes such as the IIDS ‘promotes research culture’ and ‘enhances networking’. In particular there were examples where funding had enabled a critical mass of researchers to work more efficiently on a shared interest, achieving more than they could individually, or training on the use of equipment by international experts.

On the other hand, some researchers in focus groups queried whether collaboration should be incentivised, and whether linking it to funding forced un-natural pairings between researchers. Anecdotal examples were given where collaborators were named on a proposal to win the grant, and yet hadn’t contributed to the proposal. One tension identified by a participant in the focus group was that support for collaboration within Hong Kong could be difficult when groups were often in competition for funding, although this is likely to be the case in the majority of funding systems.

In addition, the CRF scheme is the mechanism to apply for funding for large equipment, which is often used across institutions, thereby requiring coordination or collaboration to use the equipment. Some participants in the focus groups queried the need for a link between infrastructure investment and collaboration and suggested this element should be split out and funded elsewhere.

4.2.2. Measuring academic excellence for research serving different aims

There were divergent views in focus groups on whether all research (across disciplines and between types of schemes) was assessed on the same quality threshold. Some focus group participants reported that the required level of quality was the same standard irrespective of sector and scheme, whereas others felt different scales were applied depending on the aims and remit of the funding scheme. For example, self-financing assessment panel members reported that for the FDS scheme, the quality of proposals was very similar to those that would be submitted in the UGC-sector to the GRF, however some researchers felt the quality threshold was or should be lower for the self-financing sector.

There was also a lack of consensus on whether all research should be assessed on the same quality threshold; this covers a range of areas including:

- Whether it is appropriate to expect the same quality from researchers in the UGC-sector and the self-financing sector given the different missions of these institutions, and the different expectation on academics in terms of teaching load
- Whether research of local relevance can be of the same quality as research of international significance in all disciplines and therefore whether research of local relevance can be considered academically excellent
- Whether basic research and applied research can be measured on the same scale given their different aims.

A couple of researchers also raised concerns in focus groups that using different quality thresholds may have an impact on the international reputation of the Hong Kong system.
4.2.3. Valuing broader societal impact

For the ECS and GRF schemes, panels assess whether the applications are basic or applied.\textsuperscript{57} For both schemes 65 per cent of the grants awarded have been classified as basic research, and 35 per cent have been classified as applied research (Figure 10). In addition to being more numerous, basic proposals are also more successful than those classified as applied (Figure 11).\textsuperscript{58}

\textbf{Figure 10:} Proportion of awarded grants classified by panelists as basic or applied

\textbf{Figure 11:} Success rate of applicants to RGC scheme, split by whether panels define the research as basic or applied

\textsuperscript{57} The RGC defines basic research as research for the sake of advancing the frontiers of knowledge regardless of whether it would provide immediate benefit to mankind, and applied research as efforts directed at meeting certain functional requirements which involve the application of theories to a specific area or for a specific purpose, and/or to enhance human life in the short/medium term.

\textsuperscript{58} There is a statistically significant difference in the success rate between basic and applied applications for both the ECS and for the GRF. Therefore, if you assume that basic and applied applications are of equal quality, basic applications are more likely to be awarded. This is true for the medicine and biology panel for ECS, and all panels except the business studies panel for the GRF.
In general researchers and panel members in focus groups did not seem to expect the research carried out in Hong Kong to provide wider benefit to society. In the survey, respondents were asked to rank their top five out of a set of 15 potential assessment criteria. All respondent types ranked academic merit and originality above ‘benefit to society’, however ‘benefit to society’ did appear in the top five for all types of respondents (Table 8).

<table>
<thead>
<tr>
<th>First</th>
<th>Second</th>
<th>Third</th>
<th>Fourth</th>
<th>Fifth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panel/ committee members</td>
<td>Academic merit</td>
<td>Originality</td>
<td>Track record</td>
<td>Feasibility in implementation</td>
</tr>
<tr>
<td>Self-financing sector researchers</td>
<td>Originality</td>
<td>Academic merit</td>
<td>Benefit to society</td>
<td>Feasibility in implementation</td>
</tr>
<tr>
<td>UGC-sector researchers</td>
<td>Academic merit</td>
<td>Originality</td>
<td>Track record</td>
<td>Benefit to society</td>
</tr>
</tbody>
</table>

In focus groups, researchers, institutional management and panel members had a range of views about the weight placed on local relevance vs academic excellence in RGC assessment processes, given the presence of other government schemes specifically aimed at funding applied or locally relevant work, such as the innovation and technology fund (ITF). A number of researchers at all stages of their career felt that as an international hub, Hong Kong should not be considering local relevance, rather working on international issues, which would, by default, be important to but not limited to Hong Kong. An example of which that was given was smart cities. In particular, there was a concern from senior managers, and a researcher from business, that if it is locally relevant or applied it won’t be published in a top journal, which is an individual criterion for promotion within HEIs. Linked to this, a panel member for GRF stated that the panel were looking for global outputs, which they felt could be difficult to achieve with research focused locally. Senior managers in universities, however, are looking at ways to combine the publication requirements with local relevance; for example inclusion of the local context in a research project or using local data for part of it.

59 See full survey protocol in Section 10.1
5. Areas for Improvements of Grant Review Processes

This chapter highlights weaknesses in RGC processes as perceived by stakeholders in the system, and hence opportunities for improvement, with comparisons made to other jurisdictions. It draws from all four methodologies. The key findings are:

- Processes are felt to be overly burdensome and could be streamlined.
- Many researchers don’t think the grants application and review process is transparent, while panel members were much more positive about transparency.
- The mixed views on the transparency of the process and system could be improved through greater engagement.

5.1. Processes are felt to be overly burdensome and could be streamlined

5.1.1. Having one round of application a year can have a negative impact on research careers, but increasing the number of rounds may raise the burden on reviewers and panel members

In general, each RGC funding scheme has one round of application a year. This was noted by researchers, in the survey (21 UGC-sector researchers and 6 panel members) and focus groups, to be inefficient and to have a significant impact on careers, as if an applicant is unsuccessful in obtaining a grant they have to wait a year until they can reapply. Panel/council members in focus groups agreed that a system with multiple rounds would be preferable; however felt that this was not feasible with the current system and human resources available, particularly due to the reliance of the system on international panel members.

In open text in the survey, a number of researchers suggested limiting the number of grants researchers can apply for/hold at any one time. In the survey and in focus groups researchers noted that it is inefficient to have to write a grant application every year. They felt that limiting the number of applications would reduce the burden on reviewers and panel members. The NSF, NSFC, Natural Sciences and Engineering Research Council of Canada (NSERC) and the Australian Research Council (ARC) were all given as examples of funding bodies where there is a limit on the number of grants a researcher can hold at any one time.

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60 The survey received responses from: 1143 UGC-sector researchers, 143 self-financing sector researchers and 288 RGC panel members/committee members.
5.1.2. The length of time it takes to hear the outcome of an application, and the timing of the grant cycle were sources of concern to researchers

In focus groups and the survey, many applicants reported having to wait nearly a year to hear the outcome of their application. This was widely commented as being too long, though it would be interesting to establish elapsed time for funding applications in other jurisdictions, to appreciate if this is unusual. For example, Research Councils in the UK, such as ESRC, aim to make a decision within 26 weeks, but it should be noted that the ESRC committee meets three times a year, rather than once for the RGC applications.61 The ERC advanced grants and starting grants, for which there is one round of application a year, will have 13 and 11 months between application and the results are announced respectively.62 Researchers (particularly from business studies) expressed frustration at having to wait to work on an idea for this long, and suggested that due to this delay they may not submit their best ideas for funding from the RGC.

A number of researchers in focus groups and the survey wanted to have the ability to respond to reviews. One suggestion from the survey was to have a ‘right to reply’ system, where applicants receive reviewer’s comments before the panel meeting and can respond to them; their comments then would be taken into account along with the reviews by the panel. Participants gave examples of funding bodies which have this system including ARC and some European funding bodies, and further work would be needed to confirm whether or not this was ‘standard practice’ in other funding bodies.

Researchers in focus groups and surveys also felt that shifting the timing of the grant cycle earlier in the year would be beneficial. At the moment most researchers receive their grant funding at the start of the academic year (September). They felt that if they received the money at the start of the summer instead they would have time to work full time on the grant at the very start, which would help them initiate the research. The current timing of grant awarding was also felt to be too late to hire good PhD students or postdocs to conduct the research required.

5.1.3. The level of declaration currently required makes researchers feel like they are not trusted, and can cause researchers not to suggest reviewers

In focus groups researchers across disciplines reported being required to make a large number of declarations on the application form, including:

- current and previous submitted and awarded grants;
- publications related to their proposed research topic; and
- relationships with suggested reviewers.

61 http://www.esrc.ac.uk/files/funding/funding-opportunities/research-grants-faqs/
Researchers in focus groups reported anecdotal instances of colleagues who had unintentionally mis-declared information, particularly relationships with reviewers, and then been subject to long disciplinary processes and perhaps disqualification. They expressed fear that they would make mistakes and have their application disqualified. Supporting the view that incorrect declaration can lead to disciplinary proceedings, one panel member commented that his impression is that about 90 per cent of the cases that reach the disciplinary panel are related to declaration.63

Fear of mis-declaration led a number of researchers in focus groups to note that they do not suggest reviewers, in case they forget to mention a relationship that the reviewer might mention, and consequently are punished. This limits the value of crowd sourcing reviewers. Some panel members commented that the nomination of reviewers was useful to them to ensure they can find appropriate reviewers and expand the pool of reviewers available to the RGC, although others thought that nominated reviewers tend to be biased, so the system is not needed.

Unrelated to this review, at the RGC meeting in December 2016, RGC decided to remove the section for PIs to nominate external reviewers in view of the availability of RGC’s sizable database of external reviewers and easily accessible resources on the internet. Misconduct cases due to non-disclosure of relationship with the nominated external reviewers will therefore not be possible in future.

5.1.4. The submission process and website were felt to be satisfactory, but could be made easier to use and more efficient

In focus groups, the majority of researchers felt the submission process was satisfactory, but some suggested improvements. The majority of the suggestions, from both the survey and the focus groups, relate to making the submission system more user-friendly. Researchers noted that they felt that the instructions for proposals were both complicated and long and could be shortened and simplified, and that the application tool was difficult to use. One survey respondent commented that ‘it could take weeks just to fill the information in’.

A particular request suggested in both the surveys and the focus groups was to reduce the amount of manual re-entry required by storing information entered into the system between years and filling it in automatically, so that applicants do not have to enter information themselves multiple times. Respondents suggested that this would help improve efficiency in the submission process.

63 Between 2014/15 and 2016/17 78 per cent of cases brought to the DC were related to non-disclosure; 30 alleged cases of non-disclosure of relationship with reviewers (61 per cent), 14 alleged cases of non-disclosure of similar/related projects (29 per cent).
5.2. Many researchers don’t think the grants application and review process is transparent, while panel members were much more positive about transparency.

5.2.1. Many researchers don’t think the grants application and review process is transparent

In the survey, between 40 and 60 per cent of all kinds of researchers did not feel that the RGC grants application and review process is transparent (Figure 12). Lack of transparency was also the issue mentioned the most by UGC-sector researchers in open-ended questions in the survey.

Figure 12: Researchers’ opinions on whether the RGC grants application and review process is transparent

When asked about transparency in focus groups, the majority of researchers said that they felt the application and review processes were not transparent. Across the focus groups we heard contradictory understandings of the process and many researchers in the focus groups highlighted elements of the process that they weren’t familiar with. These aspects included: panel membership, suitability of reviewers to assess particular applications, nomination of reviewers and number of reviewers per application.

The perception of transparency appears to also be linked to perceptions of fairness and reliability. 52 per cent of researchers in the survey who disagreed that the RGC grants application and review process is transparent also disagreed that the RGC grants application process is both fair and reliable; only 8 per cent of researchers who disagreed that the RGC grants application and review process is transparent agreed that the RGC grants application process is both fair and reliable. Participants in focus groups also commented that they did not understand the process, and therefore when they received negative results that they did not understand or feel were justified it made them feel that the process was unreliable and unfair.

5.2.2. With familiarity and involvement with the system, perception of transparency appears to be higher

However, 79 per cent of panel/committee members who responded to the survey agreed that the RGC grants application and review process is transparent (Figure 13). In focus groups, panel members generally agreed that the system was transparent to those who had experience of it, through participation on panels and committees. They also felt it was as fair and reliable as possible.
In the focus groups it was suggested by one participant (a researcher) that, due to a lack of experience with the system, junior members of staff may understand the system less than others. Survey responses appear to back up this opinion as the percentage of responses across all questions that were ‘don’t know’ was highest for assistant professors, and decreased with seniority/career experience of respondents (Figure 14).

5.2.3. Researchers are unclear on the review process undertaken to allocate funding through the RGC

Across all disciplines, researchers in our survey and focus groups questioned how a large number of parts of the application and review process worked, including:

- How proposals are matched
- What the appeal procedure is
- What the background of the reviewers is
- How panel members arrive at the final score
- How the rating and weighting works
- How/why does cutting of budgets happen
- How are panel members selected
- What should be received as feedback from the panel
A small number of researchers in focus groups were concerned that reviewers and panel members do not always understand the aims and objectives of different schemes. This was particularly felt to be a problem in the self-financing sector when distinguishing the aims of IDS funding, compared to IIDS. Researchers felt that better guidance for reviewers was needed to improve the quality/utility of reviews. In addition there was concern that international reviewers did not understand the Hong Kong scoring scale and system. In order to address this, researchers in focus groups and the survey suggested making the outcome and implications of scores and reviews much clearer to reviewers, for example changing subjective terms such as ‘excellent’ and ‘good’ to outcome-related terms such as ‘definitely fund’, ‘fundable’ etc. to avoid ambiguity, and reduce subjectivity between reviewers. In response, some panel members stressed that this was their role in amalgamating scores and comments, taking into account the views of expert reviewers, but having the final decision.

5.2.4. Myths exist in the system which affect which research ideas are put forward and the support researchers request in grants

Researchers and council members in focus groups had contradictory views on what funding secured from the RGC could be used for. For example, some researchers reported that they had been led to believe by colleagues and central administration within their HEIs that certain types of research and resources would not be funded; they reported that this caused them to ‘play it safe’ and not ask for these things. Panel members however said that there is a ‘one line budget’ so that in the majority of cases funding can be flexibly spent at the discretion of the researcher. In addition a number of researchers reported a lack of consistency across universities regarding how money from each grant can be spent once it has been secured.

5.3. The mixed views on the transparency of the process and system could be improved through greater engagement

5.3.1. While there is some engagement between the RGC and the research community, further engagement is desired

The RGC undertakes a variety of engagement activities with the academic community through mechanisms including town hall meetings, its website, and a YouTube channel. While the website and RGC annual report were reported as being used at least once a year by the majority of respondents, only 10-30 per cent of respondents use the RGC YouTube Chanel on an annual basis (Figure 15).

The majority of researchers in focus groups felt that they have minimal engagement with the RGC and that the only senior management can influence the RGC. Town hall meetings were viewed to have been useful by a number of panel members and some researchers, however few researchers at our focus groups were aware of this forum and had attended.
5.3.2. There is a balance between transparency and level of burden on the RGC and the RGC Council/Panel members

Increasing transparency may also increase the burden on the RGC and RGC Council/Panel members. One particular area where many researchers in focus groups and in the survey want increased transparency is how scores are calculated; a few researchers would also like further justification from the panel to explain their score and why they did or did not receive funding. However while some panel members felt additional feedback was justified, others queried whether it would improve the level of satisfaction of researchers or whether it would just lead to more work.
6. Concluding Observations from the Research Findings

As discussed in the introduction to this report, the Hong Kong University Grants Committee has sought a macro level review of their processes to understand the strengths of the existing system and areas for improvement. The independent evidence gathered in this report aims to inform the Task Force in their deliberations in regards to Phase 1 of their review.

Looking across all the evidence collected during this evaluation and combining it with other studies RAND Europe have been involved in (e.g. Morgan Jones et al. 2013; Guthrie et al. 2015; Manville et al., 2015a; Manville et al., 2015b), and with a view to future assessment of research and funding allocation, the authors from RAND Europe make the following concluding comments:

Strengths and achievements to date of the RGC

The RGC is Hong Kong’s primary research grant funder and has established a positive reputation over the past 25 years. In this time it has allocated HK$15,491 million. Through our focus groups and surveys there were many positive views articulated, by both local and international stakeholders, about what the RGC and associated funding has achieved. Many grant recipients also perceive that the RGC has facilitated their individual careers. Researchers and institutional managers were generally happy with the available mix and balance of research funding schemes, with researchers particularly valuing the fact that the majority of funding (80 per cent) provided by the RGC is response mode. As a result, we believe that the RGC should continue to provide a portfolio of funding and awards of varying amounts and durations and for different career stages and disciplines to ensure both capacity building, through schemes such as the ECS and GRF, and some strategic development, through initiatives such as the TRS and AoE Scheme.

Concerns on the value of the funding available for competitive grants

Participants in our focus groups as well as survey and consultation respondents, spanning all stakeholder groups (academics, universities and institutions, panel members and wider society) felt that the overall value of the funding available is a source of concern. At 0.7 per cent, the percentage of GDP that is spent on research in Hong Kong is low compared to other countries; for example other countries in the region, such as Taiwan, Japan and South Korea, were all above 2 per cent in 2014. In addition, there has been no increase in the percentage of GDP spent on research in Hong Kong since 2005. To increase the value of funding, the sector needs to justify this investment. Reviewing and articulating the broader societal impact of the research funded to date could support this case.

Linked to this issue, is the lack of diversity of funding sources for academic research in Hong Kong. The RGC is the sole source of grant funding available for a large number of researchers in the system. For example, only 40 per cent of UGC-sector researchers who responded to the survey had funding from sources other than the UGC and their own institution. A review of opportunities and incentives which would promote and increase the amount of funding and diversity of funding available for research in Hong Kong, for example from industry and philanthropy, could be beneficial.

Consequences of the system and its processes

Through our research we found there was a lack of agreement within the academic community as to whether the current value and duration of awards is correct. RGC grants are lower value and shorter duration than many grants in comparator countries. Single investigator grants funded by the RGC have an average value of 87,000 USD, and an average duration of two to three years; compared to an average of 118,000 USD for the same duration distributed by the NSF.

Providing awards which are perceived to be low value and short time frame was thought to have consequences on the research conducted, for example, conducting more theoretical and less experimental research, and attempting only incremental advances rather than transformational changes. In general, researchers are more concerned with the value of awards than the duration. However, while researchers would like grants to be both larger and longer, many only want this if the total funding available can also be increased. This may in part link to the lack of alternative funding sources, and the need for the high success rates.

Grant metrics are now used by the sector as a measure of success to reward both researchers and universities. GRF grants, won by individual academics are used as one of a number of funding schemes used in the calculation of part of the research element of the UGC’s block grant allocation. This coupling aims to incentivise competition and promote research excellence in the sector, which a recent review of the R-portion allocation determined it did. This was measured through increasing volumes of applications, improving research proposal quality and academics becoming more active in research participation. However, it is also important to consider the other behaviours that the coupling drives in the sector. For example, researchers perceived that the use of GRF grants in the calculation of the block

68 http://www.ugc.edu.hk/eng/ugc/faq/q303c.html
69 Documents provided confidentially to RAND Europe by the UGC
grant has led to GRF awards being used as a university metric in promotion and tenure at an individual level. Researchers felt this also led to increased pressure on staff and inefficiency in the funding system. There is also a risk that increasing the focus of researchers and institutions on receiving competitive grant funding from the RGC makes it less likely for other funders to develop new funding options.

The Role of RGC in Strategic Research Directions

The RGC has a published mission and aims; however it does not have a published strategy. When asked whether the RGC and associated funding met the needs of researchers it became apparent that the aims of the RGC, and the goals of its funding, are not well understood by the sector. In focus groups researchers commented that they felt only people at the very top of HEIs could engage with the RGC and input into RGC processes and strategy. To address this, the RGC should consider how it might enhance its engagement activities, with an eye to supporting stakeholder involvement in its strategic direction and decision making.

The majority of the strategic decisions are devolved to the panels, and therefore it is possible for different panels to have different strategies. This recognizes disciplinary differences but may lead to differences in processes which provide conflicting information. For example, there was a lack of consensus on whether all research (across disciplines and between types of schemes) was, or should be, assessed on the same quality threshold. In the focus groups, some participants reported that the required level of quality was the same standard irrespective of sector and scheme, whereas others felt different scales were applied depending on the aims and remit of the funding scheme. Whilst criteria and thresholds do not need to be consistent, depending on the aims of the different elements of RGC’s funding portfolio it is important to acknowledge the merits on which different types of research are funded. Therefore the RGC should consider whether the criteria and thresholds on which quality of applications are assessed by different panels are appropriate to ensure they are in line with their strategic aims.

Through the review, participants identified a number of areas for future strategic consideration. These included encouraging genuine collaboration, measuring academic excellence for research serving different aims and valuing broader societal impact. Due to the range of schemes available, it is important for the RGC to consider and articulate its position on a number of issues of global strategic relevance to ensure the portfolio delivers the desired balance of factors, and understand the impact this has on the type of research funded, and the benefits it can deliver.

Process Improvements of the Review Processes

Many researchers don’t think the grants application and review process is transparent, while panel members (who were more familiar with the system and more involved) were much more positive about transparency. For example, researchers are unclear on the review process undertaken to allocate funding through the RGC and as a result myths affect which research ideas are put forward and the research support researchers request in grants. While there is some engagement between the RGC and the research community, further engagement is desired. Therefore the RGC should review and enhance its communication activities, with an eye to improving the understanding of RGC processes by all stakeholders. On the other hand, HEIs should review internal processes to ensure information from RGC
flows down and reaches all staff, and researchers should seek out an awareness of RGC processes and input when given the opportunity.

When asked about specifics on the RGC's processes, some felt they were overly burdensome and could be streamlined. For example, increasing the number of applications per year, reducing the length of time it takes to hear the outcome of an application, the timing of the grant cycle in the academic calendar and the level of declaration currently required. The submission process and website were felt to be satisfactory, but could be made easier to use and more efficient. To address this, the RGC should review its processes and streamline them to maintain fairness and efficiency.
In order to better understand the Research Grants Council (RGC) we reviewed a series of public and private documents describing its funding schemes, structures and processes. To place this into context we also compared the RGC’s funding schemes and processes against eight comparator countries. Comparator countries were chosen based on international significance to Hong Kong, or similarity to Hong Kong.

In this annex we first describe our approach to the document review including choice of country and funding body within each country, and the documents reviewed. We then describe the research funding landscape in Hong Kong, and the role of the RGC in this system; and then describe the RGCs structure and processes and funding schemes, contrasting them against the eight comparator countries.

A.1. Approach

A.1.1. Country and funding body selection

A multi stage process was used to identify comparator countries. Firstly we compiled a list of potential countries of interest. Countries were included in the list based on specialist knowledge of the project team and if they were mentioned in international comparisons in reports by either the University Grants Committee or the Our Hong Kong Foundation. Then for each of these countries we compiled a broad selection of indicators which give an indication of ‘international equivalence’.

We considered: R&D expenditure, both of the country and of the government (Table 9); general country similarity in terms of overall GDP, population, land area (Table 10); education and development similarity in terms of development indices and education levels (Table 11); and research similarity in terms of number of researchers, number of institutions and research rankings (Table 12). We then compared the countries to find those that are most similar in these different areas.

