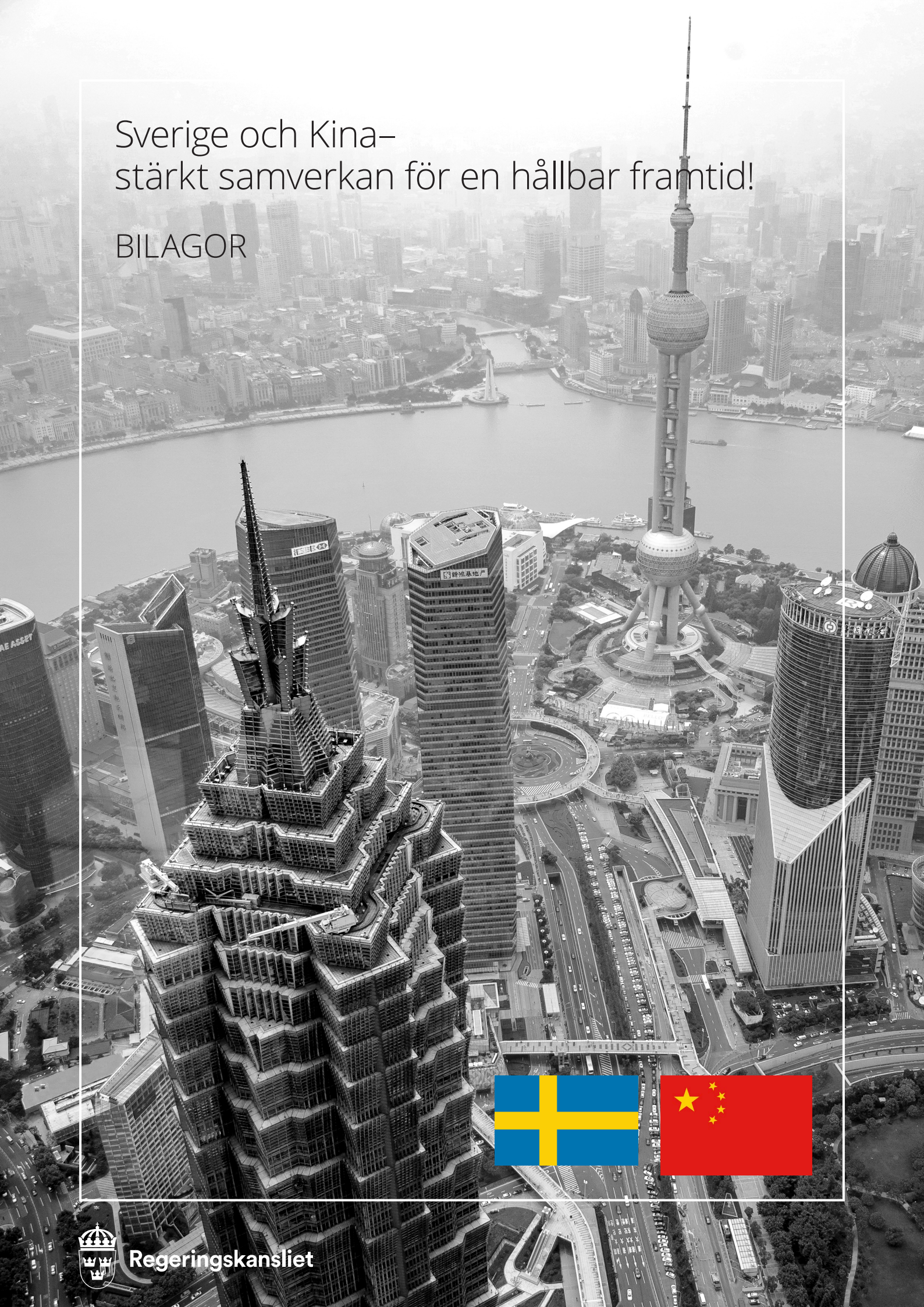
Sverige och Kina– stärkt samverkan för en hållbar framtid!

BILAGOR



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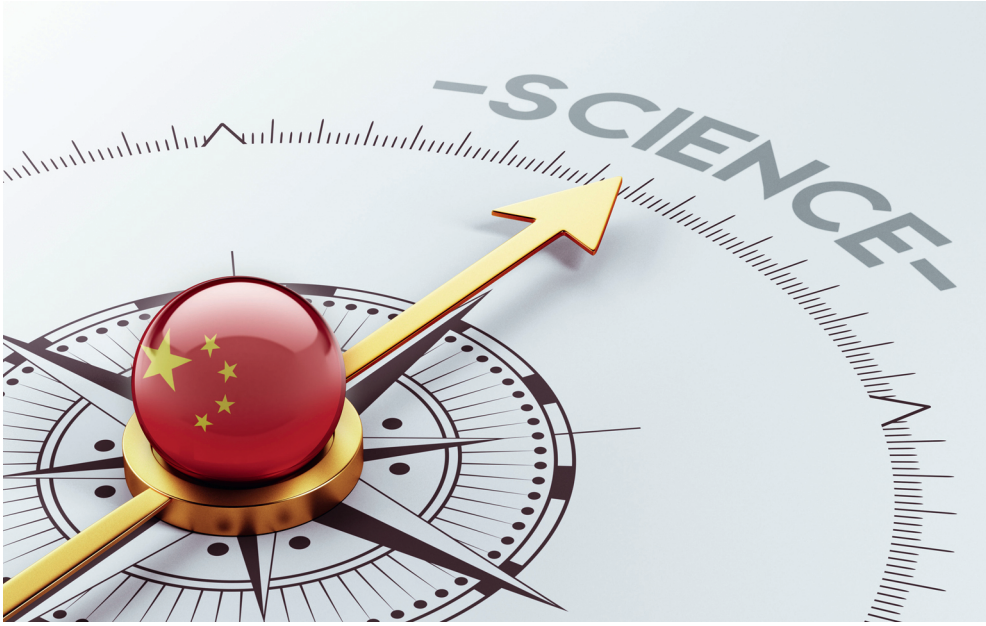


Academic collaboration: Sweden–China

STINT
The Swedish Foundation for International Cooperation in Research and Higher Education

R 18:01

Summary

This study of academic collaboration between Sweden and China is undertaken with the aim of informing policy decisions at institutional and national levels. The focus is on research collaboration, but teaching collaboration is also touched upon. Through an analysis of publications in the Scopus database, the study illustrates how research collaboration has developed at national, institutional and individual levels.

Overall, the co-publication volumes involving Sweden and China increase rapidly. They enjoy high citation impact, also when publications with 100 or more co-authors are not counted. Co-publication volumes are increasing rapidly, but the development is similar to that of other mature research countries' co-publications with China. In comparison to Australia, Canada, Denmark, Germany and the United Kingdom, only Germany shows a slower increase in co-publication volumes with China than Sweden.

The analysis shows that most co-publications (~50%) occur in the natural sciences, followed by engineering & technology, and the medical sciences. The disciplinary distribution is to some extent mirrored by the institutions with most Sweden – China co-publications, with KTH Royal Institute of Technology leading in Sweden and the Chinese Academy of Sciences in China.

Data for student mobility between Sweden and China indicate that the number of incoming students to Sweden has dropped substantially after the tuition fee reform. KTH Royal Institute of Technology is the largest receiver of Chinese students in absolute numbers. But as a share of all incoming international students to the university, two small universities have more than 15% Chinese students.

In the STINT – NSFC mobility programme, engineering & technology projects occur more frequently among the 75 projects granted funding than the co-publication profile would indicate. Similarly, projects in the natural sciences are underrepresented.

For several reasons, not least the high citation impact of Sweden – China co-publications, one recommendation is to further promote and support academic collaboration between the countries. One approach on the Swedish side could be to promote broader participation through the involvement of additional universities. Expanding research collaboration

in the humanities and social sciences could also be relevant. Another long-term method of fostering academic collaboration is through student mobility. It should also be considered how to promote innovations emanating from the academic collaborations.

Preface

The Swedish Foundation for International Cooperation in Research and Higher Education (STINT) was set up by the Swedish Government in 1994 with the mission of internationalising Swedish higher education and research. STINT promotes knowledge and competence development in the area of internationalisation and invests in internationalisation projects proposed by researchers, teachers and senior leadership at Swedish universities.

During the last 15 years, China has shown rapid scientific development, which has led STINT to focus increasingly on China in its activities. Since 2015, STINT has co-funded bilateral research projects together with the National Natural Science Foundation of China (NSFC). Today this programme is the largest academic mobility programme between Sweden and China, with a total of 75 currently ongoing projects. STINT has also recently started a project to increase understanding of the development of the higher education and research sector in China in order to assist Swedish universities, as well as related agencies and organisations, in their development of strategic cooperation with China.

In early 2018, the Swedish Government initiated a government remit to compile documentation for the government's work on increased and strategically targeted cooperation with China in innovation, science and higher education. STINT is contributing to the remit with its experience of and competence in academic cooperation regarding China.

One of the aims with this report is to support the ongoing government remit by providing data on research collaboration. It also includes data on educational collaboration to some extent. The study illustrates how research collaboration with China has developed at national, institutional and individual levels.

The author of the report is Hans Pohl, Programme Director at STINT.

