



Swedish–Chinese Research Collaborations: Experiences from the Joint China– Sweden Mobility Programme



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Preface

The mission of STINT, the Swedish Foundation for International Cooperation in Research and Higher Education, is to internationalise Swedish higher education and research. STINT promotes knowledge and competence development within internationalisation and invests in internationalisation projects proposed by researchers, educators, and leaderships at Swedish universities.

China is nowadays one of the world's leading science nations. As an advanced science nation, it is important for Sweden to understand as well as interact and collaborate with the Chinese research and higher education system. STINT established a bilateral mobility programme with the National Natural Science Foundation of China (NSFC) in 2015. In 2021, it was ended and replaced by a call for applications within STINT's regular programme portfolio, though with continued collaboration with NSFC. In order to provide knowledge and analysis, STINT has a representative in China since 2018, who also covers other Asian countries.

As part of our work relating to China, we publish a series of reports highlighting pertinent issues in Chinese academia. This report aims to provide an understanding of Swedish – Chinese collaborations by summarising insights from a study of research projects funded by STINT – NSFC through the Joint China – Sweden Mobility (JCSM) programme. This broad study was conducted over a two-year period using an approach combining document analysis with in-depth interviews, focus groups and bibliometric analysis. Given the depth and breadth of the study, together with the fact that the JCSM programme is by far the largest bilateral funding programme between Sweden and China in terms of the number of projects, the findings provide a useful snapshot of the state of scientific collaborations between Sweden and in China in the fields funded by the JCSM programme, i.e., the Engineering Sciences, Natural Sciences, Medicine, and Management Sciences.

We would like to thank the researchers, university administrators and funding managers that participated in the interviews.

Dr Tommy Shih, researcher, Örebro University, and Dr Erik Forsberg, Representative in China and APAC, STINT, conducted the study and authored this report.

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Stockholm, Sweden, December 2021

1. Introduction

China has seen unprecedented economic growth in the last 40 years. Along with this development, the Chinese government has also aimed to develop China's scientific prowess. Continued increases in the amount of spending on research and development (R&D) as a percentage of the gross domestic product (GDP), coupled with rapid GDP growth, have led to a dramatic increase in research spending in China, which in turn has enabled China to evolve into one of the world's leading science nations. As of 2019, China's R&D spending accounted for 2.2% of the country's GDP,¹ representing more than 25% of total global research spending.² The growth rate of China's R&D investment remains significantly higher than that of either the United States or the European Union.³ In nominal terms, Chinese R&D investments are second in size to those of the United States and exceed those of the European Union.⁴ China's recently adopted 14th five-year plan aims for a 7% overall increase in R&D spending annually.

These large investments have had a considerable impact. China has more students at the tertiary level and researchers in the fields of science, technology, engineering, and mathematics than any other country. Since 2019, China has also been the largest producer of scientific publications in the world,⁵ which it will likely remain in the foreseeable future. Moreover, the quality of output has improved. The country's Field Weighted Citation Impact (FWCI) was 1.03 in 2019, which means that Chinese scientific production was overall cited slightly more frequently than the world average.⁶ With regards to the number of publications ranked among the top 10% of the most frequently cited, Chinese research has improved drastically in the last decade and has overtaken the European Union.⁷

The government's strong focus on the hard sciences has been part of this development. Research in China focuses strongly on the natural, engineering, and medical sciences, with the social sciences, arts and humanities comprising significantly smaller proportions of the total research output than in Western nations. Research in the social sciences and humanities is more strictly controlled in China, compared to the hard sciences. In parallel with the growth of R&D, China has moreover seen a rapid growth in the number of outbound students and international scientific collaborations, both of which have been important factors in China's scientific development. China is additionally not only the largest source of outbound international students in the world, but also the third largest receiver of inbound in-