The indicators collected were: figures on Research and Development (R&D) expenditure, economic indicators such as Gross Domestic Product (GDP), country size in terms of land area and population, development indicators such as the Human Development Index (HDI) or Gini coefficient, and Times Higher Education university ranking indicators, which give a very rough representation of the international success of higher education institutions in each country.
Table 9: Research and development (R&D) expenditure of Hong Kong and other potential comparator countries

<table>
<thead>
<tr>
<th>Country</th>
<th>R&amp;D expenditure as a percentage of GDP</th>
<th>R&amp;D expenditure in current USD (bn)</th>
<th>Public R&amp;D expenditure as a percentage of total R&amp;D expenditure</th>
<th>Public R&amp;D expenditure as a percentage of GDP</th>
<th>Public R&amp;D expenditure in current USD</th>
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</thead>
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<tr>
<td>Hong Kong</td>
<td>0.73%</td>
<td>2.26</td>
<td>55.5%</td>
<td>0.41%</td>
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<td>Australia</td>
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<td>30.14</td>
<td>34.6%</td>
<td>0.78%</td>
<td>10.43</td>
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<td>1.62%</td>
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<td>43.7%</td>
<td>0.71%</td>
<td>10.99</td>
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<td>0.42%</td>
<td>46.09</td>
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<td>9.03</td>
<td>29.3%</td>
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<td>2.65</td>
</tr>
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<td>Finland</td>
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<td>7.61</td>
<td>26.2%</td>
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<td>1.99</td>
</tr>
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<td>France</td>
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<td>0.81%</td>
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<td>1.73</td>
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<td>23.2%</td>
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<td>1.63%</td>
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<td>29.2%</td>
<td>0.96%</td>
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<td>Switzerland</td>
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<td>19.68</td>
<td>26.6%</td>
<td>0.79%</td>
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<td>504.31</td>
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<td>0.95%</td>
<td>170.46</td>
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Table 10: GDP, population and land area of Hong Kong and other potential comparator countries

<table>
<thead>
<tr>
<th>Country</th>
<th>GDP in current USD (bn)</th>
<th>GDP per capita PPP</th>
<th>Population</th>
<th>Land area in km²</th>
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<td>Hong Kong</td>
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<td>56,719.50</td>
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<td>296.08</td>
<td>35,431.60</td>
<td>8,380,400</td>
<td>21,640</td>
</tr>
<tr>
<td>Japan</td>
<td>4,123.26</td>
<td>37,321.60</td>
<td>126,958,472</td>
<td>364,560</td>
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<tr>
<td>Luxembourg</td>
<td>57.79</td>
<td>101,926.40</td>
<td>569,676</td>
<td>2,590</td>
</tr>
<tr>
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<td>296.22</td>
<td>26,891.44</td>
<td>30,331,007</td>
<td>328,550</td>
</tr>
<tr>
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<td>752.55</td>
<td>48,458.90</td>
<td>16,936,520</td>
<td>33,670</td>
</tr>
<tr>
<td>New Zealand</td>
<td>173.75</td>
<td>36,982.30</td>
<td>4,595,700</td>
<td>263,310</td>
</tr>
<tr>
<td>Norway</td>
<td>388.32</td>
<td>61,471.60</td>
<td>5,195,921</td>
<td>365,245</td>
</tr>
<tr>
<td>Oman</td>
<td>70.26</td>
<td>39,234.10</td>
<td>4,490,541</td>
<td>309,500</td>
</tr>
<tr>
<td>Qatar</td>
<td>166.91</td>
<td>143,788.20</td>
<td>2,235,355</td>
<td>11,610</td>
</tr>
<tr>
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<td>292.74</td>
<td>85,208.80</td>
<td>5,535,002</td>
<td>707</td>
</tr>
<tr>
<td>South Korea</td>
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<td>34,549.20</td>
<td>50,617,045</td>
<td>97,466</td>
</tr>
<tr>
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<td>9,798,871</td>
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<td>8,286,976</td>
<td>39,516</td>
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<tr>
<td>Taiwan</td>
<td>523.60</td>
<td>46,800.00</td>
<td>23,415,126</td>
<td>32,260</td>
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<tr>
<td>Thailand</td>
<td>395.28</td>
<td>16,305.50</td>
<td>67,959,359</td>
<td>510,890</td>
</tr>
<tr>
<td>Turkey</td>
<td>718.22</td>
<td>19,618.20</td>
<td>78,665,930</td>
<td>769,630</td>
</tr>
<tr>
<td>UK</td>
<td>2,848.76</td>
<td>41,324.60</td>
<td>65,178,312</td>
<td>241,930</td>
</tr>
<tr>
<td>USA</td>
<td>17,947.00</td>
<td>55,836.80</td>
<td>321,418,820</td>
<td>9,147,420</td>
</tr>
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</table>
Table 11: Development and education levels of Hong Kong and other potential comparator countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Human Development Index (HDI)</th>
<th>Gini coefficient</th>
<th>Enrolment in tertiary education (gross enrolment ratio, both sexes)</th>
<th>PISA ranking</th>
<th>Government expenditure on education as percentage of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hong Kong</td>
<td>0.910</td>
<td>53.7</td>
<td>68.78%</td>
<td>3</td>
<td>3.6%</td>
</tr>
<tr>
<td>Australia</td>
<td>0.935</td>
<td>30.3</td>
<td>86.55%</td>
<td>19</td>
<td>4.9%</td>
</tr>
<tr>
<td>Canada</td>
<td>0.913</td>
<td>32.1</td>
<td>58.88%</td>
<td>13</td>
<td>5.3%</td>
</tr>
<tr>
<td>China</td>
<td>0.727</td>
<td>46.9</td>
<td>39.39%</td>
<td>1</td>
<td>1.9%</td>
</tr>
<tr>
<td>Denmark</td>
<td>0.923</td>
<td>24.8</td>
<td>81.52%</td>
<td>22</td>
<td>8.5%</td>
</tr>
<tr>
<td>Finland</td>
<td>0.883</td>
<td>26.8</td>
<td>88.67%</td>
<td>12</td>
<td>7.2%</td>
</tr>
<tr>
<td>France</td>
<td>0.888</td>
<td>30.1</td>
<td>64.39%</td>
<td>25</td>
<td>5.5%</td>
</tr>
<tr>
<td>Germany</td>
<td>0.916</td>
<td>27.0</td>
<td>65.47%</td>
<td>16</td>
<td>4.9%</td>
</tr>
<tr>
<td>Greece</td>
<td>0.865</td>
<td>36.7</td>
<td>110.16%</td>
<td>42</td>
<td>4.0%</td>
</tr>
<tr>
<td>Iceland</td>
<td>0.899</td>
<td>28.0</td>
<td>82.23%</td>
<td>27</td>
<td>7.0%</td>
</tr>
<tr>
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<td>0.609</td>
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<td>23.89%</td>
<td>NA</td>
<td>3.8%</td>
</tr>
<tr>
<td>Ireland</td>
<td>0.916</td>
<td>33.9</td>
<td>73.17%</td>
<td>20</td>
<td>5.8%</td>
</tr>
<tr>
<td>Israel</td>
<td>0.894</td>
<td>42.8</td>
<td>66.18%</td>
<td>41</td>
<td>5.6%</td>
</tr>
<tr>
<td>Japan</td>
<td>0.891</td>
<td>37.9</td>
<td>62.41%</td>
<td>7</td>
<td>3.8%</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>0.892</td>
<td>30.4</td>
<td>19.41%</td>
<td>29</td>
<td>3.6%</td>
</tr>
<tr>
<td>Malaysia</td>
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<td>29.70%</td>
<td>52</td>
<td>6.3%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>0.922</td>
<td>25.1</td>
<td>78.50%</td>
<td>10</td>
<td>5.5%</td>
</tr>
<tr>
<td>New Zealand</td>
<td>0.913</td>
<td>36.2</td>
<td>80.88%</td>
<td>23</td>
<td>7.3%</td>
</tr>
<tr>
<td>Norway</td>
<td>0.944</td>
<td>26.8</td>
<td>76.78%</td>
<td>30</td>
<td>7.4%</td>
</tr>
<tr>
<td>Oman</td>
<td>0.793</td>
<td>NA</td>
<td>28.58%</td>
<td>NA</td>
<td>4.2%</td>
</tr>
<tr>
<td>Qatar</td>
<td>0.850</td>
<td>41.1</td>
<td>15.83%</td>
<td>63</td>
<td>3.5%</td>
</tr>
<tr>
<td>Singapore</td>
<td>0.912</td>
<td>46.4</td>
<td>2%</td>
<td>2</td>
<td>2.9%</td>
</tr>
</tbody>
</table>

71 The Human Development Index (HDI) is a composite statistic of life expectancy, education, and per capita income indicators.

72 The Gini coefficient is a measure of statistical dispersion intended to represent the income or wealth distribution of a nation’s residents; it is generally used to measure level of inequality.

73 Ranking on student performance in mathematics, reading and science.
<table>
<thead>
<tr>
<th>Country</th>
<th>Human Development Index (HDI)</th>
<th>Gini coefficient</th>
<th>Enrolment in tertiary education (gross enrolment ratio, both sexes)</th>
<th>PISA ranking</th>
<th>Government expenditure on education as percentage of GDP</th>
</tr>
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<tbody>
<tr>
<td>South Korea</td>
<td>0.898</td>
<td>30.2</td>
<td>95.35%</td>
<td>5</td>
<td>4.6%</td>
</tr>
<tr>
<td>Sweden</td>
<td>0.907</td>
<td>24.9</td>
<td>62.35%</td>
<td>38</td>
<td>7.7%</td>
</tr>
<tr>
<td>Switzerland</td>
<td>0.930</td>
<td>28.7</td>
<td>57.23%</td>
<td>9</td>
<td>5.0%</td>
</tr>
<tr>
<td>Taiwan</td>
<td>0.882</td>
<td>33.6</td>
<td>NA</td>
<td>4</td>
<td>NA</td>
</tr>
<tr>
<td>Thailand</td>
<td>0.726</td>
<td>48.4</td>
<td>52.51%</td>
<td>50</td>
<td>4.9%</td>
</tr>
<tr>
<td>Turkey</td>
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<td>40.2</td>
<td>78.98%</td>
<td>44</td>
<td>2.9%</td>
</tr>
<tr>
<td>UK</td>
<td>0.907</td>
<td>32.4</td>
<td>56.48%</td>
<td>26</td>
<td>5.7%</td>
</tr>
<tr>
<td>USA</td>
<td>0.915</td>
<td>45.0</td>
<td>86.66%</td>
<td>36</td>
<td>5.2%</td>
</tr>
<tr>
<td>Country</td>
<td>Researchers in R&amp;D per million population</td>
<td>Number of institutions in THE World Rankings</td>
<td>Rank of top institution in THE Rankings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------</td>
<td>-------------------------------------------</td>
<td>--------------------------------------------</td>
<td>----------------------------------------</td>
<td></td>
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</tr>
<tr>
<td>Hong Kong</td>
<td>2,990.2</td>
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<td>33</td>
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</tr>
<tr>
<td>Canada</td>
<td>4,489.8</td>
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<td>19</td>
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<tr>
<td>China</td>
<td>1,035.9</td>
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<td>42</td>
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<td>9</td>
<td>76</td>
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<tr>
<td>France</td>
<td>4,153.5</td>
<td>27</td>
<td>54</td>
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<tr>
<td>Germany</td>
<td>4,472.2</td>
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<tr>
<td>Greece</td>
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<td>7</td>
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<td>India</td>
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<td>251</td>
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<tr>
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<td>3,370.3</td>
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<td>160</td>
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<tr>
<td>Israel</td>
<td>8,282.3</td>
<td>6</td>
<td>178</td>
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<tr>
<td>Japan</td>
<td>5,201.3</td>
<td>41</td>
<td>43</td>
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<tr>
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<tr>
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<tr>
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<td>3,700.8</td>
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<td>172</td>
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<tr>
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<td>135</td>
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</tr>
<tr>
<td>Oman</td>
<td>127.3</td>
<td>5</td>
<td>501</td>
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<td></td>
</tr>
<tr>
<td>Qatar</td>
<td>597.1</td>
<td>1</td>
<td>601</td>
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<td></td>
</tr>
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<td>Singapore</td>
<td>6,442.3</td>
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<td></td>
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<tr>
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<tr>
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<td>11</td>
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<tr>
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<td>9</td>
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<td></td>
</tr>
<tr>
<td>Taiwan</td>
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<td>24</td>
<td>167</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thailand</td>
<td>543.5</td>
<td>7</td>
<td>501</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turkey</td>
<td>1,168.6</td>
<td>11</td>
<td>251</td>
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<td></td>
</tr>
<tr>
<td>UK</td>
<td>4,055.1</td>
<td>78</td>
<td>2</td>
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<td></td>
</tr>
<tr>
<td>USA</td>
<td>4,018.6</td>
<td>147</td>
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<td></td>
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</tbody>
</table>
Following the comparative analysis, our initial list of countries included: Greece, Ireland, Singapore, Denmark, Israel, Malaysia, New Zealand and Qatar. In addition we proposed countries which are not necessarily similar but have particular relevance to Hong Kong: China, the United Kingdom (UK) and the United States (US). As similarity of funding systems can not necessarily be measured quantitatively, we discussed the list of countries with the commissioning team at the University Grants Committee (UGC) and the Task Force to gain their expert knowledge and views, and refined the list. The final list of countries was: the UK, the US, China as internationally significant examples for Hong Kong, as well as South Korea, Singapore, New Zealand, Israel and Denmark as countries with similar characteristics (based on the indicators) to Hong Kong. South Korea and Singapore are of specific interest for Hong Kong as regional examples.

In order to be able to cover this range of countries within the scope and timeframe of the study, one major funding body was selected in each selected country, based on the following criteria:

- Size of the funding body (in terms of funding granted every year)
- International reputation
- Public nature of the organisation
- Size and nature of research programmes portfolio

While these funding bodies were the focus of our data collection efforts, we also included information on other funding bodies in our sample of countries where the project team had prior knowledge and experience.

Reasons for the countries and funding bodies selected

**United Kingdom**

The historical link between the UK and Hong Kong, and the similar set-up of the research system, make the UK an interesting comparator country. Within the UK there are currently seven discipline specific funding bodies under the public funding umbrella organisation of Research Councils UK (RCUK). For the purposes of this study, we chose the Biotechnology and Biological Sciences Research Council (BBSRC) as the comparator funding body as it is the largest public funding body of non-medical bioscience and has invested £473M in bioscience research and infrastructure in 2015-16.

**United States**

The United States are generally considered to be a strong international example of a research funding system. In addition, many of the researchers within Hong Kong were trained in the US system or have worked there during their careers, and therefore view the US system as an important comparator. Within

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74 This system is under rearrangement at the time of writing this report and the seven UK Research Councils will be gathered under the UK Research and Innovation (UKRI).
75 Originally due to data availability the Medical Research Council (MRC) was used, however following discussion with the Task Force this has been switched to the BBSRC.
76 Biotechnology and Biological Sciences Research Council’s website: [http://www.bbsrc.ac.uk/about/](http://www.bbsrc.ac.uk/about/)
the US there are a wide variety of public funding bodies. We chose the National Science Foundation (NSF) as the comparator funding body as it is a major research funding organisation in the US and it provides funding for public research in all fields of fundamental science and engineering, except for biomedical sciences (as this is covered by the National Institutes of Health (NIH)). While we did not specifically collect data on the NIH for this study, we also considered it as background knowledge of the project team.

**China**

China is of political and economic importance to Hong Kong and engagement with China is listed as an explicit goal for UGC-funded universities in the UGC Annual Report, 2014-2015. Additionally, Chinese research intensity has grown fast during the past decades, outperforming that of the European Union (EU) in 2013 with Chinese R&D expenditures equivalent to 2.08 per cent of GDP compared to 2.03 per cent for the EU, and the quality of research has also increased, demonstrated by a steady increase in both the citation impact and the number of patents. We chose the National Natural Science Foundation of China (NSFC) as the comparator funding body as it is the largest Chinese research funding agency for basic research and application-oriented research in the natural sciences. The NSFC also co-funds researchers with the RGC through the NSFC/RGC Joint Research Scheme.

**South Korea**

South Korea has strong economic and political influence in the Asia-Pacific region as one of the four Asian Tigers and is an important political and economic partner for Hong Kong; it is also frequently mentioned in Hong Kong’s official documents. In addition South Korea has achieved outstanding economic growth over the last five decades due to its strategic R&D investments; the country spends a larger percentage of its Gross Domestic Product on research and development than Germany, the United Kingdom, or the United States. We chose the National Research Foundation (NRF) as the comparator funding body as it is the main public organisation financing research covering a wide range of disciplines including science, engineering, humanities, social sciences and interdisciplinary studies.

**Singapore**

The historical, commercial and political links between Singapore and Hong Kong as former British territories and Asian Tigers, as well as their similarities in terms of geography, population, economy, and development indicators make Singapore an interesting comparator country. Singapore is also frequently

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78 It is the fifth largest funder in the US [R&D in the 2015 Budget (revised)].
80 OECD Main Science and Technology Indicators, Issue 1 (OECD Press, Paris 2014)
84 Mi-Jung Hum. Centre of Excellence as a tool for capacity building, case study: Korea. Programme on Innovation, Higher Education and Research for Development, IHERD. OECD
mentioned in international comparisons by the Our Hong Kong Foundation,\textsuperscript{85} the UGC\textsuperscript{86} and Times Higher Education.\textsuperscript{87} We chose the National Research Foundation (NRF) as the comparator funding body as it is the main governmental organisation providing funding on a competitive basis to universities, coordinating the different national research agencies and setting the national direction for R&D.\textsuperscript{88} We have also considered the Agency for Science, Technology and Research (A*STAR) for this study as the project team had prior knowledge and experience in this area, and it is one of the largest public research funders in Singapore in the field of biomedical sciences, physical sciences and engineering.

\textbf{New Zealand}

New Zealand shares similarities with Hong Kong in terms of R&D indicators, population size and the Human Development Index. We chose the Ministry of Business, Innovation and Employment (MBIE) as the comparator funding body as it is the government’s lead agency in charge of research, science and technology investments across a wide range of research areas, including biological industries, energy & minerals, hazards & infrastructure, environment, health & society, and high-value manufacturing & services.\textsuperscript{89}

\textbf{Israel}

Israel is similar to Hong Kong in terms of its geographical size, population and GDP, but has a significantly higher R&D spending (as percentage of its GDP) compared to other Organisation for Economic Co-operation and Development (OECD) countries, including Hong Kong. It also has an international reputation for the funding of innovation as well. We chose the Israel Science Foundation (ISF) as the comparator funding body as it is Israel’s predominant source of competitive grant funding for basic research.\textsuperscript{90}

\textbf{Denmark}

Denmark is similar to Hong Kong in terms of GDP, land area and population. It has a high level of public R&D spending compared to other OECD countries and Hong Kong, and a strong research and innovation position at the international level. We chose the Danish Council for Independent Research (DFF) as the comparator funding body as it is the largest research funder of basic research in Denmark.\textsuperscript{91}

\begin{thebibliography}{99}
\bibitem{85} Prof. Lap-Chee Tsui, Rita Lun and Edwin Cheung. December 2015. The Ecosystem of Innovation and Technology in Hong Kong. Our Hong Kong Foundation.
\bibitem{88} http://www.nrf.gov.sg/funding-grants#sthash.sfvueQPA.dpuf
\end{thebibliography}
A.1.2. Document Selection

RGC Documents
The UGC provided us with documents covering the structure and processes of the RGC and the current RGC funding schemes. For each funding scheme this included: their objectives and the support provided to researchers, membership of assessment panels, guidance to panels and reviewers and data on applicants to all schemes from 2011-2015 (where applicable).

They also provided us with documents covering the context of the Hong Kong system including the make-up of higher education institutions in Hong Kong, and details on other government funding schemes in Hong Kong.

Two key informant interviews were also conducted with the chairmen of the RGC, both current and past, to provide context and perspectives.

Country documents
We have used publicly available documents to determine the processes in each funding body. These documents were almost all found on the funding body website. If data is not available publicly then we have not been able to collect it. Given the time limits of this review it has not been possible to cover all features of all countries, therefore for each country we have focussed on the variables are of particular interest and relevance. Funding bodies mentioned in each theme are chosen based on availability of data, interesting/relevant processes, and to span both internationally significant and similar countries. We do not describe the processes of funding bodies from all countries for all themes in large part because there is very little relevant published material and additional interviews were not possible within the remit of this work. Where we already had information on other funding bodies that was of interest we also included it.

A.2. Results

A.2.1. Overview of the Hong Kong Research System

Hong Kong has eight publicly-funded universities, funded by the UGC, and 13 local self-financing degree awarding institutions (Table 13). It performs well in international rankings of research with five of the top eight UGC-funded universities in the top 200 in the QS University Ranking, and two in the top 50.92

92 https://www.topuniversities.com/university-rankings
Table 13: Higher education institutions in Hong Kong by sector

<table>
<thead>
<tr>
<th>Sector</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>UGC</td>
<td>The University of Hong Kong</td>
</tr>
<tr>
<td>UGC</td>
<td>The Chinese University of Hong Kong</td>
</tr>
<tr>
<td>UGC</td>
<td>The Hong Kong University of Science and Technology</td>
</tr>
<tr>
<td>UGC</td>
<td>City University of Hong Kong</td>
</tr>
<tr>
<td>UGC</td>
<td>The Hong Kong Polytechnic University</td>
</tr>
<tr>
<td>UGC</td>
<td>Hong Kong Baptist University</td>
</tr>
<tr>
<td>UGC</td>
<td>Lingnan University</td>
</tr>
<tr>
<td>UGC</td>
<td>The Education University of Hong Kong</td>
</tr>
<tr>
<td>Self-financing</td>
<td>Caritas Institute of Higher Education</td>
</tr>
<tr>
<td>Self-financing</td>
<td>Centennial College</td>
</tr>
<tr>
<td>Self-financing</td>
<td>Chu Hai College of Higher Education</td>
</tr>
<tr>
<td>Self-financing</td>
<td>Gratia Christian College</td>
</tr>
<tr>
<td>Self-financing</td>
<td>Hang Seng Management College</td>
</tr>
<tr>
<td>Self-financing</td>
<td>HKCT Institute of Higher Education</td>
</tr>
<tr>
<td>Self-financing</td>
<td>Hong Kong Nang Yan College of Higher Education</td>
</tr>
<tr>
<td>Self-financing</td>
<td>Hong Kong Shue Yan University</td>
</tr>
<tr>
<td>Self-financing</td>
<td>School of Continuing Education, Hong Kong Baptist University</td>
</tr>
<tr>
<td>Self-financing</td>
<td>School of Professional Education and Executive Development, The Hong Kong Polytechnic University</td>
</tr>
<tr>
<td>Self-financing</td>
<td>Technological and Higher Education Institute (THEi) of Hong Kong</td>
</tr>
<tr>
<td>Self-financing</td>
<td>The Open University of Hong Kong</td>
</tr>
<tr>
<td>Self-financing</td>
<td>Tung Wah College</td>
</tr>
</tbody>
</table>

UGC-funded universities

The eight publicly funded universities in Hong Kong are primarily funded by the UGC, a non-statutory advisory committee which is also responsible for advising the Hong Kong government on the needs of higher education institutions in Hong Kong, including both research and education, and the RGC, an advisory board on research matters to the UGC responsible for the provision of competitive earmarked research grants. The bulk of the government funding is distributed by the UGC through a block grant,
covering both teaching and research activities; 23 per cent of this block grant is allocated for research (the Research, or R-portion). The R-portion corresponds to 65 per cent of the research funding for UGC-funded universities, and can be used to cover a variety of costs including: salaries, infrastructure such as buildings and equipment, and other overhead costs. The rest of the research funding comes from: competitive grants managed by the RGC (10 per cent); other government sources (8 per cent); and private funding (17 per cent) (Figure 16). Although these figures indicate a diversity of sources for research funding, as later sections of this report will demonstrate, the RGC is widely perceived as the primary grant funder of research within academic institutions.

Figure 16: Source and percentage of funding for research at UGC-funded universities

In Hong Kong, similar to in the UK, a Research Assessment Exercise (RAE) is run at an interval of about six years; this is then used to determine the amount of funding each university gets as the research portion of the block grant over the next triennium/triennia. The allocation of the R-portion of the block grant to each university was initially based entirely on the results of the RAE. However, from 2012/13 onwards, in a move designed to increase competitiveness a decision was made to reduce the proportion of the money awarded based on the results of the RAE, and instead distribute some of the money based on each university’s success in gaining RGC Earmarked Research Grants (this is similar to Australia). This magnifies the importance and significance of RGC funding within the eco-system. By 2020/21, 50 per cent of the money in the R-portion of the block grant will be distributed based on the RAE, and 50 per cent will be distributed based on success in RGC Earmarked Research Grants.

While this money is allocated for research, there is no requirement placed on the universities for it to be spent entirely on research, not on other activities such as teaching. Equally there is no requirement that other money from the block grant is not spent on research.

Note that, the R-portion is allocated to universities to use as they wish, and is often used to pay for infrastructure and overhead costs.


http://www.ugc.edu.hk/eng/ugc/faq/q303c.htm
Of the competitive funding from government, more than half is distributed by the RGC. The majority of this funding is response mode funding (80 per cent), with no set area and with full autonomy given to academics to set the research agenda. Even with regard to large collaborative calls, such as the Areas of Excellence (AoE) Scheme (see Table 14), the majority of funding is designed to be curiosity led rather than shaped by strategic aims. The amount of funding distributed is based on interest earned on the Research Endowment Fund, a government endowment established in 2009 in order to provide continuous research funding to the UGC sector. This has the benefit of providing a relatively stable stream of income for research but also constrains the available resource.

A number of other government departments also provide competitive research funding; these calls for funding tend to be more targeted. The largest of these are:

- The Innovation & Technology fund (ITF), administered by the Innovation and Technology Commission (ITC), which aims to support midstream/downstream research and development, foster an innovation and technology culture, and increase industry university relations.
- The Health and Medical Research Fund, administered by the Research Council and under the purview of the Research Office of the Food and Health Bureau, which supports advanced medical research.
- The Environment and Conservation Fund, a fund established under the Environment and Conservation Fund Ordinance and overseen by The Environment & Conservation Fund Committee (ECFC), provides funding for educational, research and other projects and activities in relation to environmental and conservation matters.
- The Quality Education Fund, administered by the Quality Education Fund Steering Committee under the Education Commission and supported by the Education Bureau, which funds non-profit making initiatives focussed on basic education, i.e. kindergarten, primary, secondary and special education.

17 per cent of research funding at UGC-funded universities comes from private funding.

Self-financing degree-awarding institutions

The self-financing degree-awarding institutions finance themselves in the large part through their teaching activities; they tend to be more teaching-focused institutions, and the majority of them are also newer and still establishing themselves. Until 2014 they did not have any access to UGC or RGC funds; however in January 2012 the Government injected HK$3 billion into the Research Endowment. The investment income from the HK$3 billion provides competitive research funding for the local self-financing degree sector to enhance academic and research development. This funding is administered by the RGC.

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98 http://www.ugc.edu.hk/eng/rgc/sf/sf.htm
A.2.2. Aims and mission of funding bodies

RGC
The objective of RGC research funding is to build up research capability in Hong Kong. The terms of reference of the RGC are: 99

- To advise the Special Administrative Region (SAR) Government, through the UGC, on the needs of the institutions of higher education in Hong Kong in the field of academic research, including the identification of priority areas, in order that a research base adequate for the maintenance of academic vigour and pertinent to the needs of Hong Kong may be developed; and

- To invite and receive, through the institutions of higher education, applications for research grants from academic staff and for the award of studentships and post-doctoral fellowships; to approve awards and other disbursements from funds made available by the SAR Government through the UGC for research; to monitor the implementation of such grants and to report at least annually to the SAR Government through the UGC.

The RGC therefore combines both an advisory role to the government and implements research priorities.

International comparator countries

Over our eight comparator countries, the following funding organisations also combine the roles of providing funding and providing an advisory role to the government:

- The DFF (Denmark) fulfils two roles by awarding grants and providing advice on research.100
- The NRF (South Korea) awards grants and aims to be responsive to opinions from the field, and to provide an advisory role for national research support.101
- The NSFC (China) aims to implement government policies and provides consultations for major issues in the science and technology development of the country.102
- The MBIE (New Zealand) awards grants and advises the government on New Zealand’s science and innovation system.103
- The NSF (US) defines and establishes its policies in accordance with national policies set forth by the President and the Congress. The board also serves as an independent body of advisors to both the President and the Congress on policy matters related to science and engineering.104

While these other funding organisations are focussed on providing funding:

99 http://www.ugc.edu.hk/eng/rgc/about/term_rgc.html
101 Personal communication, 2016
103 http://www.access4.eu/newzealand/683.php
104 http://www.nsf.gov/nsb/about/
• The role of the NRF (Singapore) is to implement the national R&D priorities set by the Research Innovation and Enterprise Council (chaired by the Prime Minister of Singapore) via policies, plans and strategies for research, innovation and enterprise.105

• The ISF (Israel)’s mission is ‘to support and promote Israeli basic research through a ‘bottom-up’ approach initiated by talented, curiosity-driven individuals, and to nurture entrepreneurship among the scientific research community’.106

• The BBSRC (UK)’s role is to distribute public funds for research.107

Focussing in on the topic of the missions, unlike the RGC, some organisations have a specific applied research focus:

• A*STAR (Singapore) has an explicit mission to bridge the gap between academia and industry and to drive mission-oriented research that advances scientific discovery and technological innovation.108

• The NRF (South Korea) specifically aims at ‘creating high value-added products across the nation by developing creative forms of future knowledge and technology through multidisciplinary convergence’.109

• The MBIE (New Zealand) oversees science and innovation investment and supports infrastructure aiming to foster commercialisation, enhance productivity and achieve wider benefits for New Zealand through the application of research results.110

Some funding bodies aim specifically at pushing the frontier of science…

• The NRF (South Korea) aims to establish an infrastructure and create an environment to facilitate the creation of breakthrough knowledge.111

• A*STAR (Singapore) aims to push the frontiers of science and engage in world-class research that will benefit the Singapore economy and society at large.112

• The NSF (US) specifically aims to ‘transform the frontiers of science and engineering’.113

… And at achieving economic and societal impacts:

• The A*STAR (Singapore) aims to create economic growth and jobs for Singapore, and enhance lives by contributing to societal benefits such as improving outcomes in healthcare, urban living, and sustainability.114

106 https://www.isf.org.il/#/isf-mission
107 http://www.bbsrc.ac.uk/about/vision-mission-strategy/mission-history/
109 http://www.nrf.re.kr/nrf_eng_cms/show.jsp?show_no=106&check_no=82&cc_relation=0&cc_relation2=0&c_now_tab=2
111 http://www.nrf.re.kr/nrf_eng_cms/show.jsp?show_no=106&check_no=82&cc_relation=0&cc_relation2=0&c_now_tab=2
• The NSF (US) aims to stimulate innovation and address societal needs through research and education.¹¹⁵

• The MBIE’s Endeavour Fund (NZ) supports research, science or technology or related activities that have high potential to positively transform New Zealand’s future economic performance, improve the sustainability and integrity of the environment, and help strengthen society, especially Māori communities.¹¹⁶

• The BBSRC’s (UK) aims include advancing and disseminating knowledge and technology to improve the quality of life and economic competitiveness of the UK.¹¹⁷

A.2.3. Priority setting

RGC

Priorities of RGC funding, and hence funding schemes, are set partly by the government, and partly by the RGC. Of the money distributed by the RGC, a portion is pre-defined by the SAR government for specific schemes. RGC divide the rest of the budget between the remaining schemes. Schemes are reviewed on a regular basis.