Andreas Göthenberg
Executive Director
STINT

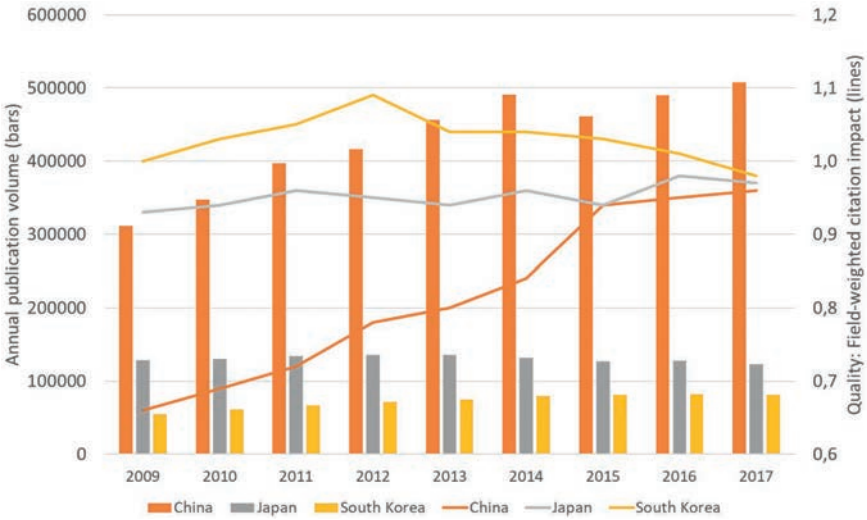
Stockholm, Sweden, May, 2018

Contents

1. Introduction

China's research production has been growing rapidly in the past two decades (c.f. STINT, 2017). Currently, it is the second largest country after the United States in terms of the total annual volume of publications in the Scopus database. The research output from China is not only growing in volume, but the publication citation impact has also increased significantly. Figure 1 compares the development in publication volume and citation impact since 2009 for China, Japan and South Korea. The volume of academic publications has increased more rapidly in China than in Japan or South Korea. In addition, the citation impact has increased rapidly from a much lower level than Japan's and South Korea's to nearly converge with these two countries in 2017.

Figure 1: **Publication volume and citation impact for China, Japan and South Korea (SciVal® database, Elsevier B.V., downloaded February 2018)**



Regarding Sweden's research collaboration with China, an analysis of publication data was carried out by the Swedish Governmental Agency for Innovation (VINNOVA) and the Swedish Research Council in 2011 in connection with a government directive to strengthen research and innovation cooperation with China (Sandström, 2011).

Since 2015, STINT has offered a bilateral mobility funding programme together with the National Natural Science Foundation of China (NSFC).

Every year, 25 new three-year projects are selected for funding.

The purpose of this study is to increase understanding of academic collaboration between Sweden and China, focusing on research but also including some student mobility data. The study concentrates on how collaboration is developing in terms of publication volume and quality, which scientific disciplines are collaborating, which higher education institutions (HEIs) collaborate, and which researchers are the most active. The aim is to inform policy decisions at institutional and national levels.

After this introduction, a section explaining the methodology for the study follows. Thereafter follows an overall description of the development of the research collaboration between Sweden and China, which in the next section is compared with how some other mature research countries have developed their collaboration with China. The research collaboration between Sweden and China is then studied more in detail, describing which scientific disciplines that are included, which institutions that participate and the most active researchers contributing to the co-publication volume. Next section describes how students move between China and Sweden and thereafter, the STINT-NSFC mobility programme is studied. After a section discussing the results, conclusions and recommendations follow.

2. Data and methodology

This report mainly makes use of publication data to examine research collaboration between Sweden and China. The data come from Scopus, the largest publication database, and some analyses were performed using Elsevier's SciVal tool (Elsevier, 2017).

The analysis mainly concerns the period 2012–2017. All data were extracted during February 2018. It should be noted that publication data for 2017 are not yet complete and therefore the figures for 2017 (volumes and citations) should be interpreted with care: the final volumes will be higher and the citation impacts will differ from what is presented here. Elsevier states that publication data for 2017 will be 95% complete in May 2018. Nevertheless, data for 2017 are included in this analysis.

One good quality indicator for publications is the Field-weighted citation impact (FWCI). Citations are formal references to earlier work made in an article or patent, frequently to other journal articles. A citation is used to credit the originator of an idea or finding and is usually used to indicate that the earlier work supports the claims of the work citing it. The number of citations an article receives in subsequently published articles provides an indication of the quality or importance of the reported research. When calculating the FWCI, the number of citations a publication receives is normalised with respect to the scientific discipline, the publication year and the type of publication. A FWCI equalling 1 indicates that the publication enjoys world average citation impact. A higher FWCI indicates higher impact (Elsevier, 2014).

A co-publication between China and Sweden has at least two authors and at least one affiliation in each of the countries. In line with this, a publication with two co-authors, one with one affiliation in Sweden, and one with two affiliations, one in Sweden and one in China, is considered an international co-publication. This is further discussed below in the section 10.

Another aspect to note is so-called hyper-authored publications. These publications often have thousands of co-authors from a large number of countries. Collaboration in such networks, typically in the natural sciences, has limited relevance when studying collaboration between two specific countries or two institutions. As the same network may produce hundreds of publications per year, the co-publication volume may appear much greater than the actual extent of bilateral collaboration. Some of

these publications receive very high numbers of citations and they may therefore also distort quality indicators. In order to address this, publications with fewer than 100 co-authors were studied separately.

For this study, we use a classification of different scientific disciplines from the Frascati Manual of the Organisation for Economic Co-operation and Development (OECD). The classification comprises the following six main categories:

– Agricultural Sciences (Agri)
– Engineering & Technology (Eng)
– Humanities (Hum)
– Medical Sciences (Med)
– Natural Sciences (Nat)
– Social Sciences (Soc).

There are also 42 subcategories in the classification.

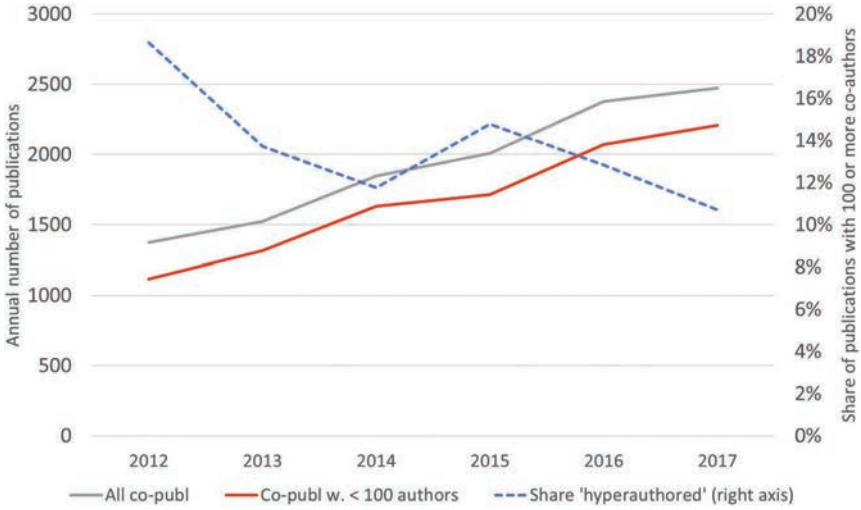
Student mobility data are mainly taken from two sources: UKÄ (2017) and UNESCO (2018).

3. Overall development of research collaboration

Figure 2 indicates that the annual volume of co-publications between Sweden and China has increased steadily during the last five years and will reach more than 2,500 publications in 2017 (when all 2017 publications have been included in the data set). The number of co-publications with more than 100 authors has remained relatively constant, thus accounting for a decreasing share of the total volume.

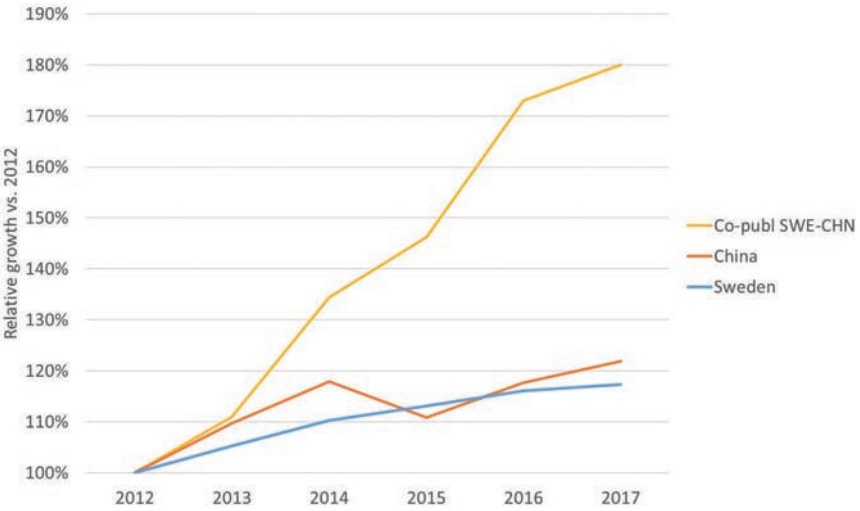
Adding the time series from Sandström (2011) yields volumes starting at 175 co-publications in 2000 and ending at 700 co-publications in 2010, based on Thomson Reuters (now Clarivate) Web of Science data.