¹ https://stats.oecd.org/Index.aspx?DataSetCode=MSTI_PUB

² <https://sgp.fas.org/crs/misc/R44283.pdf>

³ https://knowledge4policy.ec.europa.eu/foresight/topic/expanding-influence-east-south/industry-science-innovation_en

⁴ <https://s.fas.org/crs/misc/R44283.pdf>

⁵ <https://data.worldbank.org/indicator/IP.JRN.ARTC.SC?locations=CN-US>

⁶ SciVal® database, Elsevier B.V., <http://www.scival.com> downloaded on 2021-04-15

⁷ <https://asistdl.onlinelibrary.wiley.com/doi/10.1002/asi.23333>

ternational students, according to data from the Institute of International Education's Project Atlas.⁸ While the inbound students mainly come from other Asian countries and Africa, the outbound mainly have Anglo-Saxon and European study destinations.

China's scientific development during the past four decades has been exceptional and can be expected to continue to develop strongly given continued strong growth in R&D spending. However, the reversal to stricter authoritarian governance of China has in recent years started to raise concerns abroad. Swedish actors have, for example, concerns about the prospects of academic freedom and the impact this will have on academic collaborations with Chinese actors. Even so, due to China's scientific strengths, researchers, and higher education institutions (HEIs) in Sweden are interested in collaborating with research institutions in China. Indeed, outside of the European Union and the United States, China is today the largest research partner of Swedish HEIs based on co-publications. However, due to the increasingly complex contemporary research landscape, universities are seeking more information to better understand the underlying premises for collaboration, including on the patterns of collaboration and the opportunities as well as challenges involved.

In this context, this report, which summarises experiences from the Joint China–Sweden Mobility (JCSM) programme, offers insights into Sino–Swedish collaborative patterns, including their motivations, opportunities, and challenges.

2. About the programme and the data

The JCSM programme, which is a bilateral mobility programme managed by STINT and the National Natural Science Foundation of China (NSFC), is divided into four areas, based on NSFC's division of main funding fields: Engineering Sciences, Natural Sciences, Medicine, and Management Sciences. Since 2015 and until 2020,⁹ 165 projects have been funded. The programme is structured so that the Swedish partner can apply for SEK 600,000 (roughly EUR 60,000) from STINT, to be used for mobility actions over a period of three years, and NSFC funds the Chinese partner to an equivalent amount. On the Swedish side the programme has been co-funded by the Swedish Research Council since 2018. The programme is open to researchers employed at Swedish universities and Chinese universities or research institutes, irrespective of their nationality. The JCSM programme provides mobility grants to facilitate interaction between groups. Grants cannot be used for equipment, consumables, or salaries.¹⁰ Funds are thus predominately used for researcher exchanges at both junior and senior levels as well as for arranging workshops and conferences.

Data were collected using multiple methods, combining document analysis with in-depth interviews, focus groups and bibliometric analysis, over a period of two years (2018–2020). The document analysis was performed using the grant applications.

Interviews were conducted with a diverse set of stakeholders on both the Swedish and Chinese sides, including researchers, university presidents, deans, and administrative staff, as well as directors and programme managers at the funding agencies. The interviews have been important in understanding how Swedish universities have forged collaborative linkages with Chinese universities. Researchers on both sides have been asked about how research collaboration is influenced by for example differences in scientific research cultures, incentive systems, cultural idiosyncrasies, or institutional conditions. In total, over 100 interviews were conducted with 40 researchers, eight university leaders, six administrative staff members, and seven others.

Focus and reference group discussions as well as workshops focusing on aspects of Sino–Swedish research collaborations have been organised during the study. Focus group discussions were arranged to co-create and gain input on documents. Focus group discussions were conducted with four different groups (at least one occasion with each group). The focus groups consisted of individuals representing

⁹ 25 projects were funded each year in 2015–2017 and 30 projects each year in 2018–2020.

¹⁰ Except for PhD students and postdocs for shorter periods of up to a few weeks.

researchers, university leaders, funding agencies and policy organisations in both Sweden and China.