International comparator countries

Priority setting is generally not documented in public documents; therefore it is difficult to provide detailed information on international examples. Generally, strategic research priorities are set up following a top-down or bottom-up approach or a combination of both, depending on the organisation.

Top-down approach

– The Ministry of Science, Technology and Space (Israel): Priorities chosen by an expert panel headed by the Chief Scientist in the Ministry.¹¹⁸

– The NIH (US) is critically reliant on political priorities and federal funding cycles and has therefore little autonomy to decide upon its research priorities.¹¹⁹

Combination of top down and bottom up

– The NSF (US) has adopted a bottom up approach by maintaining constant contact with the research community to identify priority research areas; however the National Science Board (NSB) is in charge of setting research priorities at the organisational level.¹²⁰

¹¹⁷ http://www.bbsrc.ac.uk/about/vision-mission-strategy/mission-history/
¹¹⁸ http://most.gov.il/english/research/Pages/default.aspx
¹¹⁹ https://www.nih.gov/about-nih/nih-research-planning
The **NRF (South Korea)** contributes to priority setting at the governmental level by linking the research community with the Ministry of Science, ICT, and Future Planning.121

**Bottom up approach**

- Defence Advanced Research Projects Agency (**DARPA** (US)) has developed a fully bottom-up approach to create their portfolio of programmes.122

## A.2.4. Funding schemes

### RGC

The RGC funds a number of schemes, across the UGC and self-financing sector. Details of these are presented in Table 14.

### Table 14: Details on grant funding schemes provided by the RGC

<table>
<thead>
<tr>
<th>Sector</th>
<th>Type</th>
<th>Scheme</th>
<th>Details</th>
<th>Aim</th>
</tr>
</thead>
<tbody>
<tr>
<td>UGC sector</td>
<td>Individual project</td>
<td>General Research Fund (GRF)</td>
<td>Small scale, 2-3 year projects, 57 per cent of 2015/16 budget for UGC sector</td>
<td>To fund as many worthy projects as possible across a broad front within the funds available</td>
</tr>
<tr>
<td></td>
<td>grants</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Early Career Scheme</td>
<td>(ECS)</td>
<td>Small scale, 2-3 year projects, 9 per cent of 2015/16 budget for UGC sector</td>
<td>To nurture junior academics and to prepare them for a career in education and research</td>
</tr>
<tr>
<td></td>
<td>(HSSPFS)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Humanities and Social</td>
<td></td>
<td>1 year fellowship to employ relief teachers/administrators, 1 per cent of 2015/16 budget for UGC</td>
<td>To recognise excellence in the Humanities and Social Sciences</td>
</tr>
<tr>
<td></td>
<td>Sciences</td>
<td></td>
<td>sector</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Collaborative Research</td>
<td>Collaborative Research Fund</td>
<td>Medium scale, 3-5 years, 10 per cent of 2015/16 budget for UGC sector</td>
<td>To encourage research groups to engage in collaborative research across disciplines and/or</td>
</tr>
<tr>
<td></td>
<td>Fund (CRF)</td>
<td>(CRF)</td>
<td></td>
<td>across universities with a view to enhancing the research output of universities in terms</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>of the level of attainment, quantity, dimensions, and/or speed; and to enable the</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>acquisition of major research facilities or equipment for collaborative research&quot;</td>
</tr>
</tbody>
</table>

121 Personal communication, 2016
<table>
<thead>
<tr>
<th>Sector</th>
<th>Type</th>
<th>Scheme</th>
<th>Details</th>
<th>Aim</th>
</tr>
</thead>
<tbody>
<tr>
<td>UGC sector</td>
<td>Theme-based</td>
<td>Theme-based Research Scheme (TRS)</td>
<td>Large scale, up to 5 years, four themes set by government, 18 per cent of 2015/16 budget for UGC sector</td>
<td>To focus academic research efforts of the UGC-funded universities on themes of strategic importance to the long-term development of Hong Kong</td>
</tr>
<tr>
<td>UGC sector</td>
<td>Areas of</td>
<td>Areas of Excellence (AoE) Scheme</td>
<td>Large scale, up to 8 years, conducted every 2 years, not awarded in 2015/16 for UGC sector</td>
<td>To build upon research areas of strength in Hong Kong and develop them into Areas of Excellence (AoE)</td>
</tr>
<tr>
<td>UGC sector</td>
<td>Joint research</td>
<td>National Natural Science Foundation of China (NSFC) / RGC Joint Research Scheme</td>
<td>5 per cent of 2015/16 budget for UGC sector</td>
<td>To promote and further encourage research co-operation and exchanges with regions outside Hong Kong. These can be divided into project grants, and travel/conference/exchange grants.</td>
</tr>
<tr>
<td>UGC sector</td>
<td>Joint research</td>
<td>French National Research Agency (ANR) / RGC Joint Research Scheme</td>
<td>They vary in size of the scheme, and in competitiveness. In all cases the RGC funds the researcher from the UGC-funded university, and the partner funds the individual from the partner university.</td>
<td></td>
</tr>
<tr>
<td>UGC sector</td>
<td>Joint research</td>
<td>German / Hong Kong Joint Research Scheme</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UGC sector</td>
<td>Joint research</td>
<td>Scottish Funding Council (SFC) / RGC Joint Research Scheme</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UGC sector</td>
<td>Joint research</td>
<td>European Commission (EC) / RGC Collaboration Scheme</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UGC sector</td>
<td>Joint research</td>
<td>PROCORE - France / Hong Kong Joint Research Scheme</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UGC sector</td>
<td>PhD scheme</td>
<td>Hong Kong PhD Fellowship Scheme (HKPFS)</td>
<td>PhD fellowships, 216 were awarded in 2015/2016</td>
<td>To attract the best and brightest students in the world to pursue their PhD programmes in Hong Kong's universities</td>
</tr>
<tr>
<td>Self-financing sector</td>
<td>Individual project grants</td>
<td>Faculty Development Scheme (FDS)</td>
<td>Small scale 2-3 year projects, 32 per cent of 2015/16 budget for self-financing sector</td>
<td>To develop the research capability of individual academic staff in the local self-financing degree-awarding institutions so that they can transfer their research experiences and new knowledge into teaching and learning.</td>
</tr>
<tr>
<td>Self-financing sector</td>
<td>Capacity building grants</td>
<td>Institutional Development Scheme (IDS)</td>
<td>Large scale projects of up to 3 years, 64 per cent of 2015/16 budget for self-financing sector</td>
<td>To build up the research capacity of local self-financing degree-awarding institutions in their strategic areas.</td>
</tr>
<tr>
<td>Sector Type</td>
<td>Scheme</td>
<td>Details</td>
<td>Aim</td>
<td></td>
</tr>
<tr>
<td>-------------</td>
<td>--------</td>
<td>---------</td>
<td>-----</td>
<td></td>
</tr>
<tr>
<td>Collaborative project grants</td>
<td>Inter-Institutional Development Scheme (IIDS)</td>
<td>Small scale funding for up to 1 year, 3 per cent of 2015/16 budget for self-financing sector</td>
<td>To enhance academics' research capability in the local self-financing degree-awarding institutions and keep them abreast of new developments and challenging research topics.</td>
<td></td>
</tr>
</tbody>
</table>
Collectively these schemes, available to the UGC-sector aim to build up research capability in Hong Kong. They provide a selection of: research support and technical staff; equipment, consumables and software licences; outsourcing of research work outside Hong Kong; travel and subsistence, including for conferences; relief teachers; relief administrators (HSSPFS only); high-performance computing services; survey expenses and research experience for undergraduate students. They do not fund the salaries of the grant holders.

The GRF and ECS are response mode, as are the AoE Scheme and CRF schemes, providing the research is collaborative; the HSSPFS is only for individuals from humanities and social sciences; the TRS initially had 3 specific themes research could be submitted under, and now has four.

The RGC also administers the Hong Kong PhD Fellowship Scheme (HKPFS), which is funded by the UGC. The HKPFS aims to attract the best and brightest students globally to pursue PhD studies in Hong Kong.

**International comparator countries**

The RGC’s main types of funding schemes are common across countries, although the split between individual, collaborative and joint research schemes might not be so explicit. The majority of funding in all of these countries is response mode rather than directed.

While all countries also have funding for PhDs, this is not necessarily directly distributed through the funding bodies we have explored. Additionally, PhD places often have nationality or geographic eligibility requirements. For example, NSF (US) PhD funding is only available for US nationals, and BBSRC (UK) grants only cover fees and living expenses if candidates are ordinarily resident in the UK.

### A.2.5. Success rates

**RGC**

**UGC-sector**

Figure 17 shows the success rates for RGC funding schemes for the UGC-sector between 2011 and 2015. Success rates for individual project grants are between 32 and 42 per cent, while those for collaborative grants are between 9 and 18 per cent.

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123 https://www.nsfgrfp.org/applicants/eligibility
124 http://www.bbsrc.ac.uk/documents/studentship-eligibility-pdf/
The success rate of the ECS and GRF schemes has remained relatively constant over time (Figure 18); however, the success rate for the HSSPFS has dropped significantly in the last year despite having the same number of applications as in 2012. The ECS and GRF schemes are both seeing an increase in applicants, although not by more than 10 per cent.

The success rate for the CRF dropped in the last year, whilst that for the TRS has risen. This matches the changes in applicant numbers (Figure 19); the CRF scheme has seen a large rise in applicants in the last 2 years after the lift of an institutional quota, while applicants to the TRS have reduced.

![Figure 17: Success rates for RGC funding schemes for the UGC-sector between 2011 and 2015](image)

![Figure 18: Success rate for each scheme over time](image)
As would be expected, institutions have different numbers of awards and success rates (Figure 20). For the CRF, institutions with larger numbers of awards also have a higher success rate (correlation of 0.97); for the GRF institutions with larger numbers of awards tend to have a higher success rate, although the correlation is weaker (0.52); for the ECS there is no relationship between the number of awards and the success rate (correlation of 0.06).

Figure 20: The number of awards and success rate in the CRF, GRF and ECS scheme for each UGC-funded university

Figure 21 details the success rates for the joint research schemes that the RGC providing in collaboration with other international funders.
**Self-financing sector**

The IDS scheme has a relatively high success rate compared to other schemes available to self-financing institutions (Figure 22). The FDS which provides project grants for developing individual researchers has a lower success rate than the GRF and ECS schemes available to staff at UGC-funded universities (Figure 20 and Figure 22).

**Figure 22: Success rates for RGC schemes for the self-financing sector**
International comparator countries

The individual grant success rate for RGC grants is the highest individual grant success rate when compared to other countries (Table 15). The ISF and NSFC also have high success rates, whereas the BBSRC and the NSF both have success rates of around 25 per cent, and the European Research council and MBIE have success rates of around 10 per cent.

Table 15: Success rates for individual grants in comparator countries\textsuperscript{125}

<table>
<thead>
<tr>
<th>Funding body</th>
<th>Success rate (per cent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RGC (Hong Kong)</td>
<td>32.42</td>
</tr>
<tr>
<td>ISF (Israel)</td>
<td>33.35 \textsuperscript{126}</td>
</tr>
<tr>
<td>NSFC (China)</td>
<td>25.30 \textsuperscript{127}</td>
</tr>
<tr>
<td>BBSRC (UK)</td>
<td>25 \textsuperscript{128}</td>
</tr>
<tr>
<td>NSF (US)</td>
<td>24 \textsuperscript{129}</td>
</tr>
<tr>
<td>European Research Council</td>
<td>10 \textsuperscript{130}</td>
</tr>
<tr>
<td>MBIE (New Zealand)</td>
<td>7 \textsuperscript{131}</td>
</tr>
</tbody>
</table>

A.2.6. Basic-applied research balance

RGC

For the ECS and GRF schemes, panels assess whether the applications are basic or applied in nature, using the RGC’s definitions presented in Box 1 (13 per cent were not classified). Grants are awarded only on academic merit. For both schemes, 65 per cent of the grants awarded were for basic research, and 35 per cent are for applied research (Figure 10).

\textsuperscript{125} All data is most recent available; data not available for Singapore and South Korea.
\textsuperscript{126} Annual Report 2015/16. Israel Science Foundation
\textsuperscript{127} http://www.nsfc.gov.cn/publish/portal1/tab285/
\textsuperscript{128} http://www.bbsrc.ac.uk/funding/post-application/success-rates/
\textsuperscript{129} Report to the National Science Board on the National Science Foundation’s Merit Review Process Fiscal Year 2012. May 2013. National Science Foundation
\textsuperscript{130} https://erc.europa.eu/projects-and-results/statistics
Box 1: RGC definitions for basic and applied research

**Basic research** – research for the sake of advancing the frontiers of knowledge regardless of whether it would provide immediate benefit to mankind

**Applied research** – efforts directed at meeting certain functional requirements which involve the application of theories to a specific area or for a specific purpose, and/or to enhance human life in the short/medium term

Figure 23: Proportion of awarded grants classified by panelists as basic or applied

When considering all years together, there is a statistically significant difference in the success rate between basic and applied applications for both the ECS and for the GRF (Figure 24). This statistical test means that, if you assume that basic and applied applications are of equal quality, basic applications are more likely to be awarded; there are obviously other possible explanations for this difference. Looking within panels this is true for the medicine and biology panel for ECS, and all panels except the business studies panel for the GRF.

Over time, basic applications have always had a higher success rate for both the GRF and the ECS scheme (Figure 25). The difference in success rate between applications categorised as basic or applied is decreasing in the GRF scheme, whereas in the ECS scheme the difference is increasing over time.
International comparator countries

Across the comparator countries data is not available to allow us to calculate the overall proportion of basic and applied research funded, however Singapore, South Korea and New Zealand have funding bodies with a particular applied focus. We were also unable to find data on comparative success rates for basic and applied research in the comparator countries. Previous RAND Europe research showed that there is not clear evidence on whether peer review rewards translational/ applied research appropriately.\footnote{Guthrie, Susan, Benoit Guerin, Helen Wu, Sharif Ismail and Steven Wooding. Alternatives to Peer Review in Research Project Funding: 2013 Update. Santa Monica, CA: RAND Corporation, 2013. http://www.rand.org/pubs/research_reports/RR139.html.}

A.2.7. Subject balance

RGC

The ECS and GRF schemes are assessed by five subject panels: business studies, engineering, humanities and social sciences, medicine and biology, and physical sciences. A formula is used to determine the
The amount of money allocated to different panels. The formula allocates money across panels based on the number of proposals submitted that are assessed to be over a certain quality in each panel (as assessed by external reviewers) and the relative cost of proposals in that panel. Success rate per panel therefore directly relates to the quality assessment (Figure 26).

**Figure 26: Success rates for each subject panel**

Between 2011 and 2015 the largest number of projects was awarded to the engineering panel; followed by the humanities panel whose share has been increasing over time (Figure 27). Comparing this to the academic staff currently in universities, the largest proportion of staff fall within humanities and social sciences, which has nearly twice as many as the other subject areas, although the proportion of senior staff is lowest of all areas.
The larger collaborative schemes are aimed at collaboration, including between different fields, and therefore there is no formula for allocating money to different areas. Biology and medicine received both the largest number of AoE Scheme grants and CRF grants (Figure 28). Humanities and social sciences have received the fewest collaborative grants, and have the lowest success rate. The TRS scheme is split into three specific themes, each of which has a similar success rate.

Figure 28: Number of awards and success rates for collaborative schemes
All schemes are available for all disciplines. In these plots we focus on the FDS, as the other schemes have fewer than 50 awards each. In the FDS, nearly 50 per cent of the awards are made by the humanities panel (Figure 29). The smallest proportion is made by the physical science panel, which also has one of the highest success rates. There is however no statistically significant difference in the success rates, meaning that based on the data from 2014/15 and 2015/16 the success rates between panels are not noticeably different (Figure 30). The FDS scheme shows a correlation (0.6) between the number of FDS awards at an institution, and the success rate of FDS awards at the institution, meaning that institutions which have more awards overall tend to be more successful when they apply (Figure 31). This is similar to the trend seen with the GRF grants within the UGC-sector.

Figure 29: Proportion of FDS grants awarded by subject panel

![Figure 29](image)

Figure 30: Success rate of FDS awards by subject panel

![Figure 30](image)

133 For years 2014/15 and 2015/16
Figure 31: The number of awards and success rate in the FDS, for each self-financing institution

International comparator countries

While subject balance is recorded in official documents of the majority of the funding bodies we investigated, the subjects listed vary significantly between countries, making direct comparison difficult.  

Comparing the balance of spending on humanities and arts to spending on sciences with similar funding bodies in other countries, shows that RGC has a comparably high spend on arts and humanities (Table 16).

Table 16: Ratio of spending between humanities and arts and sciences

<table>
<thead>
<tr>
<th>Funder</th>
<th>Dates</th>
<th>Ratio of spending (humanities and arts: sciences) [per cent]</th>
</tr>
</thead>
<tbody>
<tr>
<td>RGC</td>
<td>2011-2015</td>
<td>31.69</td>
</tr>
<tr>
<td>DFF (Denmark)</td>
<td>2013</td>
<td>24.76</td>
</tr>
<tr>
<td>NRF (South Korea)</td>
<td>2008-2011</td>
<td>13.87</td>
</tr>
</tbody>
</table>

---

134 Some of the funding bodies we considered also do not cover the full range of subjects.

135 Figures for the RGC spend include business studies.


137 [Link](http://www.nrf.re.kr/nrf_eng.cms/show.jsp?show_no=100&check_no=99&c_relation=0&c_relation2=0)
A.2.8. Size and duration of funding

RGC

The average GRF and ECS grant is between two and three years in length, although longer durations can be requested if necessary. They range from 20,000 to 300,000 US$, with an average of 87,000 US$, over this time period. The collaborative schemes range from 3 to 8 years and range from 300,000 US$ to 12M US$ (for further details see Table 14).

Within the RGC panel assessment the amount of funding requested is reviewed, and often the amount awarded is less than that requested (Figure 32). This is particularly striking for the ECS and GRF schemes, where 50 per cent of the awardees received less than 75 per cent, and 60 per cent respectively of the amount they requested.

14 per cent of GRF grants and 8 per cent of ECS grants were awarded for a shorter duration than requested, and 0.1 per cent of GRF grants were awarded for a longer duration than requested; all other grants were awarded for the duration requested.

Figure 32: Percentage of requested funding awarded for RGC schemes

In all RGC schemes on average the value of funding requested was slightly higher for successful grants than unsuccessful grants (Figure 33)
Figure 33: Density chart of the amount of funding sought by RGC applicants to the GRF scheme for successful and unsuccessful applicants.

International comparator countries

RGC grants are shorter than many grants in comparator countries, with the exception of NSF individual grants which are comparable in length (Table 17). We have not been able to find comparative data on the proportion of funding asked for that is ultimately awarded.

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138 A density plot shows the shape of a distribution; the area under each curve is 1. It is therefore possible to compare the shape of the two distributions, despite the fact that there are different numbers of applicants in each distribution.
Table 17: Length and value of average single investigator grants from the RGC and comparator funding bodies.

<table>
<thead>
<tr>
<th>Funding body</th>
<th>Country</th>
<th>Grant length (years)</th>
<th>Funding value in thousand USD per year</th>
</tr>
</thead>
<tbody>
<tr>
<td>RGC</td>
<td>Hong Kong</td>
<td>2.3</td>
<td>30</td>
</tr>
<tr>
<td>DFF</td>
<td>Denmark</td>
<td>3.5</td>
<td>225</td>
</tr>
<tr>
<td>ISF</td>
<td>Israel</td>
<td>5 maximum</td>
<td>46-75</td>
</tr>
<tr>
<td>NSF</td>
<td>US</td>
<td>2.5</td>
<td>118</td>
</tr>
</tbody>
</table>

A.2.9. *Local focus/international significance*

RGC

This study also looked at the needs of Hong Kong, alongside the needs of the research community. Therefore, we were interested to explore the balance between research projects of local focus and those of international significance. The RGC do not routinely collect data on whether an application is of local or international significance, therefore, as a proxy, we have used the presence of ‘Hong Kong’ in titles of applications to estimate the number of projects with local focus (Table 18). Overall 9 per cent of the applications have ‘Hong Kong’ in the title: this equates to 7 per cent of the successful proposals, and 10 per cent of unsuccessful ones. 75 per cent of applications with ‘Hong Kong’ in the title are submitted to the Humanities panel, and there is a 50:50 split between those classified as basic and applied.

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139 This data was also available for South Korea, where grants range from 45kUSD to 715KUSD over 3-9 years. As the range of values is very large this an average could not be calculated, so it has not been included in the table http://www.nrf.re.kr/nrf_eng.cms/show.jsp?show_no=90&check_no=89&c_relation=0&c_relation2=0
140 Calculated as a function of available data, for example dividing the overall average value of awards by the average grant length.
142 Annual Report 2015/16. Israel Science Foundation
143 Report to the National Science Board on the National Science Foundation’s Merit Review Process Fiscal Year 2012. May 2013. National Science Foundation

83
Table 18: Percentage of grant applications to RGC schemes with ‘Hong Kong’ in the title

<table>
<thead>
<tr>
<th>Scheme</th>
<th>Percentage of successful proposals that contain &quot;Hong Kong&quot; in the title</th>
<th>Percentage of unsuccessful proposals that contain &quot;Hong Kong&quot; in the title</th>
<th>Percentage of all proposals that contain &quot;Hong Kong&quot; in the title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AoE</td>
<td>0%</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>CRF</td>
<td>8%</td>
<td>5%</td>
<td>6%</td>
</tr>
<tr>
<td>ECS</td>
<td>11%</td>
<td>17%</td>
<td>15%</td>
</tr>
<tr>
<td>GRF</td>
<td>7%</td>
<td>10%</td>
<td>9%</td>
</tr>
<tr>
<td>HSSPFS</td>
<td>8%</td>
<td>13%</td>
<td>12%</td>
</tr>
<tr>
<td>JRS-ANR</td>
<td>0%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>JRS-CSIC</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>JRS-ESRC</td>
<td>69%</td>
<td>73%</td>
<td>72%</td>
</tr>
<tr>
<td>JRS-France</td>
<td>5%</td>
<td>4%</td>
<td>5%</td>
</tr>
<tr>
<td>JRS-Germany</td>
<td>4%</td>
<td>11%</td>
<td>9%</td>
</tr>
<tr>
<td>JRS-NSFC</td>
<td>0%</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>JRS-NWO</td>
<td>0%</td>
<td>13%</td>
<td>6%</td>
</tr>
<tr>
<td>JRS-Scotland</td>
<td>20%</td>
<td>0%</td>
<td>18%</td>
</tr>
<tr>
<td>JRS-SFC</td>
<td>0%</td>
<td>5%</td>
<td>3%</td>
</tr>
<tr>
<td>JRS-SRFDP</td>
<td>0%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>TRS</td>
<td>17%</td>
<td>23%</td>
<td>23%</td>
</tr>
<tr>
<td>All applications</td>
<td>7%</td>
<td>10%</td>
<td>9%</td>
</tr>
</tbody>
</table>

International comparator countries

No information assessing this issue in the other countries of interest was found.

A.2.10. Applicant characteristics

The RGC do not routinely collect data on demographic information of applicants (except for the HKPFS), therefore it is not possible to assess success rates by gender, nationality or ethnicity. These issues are seen to be of international importance however, and funding bodies in the US and the UK do routinely collect this data.

A number of organisations also have specific schemes designed to strengthen diversity and inclusivity:

- The **NRF (South Korea)** has the young researcher program which is targeted at both young researchers and women.\(^{144}\)

- The **NSFC (China)** has a fund dedicated to Less Developed Regions and two funds for young scientists.\(^{145}\)

Inclusivity and diversity data is held for the HKPFS. The majority of individuals funded under the HKPFS are from mainland China, although that percentage decreased in the last year (Figure 34). The

\(^{144}\) http://www.nrf.rc.kt/nrf_eng_cms/show.jsp?show_no=90&check_no=89&c_relation=0&c_relation2=0&c_now_tab=2

success rate has generally been highest for local students (approximately seven per cent on average) and lowest for students from Asia excluding mainland China and Hong Kong (approximately three per cent on average); with students from mainland China and other parts of the world having a success rate of five per cent and six per cent on average respectively. The proportion of awardees that are female ranges between 48 per cent and just under 40 per cent. There is no statistically significant change over time.

**Figure 34: Nationality of HKPFS awardees**

While the balance of grants over applicants, the balance of grants over career stages, and whether teaching is integrated into the project, are seen as important issues in this review, the RGC does not routinely collect data that would allow us to quantify or assess these issues. Therefore it has not been possible to explore them in the document review. In view of the constraint, some of these data were collected via the online survey.

### A.2.11. Decision making

**RGC**

The RGC is made up of local and non-local academics (11 and 13 respectively as at 1 March 2017) and local lay members (four as at 1 March 2017). There is also a staff of around 30 non-academic staff (the secretariat). It is headed up by a chairman, a local academic from a UGC-funded university, who is responsible for appointing chairmen and members of steering committees and assessment panels, chairing

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146 Collection of data is bound by the Personal Data (Privacy) Ordinance in Hong Kong. The RGC clearly specify that data are collected solely for grant-assessing purposes. Demographic information such as gender, nationality or ethnicity are not collected.
RGC meetings, and being the face of RGC at external meetings. The chairman does not participate in the assessment of research proposals. The role of the chairman is currently part-time.

The RGC largely operates through Steering Committees and Assessment Panels/Committees. There are three steering committees to oversee the development and operation of particular funding streams,

- The Major Projects Steering Committee
- The HKPFS Steering Committee
- The Steering Committee on Competitive Research Funding for the Self-financing Degree Sector (SCSF)

Each scheme also has at least one assessment panel/committee. Committees and panels are almost all chaired by a member of the RGC, with the rest of the membership made up of a mix of local academics, local lay members, and non-local academics (except the SCSF of which the membership is made up of local academics). For all UGC-sector schemes the chair of the committee is non-local.

International comparator countries

Using publically available information from funding body websites we have identified three types of decision making set-up.