Figure 2: **Annual co-publication volumes Sweden – China**



As mentioned in the introduction, China has had a tremendous publication growth during recent decades. However, this growth has slowed and as Figure 3 shows, it has not been very different from Sweden's since 2012. Figure 3 also indicates that in comparison to the development of the total volume of publications, the number of co-publications has increased much more rapidly, when using 2012 as the reference year.

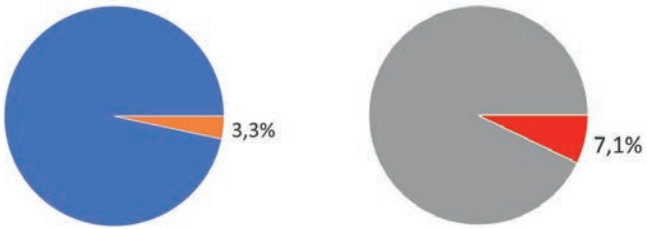
Figure 3: **Relative publication volume growth since 2012**



In a previous study (STINT, 2017), a new indicator was introduced, the Normalised Collaboration Intensity Index (NCII). It compares the actual and expected numbers of co-publications between two countries. The expected numbers of co-publications are calculated on the assumption that all countries collaborate in proportion to their share of the global volume of international co-publications.

Figure 4 provides a slightly simplified example: Sweden's co-publications with China for the period 2012–2016 represent a 3.3% share of all international co-publications including Sweden (gross volume).

Figure 4: **Example showing how Sweden's NCII with China is calculated**



This share is then compared with China's share of the global volume of international co-publications, which was 7.1%. Obviously, China's representation in the Swedish international co-publication portfolio does not

correspond to its total volume of international co-publications. The NCII is calculated as 3.3/7.1 = 46%. An index of 100% indicates an average collaboration intensity. South Korea is even lower with 40%, whereas Japan has an NCII of 66% (STINT, 2017).

When comparing the NCII of Sweden and China for a selection of countries, it is clear, as might be expected, that China has more collaborations with eastern countries such as Japan, Singapore and South Korea, whereas Sweden collaborates much more with its neighbouring countries (Figure 5). A comparison of co-publications with China among the Nordic countries shows that China collaborates to the same extent with Denmark and Sweden, and slightly less with Finland.[1]

In relative terms, China clearly has larger shares of co-publications with Australia, Canada and the United States, compared to the Swedish collaboration pattern.

Figure 5: **Normalised Collaboration Intensity Index for Sweden and China**

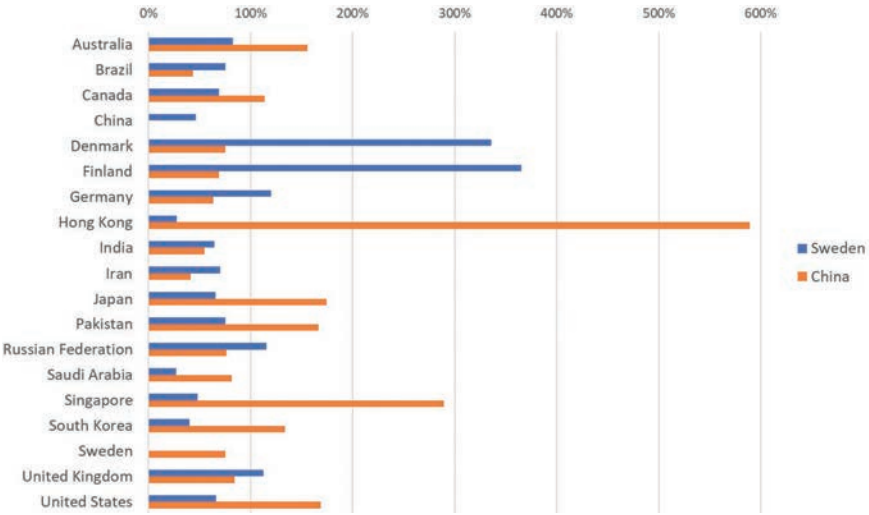
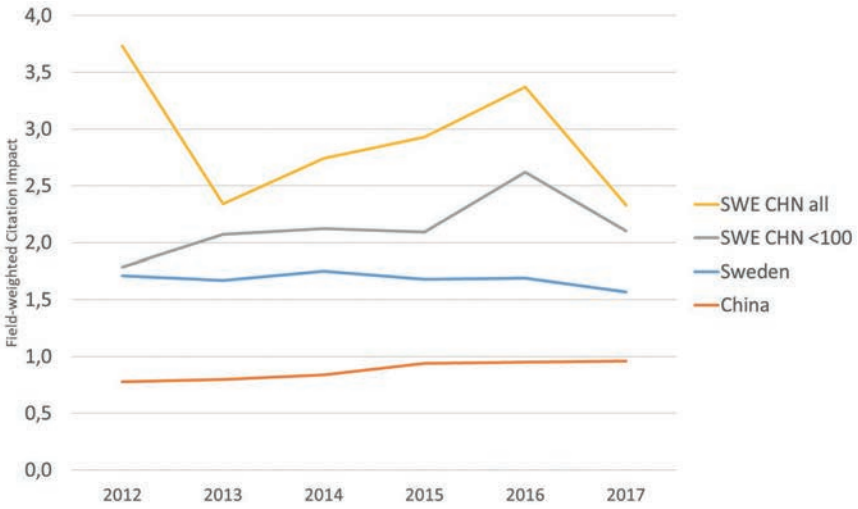


Figure 6 shows the higher citation impact of Sweden – China co-publications compared to national publications (including international co-publications). Figure 6 also includes a time series for co-publications with

[1] NCII is asymmetric as the index is normalised using the international co-publication volume of the country for which it is being calculated. Therefore, the Swedish NCII with China (46%) differs from the Chinese NCII with Sweden (75%)

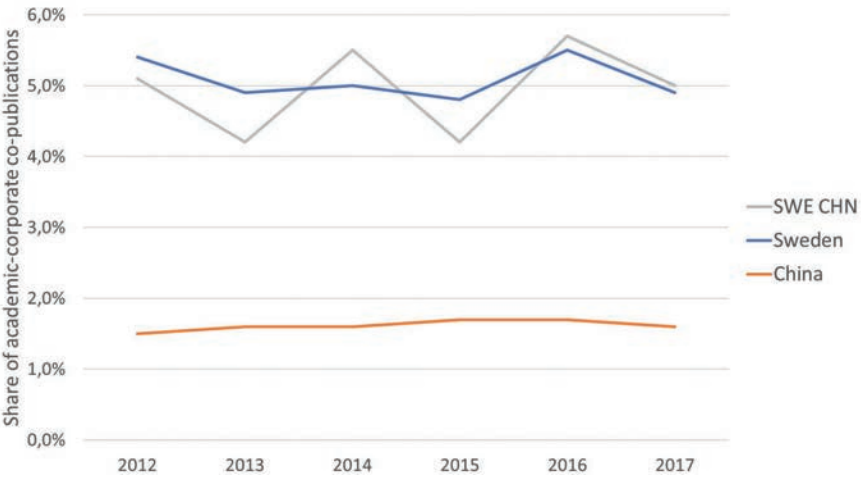
fewer than 100 co-authors. The impact of hyper-authored publications becomes very clear. Again, please note that data for 2017 are still incomplete.

Figure 6: **Publication FWCI development for co-publications Sweden – China**



Another perspective on the data is the extent to which corporate entities are involved in the collaborations. One indicator for this is the share of publications with at least one affiliation at a corporate entity. In Figure 7, the shares for Sweden, China and the co-publications between the countries are compared. It shows that corporate participation in the Sweden – China publications is close to the average for Sweden and much higher than the Chinese average. In a more general international comparison, Sweden has a relatively high share of academic-corporate co-publications.

Figure 7: **Sweden–China co-publications involving corporate entities**



With 84 publications, AstraZeneca (Sweden) is the corporate organisation with the highest number of publications among all Sweden–China publications with fewer than 100 authors for the period 2012–2017.

4. Comparison with other countries

In this section, a few other countries' collaboration with China is compared to that of Sweden. When comparing the co-publication volumes with China with each country's total publication volume, the share of such co-publications is the highest for Australia and the lowest for Germany (Figure 8).