The JCSM programme has also been studied using bibliometric data. Between 2015 and 2019, approximately 1,000 grant applications have been submitted to the programme, of which 135 projects have been funded. The applications and projects granted funding in the period 2015–2019 were used as the data set for the bibliometric analysis, which provides an understanding of the publication patterns in the projects, and to obtain information about individual scientists.

3. Experiences from the programme

3.1 Origins of the collaborations

The researchers initiated collaborations in various ways. Some of the most common ways described were “*we had met at a conference*”, “*we had previously been colleagues in the same laboratory*” (for example as postdocs), “*through referrals from colleagues*”, or the researcher on the Swedish side is from China and “*the partnership originates from my network ‘back home’*”. A few partnerships originated from internet searches and emails suggesting collaboration. Data on co-publications showed that in 26% of the funded projects, the researchers had previously published together. The most common prior relationship pattern was that the researcher on the Chinese side had previously worked at the Swedish partner’s institution.

Roughly one third of the JCSM projects involved a Swedish partner who was originally from China. In some cases, in this category, the project was in practice an extension of what can be characterised as an existing cross-border research group. For example, the Swedish PI in one of the project groups interviewed had already been a guest professor at the Chinese partner university prior to submitting the project application. This Swedish PI was clearly the dominant party of the collaboration, as evident not by how he was referred to by the interviewed Chinese researchers participating in the project, but also in the pattern of mobility exchange, which mainly involved the Swedish PI visiting the Chinese partner. While this may certainly be an effective research collaboration, the funders considered it questionable whether funding such projects represents effective use of the JCSM programme budget, since relationship novelty is considered an important appraisal factor.

3.2 Incentives for collaboration

The reasons for the collaborations were diverse but respondents generally mentioned “*new research opportunities*”, “*additional resources*”, “*training of researchers*”, or “*increased research strength and status*”. The interviewed researchers often cited the opportunity to frame new research questions through the combined skillset and resources of the collaborating groups and to conduct research that would otherwise not be possible separately as a key motivator for collaborations, since it was perceived as enabling more impactful research. An example is collaborative research on butterflies, in which the theories of the researcher on the Swedish side, an international authority in the field, could be verified and refined through

the collaboration. Important factors in this project included the fact that China has a larger and more diverse fauna than Europe and the Chinese research partner was well known for its research and fieldwork in China. In another example, the Chinese partner's internationally leading characterisation technology enabled the Swedish partner to push boundaries on its development of THz graphene detectors. Here the research conducted on the Chinese side was very advanced and complementary to the research on the Swedish side. In several projects, the Chinese research group sought to improve knowledge of basic research, which was the strength of the Swedish group, whereas their Swedish partners were motivated by the opportunity to work on practical applications of their research, which was the strength of the Chinese side. In some projects, the skills and level of research of the collaborating groups were similar and the interest in collaboration primarily lay in pushing knowledge in a certain area where the research groups on both sides had a high level of expertise.

A key motivating factor for collaborations was access to additional resources, including research personnel, data, instruments, and knowledge. Here there were some general differences in motivations between the Swedish and Chinese sides. From the Swedish side, the motivation for collaboration was often related to access to large datasets, for example in a clinical setting. This was for example the case in a study on cancer in which the Chinese partner institution was one of the key cancer hospitals in China. Similarly, the ability to study problems on a larger scale, for instance in projects related to public health, epidemiology, water, and pollution, was also a motivation. One such project tested novel approaches to city drainage on a scale impossible in Sweden given the overall small population sizes in Swedish cities. Access to advanced instrumentation or know-how is also a cited motivator, more often from the Chinese side. The interviews showed that one project appeared to a large extent to be tailored to enable the Chinese partner to access experimental time at a synchrotron source in another European country. Enhanced publication opportunities were moreover important goals for collaboration. Some researchers in Sweden especially noted the faster rate of publishing in China compared to that in Sweden.