Some funding bodies are governed by a single entity similarly to the RGC:

- The **NSFC (China)** is administered by its Council which consists of the President, Vice Presidents and Council Members. The Council is headed by one president and six vice presidents. The Council consists of 25 members who are scientists, engineering and technological experts and management experts from the institutions of higher learning, research organisations, governmental administrations and enterprises.\(^{147}\)

- The **NRF (Singapore)** is governed by the NRF Board; its members are appointed by the Prime Minister of Singapore.\(^{148}\)

- The **DFF (Denmark)** is governed by its Board of Directors composed of nine members, all of whom must be recognised researchers. One of these members serves as the Chairperson of the Board. This Chairperson and all ordinary members of the Board are appointed by the Minister for Higher Education and Science. The Board is given the authority to draw up its own statutes. It carries the responsibility to ensure that DFF fulfils its purpose in the foreseen manner. It is also eligible to establish and to name up to six subject-specific research councils.\(^{149}\)

- The **MBIE (NZ)**’s Science Board is appointed by the Ministry and is responsible for making independent decisions to allocate funding appropriated for research, science and technology and related activities.\(^{150}\)

\(^{147}\) NSFC’s Organization. [As of 23 September 2016: http://www.nsfc.gov.cn/Portals/1/fj/pdf/03-01.pdf]


- The **BBSRC (UK)** is run by a Council appointed by the Government. The Council oversees corporate policy and science strategy, taking into account the advice of the appointments board, remuneration board, the audit committee, and a collection of strategy advisory panels and research committees.\(^{151}\)

While others are governed by a single person:

- **NIH (US)**: the Office of Director is the central office, responsible for setting policy for NIH and for planning, managing, and coordinating the programs and activities of all the NIH components. Additionally, each institute and centre has its own director, sets its own agenda and administers its own budget.\(^ {152}\)

Or by several leadership entities:

- The **ISF (Israel)** is led by a council, an executive committee, and an academic board, working in coordination with each other. As head of the ISF, the Director-General is in charge of the organisation’s academic and administrative activities in full coordination with the governing bodies. The Director-General has the authority to make decisions according to ISF policy and represents the ISF in interactions with national and international organisations.\(^ {153}\)

- The **NSF (US)** leadership is divided into two major components:**\(^ {154}\)
  - the Office of the Director oversees the NSF activities, its staff as well as the overall programmes management and day-to-day operations;
  - the National Science Board (NSB), constituted by 25 members representing a variety of science and engineering disciplines and geographic areas, plays a key role in establishing NSF policies: it has the ability to set strategic direction, approve budgets, approve the annual budget submission to the Office of Management and Budget, and approve new major programmes and awards

- The **NRF (South Korea)** is governed in conjunction with the President, the Board of Directors and the Director General.\(^ {155}\)

### A.2.12. Assessment of applications

**RGC**

Assessment for RGC schemes is done by peer review. Assessment panels for all UGC-sector schemes consist of both non-local and local academics/lay members (Table 19). Those for the self-financing sector only include local members. For all schemes at least two panel members review the application, and they also send applications to external reviewers, 95 per cent of which are non-local.\(^ {156}\)

\(^{151}\) [http://www.bbsrc.ac.uk/about/governance-structure/](http://www.bbsrc.ac.uk/about/governance-structure/)


\(^{153}\) [https://www.isf.org.il/#/organizational-structure](https://www.isf.org.il/#/organizational-structure)


\(^{155}\) [http://www.nrf.re.kr/nrf_eng_cms/show.jsp?show_no=85&check_no=82&c_relation=0&c_relation2=0](http://www.nrf.re.kr/nrf_eng_cms/show.jsp?show_no=85&check_no=82&c_relation=0&c_relation2=0)

\(^{156}\) For CRF all reviewers are non-local
schemes, local reviewers are used when local knowledge is required to review the proposal. Applications are sent out to six to eight external reviewers initially, with the target of obtaining three independent assessments for each proposal (Figure 35).

**Table 19: Number of local and non-local panel members for different RGC funding schemes**

<table>
<thead>
<tr>
<th>Funding schemes</th>
<th>Number of local academics/lay members</th>
<th>Number of non-local academics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual research</td>
<td>103</td>
<td>108</td>
</tr>
<tr>
<td>Collaborative research</td>
<td>1</td>
<td>70</td>
</tr>
<tr>
<td>HKPFS</td>
<td>22</td>
<td>27</td>
</tr>
<tr>
<td>Joint Research</td>
<td>40</td>
<td>19</td>
</tr>
<tr>
<td>SF Sector</td>
<td>32</td>
<td>0</td>
</tr>
</tbody>
</table>

**International comparator countries**

Most countries use similar assessment processes to the RGC:

- They rely on external peer reviewers and committees made up of external experts
  - **ISF (Israel):** professional committees are comprised of experts in different fields and are formed each year according to the subjects of the applications, so that the composition of

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157 As at September 2016
the committees changes yearly. The 90 committees in the ISF (for the various programs) are each composed of three to 12 members.\textsuperscript{158}

- The \textbf{NSFC (China)} relies on review panels constituted by 1,693 panel members divided into 94 panels.\textsuperscript{159}

- Other countries such as the US, UK, Singapore, South Korea and New Zealand also rely on external peer review to make their funding decisions.

They are supported by committees in their decision-making processes:

- \textbf{NSFC (China)}: there is an academic advisory committee, Supervision Committee and standing committee.\textsuperscript{160}

Unlike the RGC, some funding bodies rely on internal selection procedure rather than on external peer reviewers

- \textbf{DFF (Denmark)}: members of subject-specific councils (responsible for funding decisions) are composed largely of Danish established researchers. They are increasingly supported by external peer review if the panel feel it would be helpful. There is a ‘matrix committee’ for appropriate distribution among the councils.\textsuperscript{161}

\textbf{A.2.13. Assessment criteria}

\textbf{RGC}

The RGC have a wide range of assessment criteria considered for the different schemes. The main criterion in all cases is academic merit. Other common criteria are the relevance of the proposal to the needs of Hong Kong, the contribution the proposal makes to academic/professional development, the potential of the proposal for social, cultural or economic applications, institutional support, research ability of the investigators, and feasibility of the proposal.\textsuperscript{162}

The joint schemes have specific criteria ensuring that the collaboration will be beneficial to both sides. Candidates for the HKPFS are also assessed on cultural diversity, leadership and societal responsibility, and communication and interpersonal skills. No other RGC schemes explicitly have these three criteria.

\textbf{International comparator countries}

We have reviewed high level assessment criteria in all of the funding bodies we investigated, apart from the NFSC (China) and the NRF (South Korea), where the criteria were not available. Academic merit is

\textsuperscript{158} https://www.isf.org.il/#/judging-process
\textsuperscript{159} NSFC’s evaluation system. [As of 23 September 2016: http://www.nsfc.gov.cn/Portals/1/fj/pdf/08-01.pdf]
\textsuperscript{160} NSFC’s organization. [As of 23 September 2016: http://www.nsfc.gov.cn/Portals/1/fj/pdf/03-01.pdf]
\textsuperscript{162} Applications are not necessarily assed against each of these criteria for all schemes, in many cases the criteria are instead used as prompts for the assessor to think about.
the primary assessment criteria for all these funding bodies.\textsuperscript{163} They also all consider the feasibility and originality of the project.

Four of the five funding bodies consider the potential impact of the proposal: the NRF (Singapore), the BBSRC (UK), the NSF (US), and the ISF (Israel). The NRF (Singapore) and MBIE (New Zealand) also consider the impact/relevance of the proposal to the country. The only funding body that doesn’t consider impact is DFF (Denmark). It does however consider the relevance of the project to Danish research. The integration of research and education is considered by the NSF (US) and the DFF (Denmark).

\section*{A.2.14. Conflict of interest}

\textbf{RGC}

Council members, panel members and external reviewers are obliged to comply with the RGC code of conduct, and hence are required to declare any conflict of interest.

Members are required to declare conflicts of interest on appointment, re-appointment, change of circumstances and annually. During the assessment process, further conflict of interest declarations are required. Panel members can do this both before applications are assigned to them, and once applications have been assigned. External reviewers are asked to do this before they carry out their review. Relationships viewed as creating conflicts of interest are listed on both the guidelines documents for members and external reviewers, and on the assessment forms.

Two types of conflict of interest are listed:

1. Institution-related conflicts, such as consulting or employment at the institution.
2. Application related conflicts including a work-related or personal relationship with the applicant or having pre-reviewed the applicant.

If individuals view that there is a major conflict of interest then they are asked not to perform the review. If the conflict of interest is viewed as minor then they can declare the relationship with the institution or applicant on the assessment form and a panel member or chairmen can decide the severity of the conflict of interest.

\textbf{International comparator countries}

We have found information on conflict of interest declaration for only a few funding bodies. Two of these have conflict of interest policies covering their funding

- The NSF (US) has a broad conflict of interest policy that applies to civil service employees; visiting scientists, engineers, and educators; and those working at NSF under the

Intergovernmental Personnel Act. This precludes anyone with a possible conflict of interest from processing or evaluating the application.  

- The BBSRC (UK) has a conflict of interest process for peer reviewers. All members of the council and research boards and panels are also required to declare their conflicts of interest. These declarations are published on the BBSRC website.

While one has a more exclusive policy applied specifically to evaluators

- The NRF (South Korea) conflict of interest policy, the 'Rule of Exclusion', specifically applies to the evaluators. This rule 'excludes' or restricts evaluators who may be either affiliated to, or have been awarded their final degrees at the same institutions as the applicant from the evaluation.

All of these policies consider both applicant–based and institution-based conflicts of interest.

A.2.15. Research improprieties

RGC

The RGC also has three Disciplinary Committees (DC)s to deal with research improprieties discovered during the processing of the funding applications:

- The DC(Investigation)– which advises on policies and procedures for investigating alleged cases and makes recommendations to the RGC on whether alleged cases are substantiated or not
- The DC(Penalty) - which advises on principles and guidelines in determining the level of penalty for substantiated cases, and makes recommendations to the RGC on the level of penalty for substantiated cases
- The DC(Appeal) - which advises on policies and procedures adopted in handling appeal cases concerning research improprieties, and considers the findings and recommendations of the appeal board and makes recommendation to the RGC. This includes advising on the level of penalty.

Each committee consists of three different non-RGC members and two non-local or lay RGC members.

International comparator countries

Very little information is available regarding other research funding bodies but it appears that in the bodies for which we have information; those processes are handled by a single entity.

- NSFC (China) handles academic misconducts through its Supervisory Committee.
- The NSF (US) deals with academic misconduct through its Office of Inspector General, which is independent from the NSF. The Office is in charge of investigating the cases through its Office of Investigations (OI). The results of their investigations are referred to the Department of Justice or other prosecutorial authorities for criminal prosecution or civil litigation, or to NSF.

164 http://www.nsf.gov/policies/conflicts.jsp
165 http://www.bbsrc.ac.uk/documents/guidance-notes-for-reviewers-pdf/
166 Personal communication, 2016
management for administrative resolution. Investigations are split in two types: criminal and civil investigations, and administrative investigations.¹⁶⁸

A.3. Caveats and limitations

The review of comparative funding bodies was compiled using public documents; the information compared is therefore dependent on the availability of public documents that describe processes in funding bodies. In addition, due to limited resources, it was not possible to do a fully thorough comparison and go into the wider literature.

¹⁶⁸ http://www.nsf.gov/oig/
Online surveys and an online consultation were designed to collect views and experience of the RGC from as wide a range of stakeholders as possible. The online surveys were targeted at stakeholders directly involved with the RGC including successful and unsuccessful applicants and RGC panel and committee members. The consultation was publically available and open to all, with the aim of allowing wider stakeholders, such as other government bodies, the legislative council, research users and other stakeholders to input into the review.

This annex sets out the methodology for the deployment and analysis of the online surveys and consultation, and then describes the findings. We provide both quantitative analyses of the closed questions in the survey as well as qualitative analysis of the responses to open questions and the consultation. The annex is structured around the quantitative questions asked in the survey, with the qualitative results from the survey and online consultation provided around these questions as appropriate to add context to the results.

B.1. Approach

B.1.1. Surveys

The purpose of the surveys was to ensure we captured the perspectives and views of both successful and unsuccessful applicants to RGC funding schemes, as well as both local and international panel/committee members.

To deliver this, three online surveys were developed. The questions were tailored as appropriate to the audience:

(1) Applicants to RGC funding schemes between 2011 and 2015 from within UGC-funded universities;

(2) Applicants to RGC funding schemes between 2011 and 2015 from within the self-financing sector; and

(3) RGC assessment panel/committee members serving between 2011 and 2015.

In line with the aims of the study (Section 1.3), the surveys focused on the two main themes of the review: the appropriate nature of the current funding schemes, and the efficiency and effectiveness of the RGC structure. We developed a set of Likert scale questions asking about opinions on these two themes, along with a small number of open questions on the way the RGC has enabled researchers. We also
provided opportunities to suggest improvements to the current system. The full survey protocols can be found in Annex D.

To enable the project team to send personalised links to the survey, the majority of institutions (both UGC-sector and self-financing sector) provided us with lists of contact details for applicants to schemes. Two institutions (HKU and CUHK) were not willing to provide contact details for their staff and instead central teams within these institutions sent out a general link to the relevant staff in their institutions. The UGC provided us with lists of contact details for panel/committee members.

Surveys were hosted through SelectSurvey and reminders were sent out on a biweekly basis to those who had not accessed the survey. The surveys were originally open for four weeks from the 20th of October to 20th of November 2016. In order to improve the response rate, particularly from institutions that sent out only a general link, which were significantly lower, the surveys were left open for an extra two weeks, until the 4th of December 2016.

Quantitative analysis of the survey data was conducted in R. For all Likert scale questions individuals could opt to select ‘don’t know’; these responses are not shown in the graphs. Responses of ‘agree’ and ‘strongly agree’ are counted as agreement; respondents of ‘disagree’ and ‘strongly disagree’ are counted as disagreement.

The survey included five open-ended questions, which were analysed qualitatively in Excel. Two of these were linked to the quantitative questions, and the other three were wider and asked:

- Has RGC funding enabled you to develop your work and career beyond the life-time of an individual grant or project? In what ways?
- Based on any experience you may have had of other national systems for supporting research, what would you recommend to RGC from these systems and why?
- Is there anything else not covered here that you think we should consider in this study?

For the qualitative analysis, broad analytical categories were developed for each question. In addition, due to the breadth, depth and diversity of views reflected across these responses, individual responses to any question may have contained information relevant to any category and would have been coded accordingly. Such an approach was deemed necessary because many responses contained a rich array of reflections, ideas and opinions across the categories and we did not want to lose this diversity of viewpoints. For example, a response to a question about research support required might have also

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169 A Likert scale is a rating scale used in questionnaires which captures the range of intensity of feelings for a given item. We used the following levels in the scale: strongly agree, agree, neutral, disagree, strongly disagree, and don’t know. Likert, Rensis (1932). "A Technique for the Measurement of Attitudes". Archives of Psychology. 140: 1–55.

170 SelectSurvey is an online survey tool used by RAND and hosted by the RAND US Information Science and Technology (IST) group. See http://selectsurvey.net/

171 R is a statistical programming language https://cran.r-project.org/

172 This question was answered by 535 UGC-sector researchers and 43 self-financing sector researchers.

173 This question was answered by 396 UGC-sector researchers, 20 self-financing sector researchers, and 127 RGC committee/panel members.

174 This question was answered by 416 UGC-sector researchers, 26 self-financing sector researchers, and 86 RGC committee/panel members.
included further views about the review process. In this sense, the unit of analysis was the entirety of an individual’s response across the questions. However, it does mean there is a risk of some ideas being over-represented and we comment on this further in the caveats and limitations section of this annex (Section 8.3).

B.1.2. **Online consultation**

An online consultation, open to the general public, was designed to capture the view of wider stakeholders such as the Legislative Council, and research users in the industrial and charitable sectors. The consultation consisted of three open questions asking what the RGC should stop doing, start doing and continue to do. The online consultation protocol can be found in Annex D.

A link to the consultation was also made available on the UGC website, alongside an invitation written in both English and Chinese, and a link was also provided at the end of the survey in case respondents to the survey wished to share further views on the RGC. In addition, we contacted 821 stakeholders, through a list identified and provided by the UGC to participate in the online consultation. This list included the Secretariat of the Legislative Council, who was asked to distribute the consultation request and link to all members of the Legislative Council.

As with the survey, the consultation was originally open for 4 weeks from the 20th October 2016. As it was linked to in the survey it was also kept open until the 4th December 2016 when the survey deadline was extended. Due to an error in Chinese translation on the UGC website, the deadline was further extended until the 24th of December.

Online consultation responses were coded and analysed using the same method and categories as the open-ended survey responses.

B.2. **Results**

The following sections summarise the results from the surveys and online consultation. We start by providing a summary of response rates, and then present an analysis of each of the survey questions, including insights from the open-ended questions where appropriate, and highlighting similarities and differences between the surveys.

B.2.1. **Response rates**

Survey

Personalised links were sent to 3,201 individual applicants from the UGC-sector and self-financing sector and members of the RGC assessment panels and committees. From these three surveys we achieved a response rate of 38 per cent, 42 per cent and 48 per cent respectively (see Table 20), which is around the
rate expected for surveys. In addition, two universities, CUHK and HKU, sent out a general link to their staff. This link achieved a response rate of approximately 11 per cent.

Table 20: Response rate by survey

<table>
<thead>
<tr>
<th>Survey</th>
<th>Number of delivered invites</th>
<th>Number of responses</th>
<th>Response rate (per cent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UGC-funded universities to whom we sent personal links</td>
<td>2260</td>
<td>887</td>
<td>38</td>
</tr>
<tr>
<td>UGC-funded universities who sent out a general link</td>
<td>-2000</td>
<td>256</td>
<td>~11</td>
</tr>
<tr>
<td>Self-financing</td>
<td>338</td>
<td>143</td>
<td>42</td>
</tr>
<tr>
<td>RGC panel</td>
<td>603</td>
<td>288</td>
<td>48</td>
</tr>
</tbody>
</table>

Due to movement of staff between institutions over time, some staff currently at CUHK and HKU received a personalised link, where included under another institution, and some staff from the other institutions received the general link provided by CUHK and HKU. Table 21 shows the collective response rate from both of these surveys for each institution. While we received a much lower response from the two institutions that sent out general links, the responses overall are similar to those from other institutions, giving us confidence that our overall response rate means that we have a good picture of the views across the sector. We also included individuals from these two institutions in our focus groups (see Table 30 in Annex C).

Table 21: Response rate at each of the UGC-funded universities

<table>
<thead>
<tr>
<th>Institution</th>
<th>Number of delivered invites</th>
<th>Number of responses</th>
<th>Response rate (per cent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CityU</td>
<td>535</td>
<td>212</td>
<td>40</td>
</tr>
<tr>
<td>CUHK</td>
<td>1059</td>
<td>132</td>
<td>12</td>
</tr>
<tr>
<td>EdUHK</td>
<td>215</td>
<td>106</td>
<td>49</td>
</tr>
<tr>
<td>HKBU</td>
<td>309</td>
<td>141</td>
<td>46</td>
</tr>
<tr>
<td>HKU</td>
<td>~1000</td>
<td>118</td>
<td>~11</td>
</tr>
</tbody>
</table>

175 We count responses as any respondent who filled in at least one of the Likert scale questions. While the majority of respondents who filled in one question did then go on to fill out all questions, there is a slightly higher response rate for questions that appeared first in the survey than for those at the end.


177 CUHK sent the general link to 1,059 individuals. HKU estimate that they sent it to approximately 1,000 individuals.
<table>
<thead>
<tr>
<th>Institution</th>
<th>Number of delivered invites</th>
<th>Number of responses</th>
<th>Response rate (per cent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HKUST</td>
<td>429</td>
<td>171</td>
<td>40</td>
</tr>
<tr>
<td>LU</td>
<td>76</td>
<td>37</td>
<td>49</td>
</tr>
<tr>
<td>PolyU</td>
<td>696</td>
<td>220</td>
<td>32</td>
</tr>
</tbody>
</table>

To check the representativeness of our sample we compared the subject balance of each institution to available demographic data (Table 22).\(^{178}\) For the majority of institutions, the subject balance of respondents to the survey is very similar to the balance within each institution. The institution with the largest difference is CUHK, which is one of the universities with a lower response rate. One of the concerns about having a lower response rate from CUHK is that it contains one of the only medical schools in Hong Kong; however as the bias appears to be towards biology and medicine there is less concern that individuals from medical schools are being missed.

**Table 22: Difference between percentage of respondents from each institution in each subject in the survey, and the proportion of academic staff in each subject**\(^{179}\)

<table>
<thead>
<tr>
<th>Biology &amp; Medicine</th>
<th>Business Studies</th>
<th>Engineering</th>
<th>Humanities and Social Sciences</th>
<th>Physical Sciences</th>
</tr>
</thead>
<tbody>
<tr>
<td>CityU</td>
<td>4%</td>
<td>-6%</td>
<td>6%</td>
<td>-7%</td>
</tr>
<tr>
<td>CUHK</td>
<td>16%</td>
<td>-10%</td>
<td>-6%</td>
<td>1%</td>
</tr>
<tr>
<td>EdUHK</td>
<td>3%</td>
<td>1%</td>
<td>3%</td>
<td>-2%</td>
</tr>
<tr>
<td>HKBU</td>
<td>1%</td>
<td>-4%</td>
<td>-1%</td>
<td>3%</td>
</tr>
<tr>
<td>HKU</td>
<td>4%</td>
<td>-4%</td>
<td>-5%</td>
<td>0%</td>
</tr>
<tr>
<td>HKUST</td>
<td>4%</td>
<td>-3%</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>LU</td>
<td>0%</td>
<td>0%</td>
<td>3%</td>
<td>-2%</td>
</tr>
<tr>
<td>PolyU</td>
<td>1%</td>
<td>-3%</td>
<td>0%</td>
<td>2%</td>
</tr>
</tbody>
</table>

**Consultation**

The consultation received 111 unique responses. The majority of responses are from UGC-sector universities (Table 23); however the consultation also received responses from five government departments, four associations and a foundation. Table 24 shows the number of respondents from each UGC-funded university. The majority of these responses are from CUHK and HKU, which had the

\(^{178}\) We used the proportion of academic staff in each discipline in each university from the academic year 2014/2015; this data was provided to us by the UGC

\(^{179}\) We used the proportion of academic staff in each discipline in each university from the academic year 2014/2015; this data was provided to us by the UGC
lowest response rates in the surveys. Comparing email addresses of respondents from these two universities, where provided,\textsuperscript{180} between the survey and the consultation there is only a 30 per cent overlap, indicating that a number of respondents from these universities filled in the consultation but did not also fill in the survey.

Table 23: Number of respondents per respondent type for the online consultation

<table>
<thead>
<tr>
<th>Respondent Type</th>
<th>Number of responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Associations/Foundations</td>
<td>5</td>
</tr>
<tr>
<td>Government</td>
<td>5</td>
</tr>
<tr>
<td>International</td>
<td>2</td>
</tr>
<tr>
<td>SF</td>
<td>3</td>
</tr>
<tr>
<td>UGC</td>
<td>94</td>
</tr>
<tr>
<td>Unknown</td>
<td>2</td>
</tr>
</tbody>
</table>

Table 24: Number of respondents to the online consultation from each UGC-funded university

<table>
<thead>
<tr>
<th>UGC-funded university</th>
<th>Number of responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>CityU</td>
<td>1</td>
</tr>
<tr>
<td>CUHK</td>
<td>39</td>
</tr>
<tr>
<td>EdUHK</td>
<td>7</td>
</tr>
<tr>
<td>HKBU</td>
<td>4</td>
</tr>
<tr>
<td>HKU</td>
<td>33</td>
</tr>
<tr>
<td>HKUST</td>
<td>2</td>
</tr>
<tr>
<td>LU</td>
<td>1</td>
</tr>
<tr>
<td>PolyU</td>
<td>7</td>
</tr>
</tbody>
</table>

B.2.2. Funding schemes provided by the RGC

All survey respondents were asked the level to which they agreed with a series of statements about the funding schemes provided by the RGC (Figure 36).

\textsuperscript{180} 44 of the 72 respondents from CUHK and HKU provided their email address
Figure 36: Survey respondents’ opinions on aspects of the RGC funding schemes

Responses ordered from strongly disagree on the left, to strongly agree on the right.

181
When asked about the inclusive nature of the schemes, all respondent types felt strongly that funding schemes are inclusive and do not discriminate based on ethnicity, nationality or gender (the level of agreement with the statement was: UGC sector researchers, 70 per cent; self-financing sector respondents, 78 per cent; panel/committee member respondents, 91 per cent) (Figure 36a).

We also asked about the balance of funding across the portfolio, in particular the balance of funding across disciplines, across basic and applied research, between research of local relevance and of international significance, and the balance of the different career stages that are financed through the RGC awards. The highest proportion of respondents disagreed with the statement that the funding schemes offer the right balance of awards across disciplines (Figure 36b). Only 24 per cent of researchers from the UGC-sector and 35 per cent from the self-financing sector agreed with the statement that the balance was currently correct; panel/committee members were more positive (54 per cent agreement). There was slightly more agreement with the statement that the current balance of basic and applied research is correct (Figure 36c: UGC-sector 31 per cent, self-financing sector 42 per cent, panel/committee members 66 per cent), and the statement that the current balance of research with a local relevance vs international significance is correct (Figure 36d: UGC-sector 37 per cent, self-financing sector 43 per cent, panel/committee members 71 per cent). The highest levels of agreement, which were still below 50 per cent for researchers, were with the statement that the balance of awards to new versus experienced researchers is correct (Figure 36e: UGC-sector 40 per cent, self-financing sector 48 per cent, panel/committee members 81 per cent).

When asked about whether the RGC funding schemes are meeting the needs of the research community, through the integration of research and education, and through the value and duration of awards (Figure 36f-i), panel/committee members disagreed most with the statement that the funding schemes are the right monetary value for the scope of the projects (30 per cent, Figure 36h). This is the one statement panel/committee members disagreed more on than the self-financing researchers. However, panel/committee members did still have a higher level of agreement than researchers (RGC-sector researchers 33 per cent, self-financing sector researchers 55 per cent, panel/committee members 57 per cent, Figure 36h). Researchers were also asked if, assuming the total funding level is fixed, RGC should award fewer but individually larger grants, or maintain the current distribution. 88 per cent of both UGC-sector and self-financing sector researchers thought that, in this situation, the current distribution should be maintained.

The value of the awards, the integration of research and education, and whether or not the current funding schemes meet the needs of researchers all had similar levels of agreement from researchers (approximately 35 and -55 per cent for the UGC-sector and self-financing sector respectively, Figure 36f-h); panel/committee members however were least convinced that research and education are integrated appropriately (52 per cent agreement). All respondent types agreed with the statement that the duration of awards is appropriate (RGC-sector researchers 55 per cent, self-financing sector researchers 70 per cent, panel/committee members 78 per cent, Figure 36i).

182 Responses of “agree” and “strongly agree” are counted as agreement; respondents of “disagree” “strongly disagree” are counted as disagreement.
Perceptions of different types of survey respondents

Overall, with the exception of the statement on the value of awards, panel/committee members responded more positively than researchers, with the highest level of agreement (at least 50 per cent of respondents agreeing with each statement), and the lowest levels of disagreement (fewer than 20 per cent disagreeing with each statement).