Figure 8: **Co-publications with China as a share of all publications for each country (2012 – 2017)**

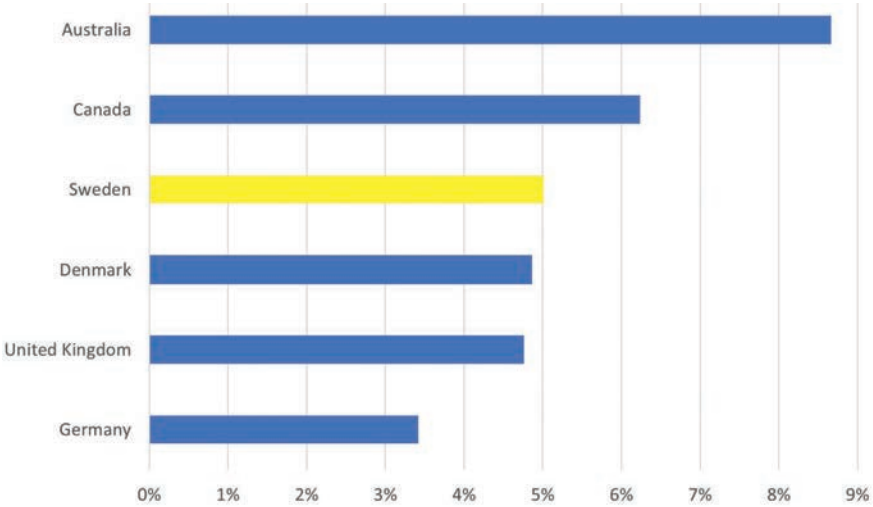
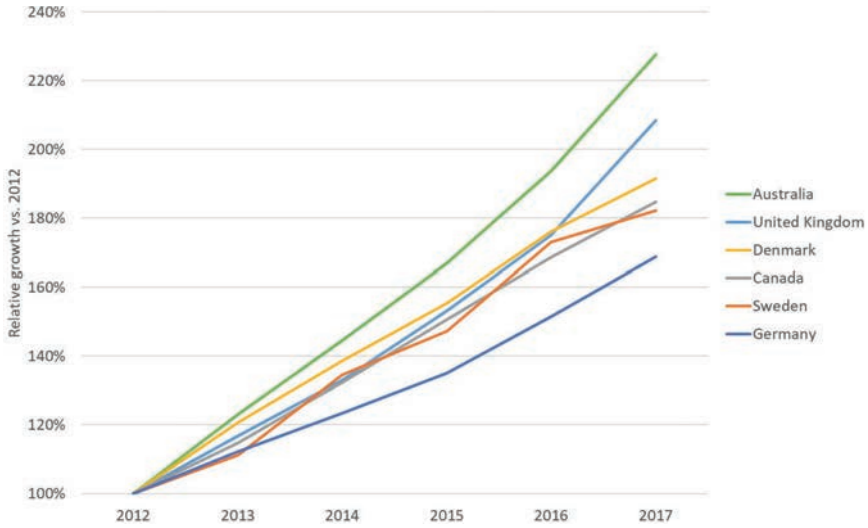


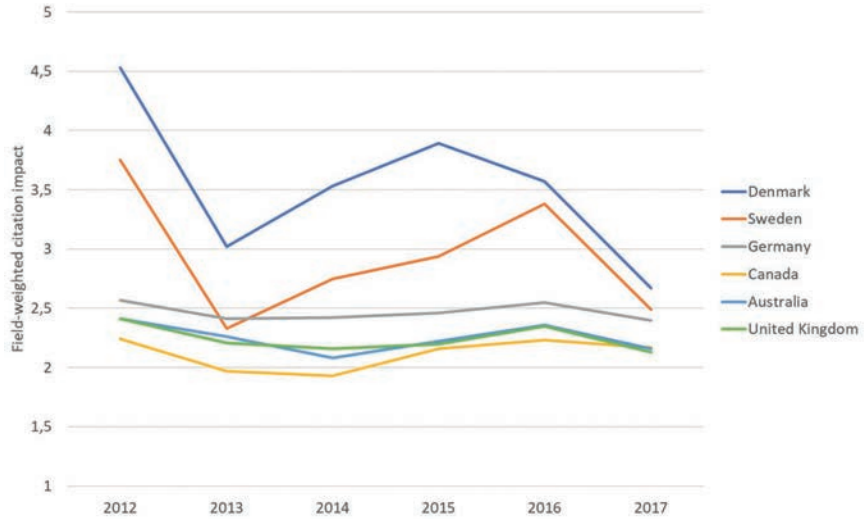
Figure 9 shows the development in co-publication volume since 2012. While the growth for Sweden is impressive, as presented above, most of the reference countries have shown more rapid growth.

Figure 9: **Co-publication growth with China**



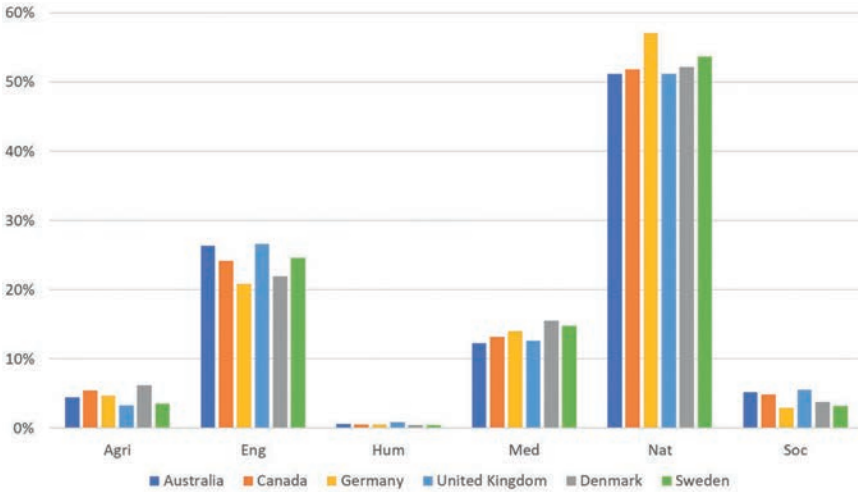
One indicator for co-publication quality is presented in Figure 10. All co-publication sets have clearly higher FWCI than the corresponding figures for national publication sets. Sweden–China co-publications enjoy higher FWCI than most comparison countries. The dip in 2013 depends to a large extent on hyper-authored publications, which had lower FWCI in 2013 (compare Figure 6).

Figure 10: **FWCI (quality) for co-publications with China**



The distribution of co-publications over the disciplines depends for instance on the profiles of the collaborating countries. As China is the partner country for all countries, the distribution does not differ that much. Obviously, most collaborations require that peers within a similar research area exist in both countries. Therefore, as China has a comparatively low share of research in the humanities, this reduces the opportunities for collaboration. This is further addressed in the next section, c.f. Figure 14. Collaborations with Denmark and Sweden show some emphasis on medicine, whereas collaboration with Germany appears to focus on the natural sciences (cf. Figure 11).

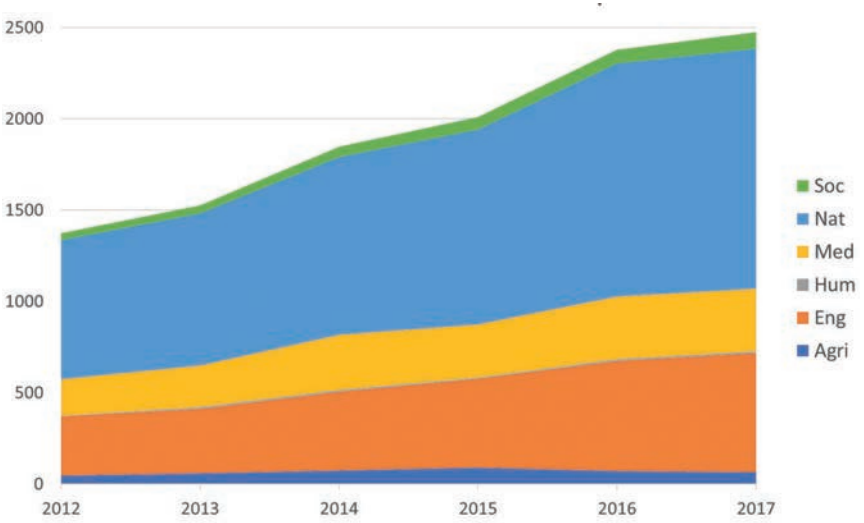
Figure 11: **Scientific profiles of co-publications with China**



5. Which scientific disciplines are involved in collaborations?

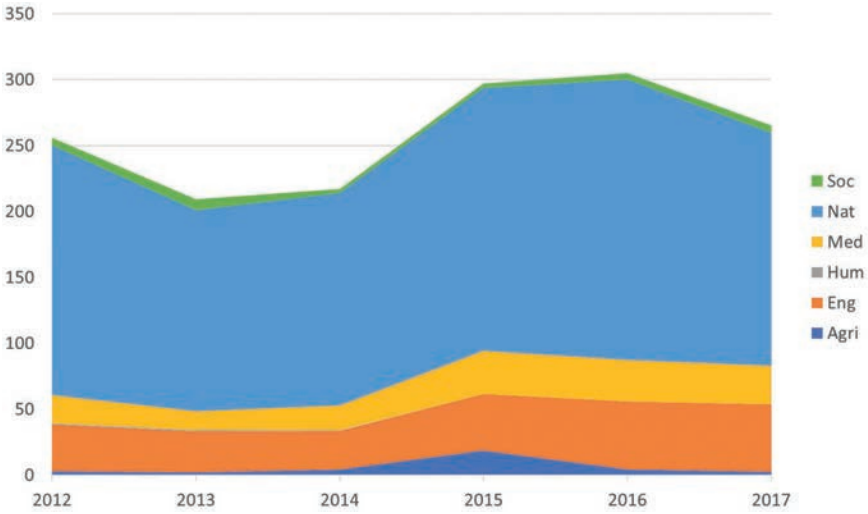
The natural sciences represent more than 50% of all co-publications (Figure 12). Engineering & technology form the second largest collaboration discipline, followed by medical sciences. The smallest discipline is the humanities, with 7–15 co-publications per year.