Training of PhD students and young faculty was an important aspect in most of the JCSM programme projects, although predominately on the Chinese side. In many cases, the possibility for Chinese PhD students to visit a Swedish lab or research environment was a key motivator for the Chinese partner. Such training could be in the use of advanced equipment, but several PIs on the Chinese side also stressed the greater attention paid to research ethics and methodology

through work with, and at, the Swedish partner institution as a benefit of the joint projects. This observation was confirmed by several PIs on the Swedish side who noted that Chinese PhD students visited Swedish universities more commonly than vice versa. Some Swedish project leaders specifically mentioned the difficulty in getting PhD students from Sweden to undertake longer research stays in China as a disappointment. Many PIs stated that longer stays (3–6 months or more) were preferred. If experimental work were to be conducted, longer stays are often necessary, for example because initial training is needed, and some experimental work can be time consuming.

Moreover, longer stays also enable PhD students and young faculty to become part of the partner lab when conducting their research and thereby further enhance both their skills as scientists and develop their peer network, as was pointed out by one of the Swedish PIs. Both the skills and network acquired were viewed as beneficial, and potentially significant for their future careers. Some Chinese PhD students mentioned that time spent at a Swedish partner institution could be an important steppingstone towards an international career, and a requirement to graduate or easier find a faculty position in China. PIs on the Chinese side viewed a foreign partnership as offering a route to enhanced career opportunities. Some Chinese researchers mentioned that having an international partner and collaboration was a formal requirement to advance their careers, for example for promotion to professor, or to be allowed to apply for certain grants or positions.

For some PIs on the Chinese side who had recently returned to China and were in the process of establishing new research groups, an international partnership offered a connection to the international forefront of their field during the period of establishing their group. One young new faculty member at a university in Zhejiang province, who had recently returned from the UK, explicitly stated this as one of the key motivations for her project in the JCSM programme, although the specific choice of partner was based on scientific complementarity. Another recently returned scientist from Sweden maintained a closed partnership with the Swedish university and although this was not explicitly stated, the JCSM programme project was clearly an important component in his capacity building in China. A related incentive for collaborations for overseas Chinese was that working with Chinese researchers not only presents an opportunity to gain access to resources, ideas, and publications but also a chance to “*go back home*”.

At the group or university level, several of the interviewed university leaders specifically emphasised that some of the collaborative relationships were seen as

strategic partnerships for the present and future with respect to resources, scientific quality, and students. In some cases, the collaboration was also in many ways a learning experience for the Chinese group as a whole. Working with a stronger partner from Sweden exposed the Chinese team to new ideas and provided access to more advanced equipment or methods, thereby enhancing the scientific prowess of the team as whole. This clearly was the case when there was a strength differential between the two groups or when there was a significant focus on the educational aspects of the project beyond student exchange, such as through courses taught by Swedish researchers in China, joint workshops between the groups, as well as involving many group members in the project. Group learning went in both directions; however, according to the PIs' collective descriptions, learning most frequently took place on the Chinese side in the projects studied here.

3.3 Main outputs

Scientific output, which for instance resulted from combining theoretical knowledge with clinical or experimental work, and new ideas stemming from the relationships were direct outcomes. According to the interviewed researchers, collaborative research was generally conducted by PhD students and postdocs who directly spent time in the partner's lab. Joint publications were later products of the collaborations that directly followed from the research. While inter-group and international collaborations per se do not equate to inter- or multi-disciplinary work, this was more often than not the case for the JCSM programme projects. The Swedish programme manager explained this as the result of the various incentives for collaboration discussed in the previous section, which included several motivations related to combining non-intersecting scientific excellence and practical know-how. New ideas generated in the projects thus frequently came through work done at the intersection of different disciplines and would probably not have materialised in the absence of mobility funding, according to several of the researchers interviewed.