Of the researchers, self-financing-sector researchers were more positive than UGC-sector researchers; at least 35 per cent of respondents agreed with each statement, and over 50 per cent agreed with the following three statements:

- Funding schemes are inclusive and do not discriminate based on ethnicity, nationality or gender (77 per cent, Figure 36a)
- Funding schemes reflect the needs of the research community (56 per cent, Figure 36g)
- Funding schemes integrate research and education appropriately (51 per cent, Figure 36f)

UGC-sector researchers have the lowest level of agreement and highest levels of disagreement for all statements. There was a higher percentage of disagreement than agreement on the following five statements:

- RGC funding schemes offer the right balance of awards across disciplines (50 per cent disagreed, 24 per cent agreed, Figure 36b)
- RGC funding schemes offer the right monetary value for the scope of the projects (43 per cent disagreed, 33 per cent agreed, Figure 36h)
- RGC funding schemes offer the right balance of basic and applied research (41 per cent disagreed, 32 per cent agreed, Figure 36c)
- RGC funding schemes reflect the needs of the research community (39 per cent disagreed, 35 per cent agreed, Figure 36g)
- RGC funding schemes integrate research and education appropriately (38 per cent disagreed, 32 per cent agreed, Figure 36f)

Disciplinary differences

There was some variation between respondents of different disciplines\(^{183}\) to the statements posed (Table 25). Social sciences and humanities and business studies scholars had the highest level of disagreement with the statement that the RGC funding schemes offer the right balance of awards across disciplines (67 per cent and 53 per cent disagreed, respectively), while researchers from biology and medicine, physical sciences and engineering sciences had the highest level of disagreement with the statement that the RGC funding schemes offer the right monetary value for the scope of the projects (57 per cent, 39 per cent, and 51 per cent, respectively) (Table 25). On average physical science researchers had the highest level of agreement and lowest level of disagreement with statements, whereas biology and medicine and social

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\(^{183}\) Respondents were asked to select their disciplinary area; multiple disciplinary areas could be selected. Respondents who selected multiple disciplines have been classified as “multiple disciplines”.
sciences and humanities researchers had the lowest level of agreement and highest level of disagreement with statements.

Table 25: The percentage of UGC-sector respondents from each discipline who responded ‘disagree’ or ‘strongly disagree’ with each statement about the RGC schemes

<table>
<thead>
<tr>
<th>Statement</th>
<th>Biology and medicine</th>
<th>Business studies</th>
<th>Engineering sciences</th>
<th>Multiple disciplines</th>
<th>Physical sciences</th>
<th>Social sciences and humanities</th>
</tr>
</thead>
<tbody>
<tr>
<td>They are inclusive and do not discriminate based on ethnicity, nationality or gender</td>
<td>10%</td>
<td>10%</td>
<td>8%</td>
<td>8%</td>
<td>8%</td>
<td>17%</td>
</tr>
<tr>
<td>They are the right duration for the scope of the projects</td>
<td>30%</td>
<td>31%</td>
<td>16%</td>
<td>24%</td>
<td>10%</td>
<td>22%</td>
</tr>
<tr>
<td>They are the right monetary value for the scope of the projects</td>
<td>57%</td>
<td>26%</td>
<td>51%</td>
<td>45%</td>
<td>39%</td>
<td>39%</td>
</tr>
<tr>
<td>They integrate research and education appropriately</td>
<td>44%</td>
<td>38%</td>
<td>35%</td>
<td>30%</td>
<td>24%</td>
<td>44%</td>
</tr>
<tr>
<td>They offer the right balance of awards across disciplines</td>
<td>50%</td>
<td>53%</td>
<td>31%</td>
<td>46%</td>
<td>29%</td>
<td>67%</td>
</tr>
<tr>
<td>They offer the right balance of awards between new investigators and experienced investigators</td>
<td>40%</td>
<td>26%</td>
<td>30%</td>
<td>25%</td>
<td>30%</td>
<td>31%</td>
</tr>
<tr>
<td>They reflect the needs of the research community</td>
<td>42%</td>
<td>37%</td>
<td>35%</td>
<td>41%</td>
<td>34%</td>
<td>42%</td>
</tr>
<tr>
<td>They represent the right balance of basic and applied research</td>
<td>42%</td>
<td>36%</td>
<td>37%</td>
<td>38%</td>
<td>32%</td>
<td>46%</td>
</tr>
<tr>
<td>They represent the right balance of research topics of local relevance and international significance</td>
<td>33%</td>
<td>34%</td>
<td>29%</td>
<td>33%</td>
<td>25%</td>
<td>44%</td>
</tr>
</tbody>
</table>

A third of the consultation respondents, spanning researchers as well as government and industry associations commented on the fact that the RGC provides funding support and should continue to do so. One industry association responding to the consultation commented that the RGC considers ‘the different needs of researchers in various disciplines by providing different funding options e.g. individual research, teaching relief’ and that it ‘provides a good pool of funding for a diverse range of local research’. The reasonable rates of success (30 per cent) and support of early career schemes (the flexibility of the fund) were also noted and valued.

Inclusivity

Discrimination or bias was largely mentioned in relation to a perceived system bias towards ‘the top three universities’ (10 UGC-sector researchers). Two UGC-sector researchers also noted that they felt there was a bias against foreign researchers; three consultation respondents also mentioned discrimination against non-Chinese researchers. While other inclusivity issues did not come up in terms of who receives grants, a couple of researchers did note that they felt there could be greater inclusivity on assessment panels.

Balance of individual and collaborative awards

The balance of the current award schemes was mentioned in all surveys in the open-ended questions. In particular the balance across the portfolio between single investigator grants and collaborative grants; 11 UGC-sector researchers and one panel member noted that they thought too much money was put into collaborative schemes in comparison to single investigator grants; two respondents to the consultation also

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184 Shading illustrates percentage of respondents that disagreed; larger levels of disagreement are indicated by darker red.

185 40 out of 110

186 The survey received responses from: 1143 UGC-sector researchers, 143 self-financing sector researchers and 288 RGC panel members/committee members.
mentioned this. It was suggested by some respondents that the current balance could harm early career researchers as they would not be eligible for the large collaborative grants. Four RGC-sector researchers and four panel members specifically mentioned that they felt the options for young investigators could be improved, with some suggesting that current schemes could have eligibility extended to researchers not yet on substantiation related research tracks. In the consultation even further broadening of the eligibility criteria was suggested, to cover also pre-qualified research entities or individuals. In the survey and the online consultation respondents suggested that for early career researchers there could be small short term grants available to get researchers started. One self-financing researcher also wanted an extension of eligibility in that sector, to allow academic administrators to apply for research funding.

Disciplinary differences

The balance of grants across disciplines was mentioned with regards to the different success rates between disciplines, with a number of researchers questioning whether it is fair for some disciplines to have higher success rates than others (five UGC–sector researchers).

Some researchers noted that the current system does not recognise disciplinary differences, as the same mechanisms are used to support research across the disciplines. Business studies was described on multiple occasions as being different from other disciplines and having different needs (10 UGC-sector researchers and two panel members). These differences are partly historical, as researchers noted that traditionally researchers in business schools have not had to apply for grants and that many (for example in the US) still do not need to. They also have worries not expressed by respondents from other disciplines, such as worries about putting ideas into the hands of reviewers who could ‘steal’ them. They also felt that in general they did not require a large amount of funding to do their work, therefore if they have a very good idea they would not be willing to wait a year to get funds for a project before working on that idea.

In other examples, one UGC-sector researcher felt that different disciplines require different amounts of money to conduct their research, so funding should not be split equally between disciplines or between grants. Another noted that for many humanities and social sciences researchers it is time rather than money that is needed. Six UGC-sector researchers also noted that they felt the current set up is based on a ‘science model’ and this can be unfair to humanities, two examples given of this were that it is not possible to have purely creative projects, and that assessment of projects is based largely on publications, which may not be an appropriate output for humanities projects.

Societal impact and industry engagement

In the consultation, associations/foundation and government respondents all commented on the academic focus of the RGC, suggesting that there should be more focus on societal impact, and less on academic indicators such as publications and grant success. One respondent commented that there is currently no linkage between the academic research conducted and real world opportunities. To address this, and promote collaboration between academics and industry another suggested that the RGC could have two elements: a research funding organisation providing funding for the basic and applied research needs of

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187 Substantiation is the terminology used in the Hong Kong system for tenure.
universities; and a technology transfer office focused specifically on driving technology transfer and research collaboration between industry and universities. A government respondent also suggested that the RGC could consider seeking views from government bureau/departments when developing/reviewing schemes aimed at local needs (such as the TRS), and encouraging applicants to seek these views when preparing research proposals, in order to maximise the operational benefits and application values of the research funded.

Value of funding available

A large number of researchers (47 UGC-sector researchers, 1 SF-researcher, 11 panel members) said that they felt the overall size of the funding pot was too small, and limited the international competitiveness of the Hong Kong research system. This was the second most mentioned topic for UGC-sector researchers in the open ended questions. It was suggested that having too small a pot, which is very competitive, could constrain promotion and contract renewal opportunities for the majority of academics, potentially leading to a brain drain. On the other hand, in the consultation, associations/foundations expressed concern that the current size of the pot was not sufficient for building critical mass, and that this can lead to research fragmentation. One consultation respondent suggested that the government (in part distributed through the RGC) should aim for a public research spending ratio of 1 per cent GDP in order to catch up with regional competitors. A number of researchers and panel members felt that the RGC should ask for more money from the government, and some noted that they were unclear if the RGC were already doing this or not. 23 UGC-sector researchers and seven panel members commented specifically that individual grants are too small, particularly from the GRF scheme, and that can limit what it is possible to do with the funding available. Five respondents also commented specifically that GRF grants are too short. Six UGC-sector researchers and two panel members commented on a need to increase the number of projects funded, particularly for GRF. One panel member said that it would be useful to know whether the strategy is to spread thinly or to fund fully.

Use of RGC success as a mechanism for promotion and recognition

25 UGC-sector researchers and one panel member commented on the role that RGC grants, particularly GRF grants, play within the overall funding system and the difficulties this can cause. A number of respondents felt that RGC grants, particularly GRF grants, are used as the sole criterion for promotion. This was due to the number of successful RGC grants being used in part of the calculation of the R-portion of the portion from UGC for each university. Four researchers and one panel member noted that the use of GRF in promotion means that staff are required by their institution to apply for grants on a yearly basis, even if they do not need the grant, which they said can lead to inefficiencies. One researcher also noted that as the success rate for grants varies between disciplines the tie with promotion means that there is not equality between disciplines.

The other topics from the questions in Figure 36 were not mentioned in open-ended questions in the consultation. However many respondents suggested other schemes they felt would benefit Hong Kong, or adjustments to current schemes. In particular self-financing sector researchers said they would like access to grants that encourage collaboration, both within Hong Kong and abroad. One also suggested having a scheme similar to one reported in Australia, where there is support for collaboration between academic
institutions and the non-profit sector to encourage knowledge co-production to match the needs of the non-profit sector. RGC sector researchers and panel members suggested broadening the range of schemes to have both a smaller scheme than GRF which would allow researchers to carry out shorter, lower value projects that are not as competitive as big projects in the GRF application, and larger schemes which encourage more innovative and risky projects which can be carried out over a longer duration.\textsuperscript{188} Both researchers and panel members suggested having schemes for postdocs similar to the HKPFS. Panel members also suggested further bilateral research schemes with foreign countries, building on the current JRS, to promote collaboration.

\subsection*{B.2.3. Other sources of funding}

When asked about other sources of funding 40 per cent of UGC-sector researchers and 18 per cent of self-financing sector researchers reported having funding from sources other than their own university and the RGC. For the UGC-sector researchers, 60 per cent of these researchers had funding from other government funding sources such as the Innovation and Technology Commission, the Health and Medical Research Grant and the Environmental Conservation Fund, 32 per cent had funding from international funding sources, the majority of which are based in China, and 6 per cent had funding from local foundations or companies. For the self-financing sector researchers, all had funding from other government funding sources and one also had funding from mainland China.

\subsection*{B.2.4. How the UGC has enabled researchers}

When asked if the RGC funding had enabled researchers to develop their work and career beyond the life-time of the individual grant or project 50 per cent of respondents who answered the question felt the RGC funding had a positive impact on their career (Table 26).\textsuperscript{189} The most common benefit was leading to further research project and ideas, followed by enabling particular research projects to be carried out – particularly those of larger scale or longer duration and a general development of research profile and track record, which allowed researcher to be successful and productive going forwards.

\textsuperscript{188} The AoE Scheme and TRS do currently aim to encourage this.

\textsuperscript{189} 289/578
Table 26: Ways that the RGC funding facilitated careers of individual researchers

<table>
<thead>
<tr>
<th>Ways that the RGC funding facilitated careers of individual researchers</th>
<th>Number of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leading to further research projects and ideas</td>
<td>66</td>
</tr>
<tr>
<td>Enabling particular research projects – e.g. large scale or longer duration ideas</td>
<td>51</td>
</tr>
<tr>
<td>Developing research profile and track record</td>
<td>48</td>
</tr>
<tr>
<td>Facilitating collaboration with other researchers, institutions or stakeholders</td>
<td>42</td>
</tr>
<tr>
<td>Developing infrastructure through providing resources which can be used after the project</td>
<td>21</td>
</tr>
<tr>
<td>Developing skills and expertise</td>
<td>15</td>
</tr>
</tbody>
</table>

B.2.5. Collaboration

The UGC-sector has three RGC schemes which specifically aim to increase collaboration: the Collaborative Research Fund (CRF), Areas of Excellence (AoE) Scheme, and Theme-based Research Scheme (TRS). Respondents to the UGC-sector survey and the panel survey were therefore specifically asked whether they agreed that these schemes promoted collaboration among researchers: within institutions, between institutions, between disciplines, within Hong Kong, and internationally (Figure 37).

In general respondents responded positively to the survey questions about the level of collaboration that resulted specifically from these funding schemes. As above panel/committee members responded more positively to all of these statements than researchers. Over 50 per cent of researchers and 70 per cent of panel/committee members agreed that these schemes promote collaboration within institutions, between institutions, and within Hong Kong (Figure 37a, b and d). Both researchers and panel/committee members had least agreement with the statements about promotion of collaboration internationally (40 per cent and 54 per cent agreed respectively, Figure 37e), and collaboration between disciplines (48 per cent and 62 per cent agreed respectively, Figure 37c).

Despite the relatively positive responses to the questions about collaboration, some survey and consultation respondents commented on problems they perceived with the collaborative schemes. Five survey respondents and two consultation respondents noted that they felt that the collaborative research grants are only for senior researchers, and that it would be useful if there was a smaller scale grant, similar to the CRF, which encourages smaller scale collaborations. A number of respondents commented that they weren’t sure that these collaborative grants really made collaborations happen in practice. These concerns were particular aimed at the AoE Scheme and the TRS, which six respondents suggested getting

190 Some respondents described multiple impacts; these respondents have been counted for each impact type they mentioned; some respondents also said that the RGC funding had facilitated their research career, but did not describe how.
rid of, because they felt they were inefficient and give money to researchers who can already have money. To explore this sentiment, these respondents felt that it would be useful to compare the output of these grants in comparison to GRF to understand the added benefit of the higher level of funding.

**Figure 37: Survey respondents’ opinions on the promotion of collaboration by the RGC collaborative schemes**

**B.2.6. Research support**

When asked to select up to three types of research support that are most important for research, the majority of respondents selected research support and technical staff (Figure 38 and Table 27). The second most popular category for the self-financing sector was relief teachers, which possibly reflects their higher teaching load and the fact that there is a limit of teaching relief that can be applied to any individual grant. For UGC-sector researchers the second most popular category was conference expenses, which also was the third most frequently selected category for the self-financing sector. For panel/committee members the second most popular category was equipment. The third most selected category was travel and subsistence for UGC-sector researchers, and consumables for research work in the opinion of panel/committee members.
Table 27: The top 3 most selected types of research support for each respondent type

<table>
<thead>
<tr>
<th>Respondent type</th>
<th>First</th>
<th>Second</th>
<th>Third</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panel/committee members</td>
<td>Research support staff and technical staff</td>
<td>Equipment</td>
<td>Consumables related to research work</td>
</tr>
<tr>
<td>Self-financing sector researchers</td>
<td>Research support staff and technical staff</td>
<td>Relief teachers</td>
<td>Conference expenses</td>
</tr>
<tr>
<td>UGC-sector researchers</td>
<td>Research support staff and technical staff</td>
<td>Conference expenses</td>
<td>Travel and subsistence</td>
</tr>
</tbody>
</table>

When asked about types of research support not currently provided by the RGC that would be useful, a large variety of answers were given in the open text box. It is difficult to generalise these as different support is provided from different schemes. However, overall there is a desire for greater teaching relief and covering of travel expenses and conference travel than is currently provided. Other areas highlighted included field expenses, such as subsistence and research participant expenses/honoraria which are not always covered. Another common category was resources and equipment, such as high-powered computers and cloud computers for big data research. However, some even requested standard ICT
equipment, and the following which are traditionally the responsibility of the host institution. These included: reference books, mobile devices, work stations, space (such as laboratory and animal facilities) artistic materials and software.

Research support was also mentioned in other open-ended questions and consultation; these comments all had a focus on a need for more flexibility in the use of funding (12 UGC-sector researchers, 2 self-financing researchers). In particular, researchers noted that they found it difficult to predict at proposal stage exactly what money will be used for but when awarded it was difficult to move the money to other items when they are carrying out the project.

B.2.7. Assessment Criteria

When asked to select up to five criteria respondents felt should be used in the assessment of grants the most frequently stated, across all types of respondents, were academic merit and originality (Figure 39). The third most frequently selected criterion for UGC-sector respondents and panel/committee members was track record, whereas researchers in the self-financing sector selected benefit to society (which links to local relevance, which was only in the top five for self-financing sector respondents) (Table 28).

Figure 39: Survey respondents’ views on the assessment criteria which should be used in the assessment of grants
Table 28: The top 5 most selected assessment criteria for each respondent type

<table>
<thead>
<tr>
<th>Respondent type</th>
<th>First</th>
<th>Second</th>
<th>Third</th>
<th>Fourth</th>
<th>Fifth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panel/committee members</td>
<td>Academic merit</td>
<td>Originality</td>
<td>Track record</td>
<td>Feasibility in implementation</td>
<td>Benefit to society</td>
</tr>
<tr>
<td>Self-financing sector researchers</td>
<td>Originality</td>
<td>Academic merit</td>
<td>Benefit to society</td>
<td>Feasibility in implementation</td>
<td>Local relevance of project</td>
</tr>
<tr>
<td>UGC-sector researchers</td>
<td>Academic merit</td>
<td>Originality</td>
<td>Track record</td>
<td>Benefit to society</td>
<td>Feasibility in implementation</td>
</tr>
</tbody>
</table>

In open-ended questions 12 UGC-sector researchers and 8 panel members mentioned assessment criteria. Mixed views were expressed as to which of the criteria are the most important, with seven UGC-sector researchers and three panel members noting they felt the emphasis on track record should be reduced, as in their opinion it does not encourage innovation or original ideas, and other criteria such as originality, scientific merit, innovation or societal benefit should be placed more highly; while five other UGC-sector researchers and four panel members thought that track record should be the most important criteria, and perhaps the only criteria.

One UGC-sector researcher thought that criteria of local relevance and benefit to society are difficult in practice because it is not necessarily clear what the needs and priorities of Hong Kong are and different assessors may have different interpretation of the needs. In addition they thought that in some fields it is not possible to be both locally relevant and academically excellent. Another felt that the current system discourages work on research about Hong Kong as reviewers do not consider such work as ‘excellent’.

Researchers from the self-financing sector thought that in their sector, academic track record should not be weighted too highly and that the requirements/expectations of the academic merit criteria should be different, reflecting the expectation of a different quality of publications.

B.2.8. Hong Kong PhD Fellowship Scheme

A subset of questions in the survey asked about experience of the Hong Kong PhD Fellowship Scheme (HKPFS). 273 UGC-sector respondents said they had experience of the scheme, through supervising a student on the scheme, or having been a student themselves funded this way and answered these questions.

In general there was a high level of agreement with the statements presented about the schemes (Figure 40). Respondents agreed the most with the statements that the HKPFS enhances cultural diversity (69 per cent) and that its value and types of support are appropriate (69 per cent). There was also high agreement with the statements that the HKPFS has appropriate terms and conditions (65 per cent). Only two statements had less than 50 per cent agreement:

- The HKPFS has the correct mix of local and non-local students (38 per cent agreement, 38 per cent disagreement)
The HKPFS has the right balance of disciplines (37 per cent agreement, 25 per cent disagreement).

Opinions on whether the HKPFS attracts the correct mix of local and non-local students seem to be connected to opinions on attracting the best and brightest students in the world to pursue their PhD study in Hong Kong. 75 per cent of those that agree that the mix of local and non-local is appropriate also agree that the HKPFS attracts the best and the brightest students to Hong Kong while only 10 per cent disagree.

In comparing perceptions of other funding schemes available to researchers (Figure 36a), the HKPFS is seen to be less inclusive (Figure 40). Of those that thought that the HKPFS is not inclusive, 28 per cent also thought that the current grant funding schemes are not inclusive whereas 56 per cent thought that they are (Figure 36a).

In open-ended questions, respondents questioned the criteria for selection of HKPFS students, particularly the scores that applicants receive for cultural diversity. One panel member and one UGC-sector researcher noted that this criterion discriminates against local and Chinese applicants, and that the primary criteria should be research excellence. However another noted that as many of the students are from mainland China, the scheme is not necessarily fostering internationalisation.

A couple of researchers raised concerns about the stipend of the HKPFS. These all focused on inequalities: inequality between students as those not on the HKPFS receive less funding, inequality between universities as some universities were reported to top up the stipend to attract the best students, and inequality between seniorities as many postdocs were reported to earn roughly the same as the HKPFS students. Finally, three researchers commented that the current length of the scheme, three years, is not sufficient to complete a PhD and that more years of support should be provided. Further work would need to be carried out in order to compare this with PhD schemes in other countries.
B.2.9. **RGC priorities and priority setting**

We also asked for opinions on the RGC’s strategic priorities and approach to priority setting. When asked about engagement of researchers in priority setting and methods for engagement in general, self-financing researchers and panel members agreed that the engagement and methods used by the RGC are appropriate (Figure 41). Only 36 per cent of UGC-sector researchers agreed that the spectrum of researchers engaged with was appropriate (though this was more than disagreed with the statement) (Figure 41a), however when asked about the methods for engagement, more UGC-sector researchers disagreed than agreed with this statement (39 per cent disagreement, 30 per cent agreement) (Figure 41b).
Researchers were also asked whether the priorities of the RGC match the needs of Hong Kong (Figure 42). 38 per cent of UGC-sector researchers and 58 per cent of self-financing sector researchers agreed with this statement; 31 per cent of UGC-sector researchers and 13 per cent of self-financing sector researchers disagreed. These responses are similar to when researchers were asked if the funding schemes meet the needs of the research community (Figure 36g, UGC-sector: 35 per cent agreed, 39 per cent disagreed; self-financing sector: 56 per cent agreed, 19 per cent disagreed).

RGC strategy was only mentioned in open-ended questions a handful of times. One panel member noted that it is not clear whether, or how research priorities are identified, suggesting a research strategic planning process may be useful. Another suggested that RGC could get further feedback from communities than it currently does. One self-financing sector researcher also noted a desire for a more open and engaged mechanism for the RGC to involve academics in discussing the research agenda of local relevance in Hong Kong, mainland China and the region.

B.2.10. RGC grants application and review process

All surveys asked respondents the level to which they agreed that the RGC grants application and review process is: fair, reliable, transparent, efficient and effective (Figure 43). Across all respondent types the highest level of disagreement was with the statement that the RGC grants application process is transparent (Figure 43c). This opinion was most strong in the UGC-sector researcher’s survey, where only...
20 per cent of UGC-sector researchers agreed and 58 per cent disagreed. In the self-financing sector survey the same number agreed as disagreed (37 per cent); and in the panel/committee member survey there was more agreement with the statements than disagreement.

For the other statements panel/committee members responded the most positively, with more than 65 per cent of panel/committee member respondents agreeing with each statement, and fewer than 12 per cent disagreeing with each statement. Approximately 50 per cent of self-financing sector researchers and 30 per cent of UGC-sector researchers also agreed with these statements. Across disciplines, respondents from physical sciences had the highest percentage of agreement, and the lowest percentage of disagreement for all of these statements.

**Figure 43: Survey respondents’ opinions on the RGC grants application and review process**

Looking across all Likert scale questions, we can see that knowledge of the RGC systems varies across career stage. Table 29 shows that the average percentage of ‘don’t know’ responses across all questions is highest for Assistant Professors, and lowest for Chair Professors. This is true in both the UGC-sector and the self-financing sector, although it should be noted that in the self-financing sector the sample size is much smaller. In line with the increasing perception of transparency as you get closer to the process (from panel members), this suggests that, through time and experience of the RGC and its associated funding schemes, researchers gain an understanding of the system.
Table 29: Percentage of ‘don’t knows’ across all Likert scale questions for different career grades

<table>
<thead>
<tr>
<th>Career stage</th>
<th>UGC-sector researchers</th>
<th>Self-financing sector researchers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assistant Professor</td>
<td>20.3 per cent</td>
<td>19.3 per cent</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>16.3 per cent</td>
<td>17.0 per cent</td>
</tr>
<tr>
<td>Chair Professor/Professor</td>
<td>11.4 per cent</td>
<td>8.8 per cent</td>
</tr>
</tbody>
</table>

When asked in the survey what they would recommend to RGC from other funding systems and why, 12 panel members and three researchers commented that they felt the RGC compares well to other systems they know of, with seven of these panel members and one of the researchers describing it as better than other funding bodies. This included comparisons with UK funding bodies, the National Science Foundation (NSF) and the National Institute of Health (NIH). In other open ended questions on the survey, 11 panel members and 10 researchers commented that they felt the RGC is fit for purpose, effective and works well for Hong Kong.

Transparency

Many researchers however did comment on issues with the RGC application and review process. Lack of transparency was the issue mentioned the most by UGC-sector researchers in open-ended questions, particularly the question asking if there was anything else that should be considered in this study (59 UGC-sector researchers). Concerns about lack of transparency spanned the whole review process and included a lack of understanding of:

- How proposals are matched
- What the appeal procedure is
- What the background of the reviewers is
- How panel members make final score
- How the rating and weighting works
- How/why does cutting of budgets happen
- How are panel members selected
- What should be received as feedback from the panel

Two self-financing researchers also mentioned transparency, as did three panel members. The panel members commented in particular on ways the system could be made more transparent, for example by making the individual scores available to applicants as well as the final score, alongside a justification of the final score and decision, or by having clear rules on the length of time that panel members and reviewers can serve. While the majority of comments about transparency were negative, two UGC-sector researchers commented that they felt the system was transparent and fair. Lack of fairness and reliability were also mentioned by 14 and 2 UGC-sector researchers respectively.
Efficiency

Efficiency of the process was also mentioned in all surveys. The efficiency issue mentioned the most by UGC-sector researchers was the turn-around time from the submission of a proposed study to the time it is approved (38 UGC-sector researches, 1 self-financing sector researcher, 3 panel members). Researchers commented that it often takes over a year from submission to receipt of the money. This was reported to lead to some researchers not submitting their best ideas, as they feel they cannot wait that long. They also felt that if the time taken was shorter then researchers could start working over the summer when they did not also need to teach. A number of UGC-researchers felt that time between submission and receipt of the grant was particularly problematic for business studies researchers, who often don’t need a large amount of money, and where ideas may no longer be current and worth exploring once the grant has been won.