Figure 12: **Sweden – China co-publications per scientific discipline**



In Figure 13, only co-publications with more than 100 co-authors are included. Most hyper-authored publications are in the natural sciences, followed by engineering & technology.

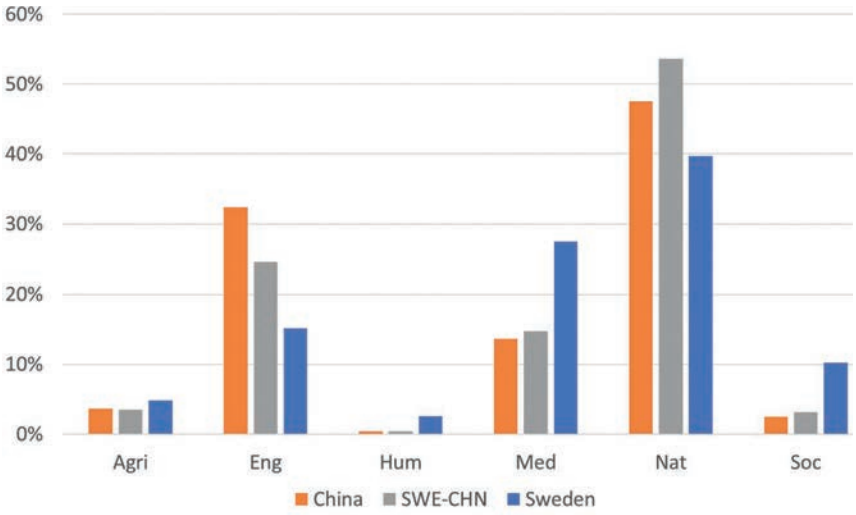
Figure 13: **Hyper-authored Sweden–China co-publications per scientific discipline**



The scientific profile of collaboration depends on the profiles of the collaborating countries. In Figure 14, the total volume of publications for the period 2012–2017 was used to calculate the share of publications in each scientific discipline for Sweden, China and co-publications involving Sweden and China. China has higher shares of publications in engineering & technology and the natural sciences, whereas Sweden has much higher shares in the humanities and social sciences and also higher shares in medical sciences.

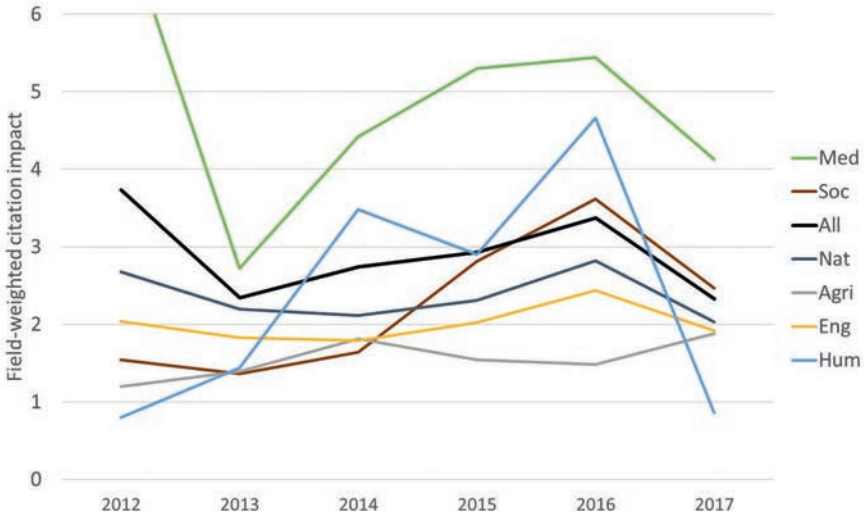
The co-publication shares in each discipline typically fall in the range between the shares for the collaborating countries. This is also the case in some disciplines, as indicated in Figure 14. However, the natural sciences have a higher share of co-publications. One of the contributing factors is that the natural sciences are very international, with high shares of international co-publications. Another factor is hyper-authored publications, which to a large extent occur in the natural sciences.

Figure 14: **Scientific profiles for China, Sweden and their co-publications**



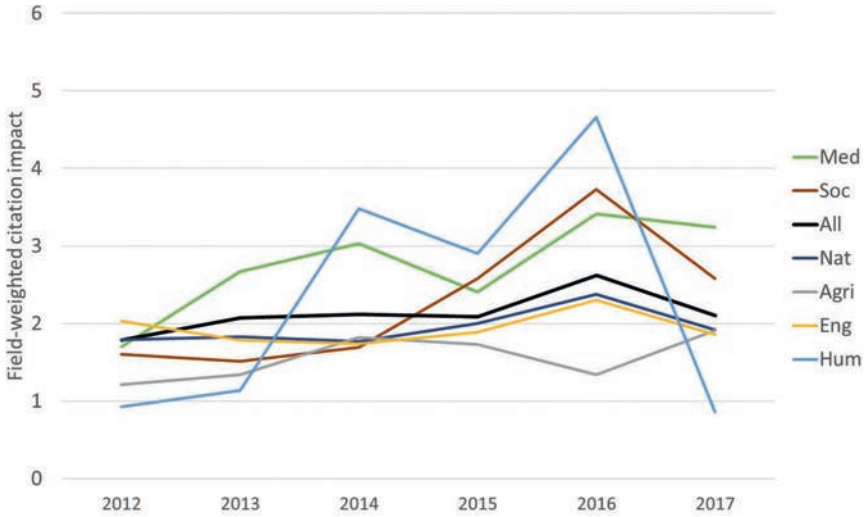
In terms of quality, the co-publications in all scientific disciplines have high or very high citation impacts (Figure 15). Again, as explained in the methodology section, the FWCI for the most recent period will change as more citations are accumulated and the lower values for 2017 may not remain.

Figure 15: **Field-weighted citation impact for all Sweden – China co-publications**



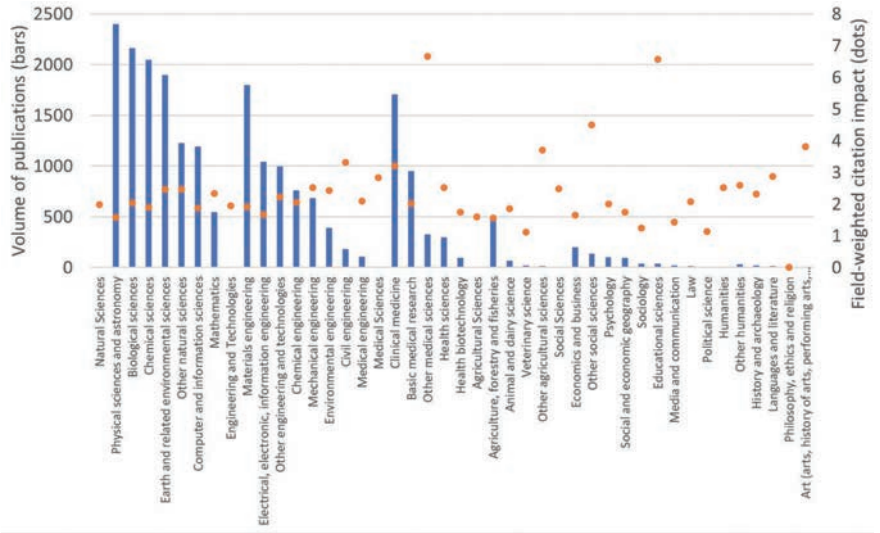
If only publications with fewer than 100 co-authors are considered, it becomes clear that hyper-authored publications have a large impact on the total citation impact for medical sciences (Figure 16).

Figure 16: **Field-weighted citation impact for Sweden – China co-publications with fewer than 100 authors**



A closer look at the subcategories indicates that several disciplines in the natural sciences yield high numbers of co-publications (Figure 17). Medical sciences are more focused on clinical aspects. A few subcategories have very high citation impact, among them the educational sciences.