New connections and networks, stated as the main objectives of the programme, were other key outputs from the projects. Reportedly, the exchange of students was often perceived as a positive outcome in discussions of the appraisal board meeting of the funders. Long visits in Sweden or China for Chinese or Swedish PhD students generally had long-term benefits for the individuals as well as the institutions. While the partnerships were rooted in research collaborations, they however quite often ended up extending to educational activities too. Moreover, an important outcome was the fact that the scientific results generated, and the

strength of the partnerships developed during project execution, formed the basis for developing new funding applications. A key outcome was thus the development of long-term partnerships. Based on the interviews with the project leaders, it was evident that the key JCSM programme objective of fostering durable new partnerships was met in a clear majority of cases. Interviewed participants in almost all projects studied had made plans to continue the partnership after the end of the JCSM grant period. Some had already secured continued funding; others were in the process of applying, while the rest were looking into their options. In some cases, the partner groups were both generally well-funded and able to continue the collaboration based on existing grants. In these cases, the JCSM grant often acted more as a catalyst to the partnership, although in some cases, as mentioned above, the JCSM grant added little additional value to an existing collaboration. Along this line, the JCSM programme has also functioned as input for the Swedish Research Council to identify potential scientific areas for its bilateral China programme with NSFC.

3.4 Challenges

3.4.1 Reciprocity

The exchange of faculty and PhD students was generally imbalanced. While the visits of senior project members seemed overall to be basically balanced, this was not the case for students and younger faculty. There was generally an inverse proportionality between the seniority of the researcher and the length of their stays as senior researchers typically have many commitments making longer stays difficult to arrange practically. PIs tended to come for shorter visits such as project meetings, workshops, and lectures. Chinese PhD students and young faculty tended to spend extended periods in Sweden, whereas their Swedish counterparts¹¹ generally made fewer visits to China and stayed for shorter periods. The net effect of this was that Chinese PhD students and junior researchers, on average, gained more international experience from the joint projects than their Swedish counterparts did. The programme managers on both sides were concerned about this lack of reciprocity, as bilateral exchange should include the development of social relationships between groups on all levels. However, institutional factors such as incentive systems, cultural aspects, practical matters (e.g., related to family and research group responsibility), and sometimes just a lack of interest all played a role in the physical mobility of the researchers and students in the projects.

The cultural distance was sometimes a source of challenges. Swedish researchers often stated that they were not used to the Chinese environment and culture.

¹¹It was noted by one of the interviewees that Swedish PhD students are overall not very mobile.

The challenges faced by PIs to arrange longer stays often made it difficult to bridge this gap. Moreover, it appeared that when the PI from the Swedish side was either Chinese or overseas Chinese, this increased the likelihood of longer and more frequent trips to China. An obvious rationale was that the cultural difference was either significantly lower or non-existing, and there were also sometimes family reasons for the trips.

Overall, intellectual property rights (IPR) were an overlooked aspect of the projects and often at best treated as an afterthought. This was at least the case from a Swedish perspective; researchers from the Chinese side had in general more incentives from the academic system in securing IPR for work developed in the projects. In one project, which was very applied in nature and close to commercialisation, the Swedish partner had clearly given no thought to handling IPR issues whereas the Chinese partner had introduced a Chinese industry partner to the project. As mentioned by other project researchers, there are nonetheless some examples of a joint structured approach, typically by agreeing that the Chinese partner applies for a patent in China while the Swedish partner applies for an EU patent.

The collaborations were generally beneficial to the Swedish side, but there was an element of perceived missed opportunities for Swedish researchers as noted by the Swedish funder. This as it can be expected that a young faculty member spending an extended period of time working in China will gain a deep understanding of China as well as develop a professional network there that can be utilised throughout the course of his or her scientific career. Given the scale and rapid growth of quality of research in China, this could potentially be of great value for the individual researcher and very likely the same for Sweden as a science nation.