The efficiency issue mentioned the most by panel members was the fact that there is only one funding cycle a year for each grant scheme. 21 UGC-sector researchers and 6 panel members felt that there should be multiple grant cycles a year. The NIH and NSF in the US were both reported to have more than one round of funding a year. Four UGC-sector researchers and one panel member also commented on inefficiency caused by not being able to work on projects while there are in review, noting again that this can cause researchers not to submit their best ideas.

Two panel members also noted that the practice of cutting budgets can lead to inefficiency as they felt that it means that, for applicants to get enough money they have to apply every year, and that cutting the budget also means the project itself has to be changed, and that this can take a lot of administrative burden.

A solution suggested by UGC-sector researchers and panel members to their perceived inefficiency is to limit the number of projects that colleagues are able to hold at the same time; this was also hoped to allow each grant to be larger. A number of examples of funding bodies reported to have a limit on the number of grants that an individual can hold were given. These include the NSF, the Australian Research Council (ARC), the National Sciences Foundation of China (NSFC), Research Council of Canada and the Natural Sciences and Engineering Research Council of Canada (NSERC).

Reviewers

The review process was regularly mentioned in the open-ended questions. The topic mentioned the most by researchers, both in the UGC-sector and self-financing sector, was the quality of reviews that were received (55 UGC-sector researchers, 5 self-financing sector researchers, 7 panel members). Many researchers gave examples of reviews they considered to be bad quality, containing unjustified and superficial comments or carried out by reviewers they considered to not be experts in the topic. Researchers suggested a number of ways to improve the quality of reviews, such as keeping an updated database of reviewers including comments from applicants and panel members on review quality, or providing improved guidelines to reviewers to ensure they understand the scheme and the review parameters (further examples provided in Box 2). Concerns about bad reviews stemmed particularly from an idea mentioned by a number of respondents, both panel members and researchers, that ‘one bad review kills a proposal’. This opinion was expressed by both panel members and researchers.
Box 2: List of suggestions to improve review quality

- Could allow applicants/panel to comment on whether the reviewer is qualified to rate the review
- Ensure panel members read reviews carefully and weed them out
- Provide better instructions to reviewers to ensure they understand the requirements of the grant
- Evaluate reviewers
- Ask reviewers to say whether or not they are experts
- Make list of reviewers public
- Ignore extreme reviews (good and bad)
- Blacklist bad reviewers
- Have reviewers meet and discuss their reviews
- Hold reviewers accountable for bad reviews
- Pay reviewers
- Include evaluation of reviewer scores in panel comments
- Make reviewer say if they received assistant
- Screen pool of reviewers

In the consultation, foundations, associations and government respondents commented that the use of international expertise, though international reviewers and international panel members should be continued as it adds value and ‘integrity’. A number of researchers and a small number of panel members commented on potential conflict of interest problems with local reviewers, such as giving very negative scores (20 UGC-sector researchers, 3 self-financing sector researchers, 2 panel members); however a small number of researchers felt that for some topics, for example those where the experts are local, it was more appropriate to have local reviewers than external reviewers. Panel members commented on the difficulty in finding the experts and getting them to review, and suggested that increasing the stipend or letting the reviewer know the outcome of the application process might help improve the rate of agreement of carrying out reviews.

The most common suggestion for improvement, which was mentioned by both researchers and panel members, was to allow researchers to be able to respond to reviewer comments within the grant round (11 UGC-sector researchers, 7 panel members). It was suggested that this could take the form of a right to reply, similar to systems respondents reported exist in the ARC (Australia) and the EPSRC (UK).

A number of researchers commented that they felt it was unfair that the number of reviewers each application receives varies. They generally felt that the more reviews an application received the more likely it was that there would be one bad one which would lead to the project not being funded. A couple of respondents suggested that regardless of how many reviews are received only three should be used, with the highest and lowest removed if there are more than three. Four researchers also commented on resubmission and difficulty if you get different reviewers.

Each suggestion was made by at least one respondent and are not in any particular order.
A number of researchers (31 UGC-sector researchers, 2 self-financing researchers) commented that they felt the review process should be double blinded to ensure fairness in judgement; this point however was not raised by any panel members.

**Panel Membership**

As well as reviews and reviewers many respondents commented on the panels and the panel members. The most common concern around panels for UGC-researchers and panel members was broadness of the subject panels, leading to difficulty ensuring there are panel members with sufficient expertise for all proposals that are submitted (20 UGC, 4 panel). Researchers felt that there was not sufficient coverage of all disciplines, with one noting that currently on some panels there are multiple panel members from the same fields, meaning there is limited diversity. One researcher noted that in the NIH the panels are less broad. A small number of respondents (7 UGC) commented that as the current panels are split by discipline, interdisciplinary research which doesn’t fall well within the remit of any of the panels can be at a disadvantage.

Similar to reviewers, researchers were worried that local panel members may have a conflict of interest, and felt that either they should not be used, or the ratio of non-local to local should be increased (13 UGC-sector researchers, 2 panel members). Four researchers specifically mentioned that they felt that applicants for grants should also be panel members. However, again, three researchers and one panel member noted that local members do have value as they know more about the Hong Kong system than non-local members. One researcher mentioned that in the NSFC local panel members are not allowed to select reviewers; another noted that in the US reviewers and panel members are not also allowed to be applicants.

Panel/committee members were also asked whether the RGC should continue to delegate proposal assessment to Committees/Panels (Figure 44). 94 per cent of panel/committee members agreed that the delegation of proposals should continue (50 per cent of these strongly agreed). When asked their opinion on the current measures guarding against conflict of interest, over 80 per cent of respondents agreed that the current measures guarding against conflict of interest are appropriate, with fewer than 10 per cent disagreeing (Figure 45).

*Figure 44: Panel/committee members’ opinions on the delegation of proposal assessment*
How members of panels are chosen was also noted as a topic of confusion, for both UGC-researchers and panel members. Six UGC-sector researchers and two panel members commented on issues of clarity, transparency and fairness as to how panel members are chosen. Two researchers and a panel member noted that they felt it was unfair that only full professors can be panel members, and that it would be fairer if all tenure-track PIs were eligible for panel membership. Related, it was reported that all researchers who are eligible to apply are also eligible to serve on panels in the NSF, implying that all eligible researchers are senior enough to be panel members. A panel member also noted that only overseas panel members are paid, which was felt to be unfair. Three researchers also expressed a lack of clarity over the rules for length of panel membership.

Some panel members made specific mention about the panel meetings. This included noting in their opinion that each panel member has too many proposals to look at, panel meetings were too rushed, and that more time could be spent evaluating and discussing each proposal. It was suggested that teleconferencing could be used in addition to the face to face meeting, and one respondent noted he felt that face-to-face meetings could be scrapped entirely.

Three respondents from the self-financing sector noted that they felt the panels did not fully understand the differences between the self-financing sector and the UGC-sector, such as the funding that institutions would themselves invest in projects, and the aims of the schemes for the sector.

**RGC Membership**

Three panel members and two UGC-sector researchers commented that they felt the chairman should not be an active administrator from a UGC-institution due to conflict of interest. It was suggested that members of RGC could be elected by the academic community instead of appointed by the Education Bureau.

**Scoring and decision making**

Three panel members commented that there is not a clearly defined process by which panel members combine reviewer scores. This was viewed by one respondent as panel members having too much power. Two UGC-sector researchers noted that they feel that scores are downgraded to 3.5 if there is not money left for a proposal to be funded, rather than leaving them at 4 and not funding. In addition, there was concern about whether the scoring structure and implications are understood by reviewers – particularly those from overseas. As commented by one UGC-sector researcher, ratings of good, very good and excellent can have different meanings to different people.
Eleven UGC-sector researchers commented on the level of power they feel that panel members have relative to the weight placed on the reviewers’ scores. These researchers felt that these scores should be more important than panel member opinions, and that panel members should have to justify any downgrading of the scores. On the other hand a number of researchers commented on the need for panel members to carefully consider the validity of reviews and remove poor reviews. One also commented that outlier reviews should specifically be discussed in panel meetings. Related to this, one panel member noted that it can be difficult within panel meetings to stop panel members providing input in on proposals on which they have little expertise.

Three researchers also mentioned not understanding how budget cutting is decided, suggesting that more feedback should be provided to explain it. One panel member commented that it was inappropriate for non-local reviewers to be asked to cut budgets as they may not have a full understanding of the funding system in Hong Kong.

Appeals and resubmission

29 UGC-sector researchers, 3 self-financing sector researchers, and one panel member commented on the fact that there is no appeal system. One researcher commented that university researchers are not able to directly contact the RGC. Instead of an appeal system, it was suggested that this could take the form of a right to reply, similar to systems respondents reported exist in the ARC (Australia) and the EPSRC (UK). A UGC-sector researcher and a panel member suggested that a right to reply system would then mean not necessarily waiting a whole year before resubmitting.

Processes

A number of researchers and panel members commented on the high level of bureaucracy in the system, suggesting that it could be reduced. 24 UGC-sector researchers commented that they find the online system not user friendly to fill in; five UGC-sector researchers commented that preparing grant applications, including physically carrying out the submission, was very time consuming. A number of improvements were suggested, detailed in Box 3.

Box 3: Suggestions for improvements

<table>
<thead>
<tr>
<th>Suggestions for improvements for the benefit of applications</th>
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<tbody>
<tr>
<td>• Don’t make applicants list all their on-going, submitted, completed projects</td>
</tr>
<tr>
<td>• Store data from previous grant applications in a format that can easily be reused, so that applicants do not have to start again from scratch</td>
</tr>
<tr>
<td>• Make declarations less complicated</td>
</tr>
<tr>
<td>• Remove unnecessary/blank pages on submission system</td>
</tr>
<tr>
<td>• Would be good to be able to check the status of applications</td>
</tr>
</tbody>
</table>

Suggestions for improvement for benefit of panel members

<table>
<thead>
<tr>
<th>Suggestions for improvement for benefit of panel members</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Only have one mode of requesting reviews</td>
</tr>
<tr>
<td>• Allow trivial budget changes to be made without approval</td>
</tr>
<tr>
<td>• Have a standard format for CVs to make it easier to compare</td>
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</tbody>
</table>
Five panel members also commented on the requirement for them to review projects once they have been completed (and also in some schemes mid-way through projects). They felt that this process did not necessarily add value, and that it may be better for RGC to retain its own scientific program managers to monitor and manage on-going projects. One also commented that panel members often don’t know that reviewing projects will be one of their duties.

B.2.11. **Disciplinary Committees**

We also asked respondents to state the level at which they agreed with the statements about the DCs of the RGC (Figure 46). Approximately 50 per cent of respondents to these questions selected ‘don’t know’; over twice as many ‘don’t knows’ as for other questions, perhaps reflecting that this is only a process used in a small number of cases.

Panel/committee members responded positively to these statements, with at least 68 per cent agreeing with each statement. In comparison, researchers had around half the percentage of respondents agreeing, and more than double the percentage disagreeing. The highest level of disagreement was that DCs are effective at reviewing appeals (38 per cent and 24 per cent for UGC-sector and self-financing sector researchers respectively).

**Figure 46: Survey respondents’ opinions on the disciplinary committees**

Panel/committee members were also asked their opinion on the deterrent effect of the current level of punishment for research improprieties (Figure 47). 70 per cent of panel/committee members agreed that the current level of punishment had sufficient deterrent efficacy.
Figure 47: Panel/committee members’ opinions on the deterrent effect of the current level of punishment for research improprieties

B.2.12. How researchers and panel assessors/committee members received information about the RGC

All survey respondents were asked how often they utilise the different channels available from the RGC to gain information and insights on the RGC and their activities (Figure 48). Across all respondent types the RGC Website is the source most frequently referred to, and out of the four options provided, the YouTube channel is the least frequently used.

Figure 48: Survey respondent’s frequency of use of RGC resources
B.3. Caveats and limitations

The biggest limitation of this element of our study is the comparably low response rate from two institutions in our sample, namely HKU and CUHK. However, on analysing the data we do not see a difference in response by institution and therefore think that this issue is of minimal risk to the quality of our findings. The surveys had response rates of between 11 per cent and 48 per cent, and it is possible that individuals with particular views would be more likely to fill in the survey than others, for example those who are particularly positive, or particularly negative, may be more inclined to fill in a survey.

In addition, the individuals who completed the surveys were identified by their institutions as being applicants to RGC schemes between 2011 and 2015. As the institutions used current staff records the sample is potentially missing (1) academics who have left Hong Kong and (2) academics who have moved institutions within Hong Kong, where the new institution is not aware of the grants that the individual has previous applied for.

The qualitative results are necessarily based on perceptions and opinions of respondents. As many of the comments were made in response to open questions, the quantification should be taken carefully as it corresponds to the issue felt highest on the respondents mind at the time of responding, and they may have commented on other aspects if asked specific questions about them. There were five researchers coding the notes and therefore variations in coding style were visible. We aimed to mitigate the effect of this on the analysis with regular meetings to discuss queries and provide an agreed standard of coding practice (see Section 8.1.1).
Face to face focus groups were carried out in order to develop a nuanced understanding of the performance of the RGC. They were carried out after the online surveys had closed, and were used to build on the results of the surveys, focusing on questions best explored through dialogue, and in particular on areas where survey respondents disagreed most with statements.

This annex sets out the methodology for the focus groups and interviews, and then describes the findings. The report is structured around the quantitative questions asked in the survey, with the qualitative results from the survey and online consultation provided around these questions as appropriate to add context to the results.

C.1. Approach

C.1.1. Sample of attendees

During the week starting 5th December 2016, 18 face-to-face focus groups lasting one and a half hours each were carried out by the study team in Hong Kong. Through the focus groups we met with 115 people, with an average size of 6 people. Face-to face focus groups were carried out with representatives from the following groups:

- UGC-sector
  - Researchers who were awarded grants between 2011 and 2015
    - Biology and medicine
    - Engineering sciences
    - Physical sciences
    - Business studies
    - Humanities and social sciences
    - Senior researchers\(^{192}\)
    - Mid-career researchers\(^{193}\)
    - Early career researchers\(^{194}\)

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\(^{192}\) As there are no specific schemes for senior researchers, staff grades were used to select invitees. Staff grades A and B were chosen as proxies for identifying senior staff as they tend to correspond to Professors and Chair Professors.

\(^{193}\) As there are no specific schemes for mid-career researchers, staff grades were used to select invitees. Staff grade C was chosen as a proxy for identifying mid-career researchers as it tends to correspond to Associate Professors.

\(^{194}\) The Early Career Scheme was used to select early career researchers.
HKPFs:
- administrators
- awardees who were awarded fellowships between 2011 and 2015
- Senior institutional managers of UGC-funded universities
- Panel members
- Committee members
- Self-financing sector
  - Researchers who were awarded grants between 2012 and 2015
  - Assessment panel members
  - Institutional managers of HEIs who had received funding since 2012
- RGC members (council members)
- UGC Secretariat

The UGC provided us with lists of successful applicants for each scheme, and panel and council members, to select participants from. From these lists we randomly selected four individuals within the category of the focus group (e.g. discipline, career-stage etc.) from each institution to approach.\(^{195}\) The spread of individuals were reviewed to ensure a range of HEIs, seniorities and grant schemes were represented (Table 30).\(^{196}\) For management and administration focus groups each institution was contacted and asked to send an individual relevant to the theme of that focus group.

**Table 30: Number of attendants at award holder focus groups from each HEI**

<table>
<thead>
<tr>
<th>HEI</th>
<th>Number of attendants</th>
</tr>
</thead>
<tbody>
<tr>
<td>CityU</td>
<td>7</td>
</tr>
<tr>
<td>CUHK</td>
<td>5</td>
</tr>
<tr>
<td>EduHK</td>
<td>9</td>
</tr>
<tr>
<td>HKBU</td>
<td>6</td>
</tr>
<tr>
<td>HKU</td>
<td>8</td>
</tr>
<tr>
<td>HKUST</td>
<td>5</td>
</tr>
<tr>
<td>Lingnan</td>
<td>4</td>
</tr>
<tr>
<td>PolyU</td>
<td>9</td>
</tr>
</tbody>
</table>

\(^{195}\) For panel members we selected non-local members based on availability in Hong Kong, and local members ensuring a spanning of panels.

\(^{196}\) Once a list of individuals for each focus group was selected we contacted the institutions to obtain email addresses. In the two instances where the institutions were unwilling to provide us with email addresses the UGC searched for the email addresses for us and provided us with those that were readily available online.
C.1.2. Interviews

The focus groups were conducted by a pair of researchers as semi-structured interviews, to explore their experiences of the RGC and focus the current process and what can be improved. The protocol was developed around areas of interest from the survey and the topics, which in our judgement could be best explored through dialogue (see Annex D for full protocol). It was structured around the current funding schemes and the submission and assessment process to cover the following topics:

- Needs of researchers in Hong Kong
- Needs of wider society in Hong Kong
- Submission and assessment process
- Promotion of collaboration
- Research support

In addition a virtual focus group was run with the Heads of Universities from UGC-funded universities, and following this they were given the opportunity to provide comments in writing which have been included in this analysis.197

C.1.3. Analysis

Following the site visit, we used notes and audio recordings taken to write up memos from each interview. These were not verbatim transcripts but detailed descriptions of the discussion. These were uploaded into QRS NVivo 11 software, which was used for the analysis. A total of 19 memos were produced.

In order to conduct the analysis, we developed a code book and assigned recorded statements to different descriptive and analytical categories.198 The code book included node sets related to the following:

- Parts of the process (priority setting, application and submission, review and award decisions, post award monitoring, appeals and disciplinary)
- Research questions around the needs of researchers and broader society
- Perceptions of the process (transparent, fair, reliable, efficiency, and effective.
- Generic nodes for capturing interviewee types (discipline, scheme and career stage), HEIs and also positive and negative views expressed by interviewees.

The nodes contained sub-themes within them, and in total there were 88 nodes in the code book (for further detail see Appendix D). Statements within the interview notes were qualitatively reviewed and coded to as many nodes as applicable. A total of 3,731 phrases were coded in NVivo.

Once all the memos were coded, coding matrices were run across the NVivo data, pulling out comments coded to two nodes to provide a subset of data to review. For example, comments related to the needs of researchers might have been crossed with all data coded to a particular discipline to see if there were similarities or differences across subject areas in the requirements perceived by interviewees.

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197 These reviews are presented as senior manager views, which also covers data from face to face focus groups with other senior managers.

198 This approach follows an analytical process such as that outlined in Bazeley & Jackson (2013).
C.1.4. **Confidentiality**

To protect the anonymity of our interviewees and ensure confidentiality, data are presented by type of interviewee (e.g. researcher, panel or council member). Where possible we have attempted to provide detail by discipline, part of the sector and career stage. We recognise that HEIs do not have one perspective on the issues discussed and therefore the data cannot be quantified at this level. The advantage of the focus group analysis is that it provides rich detail and nuanced understanding of the different issues from an array of perspectives. Therefore, throughout our analysis, the quantitative data is taken predominantly from the surveys and supported by qualitative information obtained during the site visits.

C.2. **Results**

C.2.1. **Response from the sector to the review and RGC in general**

When conducting the focus groups in Hong Kong, participants invited were keen to attend and provide their views. Without being asked, a small number of participants across the majority of the focus groups stressed to us that they were pleased this review was happening. In particular, they felt it was timely to conduct a review at this point and reflect after 25 years taking into account changes and developments in the Hong Kong and global research system over time. Participants were keen to provide their opinions and perspectives to improve the system going forwards, but recognised that incremental improvements were needed rather than an overhaul of the system.

‘GRF serves a good purpose though you can probably fine tune it.’

Although the majority of the discussion was around things which could be improved and the changes which could be made, it is important to note that there were a number of positive elements of the RGC process mentioned in all focus groups. A selection of these is highlighted in Box 4.

**Box 4: Examples of positive comments made in focus groups about the RGC and its process**

- The ability of the programme to meet the needs of researchers, in particular promoting culture and excellence within universities
- Confidence in the assessment process, in particular its reliability
- Fairness in reviewing created by international assessors
- Academic freedom to suggest research topics
- Volume of researchers supported by the system, compared to funding overseas
- Prestigious nature of RGC funding
- Well funding of some schemes, such as the collaborative one
- Integrity of the UGC as an organisation, and the credit due to the staff working there.

A number of participants stressed the importance of valuing the system in place. For example when discussing a wish for a larger investment recognising that the system delivers a lot with the resource available to it
Under the conditions…. ‘the system can’t do better. The review process is extremely fair and panels do a great job.’

C.2.2. Needs of researchers

When asked whether the funding schemes of the RGC met the needs of researchers, researchers across each discipline felt it did. The discussion then invariably focused on what were the needs, and further improvements that could be made to address the needs of researchers.

Value of the funding distributed from RGC and the value of individual awards

In particular, researchers, university managers and panel members felt the value of the funding available across the system, and in specific schemes, including the GRF and HKPFS was too low. Researchers often quoted the percentage of GDP invested in research, expressing concern that this was lower than other international benchmarks, such as European countries, US and Singapore, and that levels should be comparable to other countries regionally such as China, Japan and South Korea, which were all above 2 per cent in 2014.

In particular, it was felt by researchers and university management and administrators that over time the value of funding, across the system and for individual awards had not kept pace with inflation or reflected the increase in the cost of resource, such as research assistant salaries. In the case of the HKPFS, administrators felt this affected the caliber of applicants applying, particularly students from overseas. On the other hand two individuals who had undertaken the HKPFS felt the value of stipend was higher than other schemes and the value of awards that other PhD students within their institution held.

Researchers felt that the low value of funding has a variety of consequences on the research system. In particular it affected the direction of research undertaken in Hong Kong, and on the type of research researchers think it is possible to conduct. For example, one researcher felt it was cheaper to conduct theoretical work, using computational simulations or theoretical algorithms, rather than experimental design and therefore this was easier to fit within the available budget; this point was also made by several panel members. Senior managers felt that the low value of individual awards, and the lack of other options to apply for, resulted in individuals applying for funding year on year. Panel member mentioned that the large number of lower value awards led to a greater burden on the applicants and reviewers. One alternative suggested was to use past performance of an individual as a criterion for funding.

Researchers from business discussed the issues of the value of funding awarded being lower than the value of the funding applied for. It was not clear how the decision by the panel to cut the funding allocated was made. Differing understandings included:

(1) The percentage awarded related to the score – i.e. 100 per cent funding receive for a 5 star proposal, 75 per cent and 50 per cent of funding requested for a proposal scoring 4.5 and 4 respectively.

199 Estimates for percentage of GDP invested in research in Hong Kong varied from 0.3 – 0.8 per cent, indicating a lack of clarity on details, even such as this which are in the public domain.

200 It would be good to check the accuracy of this point with the RGC.
(2) Those requesting funding for theoretical research received a lower proportion than requested than their experimental colleagues.

They stressed that these cuts can lead to difficulties employing post docs or research assistants to conduct the project as more of the grant is required to cover salaries, and that often the same amount of research is expected within a reduced budget. Examples were given where the host HEI provided funding to supplement what was received from the RGC.

A small number of anecdotal examples were given where budgets were deliberately inflated to take into account where budget cuts may be requested, whereas others felt that budgets over a certain size (often given as 1 million HK dollars for GRF) would result in your proposal being rejected outright or cut further.

Duration of awards

In some fields of research, researchers felt that the duration of grants awarded was too short. In particular this was highlighted in focus groups for medicine, business, and humanities, as well as senior university managers. Anecdotal examples where given by researchers of where individuals applied for funding covering multiple years but this was reduced by the panel and funder to a single year.

Researchers felt that the consequences of the short duration of funding included that it made it difficult to recruit to ongoing positions, such as supporting PhD students when the initial funding won’t cover the full length of training. In particular this was raised as an issue for early career researchers. Therefore one participant suggested having a longer timeframe for early career researchers, and cited NSF and NIH as examples of funders who did this. Another potential consequence was that researchers felt the duration affected the type of ideas proposed in grants, to ensure they could be achieved within a few years and that short term vision limited the research aspirations.

Researchers also felt that the need to produce at least one paper at the end of each award, to be eligible for subsequent funding, led to researchers only publishing incremental advances in research. A panel member mentioned that with shorter duration of funding it may be harder to produce research with an impact or benefit on society.

Looking specifically at the HKPFS, a couple of current students suggested there could be a three year period, with a fourth year of flexibility. They felt the current system, requiring completion within three years, put too much pressure on students to complete which risked compromising the quality of work conducted.

It is interesting to note that as stated above these comments about the size and value of awards reflect particularly to the GRF, whereas other schemes, such as CRF and TRS were felt to be more generous in the value of funding, and the outcomes expected for the funding provided.

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201 It was reported that NSF provides five years for early career compared to three years for other schemes, and NIH gives five years for early career researchers and four years for researchers who already have an independent award. This should be confirmed and a reference included in this footnote.

202 Confirm with the RGC that the perception to complete within 3 years is correct
Number of individuals funded

One researcher from the biomedical area felt the value of awards was not an issue, but that the success rates were. A handful of international panel members highlighted that success rates were lower in other systems, such as NSF, 25 per cent compared to 40 per cent in Hong Kong. Two panel members highlighted the tension between the value of research funding available and the number of research active staff. They noted individual researchers, and targeted areas of research, could be better funded if few individuals were successful, or if funding was focused around chosen topics. However, the opposing view to this presented by other panel members was that, you couldn’t predict winners and therefore it was a safer option to distribute funding to a wider pool of applicants. ‘If you cannot identify the stars then you should give funding to everyone and some of the seeds will become stars’. Also, participants from senior university management stressed that the current schemes allowed diversity to be funded, as long as it was based on excellent research. Some stressed how important RGC funding had been to them in enabling them to continue their research career when returning from overseas.

Researchers, senior managers, panel and council members recognised the tension between value of awards and number of successful grantees accepting that without increasing the overall pot it was not possible to increase both of these elements (length and value). In response to this, participants stressed the importance of RGC funding for sustaining the research community in Hong Kong, which they felt was a primary aim of RGC funding. Therefore most were in favour of retaining the current value and duration if the total funding allocated was fixed; whereas a minority of researchers and council members felt the length should be extended, resulting in a reduction of grant holders.

Panel members described the level of autonomy the panel, and in particular the panel chair, have in decision making about the grant portfolio for a funding cycle. In particular they can determine the size of grants and success rate. Therefore in addition, this affects the balance of types of research and the proportion of basic and applied research funded. Although it was recognised that there may be disciplinary differences in the process and criteria, in particular one panel member mentioned that guidance from the UGC in what was appropriate would be useful.

Promotion and recognition of the individual

Researchers often felt that RGC funding was important to advance their career, as it was a metric and measure that they perceived the universities valued. On the other hand, if individuals were not successful at receiving funding this can have implications on their career beyond being unsuccessful to a specific funding stream. As one participant said: ‘If you get three years consecutively without funding then that would be devastating’.

Researchers from several disciplines, namely business and engineering, and at all career stages, as well as Council members felt that academics perceived a need to apply for a grant ever year due to pressure from their institution, and a link between RGC grant success and individual promotion – in particular achieving tenure and recognition. One participant said: ‘Getting a grant is a good thing, a positive indicator for senior faculty who decide on tenure and promotion decisions’. The reason given for this link

203 Applications have a lower success rate in biomedical than other scientific fields (see Figure 26).
was that success in RGC grants is part of the funding formula for the allocation of the R portion of the block grant from the UGC to HEIs.