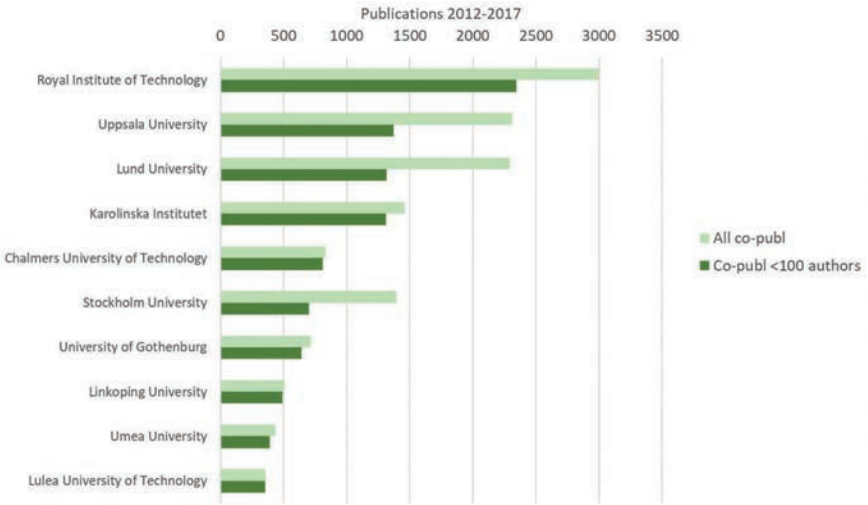
Figure 17: **Publication volume and citation impact per subcategory**



6. Collaborating institutions

One advantage of publication data is that it can be used at all levels of aggregation, from the global perspective down to individual researchers. In this section, we focus on the ten higher education institutions (HEIs) in Sweden with the largest numbers of co-publications with China with fewer than 100 authors (and vice versa). As can be seen in Figure 18, hyper-authored publications form a substantial share of all co-publications for Uppsala University, Lund University and Stockholm University.[2]

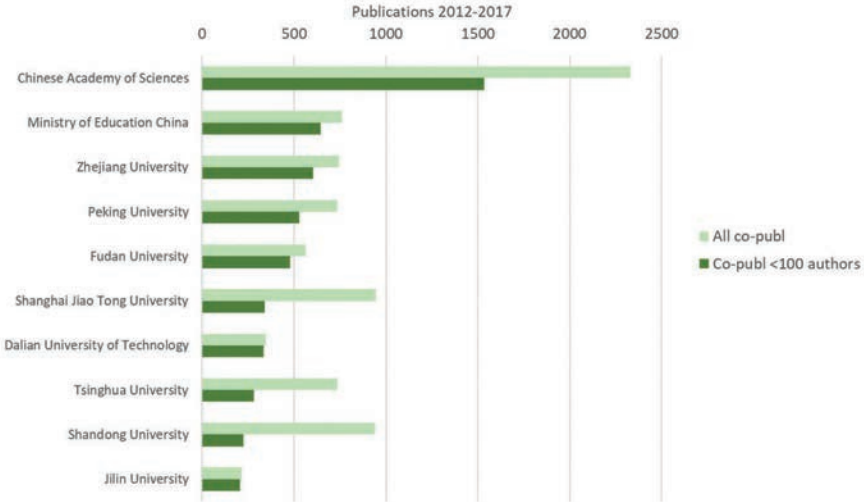
Figure 18: **Swedish HEIs' co-publications with China**



The corresponding data for Chinese HEIs are presented in Figure 19. Also in China, it appears that the top ten collaborators with Sweden participate in large networks of researchers. Here it should be noted that the Ministry of Education is the main affiliation for researchers at the ministry's Key Labs at various institutions in China. Accordingly, these researchers tend to state at least two affiliations in China, one at the ministry and one at the institution hosting the Key Lab.

[2] University names from SciVal are used in figures and tables

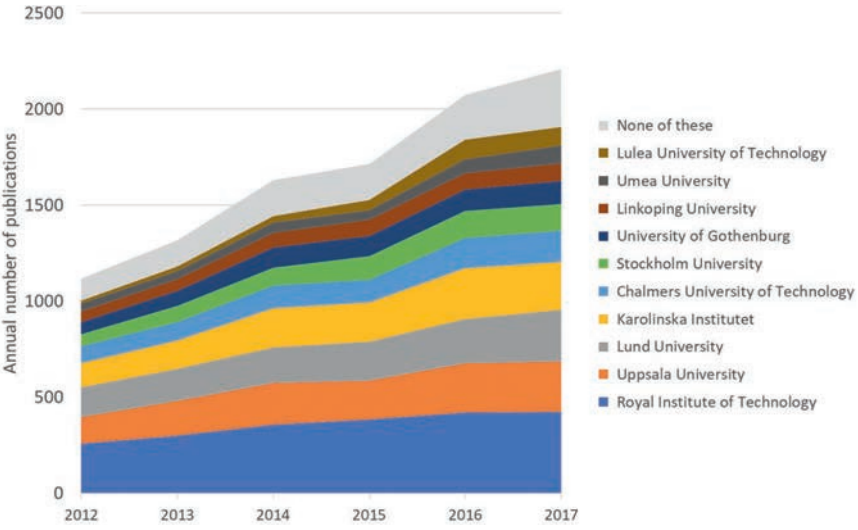
Figure 19: **Chinese HEIs' co-publications with Sweden**



As demonstrated above, hyper-authored publications have a large impact at the institutional level and they are thus not included in the rest of this section.

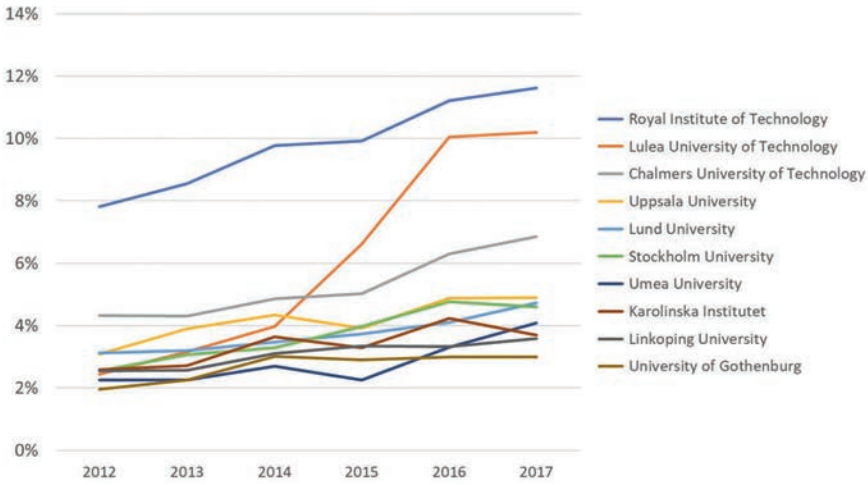
The top ten HEIs in Sweden cover a large share of the total co-publication volume (Figure 20).

Figure 20: **Top ten Swedish HEIs with the highest numbers of co-publications with China**



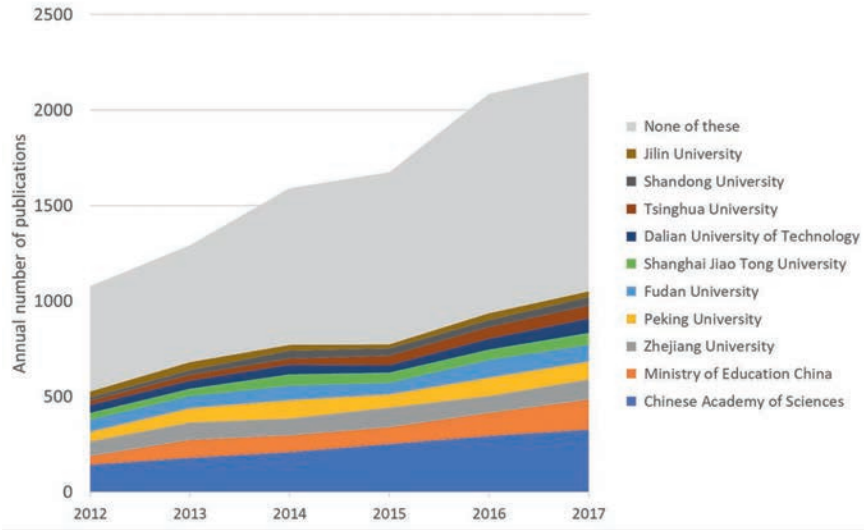
The volumes are increasing, also in comparison to the total publication volume at each HEI (cf. Figure 21). Three universities of technology enjoy the largest shares of co-publications with China.

Figure 21: **Share of co-publications with China in relation to all publications at the HEI**



China has many more HEIs and thus the top ten are involved in a smaller share of the total, about 50% (Figure 22). The 'None of these' share is also increasing, thus indicating that the collaboration is growing more extensive and involves more Chinese institutions.

Figure 22: **Top ten Chinese HEIs with the highest numbers of co-publications with Sweden**



When comparing the Chinese HEIs' co-publications with Sweden to their total publication output, the shares are small but increasing (Figure 23).