3.4.2 Ethical challenges and a lack of transparency

Some ethical challenges were encountered in relation to some of the applications to the programme. During the appraisal process, certain recurring patterns were identified as potentially problematic. The possibility to conduct research across borders can form grey zones due to unclarity in jurisdiction and a lack of clear control mechanisms. Some projects were designed to fast-track certain research based on such grey zones. For example, a quick 'bench to practice' possibility was sometimes argued in applications as an opportunity to rapidly gain reciprocal interaction between theory-driven research and the clin-

ical setting. Such research could potentially override safety mechanisms put in place to protect patients or stringent animal testing protocols as mentioned by a programme manager from the Swedish side. A small number of project applications included research questions that were ethically questionable from a Swedish perspective. Overall, the percentage of considerable ethical challenges identified by the evaluators in the programme applications received was in the low single digits. Those applications were not granted funding.

The transparency of researchers about their backgrounds or previous collaborations varied across the applications. Many of the applicants were quite open about their prior relationships and commitments to the partner universities, whereas a smaller number of applicants avoided reporting on earlier collaborative activities (such as neglecting reporting prior stays and affiliations as well as earlier co-publications). The funding organisations, programme managers and appraisal board members did state that a higher degree of transparency was desirable. The reasons included the need to understand how to manage system differences, the novelty of the relationship, or a concern about challenges faced at the national level, in the media and political spheres. As noted by STINT: *“It is necessary that funding goes to projects that are the most suitable according to the programme requirements”*.

The funded projects included a few cases where material, data, samples, and other research items were transferred without proper procedures. It was mentioned by several researchers that there were instances in which samples and materials were brought in their suitcases across borders without consideration as to appropriacy. It was for example not always clear whether proper protocols had been followed when handling the material. Sometimes PhD students would transport research samples and materials, leading to additional questions concerning consent. The vast majority of the PIs stated that their funded projects were executed in an ethically and scientifically sound manner. STINT also requires the applicants to follow laws and sound ethical principles, as well try identify those that do not meet these requirements when reading the applications. In the appraisal process a programme officer at STINT mentioned: *“Around five percent of the applications raise questions about respect to scientific integrity, ethics or non-transparent reporting of affiliations. After closer evaluation we generally identify around a third of those as highly unsuitable projects”*.

4. Concluding comments

4.1 Summary

On an aggregated level, the JCSM programme has positive effects for Swedish–China scientific collaborations. Many new Swedish–Chinese partnerships have been formed and the JCSM programme is achieving what it is intended to achieve, i.e., fostering new, long-term academic partnerships between Sweden and China. However, international research collaborations need to be managed by researchers and institutions with respect to issues such as research integrity, reciprocity, and transparency. Imbalances, institutional differences, and un-equitable collaborations can impact the longevity and desirability of collaborations on various levels. To the extent it was possible to discern from the interviews made for this study issues related to research ethics was generally managed in a proper way in funded projects. From the perspective of transparency and reciprocity there are issues that need to be better managed.

4.2 Recommendations

The recommendations derived from the insights gained from the analysis and findings are grouped into three categories: recommendations for national policy, recommendations for funding organisations, as well as recommendations for research institutions and individual researchers involved in collaborations.

4.2.1 Policy

Research is not without risk of adverse effects, but the scientific community has developed mechanisms that can mitigate those, through disciplinary norms or national regulations. However, grey zones exist with respect to internationalisation. One example is the risk of ethics dumping due to varying norms and laws. The benefits of international scientific collaborations are apparent, as discussed in the introduction of this report and the references cited. This study similarly saw overall strong professional incentives for such collaborations. It is thus important to develop policies and practices to mitigate ethically questionable research conduct (both intended and unintended) that can result due to such grey zones. As the majority of the collaborations, viewed through the lens of the applications, do not appear to lie within these grey areas, efforts should focus on improving researchers' knowledge of the partners they work with and the environments they work in. Suitable activities to promote meaningful collaborations, which both the Swedish and Chinese academic sectors may consider, include providing information as well as opportunities for peer learning and training.