Application funding cycling

A number of researchers commented that one round a year was not sufficient, and can have a significant impact on careers, particularly for early career researchers. Council members agreed that twice a year would be a better system but felt that with the burden on reviewers and human resources it would be impossible to run two rounds a year of the current process.

*There is 'one round of review each year, and it takes a year to get the outcome. If you don't get funded you have to wait another year.'* (Researcher)

Many researchers, in particular those from business, and mid-career researchers expressed concern about the time period between submission and result, with some querying whether it could be reduced. In particular it was noted that the time it takes to receive the result of a funding application caused a problem for resubmission, as there was only a short window until the next application was due.

Researchers also questioned whether the timing could be shifted, so that projects started at the start of the summer, rather than the start of the academic year (September). Some thought this would help with hiring good staff, as many of those will have been hired by the time they currently hear about grant success, and would also mean that at the start of a grant researchers would have more time as they would not also be teaching.

Related to this, there was uncertainty as to whether researchers could work on proposed work before they are awarded the grant, with some researchers commenting that this is not permitted, as if you could conduct the research without funding why you were applying for a grant. However, researchers in business were concerned that the time delay in awarding grants would affect the timeliness and relevance of their proposed research. Some researchers reported colleagues who would do a large amount of the proposed research in advance of submitting the application to enable them to submit a very complete application, and provide preliminary data. For early career researchers without access to students and Research Assistants this was reported as being difficult and there was uncertainty about how much preliminary data is required.

Research support

When discussing the needs of researchers a lot of the conversation discussed research support available. Whilst it is important to note that different support may be available for different schemes, the discussion focused on the following aspects: research staff, teaching relief, equipment and funding for travel and conference attendance.

There was a lack of clarity over what researchers can apply for within their grant. A number of researchers reported colleagues telling them not to apply for, for example, equipment or senior RAs as they would not get the funds for it. The impression that there are some things that you cannot apply for/will not get on the grant (such as particular equipment) led one research to describe themselves as *‘discouraged’* and effecting the scope of the research proposed. There was the impression that under the current system people are *‘forced to play safe’*. 

132
Many participants complained that they did not have sufficient funding to hire staff to work on their projects. In particular, research assistants, post-doctoral researchers or PhD students. In particular, participants stressed that salaries had increased with inflation, whereas the value of awards had not.

Teaching relief, where available, was highly valued by the researchers. However researchers from self-financing institutions in particular commented on the burden of their teaching and research loads and also that teaching relief time allowance didn’t seem to be awarded in proportion to the project length, rather capped at a maximum number of hours irrespective of project duration. In general there was confusion about whether certain schemes were eligible for teaching relief and therefore some researchers felt they would benefit from having more guidelines for how to apply for teaching relief.

There was also confusion on what equipment could be requested, or would be funded within a grant, and what should be provided by the host institution. In some instances, participants gave examples of where they had not requested funds for equipment for fear their proposal would be rejected. However, a panel member stressed that it is at the discretion of the researcher. It was noted that, particularly in the creative arts, funding for materials such as production costs for performances, hiring a venue for events, artists’ materials would be very valuable. Funding for subsistence, translation and paying participants in social science field work was also desired.

Where available, funding for travel and conferences was felt to be valuable. Some researchers felt that funding for these activities was more generous in Hong Kong than abroad, for example in the US. Yet, several researchers requested an increase in the funding available for these types of activities, to maximise collaboration and research conducted with colleagues overseas.

C.2.3. Needs of Hong Kong

When asked whether the funding schemes of the RGC met the needs of Hong Kong, there was a lack of clarity across respondents about what the needs of Hong Kong were, and clarity over what the strategy was by which the RGC intended to address these things, and what the RGC sought to prioritise. The discussion focused on the following:

Role of the HEI sector

Participants felt that HEIs had two functions: research and teaching. It was unclear to participants what balance these functions should hold in the Hong Kong system. There are different schemes for the UGC sector and the self-financing parts of the Higher Education (HE) sector. These reflect the differences in the aims of the two arms of the sector. Some researchers and panel members felt it was the role of the UGC sector institutions to conduct the blue skies research, whereas the self-financing sector should support industry to have a leading edge through applied research which improves process and products.

Another aspect of this that was mentioned was the emphasis on capacity building through training researchers, within a global market, and the focus on retaining the best in Hong Kong compared to training those from Hong Kong or overseas who leave Hong Kong after finishing their studies.
RGC in the broader funding landscape

Senior managers in universities and researchers highlighted the importance, and the difficulty, in the role of the RGC in funding research across Hong Kong due to the lack of other sources of funding in the system. There was a perception from senior managers that money from industry and philanthropy was minimal. In the case of many in the academic community, RGC grants were felt to be the only option for funding. When discussing the type of research that RGC should fund, some participants felt that it should concentrate on basic, or blue skies, research leaving the applied research to others such as the ITF. Based on the available level of funding, described above, participants queried how to maintain the high international standard that Hong Kong has achieved, particularly given its lower level of investment than other comparator counties, such as Singapore. To address this, one researcher suggested international partnerships especially across the region.

Types of research supported

When discussing the types of research supported by the RGC, a number of discussions focused on the different value and prominence placed on research termed broadly to be basic or applied. Currently topics for schemes, such as the GRF are selected bottom up – by the researcher putting in the application. This was felt to be important and that the research community were best placed to be aware of the local needs. Council members stressed that although information is collected on whether a proposal is categorised as ‘basic’ or ‘applied’ these categories are not used as quotas to determine what is funded. Some panel members felt, or reported that peer reviewers for their panels felt, that RGC should be funding research solely based on academic excellence, and more applied questions should be supported by other sources, such as the ITF or industry.

There is a perception by some that there is more applied research being conducted within the self-financing sector, though others were keen to stress that not all research within the self-financing sector is applied. At one self-financing institution, they require grant submissions to link between their research and teaching, so that it feeds into their teaching and improves it.

As in other systems globally there is a move towards the funding of more applied research whose value can be justified to the government and public tax payer. Participants discussed the issue in communicating the benefit of research to the public and to industry to ensure it can be taken up and translated. A number of examples were given where the RGC had supported knowledge transfer events, and greater promotion and engagement was felt to be valuable and to be needed.

There was a concern that the trend towards more applied questions may led to research being directed away from basic to more applied research where the impact is visible and more immediate. This was not just in the science subjects, but in the humanities and social sciences as well. For example, as a creative artist, one of the participants said it was easier for their colleagues to get a grant to write about their music than for them to get a grant to compose.

In line with this move, there was a concern from researchers that some disciplines would struggle to be applied and to demonstrate their impact and benefit on society. Examples given included history literature
and Chinese studies. Others stressed that as well as benefits and impact through commercialisation there were broader societal benefits which should not be forgotten.

These are discussions which are also going on internationally, and some recognised that Hong Kong will undertake an assessment on the impact of research on broader society through its upcoming RAE.\(^{204}\)

Another terminology that was used was the balance between international significance and local relevance. When asked a number of researchers at all stages of their career felt that as an international hub, Hong Kong should not be considering local relevance, rather working on international issues, which would by default be important to but not limited to Hong Kong; for example smart cities. Others felt that international significance was more important than local relevance. An area of local relevance, with outstanding research mentioned was research into South China cancer.

There was a concern from senior managers, and researcher from business, that if it is locally relevant or applied it won’t be published in a top journal, which is an individual criterion for promotion within HEIs. Linked to this, a panel member for GRF stated that the panel were looking for global outputs which they felt could be difficult to achieve with research focused locally. Senior managers are looking at ways to combine the publication requirements, with local relevance; for example inclusion of the local context in a research project or using local data for part of it.

Due to the size of the sector in Hong Kong, applications are often reviewed by international experts, to reduce bias and conflict of interest in a small community. However, it was questioned how they could assess local relevance.

Researchers acknowledged the challenges in creating research with benefit on wider society due to the time taken to deliver the broader benefits. As mentioned above (Section 9.2.2) there was a concern that the short duration of funding available resulted in less ambitious, and potentially less impactful research, being aimed for to ensure researchers meet the output requirement at the end of their grant and remain eligible to apply for more funding.

Focusing on the role of the RGC in facilitating impact and translation of research, one panel member mentioned that the RGC could do more to support and incentivise commercialisation of research. These suggestions are detailed in Box 5.

**Box 5: Mechanisms of support that participants suggested that the RGC could provide to encourage impactful research**

- Showcase and promote the successful examples that have occurred to the public, government and industry.
- Encourage local engagement to enable presentation of relevant and usable information to local industry i.e. beyond journal publications in English.
- Encourage applications from applied research areas to emphasise support to research which aims to benefit society
- Support projects that can secure match funding from industry.

\(^{204}\) Link to document which says RAE/REF will have an impact component
Quality of research

The definition of quality was discussed in several focus groups. Some researchers felt that the quality threshold was lower to receive funding in the self-financing sector, whereas other opposed this view strongly. In particular those on the self-financing panel, who were academic within UGC-funded universities, felt that the quality was closely comparable, as it should be, in part because of the movement of academics from the UGC to self-financing sectors to focus on more applied research. One participant stressed that quality was most important, irrespective of the social value. However, there is still misinformation on the assessment process and the merits on which proposals are reviewed.

‘Quality is very subjective. It has four dimensions. The first is originality (innovative) in order to have the thing published in the top journals. Then it has to be relevant – this is what makes it interesting. Then track record and visibility also come into play. Different people might have different perspectives on the weighting of the aspects of quality.’

Geographical diversity within the HKPFS

When asked specifically about the Hong Kong PhD Fellowship Scheme (HKPFS) support was voiced by some for the scheme which was perceived to have a global vision and ‘is a good way to attract good people’. However, some others felt that the scheme doesn’t attract the best students and doesn’t have many local HK students. In particular, administrators of the HKPFS felt that the student population was heavily dominated by mainland students and an increasing amount of African students and fewer submissions from European countries. They felt this may be because over time they perceived that the funding allocation was becoming less and less attractive to international students. There were divergent views on whether students who came from overseas to study tended to stay in Hong Kong beyond the length of their studies. Several administrators were also concerned that the research topics chosen by students were not always relevant, and therefore beneficial to Hong Kong.

C.2.4. RGC Process

Participants were asked for their thoughts on the different stages of the application and assessment process

Application and submission processes

The submission process was felt to be fit for purpose by respondents at a range of career stages. Many respondents however did comment that they felt the submission system could be made more efficient. Both the proposal and the instructions for the proposal were felt to be very long, and getting longer and more complicated over time. Online submission was reported as requiring a lot of manual entry, and the interface was reported as being difficult to use. One respondent commented that it could take weeks just to fill everything in on the system. A number of respondents across the focus groups suggested streamlining the system, for example automatically pulling out information that was entered in previous years so that re-entry was not required.

A number of researchers commented on the large amount of declarations that are required within the application form, for example relationships with those suggested as reviewers. This led to discussions about what would happen if you did not accurately declare everything, including many researchers
expressing fear of disqualification, and therefore not providing suggestions for reviewers. Examples of researchers who had been disqualified were given, there was however one example of explanation of non-declaration which still led to award of the funds.

Review process

In general panel and council members are very positive about the review system. Multiple panel members commented that the review process is as reliable and fair as possible. Panel members felt that the RGC has a good reputation worldwide, which resulted in them attracting high quality reviewers. When comparing against other systems (e.g. China and Australia) many panel members felt that the RGC system is particularly fair, as they do their best to reduce conflict of interest and the external peer reviews from experts ensure the influence of the panel member is appropriate.

‘The current system with the two tiers, external reviewers and a panel, as a whole is an excellent system... The strongest and most vocal critics, when they serve on the panel, they become converts [to the process].’

Researchers however tended to have more mixed views, with many commenting on a lack of fairness, transparency and reliability. Across the focus groups we heard contradictory understandings of the process and many researchers highlighted elements of the process that they weren’t familiar with. These included:

- Panel membership
- Suitability of reviewers to assess particular applications
- Nomination of reviewers
- Number of reviewers per application

and are described in more detail below.

Researchers are generally unclear on how panel members are chosen; some senior managers noted that they are asked to nominate but they do not know how these nominations are used. In particular some researchers and senior managers felt that panels did not represent all universities and there should be proportional representation. One researcher also questioned the term people should spend on the panel, suggesting limiting it to less than six years.

It was felt to be good that the panel chair was external but there were mixed views on what the balance of local and international members should be for the rest of the panel; with some researchers and senior managers feeling that overseas gave impartiality and objectivity, limiting the potential risk of conflict of interest, but other researchers feeling that local members understand the system better and should be trusted to be fair.

In the self-financing sector, researchers felt that panel members, who tend to come from UGC sector institutions, didn’t understand and appreciate the different aims and priorities of this sector to the UGC-sector. There was a lot of fear that they were being judged against the same yardstick as the UGC sector, which was described as more research intensive and mature.

Many people commented on the quality of reviews, quoting examples of reviewers who they felt: didn’t understand the topic, hadn’t read the proposal, gave the proposal to their student etc. Related to this, some researchers also noted that, as you don’t know who carried out the review, and so can’t gauge their suitability, it is difficult to know if the system is fair.
It was generally felt that using overseas reviewers was good, to avoid conflict of interest. Some researchers from business however were worried about the stealing of ideas and concepts. Panel members and researchers from Humanities and Social Sciences and Business discussed blinding reviewers. While some felt this would be useful to avoid conflict of interest, other commented that as track record is part of the assessment this isn’t really possible.

Many panel members discussed the issue of poor reviews. While there is currently a system in some schemes for commenting on whether or not you would re-use a reviewer, and also a blacklist, though council members were concerned about putting people on that list too quickly and said they didn’t use it much. Researchers and panel members appreciated that it can be difficult for panels to get enough reviewers. Some described reviewer fatigue, where good reviewers have been overused which reduces the availability of the pool of reviewers. Panel members commented that the nomination of reviewers was useful to them to ensure they can find appropriate reviewers, although some panel members also thought that nominated reviewers tend to be biased, so the system is not needed. However, the current system of declarations does not encourage researchers to provide suggestions for fear of disciplinary action.

Many researchers and senior managers commented that the number of reviewers varied for different applications. This was felt to be unfair, and also increased the feeling that they don’t understand the system. Panel members however felt that, while it is not ideal, given the time constraints and disciplinary differences of particular fields and niche areas it was not possible to ensure all applications received the same number of reviews.

Scoring and decision making

There was a lack of understanding across focus groups of how the scoring system works – both in the assessment by peer reviewers, and when scores are combined by panel members. This was visible through the statements from researchers in our focus groups, and reported by council members.

Reviewing and providing scores was noted to be necessarily subjective, a number of respondents commented on the large diversity in scores that they had received. To address this, one researcher suggested deleting the lowest and highest score. The perceived diversity was felt to make it difficult to compare people with average scores and to ensure the system was reliable. For example, a couple of researchers gave examples resubmitting unfunded proposal with no changes and it being funded.

‘Reviewing is subjective and always get comments you feel are unfair, however process generally fair’

Six of the focus groups felt that the scoring grades were not understood in a uniform way across the reviewers. It was suggested that instead of subjective terms such as ‘good’ and ‘excellent’ the system could be changed to terms that describe what that score means in practice such as ‘definitely fund’, ‘fundable’, ‘not fundable’.

Some researchers felt that there were problems for interdisciplinary work, which they perceived to get lower scores, and also that quality adjustment might be needed between fields.

The majority of researchers did not understand how panel decisions were made. Many said ‘my impression is’ or ‘I assume’ when describing what they thought happened. Panel members however felt that the process was efficient and fair. Some also noted they felt it was fairer than other countries (such as
China and Australia). Some panel members discussed changes that have been implemented to make it fairer, for example in the engineering panel reviewers are now asked to declare their level of knowledge on a given topic (e.g. expert, knowledgeable etc.). Panel members also described how they deal with outliers through general discussion, and how they get extra reviews if the panel lacks knowledge in the area, processes which researchers in the room were unaware of.

‘GRF reviewers are transparent, but the panel meeting is a black box. What is the score based on? Track record, team members? Once you get started it’s easier to have a track record’

The biggest confusion was around how reviewer scores were used. There was widespread opinion among researchers that one bad review would stop an application from being funded. Panel members however explained that the panel member in the capacity of the proposal reader does not necessarily just average the scores, and will look at the reviews and consider whether the outliers have merit. One rumour mentioned in a few of the focus groups was the idea that the panel downgraded scores to contain the number of proposals funded, or distribute the funding available.

Some panel members felt that transparency and trust in the system might be increased if, as well as the comments from each reviewer, applicants were provided with a summary of comments and explanation of score. For example, one researcher suggested, to support understanding, and the submission of better future applications, that applicants could be informed which of the questions in the assessment form decides the score, and how is it calculated. Others however disagreed due to the burden this increased feedback would create, and that justification was not always clear cut as peer review is an inherently subjective decision making process.

‘Decisions are often marginal... Giving out detailed feedback would exacerbate the problem.’

Some researchers (in particular those at an early career stage) stressed how useful the feedback they had received was. One example was given where a researcher was initially unsuccessful in securing funding due to the scope of work proposed within a given budget but using the feedback provided were able to submit a reduced scope of research to a subsequent RGC funding call.

**Appeals and resubmission**

Researchers from a range of career stages and disciplines and senior managers noted with dissatisfaction that there is no appeal process if your application was unsuccessful. Views on resubmission were mixed. It is possible to resubmit, but this required waiting a year until the next cycle. Two researchers stressed that the comments received from the initial submission were useful for resubmission. However some researchers expressed fear of disqualification in resubmission due to the impression that you are working on same topic or not declaring everything, and others believed that panel members do not like resubmission and therefore were not favourable towards these applications. In the business focus group, there was a discussion about whether resubmitted proposals were reviewed by the initial reviewers. A panel member noted that they do try, but they often get turned down by those reviewers which is why you get different reviews. It was suggested that extra effort should be put into trying to get the same reviewers.

**Disciplinary Committees**
In general researchers and panel members felt the processes on handling of alleged misconduct cases could be improved. Many felt that the consequences for some minor misdemeanours, such as non-declaration of conflict of interest (reported to be 90 per cent of cases that reach the disciplinary panel) were too harsh, with decisions having a very large impact on individual’s careers.²⁰⁵ In addition, one researcher commented that the process is very slow, which can have a career effect even if you are found not guilty, as grant funding is suspended during the investigation.

Respondents involved in disciplinary processes from universities and on disciplinary committees commented that it was often difficult to collect evidence accurately to really be able to draw a judgement on cases; this meant that having to make decisions is a large burden. DC members also felt they did not get sufficient time to properly discuss cases and make judgements. One DC member did comment that he felt the two stage process was good as it separated out the decisions on guilt and the appropriate penalty.

Some committee members discussed putting disciplinary responsibilities in the hands of HEIs working to a set of criteria, and then having an office of research integrity outside of UGC that endorses/checks the decision making, however not all panel members were in favour of this suggestion.

Post-award monitoring
Focus group participants described a process of mid-term and final reporting. The timings of these varied, depending on the duration of the award. Researchers across the disciplines generally felt that the monitoring process for awards (submitting a mid-term and a final report) were satisfactory.

There was a mismatch between the understanding of the purpose of the mid-term report between researchers and panel members. Some researchers expected feedback on their progress, whereas panel members said that they were only asked to comment on use of money and amount of progress, not to evaluate the work itself. Related to this, some participants from the physical science scheme were concerned that the recent introduction of instalment payments in GRF was inappropriate for them as spend across a grant was not constant and a large proportion of the funding may be needed upfront to pay for equipment.²⁰⁶

In the self-financing sector, panel members play an active role in monitoring awards which they are responsible for awarding through a ‘Shepherd’ role. This requires them to actively monitor an award, ensuring progress is in line with plan, e.g. that money has been spent on equipment where specified. This is burdensome on the panel members, where there are inaccuracies in the reporting, and so some queried whether RGC could support the checking process further.

When discussing the final report requirements, researchers from social sciences and business studies, and researchers in the self-financing sector, according to senior managers from these institutions, thought that they needed to produce a paper by the time of the final report in order to ‘pass’ and be eligible to apply

²⁰⁵ Between 2014/15 and 2016/17 there were 49 cases brought to the DC: 30 alleged cases of non-disclosure of relationship with reviewers (61 per cent), 14 alleged cases of non-disclosure of similar/related projects (29 per cent), four alleged cases of plagiarism (8 per cent) and one alleged case of falsification (2 per cent).
²⁰⁶ Research projects which last a year or less receive a one-off payment; those which last more than 12 months are payed in installments.
for subsequent funding from RGC. Some felt that the timeframe of the award was not sufficient to produce a high quality publication, which was what the university required from them; this may force some to get a worse publication in order to not get an unsatisfactory grade through monitoring and be penalised by the RGC in the future. Panel members from social sciences and business studies explained that extensions were possible in these types of instances and that panel members have a general reluctance to give people an ‘unsatisfactory’ grade. Many researchers in these groups were unaware of this. Senior managers from the self-financing sector felt that the expectation of a publishable output from the IDS and IIDS schemes was inappropriate.

Council members recognised that it is best when those who reviewed and approved the application initially stay involved and conduct the monitoring and follow up for a particular award. However, this is additional burden on panel members and reviewers, which they are not always available to commit to and this means that reports are not always read.

C.2.5. Fostering collaboration

The RGC supports collaboration at a number of levels and through specific schemes, detailed below. We have identified four main levels of collaboration: within an institution, between disciplines, between institutions, and with international partners. A key aim of specific streams of funding from the RGC is to foster and encourage collaboration. These schemes are: the collaborative research fund (CRF), Areas of Excellence (AoE) Scheme and Theme-based Research Scheme (TRS) in the UGC sector. In addition, when asking researchers about collaboration, some in the self-financing sector brought up the benefits of the IIDS scheme, which are included below.

In general, researchers and the self-financing sector felt that these schemes were effective in supporting collaboration, and examples were given where funding had stimulated collaboration within Hong Kong or internationally. For example, a number of researchers stress that schemes such as the IIDS ‘promotes research culture’ and ‘enhance networking’. In particular there were examples where funding had enabled a critical mass of researchers to work more efficiently on a shared interest, achieving more than they could individually, or training on the use of equipment by international experts. A few participants mentioned the Joint Research Schemes, which are co-funded between the two participating countries – e.g. Hong Kong and Europe. One participant suggested expanding the countries which are active in this stream to include Australia, N America and Social Sciences in China.

‘inter-institutional projects plays a great role. RGC brings people together and we see if we can find collaborative ideas.’

On the other hand, some queried whether collaboration should be incentivised, and whether linking it to funding forced un-natural pairing. Anecdotal examples were given where collaborators were named on a proposal to win the work, and yet hadn’t contributed. One tension identified by a participant was supporting collaboration within Hong Kong, when groups were often in competition for funding.

There was discussion from some focus groups that the value of collaborative awards allocated was higher than other schemes, such as GRF. This was appreciated by some researchers. Whereas others queried
whether the proportion of overall funding allocated to these schemes should be reviewed and reduced, in favour of individual schemes, such as GRF.\textsuperscript{207}

One issue raised was the access to these collaborative schemes. Whereas the GRF is open to everyone, early career researchers felt that you couldn’t apply, or wouldn’t be successful in receiving a collaborative grant, without proven track record and expertise in the system. In particular, one participant felt it was hard for early career researchers to collaborate internationally, and that currently this funding stream did not provide the opportunity for early career researchers to produce proposals with international academics. Linked to this, when asked at the HKPFS student focus group all attendees (n=5) felt the scheme did not promote collaboration within their institution, an area which could be enhanced.

The CRF scheme is also the mechanism for funding major pieces of equipment, although these can be shared between institutions within Hong Kong. Researchers, senior managers and panel members felt this confused the purpose of the scheme, and equipment funding should be a separate stream of investment, as in the NIH. There was also concern that the investment by the RGC was lower than the level of investment in infrastructure in other countries.

There was discussion on how the themes for the TRS programme were selected, and how researchers whose areas were outside of the selected areas could apply for funding. Some felt there was a focus on technology, which didn’t take into account the humanities and social sciences research ongoing in Hong Kong.\textsuperscript{208} Others felt that these programmes could be even further linked to local needs. When debating the assessment of these awards, a panel member felt there should be smaller and more specific panels, to ensure the expertise of the reviewer was relevant and aligned with the proposal.

Several participants from the self-financing sector suggested that the RGC could stress the purpose of the IIDS scheme to support proposal development between institutions or joint effort in existing projects (between self-financing and UGC sector institutions). It was suggested that this would allow mutual learning from different strengths within the research system, the establish research ongoing in the UGC-funded universities institutions and the self-financing sector’s experience with industry.

\textbf{C.2.6. Engagement between the RGC and the research community}

Researchers generally felt that there was minimal engagement with RGC, some saying that this review was the only engagement they had had. Some researchers, and even senior managers at universities discussed the fact that only senior academic staff were really able to engage with the RGC, and often felt that there was a one way information channel from RGC to the research community, without the dialogue where the sector could respond or feed into discussions, which they would find valuable. Heads of Universities in particular wanted greater input into the RGC and policy developments by the UGC.

\textsuperscript{207} It is important to note that the funding for a number of the collaborative schemes such as the AoE Scheme and TRS, is provided from government through a separate stream to the endowment, and therefore the RGC are restricted in the movement of funds between some schemes.

\textsuperscript{208} Starting from 2016/2017 the four theme sunder the TRS are: (Theme 1) Promoting Good Health; (Theme 2) Developing a Sustainable Environment; (Theme 3) Enhancing Hong Kong’s Strategic Position as a Regional and International Business Centre; and (Theme 4) Advancing Emerging Research and Innovations Important to Hong Kong.
The RGC runs town meetings, which are open to all, and has also hosted meetings at universities where panel members describe processes. Panel members described town meetings as being well attended, but felt that given the misinformation in the system more town meetings, and other engagement activities, may be useful to improve transparency. A couple of researchers who had attended meetings with panels noted that they felt the meetings did not give them the level of detail they would like, another commented that while the RGC does appear to be trying, much more could be done to ensure the research community understands the process.

Researchers from the self-financing sector in particular felt that communication could be improved. As the process is still relatively new in these institutions, and there is not a lot of expertise on how to write successful applications in these institutions, researchers felt that there was not enough information, and that communication could have been improved to allow people to really understand what is being looked for.

Researchers and panel members (both local and international) felt that there was a lack of clarity on the strategy/areas of focus of the RGC. There was limited understanding of the structure of RGC funding and the ability of RGC itself to move money around between funds. Some late career researchers also felt that they had a lack of clarity on who was responsible for the strategy of the RGC.

In the HKPFS, administrators would value increased support from and contact with the RGC. Currently when there is a decision about the use of funding to support particular activities the administrators are not in a position to make a decision on whether this is allowed and contact the RGC to confirm. This takes time and causes delays. Students felt it would be valuable to have greater interaction with others on the scheme, within their institution and more broadly. Therefore several participants suggested that they would benefit from an alumni gathering supported by the RGC or a student conference.

C.3. Caveats and limitations

While the focus groups allowed us to explore a wide range of opinions about the RGC and really understand the issues raised in the surveys, there are disadvantages of this data collection approach.

The purpose of the focus groups was to explore areas of improvement determined from the survey data, i.e. where there was least satisfaction in the current processes. There was therefore less time spent discussing elements that worked well. In addition, as we used a semi structured protocol not all questions were addressed within each focus group, or with each focus group attendant.