Figure 23: **Share of co-publications with Sweden in relation to all publications at the HEI**

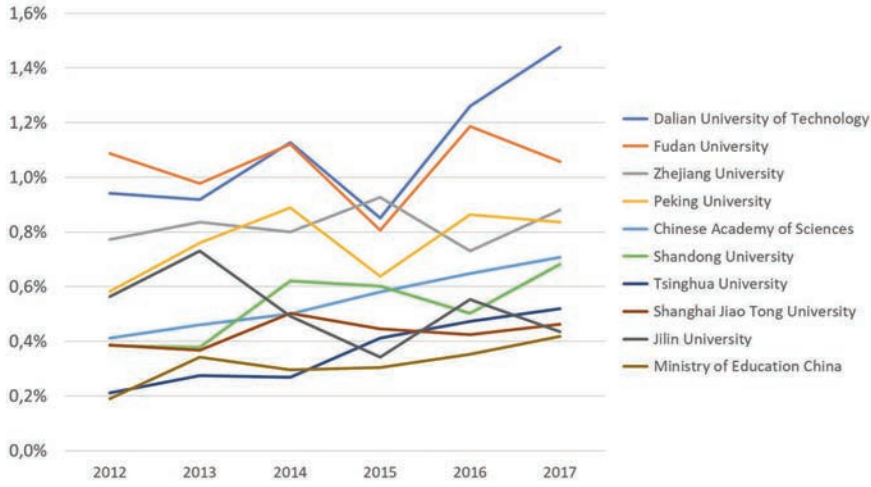


Table 1: **Absolute and relative growth in co-publications with fewer than 100 authors**

Growth 2012–2017 (2017 incomplete)		
	Absolute	**Relative**
Lulea University of Technology	87	583%
Umea University	56	222%
Stockholm University	82	219%
Karolinska Institutet	136	197%
Uppsala University	137	191%
University of Gothenburg	63	191%
Chalmers University of Technology	84	188%
Lund University	123	172%
Royal Institute of Technology	182	164%
Linkoping University	39	164%
Ministry of Education China	122	344%
Tsinghua University	49	313%
Chinese Academy of Sciences	203	230%
Shandong University	28	222%
Peking University	48	186%
Dalian University of Technology	37	182%
Shanghai Jiao Tong University	28	168%
Fudan University	29	143%
Zhejiang University	30	135%
Jilin University	-1	97%

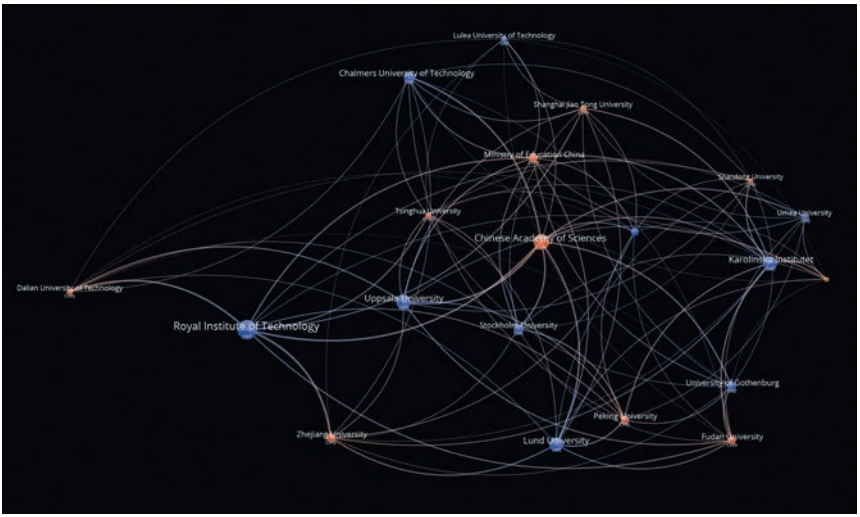
The co-publication matrix based on publications 2012–2017 in Figure 24 indicates that the Chinese Academy of Sciences dominates in almost all Swedish HEIs' co-publications with China. Karolinska Institutet shows a slightly different pattern, probably because of its focus on medical sciences.

Figure 24: **Co-publication matrix for the top ten HEIs (<100 authors)**

	Chinese Academy of Sciences	Ministry of Education China	Zhejiang University	Peking University	Fudan University	Shanghai Jiao Tong University	Dalian University of Technology	Tsinghua University	Shandong University	Jilin University	TOTAL CO-PUBL. W. CHINA
Royal Institute of Technology	270	119	331	56	91	68	257	81	25	11	**2345**
Uppsala University	263	103	35	63	83	37	101	47	20	25	**1372**
Lund University	199	60	97	120	70	32	15	27	14	24	**1315**
Karolinska Institutet	62	83	49	93	132	89	3	11	108	92	**1312**
Chalmers University of Technology	205	75	18	22	4	35	16	26	12	3	**810**
Stockholm University	176	65	18	95	11	16	16	46	6	20	**700**
University of Gothenburg	135	37	11	43	68	18	1	12	13	3	**640**
Linkoping University	66	39	33	33	11	24	2	9	19	8	**491**
Umea University	81	23	5	13	19	11	0	9	10	24	**388**
Lulea University of Technology	27	26	4	0	2	23	4	7	3	1	**353**
TOTAL CO-PUBL. W. SWEDEN	**1535**	**644**	**604**	**529**	**479**	**340**	**333**	**282**	**225**	**207**	

Based on the same data, collaboration can be visualised using clustering tools. In this case, Vosviewer is used, which clusters entities based on the strength of each link (Vosviewer, 2017). The size of the circles represents the total co-publication volume, whereas the thickness of the links represents the numbers of co-publications (Figure 25). Co-publications between Swedish or between Chinese HEIs are not indicated.

Figure 25: **Cluster map of the top ten HEIs' collaborations**



Technology dominates the left-hand side of Figure 25, whereas the medicine cluster is represented on the right. The central position of the Chinese Academy of Sciences reflects the fact that it has the highest number of co-publications with 9 out of 10 Swedish HEIs. KTH Royal Institute of Technology has the highest number of co-publications with China, but they are more concentrated on a few HEIs, thus the position in the map.

7. Collaborating researchers

Approximately 9,000 researchers in Sweden and 21,000 in China have been involved in co-publications between China and Sweden during 2012–2017. Again, it is most relevant to look at co-publications with fewer than 100 authors. The ten most productive researchers of co-publications with fewer than 100 authors are listed in Table 2.

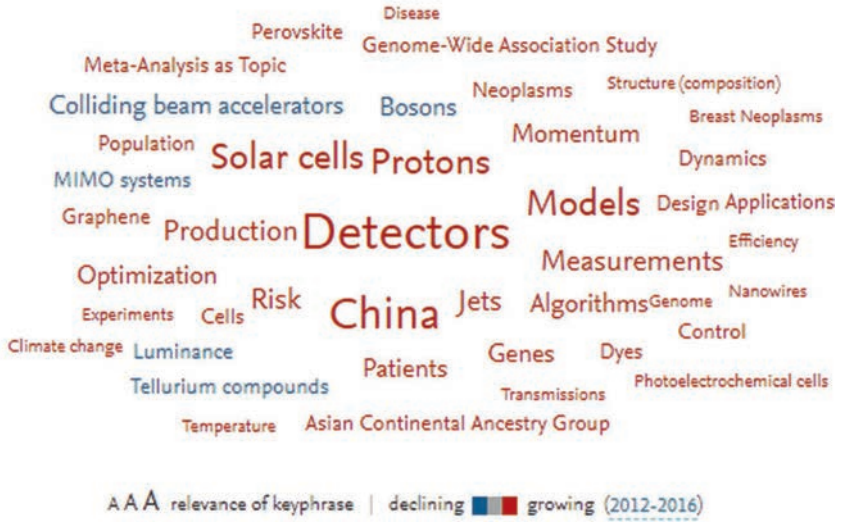
Table 2: **Researchers with the highest numbers of Sweden–China co-publications during 2012–2017**

No. of publ.	Author	Scopus main affiliation	Second affiliation	Research area publ.
215	Sun, Licheng	KTH Royal Institute of Technology	Dalian University of Technology	Catalysts, solar cells...
204	He, Sailing	KTH Royal Institute of Technology	Zhejiang University	Metamaterials, antennas...
141	Sundén, Bengt	Lund University		Heat transfer, fuel cells...
115	Liu, Johan	Shanghai University	Chalmers University of Technology	Thermal insulating materials, graphene...
89	Wang, Shumin	Shanghai Institute of Microsystem and Information Technology Chinese Academy of Sciences	Chalmers University of Technology	Semiconductors...
86	Vasilakos, Athanisos V.	Lulea University of Technology		Wireless networks, cloud computing...
82	Li, Xin	KTH Royal Institute of Technology		Solar cells, fluorescence...
82	Yan, Jinyue	KTH Royal Institute of Technology	Mälardalen University	Solar cells, energy...
82	Zhu, Bin	China University of Geosciences	KTH Royal Institute of Technology	Fuel cells...
77	Luo, Yi	Hefei National Laboratory for Physical Sciences at Microscale	KTH Royal Institute of Technology	Materials science, chemical engineering...

Seven of these researchers have multiple affiliations and six have one affiliation in Sweden and another in China. A detailed study of Licheng Sun's affiliations shows that 208 of his 215 publications indicate KTH Royal Institute of Technology as an affiliation and 211 Dalian University of Technology. Most of his publications have 5–10 co-authors. For the next researcher, Sailing He, 192 publications list KTH Royal Institute of Technology as an affiliation and 167 Zheijang University. Most of his publications have 3–7 co-authors.

Using Elsevier Fingerprint engine (cf. Elsevier, 2016) to analyse the metadata and abstracts of the publications, the key phrases in the publication set comprising all co-publications between Sweden and China are depicted in Figure 26. As explained in the figure, the colours specify the growth or decline during the full years 2012–2016, and the font size indicates relevance.

Figure 26: **Key phrase map for all Sweden – China co-publications, 2012 – 2016**



In Figure 27, co-publications with fewer than 100 authors are used to create a map of key phrases. Some key phrases such as Detectors, Protons and Bosons are obviously most relevant for hyper-authored publications whereas Solar cells, China and Models are relevant in both sets.

The key phrases match the scientific areas of the researchers in Table 2. However, the key phrase China is not a part of their research interests. The absence of Sweden as a key phrase indicates that China is more dominant in the definition of research areas to address.