To address grey zones, policies and practices need to be developed bilaterally, and ideally multilaterally, as such grey zones appear due to differences in legal frameworks, incentive systems and cultural practices. It is our recommendation that such work should be driven by collaboration between funding agencies. Funding mechanisms are typically a suitable way to induce changes in behaviour, and coordination between funding agencies can be driven in a fairly nimble and flexible way through the development of a commonly accepted and implemented code of conduct that agencies can require researchers applying for funding to adhere to. It is further recommended that funding agencies in Sweden, the Nordic countries, the European Union, and China collaborate to share the best practices of selecting and supporting high-impact projects that have the ability to generate long-term benefits.

4.2.2 Funding organisations

The recommendations for funding agencies are in regard to programme information and proposal appraisal. We recommend that they inform applicants in more detail on the requirements for and expectations of successful projects. This will enhance the quality of the submitted project proposals with respect to their descriptions of internationalisation as well as research goals and processes. It would further be beneficial to provide clearer information on evaluation processes and on the general practices of funding organisations. Providing stricter guidelines in the application process is also recommended, as is more explicitly mentioning expectations and the importance of truthfulness (including consequences of breaches in truthfulness) to potential applicants. Moreover, the JSCM programme also demonstrates how mobility programmes can be connected with other international funding programmes such as the one between the Swedish Research Council and NSFC.

At present, project applications are evaluated mainly on scientific quality; however, the development of a template scorecard for evaluation of project benefits regarding group capacity building and professional development of participating students and researchers would be useful in making the benefits of exchange more explicit. Earlier mobility project researchers should also be encouraged to act as ambassadors at their respective universities, which could raise the quality of applications, as well as stimulate researchers to learn from prior experiences of building international networks.

4.2.3 Research institutions and researchers

For individual researchers it is important to evaluate what is intended to be

gained from the collaboration to ensure that this is achieved, i.e., to have a vision and clear purpose for the collaboration.¹² It should be realised that collaborations can potentially generate significant outcomes beyond scientific results. One of the most important of these discussed in this study is development opportunities for PhD students and young faculty and from the Swedish perspective it would be of benefit for these to be encouraged to make use of the opportunities that international collaboration projects present. Further, opportunities for commercialisation of research should be explored and plans should be in place to handle intellectual property rights resulting from the project.

When preparing a project, it is crucial to consider its ethical and legal aspects. This is certainly important for any research project and for all international collaboration projects; however, even more attention should be paid to these aspects when projects involve partners based in countries with significant cultural differences and/or differing political and legal systems, as is the case in Swedish–Chinese collaborations. Universities must provide support and knowledge to their faculty members engaging in international collaboration projects. Institutional support should be in place to inform and educate potential participants with the aim that no projects should cross red ethical or legal lines. It is important to create an institutional awareness and memory, so that ‘good’ projects (both in terms of being ethically sound as well as being projects that bring the most to researchers, students, research groups and the universities) are automatically promoted at department and school levels.

¹² Shih, T., Gaunt, A. & Östlund, S. (2020). *Responsible internationalisation: Guidelines for reflection on international academic collaboration*. Stockholm: STINT, 2020.

STINT, The Swedish Foundation for International Cooperation in Research and Higher Education, was set up by the Swedish Government in 1994 with the mission to internationalise Swedish higher education and research.

STINT promotes knowledge and competence development within internationalisation and invests in internationalisation projects proposed by researchers, educators and leaderships at Swedish universities.

STINT promotes internationalisation as an instrument to:

- Enhance the quality of research and higher education
- Increase the competitiveness of universities
- Strengthen the attractiveness of Swedish universities

STINT's mission is to encourage renewal within internationalisation through new collaboration forms and new partners. For example, STINT invests in young researchers' and teachers' international collaborations. Moreover, STINT's ambition is to be a pioneer in establishing strategic cooperation with emerging countries in research and higher education.



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