The results are necessarily based on perceptions and opinions of focus group attendants, and a range of views was expressed by each focus group. Contradictory points could be raised within a discipline as disciplines were covered through multiple focus groups. Therefore statements are not necessarily representative of a ‘discipline’ view, rather individuals within a discipline. To this end we have not quantified the analysis and it is difficult to indicate the weight of evidence about any one point in particular.

\[209\] The same can be said for career stages.
The focus groups were split across the team and therefore different interview styles were used. In order to minimise the effects of this variation, the pairs were mixed up to ensure that junior researchers worked with all senior researchers and vice versa. The interviews were written up as a summary of the discussions rather than a verbatim transcript of the conversation and this is one point at which information could have been lost; others are the coding and analysis stages. There were three researchers coding the notes and therefore variations in coding style were visible. We aimed to mitigate the effect of this on the analysis with regular meetings to discuss queries and provide an agreed standard of coding practice.
Annex D  Protocols

D.1. Survey soliciting UGC-institution researcher views on the Research Grants Council

This survey is one element of a review of the Hong Kong Research Grants Council (RGC). The main purpose of the review is to ensure funding is used and managed efficiently, and meets the needs of Hong Kong in the field of academic research. In the review we are considering the following broad questions:

Do the current funding schemes:
a) Fit the needs of researchers in Hong Kong?
b) Fit the needs of the wider research community in Hong Kong?
c) Complement other available funding opportunities in Hong Kong?

Is the current RGC structure efficient and effective at:
a) Formulating initiatives that reflect the needs of the research community?
b) Assessing research proposals?
c) Handling disciplinary cases?

What improvements could be made to the current funding schemes and current RGC structure?

If you have any further comments or questions, please email rgc_review@rand.org

Your background

1. Please indicate your academic disciplinary area
   a. Business studies
   b. Biology and medicine
   c. Social sciences and humanities
   d. Engineering sciences
   e. Physical sciences

2. Please indicate the number of years you have worked at a UGC-funded institution in Hong Kong
   a. 0-4
b. 5-9
   c. 10-14
   d. 15-19
   e. 20-24
   f. 25-29
   g. More than 30

3. Please indicate your university
   a. CityU
   b. HKBU
   c. LU
   d. CUHK
   e. EdUHK
   f. PolyU
   g. HKUST
   h. HKU

4. Please indicate your position
   a. Chair Professor/Professor
   b. Associate Professor
   c. Assistant Professor
   d. Senior Lecturer
   e. Lecturer
   f. Assistant Lecturer
   g. Other, please specify

5. Do you have tenure?
   a. Yes
   b. No

6. Please indicate your gender
   a. Male
   b. Female
   c. Other
   d. Prefer not to say

7. Please indicate your age
   a. 20-29
   b. 30-39
   c. 40-49
   d. 50-59
   e. >60
   f. Prefer not to say
RGC funding

8. Please indicate, for each scheme, the total number of RGC awards you:
   a. have ever applied for as PC/PI
   b. have ever held as PC/PI
   c. currently hold as PI

   *For each scheme there will be a bar (or drop down list?), initially set to 0, which will allow individuals to choose from: 0, 1, 2, 3, 4, more than 4*

<table>
<thead>
<tr>
<th>Scheme</th>
<th>Total number of awards ever applied for</th>
<th>Total number of awards ever held</th>
<th>Total number of awards held currently</th>
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</thead>
<tbody>
<tr>
<td>General Research Fund</td>
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<td>Early Career Scheme</td>
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<td>Humanities and social sciences prestigious</td>
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<tr>
<td>fellowship scheme</td>
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<tr>
<td>Collaborative research fund</td>
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<tr>
<td>Theme research scheme</td>
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<tr>
<td>Areas of Excellence scheme</td>
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<tr>
<td>Joint Research Scheme (of any type)</td>
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</tbody>
</table>

9. Have you ever applied for an RGC funding scheme for the self-financing sector?
   a. Yes
   b. No

10. If yes in Question 9, please indicate, for each scheme, the total number of RGC awards you:
    a. have ever applied for as PC/PI
    b. have ever held as PC/PI
    c. currently hold as PI

    *For each scheme there will be a bar (or drop down list?), initially set to 0, which will allow individuals to choose from: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, or more than 10*

<table>
<thead>
<tr>
<th>Scheme</th>
<th>Total number of awards ever applied for</th>
<th>Total number of awards ever held</th>
<th>Total number of awards held currently</th>
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<tr>
<td>Faculty Development Scheme</td>
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</table>
Inter-institutional Development Scheme

Institutional Development Scheme

11. Do you currently hold any grant funding from sources other than the RGC?*
   a. Yes
   b. No

12. If yes, please indicate, the sources (free text box)

Current Funding Schemes

13. Please state the extent to which you agree with the following sentences about the current funding schemes (excluding the HKPFS)

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>They offer the right balance of awards between new investigators and experienced investigators</td>
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<tr>
<td>They offer the right balance of awards across disciplines</td>
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<tr>
<td>They integrate research and education appropriately</td>
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<td>They represent the right balance of basic and applied research</td>
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<tr>
<td>They represent the right balance of research topics of local relevance and international significance</td>
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<td>They are the right monetary value for the scope of the projects</td>
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<tr>
<td>They are the right duration for the scope of the projects</td>
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<tr>
<td>They are inclusive and do not discriminate based on ethnicity, nationality or gender</td>
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<tr>
<td>They reflect the needs of the research community</td>
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</table>
14. Assuming total funding is relatively fixed, do you think that RGC should:
   a. award fewer but individually larger grants
   b. maintain the current distribution based on smaller levels of award

15. Please state the extent to which you agree with the following sentences about the three group funding schemes: the Collaborative Research Fund, the Theme Research Fund and the Areas of Excellence scheme.
   They promote collaboration among researchers:

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Don’t know</th>
</tr>
</thead>
</table>
   **Within institutions**
   **Between institutions**
   **Between disciplines**
   **Within Hong Kong**
   **Internationally**

16. There are many criteria which are used in the assessment of research proposals. The list below provides a range of criteria which are drawn from research funding councils worldwide. Please indicate up to 5 criteria you feel should be used in the assessment of grants
   Select at least 1 and no more than 5.
   a. Academic merit
   b. Benefit to society
   c. Commercial translation
   d. Inter-disciplinarity
   e. Originality
   f. Local relevance of project
   g. Extent to which there is integration of research, training and teaching in the grant
   h. Strength of collaborators
   i. Track record/merit of PI
   j. Personal skills of PI such as communication and leadership skills
   k. Feasibility in implementation
   l. Value for money
   m. Stakeholder involvement
   n. Other

17. Please indicate up to three types of research support provided by the RGC you feel are most important Select at least 1 and no more than 3.
a. Research support staff and technical staff
b. Equipment
c. Outsourcing of research work outside Hong Kong
d. Travel and subsistence
e. Relief teachers
f. Relief administrators
g. Consumables related to research work
h. Survey expenses
i. Conference expenses
j. Research related software licence/dataset
k. Research experience for undergraduate students
l. Other

18. Please list any types of research support not currently provided by the RGC that you feel would be useful?
   Free text entry

The Hong Kong PhD Fellowship Scheme

19. Have you had a student on the HKPFS, or otherwise been involved in it (e.g. as a student)?
   If yes then routing will show the following question

20. Please state the level at which you agree with the following statements about the Hong Kong PhD Fellowship Scheme.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>It attracts the best and brightest students in the world to pursue their PhD study in Hong Kong.</td>
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<tr>
<td>It enhances cultural diversity and internationalisation of the sector.</td>
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<tr>
<td>It has the correct mix of local and non-local students.</td>
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</tr>
<tr>
<td>It is inclusive and does not discriminate based on ethnicity, nationality or gender.</td>
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<tr>
<td>It has the right balance of disciplines.</td>
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<tr>
<td>Its value and types of support (i.e. HK$240,000 as stipend and HK $10,000 as conference and research-</td>
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</tbody>
</table>
related travel allowance per annum) are appropriate.

It has appropriate terms and conditions.

### The RGC

21. Please state the level at which you agree with the following statements about the RGC

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Don’t know</th>
</tr>
</thead>
</table>

- Its priorities match the needs of Hong Kong
- It engages with an appropriate spectrum of researchers when it sets its priorities
- It uses appropriate methods for engaging with researchers in the setting of priorities

22. Please state the level at which you agree with the following statements about the RGC application and review process

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Don’t know</th>
</tr>
</thead>
</table>

- It is fair
- It is reliable
- It is transparent
- It is efficient
- It is effective

23. Please state the level at which you agree with the following statements about the Disciplinary Committees of the RGC.

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Don’t know</th>
</tr>
</thead>
</table>

- They are effective at reviewing appeals
- They are effective at handling research improprieties
- The current procedures for investigation of
24. How often do you utilise the following resources of the RGC for getting information and updates on the RGC activities?

<table>
<thead>
<tr>
<th>Once a year or less</th>
<th>Every six months</th>
<th>Every three months</th>
<th>Never</th>
<th>Don’t know</th>
</tr>
</thead>
</table>

RGC Annual Report
RGC Website
RGC YouTube Channel

25. Based on any experience you may have had of other national systems for supporting research, what would you recommend to RGC from these systems and why??
[Open text limited to 200 words]

26. Has RGC funding enabled you to develop your work and career beyond the life-time of an individual grant or project? In what ways?[Open text limited to 200 words]

27. Is there anything else not covered here that you think we should consider in this study?
[Open text limited to 200 words]

Thank you for taking the survey!

Please note that as part of the review of the RGC, we are also running an online consultation. If you feel that there are important points that you have not been able to make here, then please feel free to also take part in the online consultation which you can access here [https://smapp2.rand.org/surv4/TakeSurvey.aspx?PageNumber=1&SurveyID=92KL6772&Preview=true#](https://smapp2.rand.org/surv4/TakeSurvey.aspx?PageNumber=1&SurveyID=92KL6772&Preview=true#) from the 20th of October for 1 month.

If you have any further comments or questions, please email rgc_review@rand.org
D.2. Survey soliciting self-financing institution researcher views on the Research Grants Council

This survey is one element of a review of the Hong Kong Research Grants Council (RGC). The main purpose of the review is to ensure funding is used and managed efficiently, and meets the needs of Hong Kong in the field of academic research. In the review we are considering the following broad questions:

Do the current funding schemes:
- a) Fit the needs of researchers in Hong Kong?
- b) Fit the needs of the wider research community in Hong Kong?
- c) Complement other available funding opportunities in Hong Kong?

Is the current RGC structure efficient and effective at:
- a) Formulating initiatives that reflect the needs of the research community?
- b) Assessing research proposals?
- c) Handling disciplinary cases?

What improvements could be made to the current funding schemes and current RGC structure?

If you have any further comments or questions, please email rgc_review@rand.org

Your background

1. Please indicate your academic discipline area
   If needed, multiple academic disciplinary areas can be selected
   - a. Business studies
   - b. Biology and medicine
   - c. Social sciences and humanities
   - d. Engineering sciences
   - e. Physical sciences

2. Please indicate the number of years you have worked at a self-financing institution in Hong Kong
   - 0-4
   - 5-9
   - 10-14
   - 15-19
   - 20-24
   - 25-29
   - More than 30

3. Please indicate your institution
   - a. Caritas Institute of Higher Education
   - b. Centennial College
c. Chu Hai College of Higher Education  
d. Gratia Christian College  
e. Hang Seng Management College  
f. HKCT Institute of Higher Education  
g. Hong Kong Nang Yan College of Higher Education  
h. Hong Kong Shue Yan University  
i. School of Continuing Education, Hong Kong Baptist University  
j. School of Professional Education and Executive Development, The Hong Kong Polytechnic University  
k. Technological and Higher Education Institute of Hong Kong  
l. The Open University of Hong Kong  
m. Tung Wah College  

4. Please indicate your position  
   a. Chair Professor/Professor  
   b. Associate Professor  
   c. Senior Lecturer  
   d. Lecturer  
   e. Assistant Lecturer  
   f. Other, please specify  

5. Do you have tenure?  
   a. Yes  
   b. No  

6. Please indicate your gender  
   a. Male  
   b. Female  
   c. Other  
   d. Prefer not to say  

7. Please indicate your age  
   a. 20-29  
   b. 30-39  
   c. 40-49  
   d. 50-59  
   e. >60  
   f. Prefer not to say  

RGC funding  

8. Please indicate, for each scheme, the total number of RGC awards you:  
   a) have ever applied for as PC/PI or co-PI
b) have ever held as PC/PI or co-PI  
c) currently hold as PI or co-PI  

For each scheme there will be a bar (or drop down list?), initially set to 0, which will allow individuals to choose from: 0, 1, 2, 3, 4, more than 4

<table>
<thead>
<tr>
<th>Scheme</th>
<th>Total number of awards ever applied for</th>
<th>Total number of awards ever held</th>
<th>Total number of awards held currently</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty Development Scheme</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Institutional development Scheme</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inter-institutional Development Scheme</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9. Have you ever applied for an RGC funding scheme for the UGC sector?  
   a. Yes  
   b. No

10. If yes in Question 9, please indicate, for each scheme, the total number of RGC awards you:  
    a) have ever applied for as PC/PI or co-PI  
    b) have ever held as PC/PI  
    c) currently hold as PI  
    For each scheme there will be a bar (or drop down list?), initially set to 0, which will allow individuals to choose from: 0, 1, 2, 3, 4, more than 4

<table>
<thead>
<tr>
<th>Scheme</th>
<th>Total number of awards ever applied for</th>
<th>Total number of awards ever held</th>
<th>Total number of awards held currently</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Research Fund</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Early Career Scheme</td>
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<tr>
<td>Humanities and social sciences prestigious fellowship scheme</td>
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<tr>
<td>Collaborative research fund</td>
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<tr>
<td>Theme research scheme</td>
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<td></td>
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<tr>
<td>Areas of Excellence</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Hong Kong PhD Fellowship Scheme</td>
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<td></td>
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</tr>
</tbody>
</table>
11. Do you currently hold any grant funding from sources other than the RGC?  
   *Yes/no*

12. If yes, please indicate, the sources (free text box)

Current Funding Schemes

13. Please state the extent to which you agree with the following sentences about the current funding schemes for the self-financing sector

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>They offer the right balance of awards to new investigators and experienced investigators</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>They offer the right balance of awards across disciplines</td>
<td></td>
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<td></td>
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<tr>
<td>They integrate research and education appropriately</td>
<td></td>
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<tr>
<td>They represent the right balance of basic and applied research</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>They represent the right balance of research topics of local relevance and international significance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>They are the right monetary value for the scope of the projects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>They are the right duration for the scope of the projects</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>They are inclusive and do not discriminate based on ethnicity, nationality or gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>They reflect the needs of the research community</td>
<td></td>
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</tr>
</tbody>
</table>

14. Assuming total funding is relatively fixed, do you think that RGC should  
   a. award fewer but individually larger grants  
   b. maintain the current distribution based on smaller levels of award?
15. There are many criteria which are used in the assessment of research proposals. The list below provides a range of criteria which are drawn from research funding councils worldwide. Please indicate up to 5 criteria you feel should be used in the assessment of grants.

Select at least 1 and no more than 5

- Academic merit
- Benefit to society
- Commercial translation
- Inter-disciplinarity
- Originality
- Local relevance of project
- Extent to which there is integration of research, training and teaching in the grant
- Strength of collaborators
- Track record/merit of PI
- Personal skills of PI such as communication and leadership skills
- Feasibility in implementation
- Value for money
- Stakeholder involvement
- Other

16. Please indicate up to three types of research support provided by the RGC you feel are most important. Select at least 1 and no more than 3

- Research support staff and technical staff
- Equipment
- Outsourcing of research work outside Hong Kong
- Travel and subsistence
- Relief teachers
- Relief administrators
- Consumables related to research work
- Survey expenses
- Conference expenses
- Research related software licence/dataset
- Research experience for undergraduate students
- Other

17. Please list any types of research support not currently provided by the RGC that you feel would be useful?

Free text entry

---

18. Please state the level at which you agree with the following statements about the RGC:

<table>
<thead>
<tr>
<th>Strongly</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly</th>
<th>Don’t</th>
</tr>
</thead>
</table>

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157
19. Please state the level at which you agree with the following statements about the RGC application and review process

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Its priorities match the needs of Hong Kong</td>
<td></td>
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</tr>
<tr>
<td>It engages with an appropriate spectrum of researchers when it sets its priorities</td>
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</tr>
<tr>
<td>It uses appropriate methods for engaging with researchers in the setting of priorities</td>
<td></td>
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</tr>
</tbody>
</table>

20. Please state the level at which you agree with the following statements about the Disciplinary Committees of the RGC.

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>They are effective at reviewing appeals</td>
<td></td>
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<tr>
<td>They are effective at handling research improprieties</td>
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<tr>
<td>The current procedures for investigation of alleged misconduct/appeal are fair</td>
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</tbody>
</table>

21. Based on any experience you may have had of other national systems for supporting research, what would you recommend to RGC from these systems and why? [Open text limited to 200 words]

22. Has RGC funding enabled you to develop your work and career beyond the life-time of an individual grant or project? In what ways? [Open text limited to 200 words]
23. Is there anything else not covered here that you think we should consider in this study? [Open text limited to 200 words]

Thank you for taking the survey!

Please note that as part of the review of the RGC, we are also running an online consultation. If you feel that there are important points that you have not been able to make here, then please feel free to also take part in the online consultation which you can access here https://smapp2.rand.org/surv4/TakeSurvey.aspx?PageNumber=1&SurveyID=92KL6772&Preview=true# from the 20th of October for 1 month.

If you have any further comments or questions, please email rgc_review@rand.org
D.3. Survey soliciting RGC members and RGC committee and panel members views on the Research Grants Council

This survey is one element of a review of the Hong Kong Research Grants Council (RGC). The main purpose of the review is to ensure funding is used and managed efficiently, and meets the needs of Hong Kong in the field of academic research. In the review we are considering the following broad questions:

Do the current funding schemes:

a) Fit the needs of researchers in Hong Kong?
b) Fit the needs of the wider research community in Hong Kong?
c) Complement other available funding opportunities in Hong Kong?

Is the current RGC structure efficient and effective at:

a) Formulating initiatives that reflect the needs of the research community?
b) Assessing research proposals?
c) Handling disciplinary cases?

What improvements could be made to the current funding schemes and current RGC structure?

If you have any further comments or questions, please email rgc_review@rand.org

Your background

1. Please indicate which Council / Committee / Panel you have been a member of
   a. Research Grants Council
   b. Collaborative Research Fund Committee
   c. Biology & Medicine Panel (Individual Research)
   d. Biology & Medicine Panel (Joint Research Schemes)
   e. Business Studies Panel (Individual Research)
   f. Business Studies Panel (Joint Research Schemes)
   g. Engineering Panel (Individual Research)
   h. Engineering Panel (Joint Research Schemes)
   i. Humanities and Social Science Panel (Individual Research)
   j. Humanities and Social Sciences Panel (Joint Research Scheme)
   k. Physical Sciences Panel (Individual Research)
   l. Physical Sciences Panel (Joint Research Schemes)
   m. HKPFS Steering Committee
   n. H Panel of the HKPFS
   o. S Panel of the HKPFS
   p. Major Projects Steering Committee
q. TRS Selection Panel
r. AoE Selection Panel
s. Steering Committee on Competitive Research Funding for the Self-financing Degree Sector
t. Assessment Panel for Competitive Research Funding Schemes for the Local Self-financing Degree Sector
u. Disciplinary Committee (Investigation)
v. Disciplinary Committee (Penalty)
w. Humanities, Social Sciences and Business Studies Selection Panel
x. Selection Committee for the National Natural Science Foundation of China/Research Grants Council
y. Selection Committee for the State Natural Science Award
z. Disciplinary Committee

2. Are you currently a Council/Committee/Panel member?
   a. Yes
   b. No

3. How many years have you been or were you a Council /Committee /Panel member for?
   a. 1
   b. 2
   c. 3
   d. 4
   e. 5
   f. 6
   g. 7
   h. 8
   i. 9
   j. 10
   k. 11
   l. 12
   m. 13
   n. 14
   o. 15
   p. 16
   q. 17
   r. 18
   s. 19
   t. 20
   u. More than 20

4. Please indicate your academic disciplinary area (can select multiple)
a. Business studies
b. Biology and medicine
c. Social sciences and humanities
d. Engineering sciences
e. Physical sciences
f. Lay member

5. Please indicate your position
   Text entry

6. Please indicate your gender
   a. Male
   b. Female
   c. Other
   d. Prefer not to say

7. Please indicate your age
   a. 20-29
   b. 30-39
   c. 40-49
   d. 50-59
   e. >60
   f. Prefer not to say

Current Funding Schemes

8. Please state the extent to which you agree with the following sentences about the current funding schemes (excluding the HKPFS)

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>They offer the right balance of awards to new investigators and experienced investigators</td>
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<td>They offer the right balance of awards across disciplines</td>
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<td>They integrate research and education appropriately</td>
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<tr>
<td>They represent the right balance of basic and applied research</td>
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</tr>
</tbody>
</table>

163
They represent the right balance of research topics of local relevance and international significance

They are the right monetary value for the scope of the projects

They are the right duration for the scope of the projects

They are inclusive and do not discriminate based on ethnicity, nationality or gender

They reflect the needs of the research community

9. Please state the extent to which you agree with the following sentences about the three group funding schemes: the Collaborative Research Fund, the Theme Research Fund and the Areas of Excellence scheme

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Within institutions</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between institutions</td>
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<td></td>
<td></td>
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<tr>
<td>Between disciplines</td>
<td></td>
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<tr>
<td>Within Hong Kong</td>
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<tr>
<td>Internationally</td>
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</tbody>
</table>

10. There are many criteria which are used in the assessment of research proposals. The list below provides a range of criteria which are drawn from research funding councils worldwide. Please indicate up to 5 criteria you feel should be used in the assessment of grants

Select at least 1 and no more than 5

a. Academic merit
b. Benefit to society
c. Commercial translation
d. Inter-disciplinarity
e. Originality
f. Local relevance of project
g. Extent to which there is integration of research, training and teaching in the grant
h. Strength of collaborators
i. Track record/merit of PI
j. Personal skills of PI such as communication and leadership skills
k. Level of institutional support
l. Feasibility in implementation
m. Value for money
n. Stakeholder involvement
o. Other

11. Please indicate up to three types of research support provided by the RGC you feel are most important. Select at least 1 and no more than 3
   a. Research support staff and technical staff
   b. Equipment
   c. Outsourcing of research work outside Hong Kong
   d. Travel and subsistence
   e. Relief teachers
   f. Relief administrators
   g. High-performance computing services
   h. Consumables related to research work
   i. Survey expenses
   j. Conference expenses
   k. Research related software licence/dataset
   l. Research experience for undergraduate students
   m. Other

12. Please list any types of research support not currently provided by the RGC that you feel would be useful? 
   Free text entry

The RGC

13. Please state the level at which you agree with the following statements about the RGC

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>It engages with an appropriate spectrum of researchers when it sets its priorities</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>It uses appropriate methods for engaging with researchers in the setting of priorities</td>
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</tr>
<tr>
<td>It should continue to delegate proposal assessment to Committees/Panels?</td>
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</tr>
</tbody>
</table>

14. Please state the level at which you agree with the following statements about the RGC grant application and review process.
15. Please state the level at which you agree with the following statements about the Disciplinary Committees of the RGC.

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>It is fair</td>
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<td></td>
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<tr>
<td>It is reliable</td>
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<td>It is transparent</td>
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<tr>
<td>It is efficient</td>
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<tr>
<td>It is effective</td>
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<td></td>
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<tr>
<td>The current measures guarding against conflict of interest are appropriate</td>
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</tr>
</tbody>
</table>

16. How often do you utilise the following resources of the RGC for getting information and updates on the RGC activities?

<table>
<thead>
<tr>
<th>Once a year or less</th>
<th>Every six months</th>
<th>Every three months</th>
<th>Never</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>RGC Annual Report</td>
<td>RGC Website</td>
<td>RGC YouTube Channel</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

17. Based on any experience you may have had of other national systems for supporting research, what would you recommend to RGC from these systems and why?
Free text response

18. Is there anything else not covered here that you think we should consider in this study?
   Free text response

Thank you for taking the survey!

Please note that as part of the review of the RGC, we are also running an online consultation. If you feel that there are important points that you have not been able to make here, then please feel free to also take part in the online consultation which you can access here [link](https://smapp2.rand.org/surv4/TakeSurvey.aspx?PageNumber=1&SurveyID=92KL6772&Preview=true) from the 20th of October for 1 month.

If you have any further comments or questions, please email [rgc_review@rand.org](mailto:rgc_review@rand.org)
D.4. **Online consultation protocol**

Thank you for your interest in the consultation. The UGC have launched a review of the RGC, to ensure funding is used and managed efficiently and meets the needs of Hong Kong in the field of academic research. In the review we are considering the following broad questions:

Do the current funding schemes:

a) Fit the needs of researchers in Hong Kong?

b) Fit the needs of the wider research community in Hong Kong?

c) Complement other available funding opportunities in Hong Kong?

Is the current RGC structure efficient and effective at:

a) Formulating initiatives that reflect the needs of the research community?

b) Assessing research proposals?

c) Handling disciplinary cases?

What improvements could be made to the current funding schemes and current RGC structure?

In view of this, please could you answer the following questions (all questions are optional):

1. Email address
2. Name
3. Organisation
4. Position
5. What does the RGC do well and what should it continue to do?
6. What problems are there with the RGC funding schemes and RGC structure and what should the RGC stop doing?
7. What could the RGC start doing to improve its performance

D.5. **Focus Group Protocol**

**Funding Schemes**

1. Do the current funding schemes in your opinion meet your needs/the needs of researchers in Hong Kong [depending if an award holder or HEI manager] and why?

2. In particular what are your views on:
   - Balance of awards across disciplines
   - Balance of research topics of local relevance and international significance
   - Balance of awards across basic and applied research

   If these are an issue, how do you think they could be resolved?
3. A number of the RGC’s current schemes aim to promote collaboration. What is your view on collaboration:
   - Between disciplines
   - At an international level
   What could be done to promote greater collaboration in these areas?

4. What specific research support is most important to researchers in your field and why?

5. In your experience how does the RGC engage researchers in priority setting across its portfolio?
   - What are the mechanisms of engagement?
   - What is the spectrum of researchers that are engaged?

6. Thinking beyond academic excellence and impact to the wider societal benefits of research to Hong Kong and abroad, do you think the current funding reflects the needs of research users? What mechanism do they use to engage with research users?

Submission and assessment process

7. How well do you think the submission process for RGC grants works? How could that be improved/avoided?

8. How well do you think the assessment process for RGC grants works? How could that be improved/avoided?

9. How well do you think the appeals process for RGC grants works? How could that be improved/avoided?

10. How well do you think the RGC does on the following criteria and why?
   - Transparency;
   - Reliability;
   - Fairness;
   - Efficiency; and
   - Effectiveness
   Do you have any thoughts on how these could be improved?

Optional extra question for all groups except HKPFS and SF

11. As well as schemes for researchers, the RGC also administers the Hong Kong PhD Fellowship scheme. Do you have any views on the process around assessment and award of PhD fellowships?

Concluding questions

12. In your opinion what is the most important thing that the RGC could do differently?
13. Is there anything else you wanted to say or add which we have not covered?

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