Figure 27: **Key phrase map for Sweden – China co-publications with fewer than 100 authors, 2012 – 2016**

8. Student mobility

The most reliable data for student mobility to and from Sweden are provided by the Swedish Higher Education Authority (UKÄ, 2017). In Table 3, data for student mobility between China and Sweden are summarised.

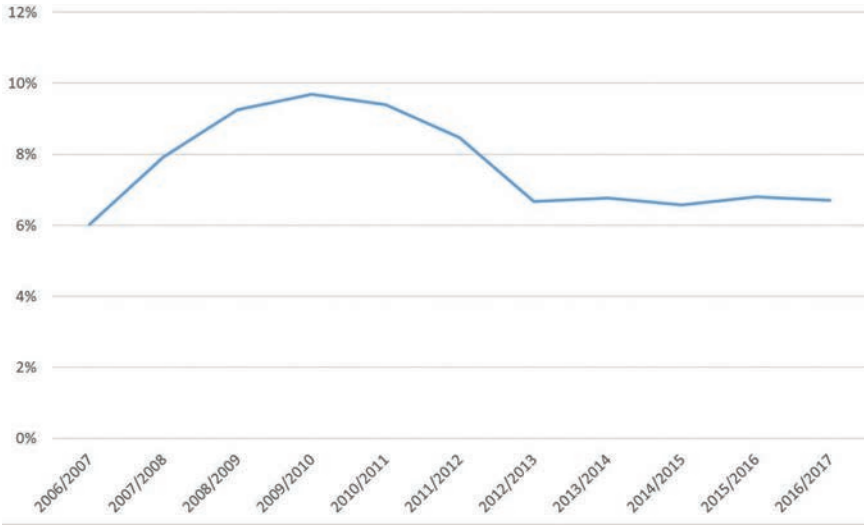
Table 3: **Student mobility, Sweden–China**

Year	2012/13	2013/14	2014/15	2015/16	2016/17
From China to Sweden					
Exchange	741	855	923	985	978
Free mover	1597	1384	1280	1416	1460
Share of all inbound to Sweden	6,8%	6,9%	6,6%	6,8%	6,8%
Share of all outbound from China*	0,33%	0,31%	0,29%	0,29%	0,29%
From Sweden to China					
Exchange	406	478	492	503	457
Free mover	108	133	128	129	94
Share of all outbound from Sweden	2,6%	2,8%	2,6%	2,6%	2,3%

Even though exchange students to some extent indicates a balance, the inbound exchange students from China to Sweden are twice as many as the outbound students from Sweden to China. But the difference in free mover students is much larger, about one order of magnitude. China receives the largest number of students from Sweden in Asia, closely followed by Japan and Singapore. However, several European countries as well as the USA, Canada and Australia receive higher numbers of Swedish students than China.

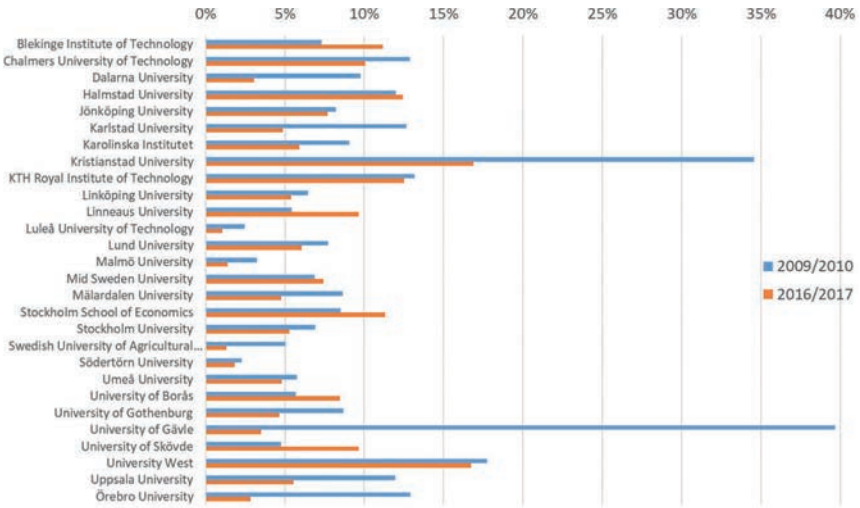
Based on data from UKÄ, it is also possible to extract a longer time series for student mobility (UKÄ, 2018). Figure 28 shows that the share of Chinese students in the total population of international students in Sweden peaked in the year 2009/2010. Here the impact of the reform that introduced tuition fees for non-European students from 2011 is clearly visible. One consequence of the reform was that the number of students from outside of Europa (e.g. China) dropped dramatically.

Figure 28: **Chinese students to Sweden as a share of the total number of incoming students**



Per institution and in absolute numbers, KTH Royal Institute of Technology hosted most Chinese students in 2009/2010 with 622, followed by Uppsala University (380), the University of Gävle (366) and Lund University (354). In 2016/2017, KTH Royal Institute of Technology still had the largest number (383), followed by Lund University (308), Stockholm University (202) and Uppsala University (194). Comparing the peak year with the latest year reveals substantial changes not only in the absolute numbers but also in the share of Chinese students in the total number of international students for some HEIs, among them the University of Gävle and Kristianstad University (Figure 29). A few HEIs have seen an increase in the share of Chinese students, including Blekinge Institute of Technology and the University of Skövde.

Figure 29: **Chinese incoming students in relation to all international students per HEI**



A rough comparison between the volumes of incoming students from China in Sweden and other countries is presented in Table 4. Here, the total number of incoming students from China according to UNESCO is divided by the country's population in 2015 (World Bank, 2017). In comparison to Denmark and Norway, Sweden receives slightly more students per capita, whereas Australia receives 20 times more students from China than Sweden.

Table 4: **Number of incoming students from China in relation to total population**

Incoming Chinese students in relation to population size	
Australia	0,472%
New Zealand	0,362%
Canada	0,170%
United Kingdom	0,140%
United States	0,091%
Korea, Rep.	0,068%
Japan	0,062%
France	0,038%
Finland	0,032%
Germany	0,029%
Sweden	0,024%
Denmark	0,023%
Switzerland	0,018%
Norway	0,013%
Austria	0,007%
Belgium	0,005%
Brazil	0,000%

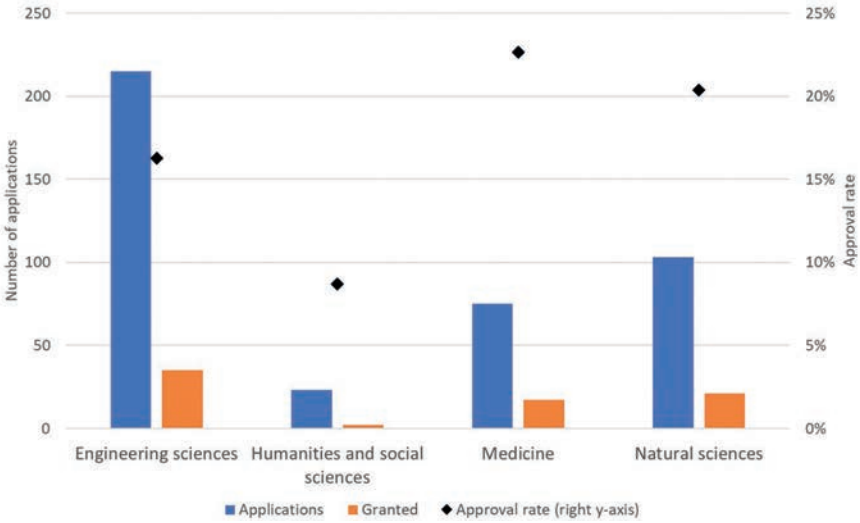
In a study of Swedish HEIs' international collaborations in education, China is number eleven in terms of the number of agreements (278). Most agreements are with Germany (1,227) and of the other ten countries above China, only the United States is located outside of Europa. Data refer to the year 2014/15 and come from a questionnaire distributed to all Swedish HEIs (UKÄ, 2015).

9. The STINT–NSFC mobility programme

Since 2015, STINT has offered a bilateral programme together with the National Natural Science Foundation of China (NSFC). The funding is for mobility only. Applications are submitted in Sweden and China, to be reviewed in a parallel process. The results of the review are compared and every year 25 new three-year projects are jointly selected for funding. From the Swedish side, the programme is open to applicants from all disciplines and in China, there is a requirement that the applicant must have research funding from the NSFC and the programme is thus limited to disciplines supported by the NSFC.

Three complete cycles have been carried out with a total of 416 applications and 75 ongoing projects. In Figure 30, the distribution over the four disciplinary classifications that STINT uses is shown for applications as well as granted projects.

Figure 30: **Scientific profile of applications to the STINT-NSFC programme**



In terms of institutions applying, there is a large difference between the countries. In Sweden, a total of 22 HEIs have submitted at least one application, and projects hosted by 14 institutions have been granted funding. In China, approximately 160 HEIs have participated, of which 51 have hosted granted projects. In Figure 31 and Figure 32, the top eleven institutions are indicated.

Figure 31: **Most active HEIs in Sweden**

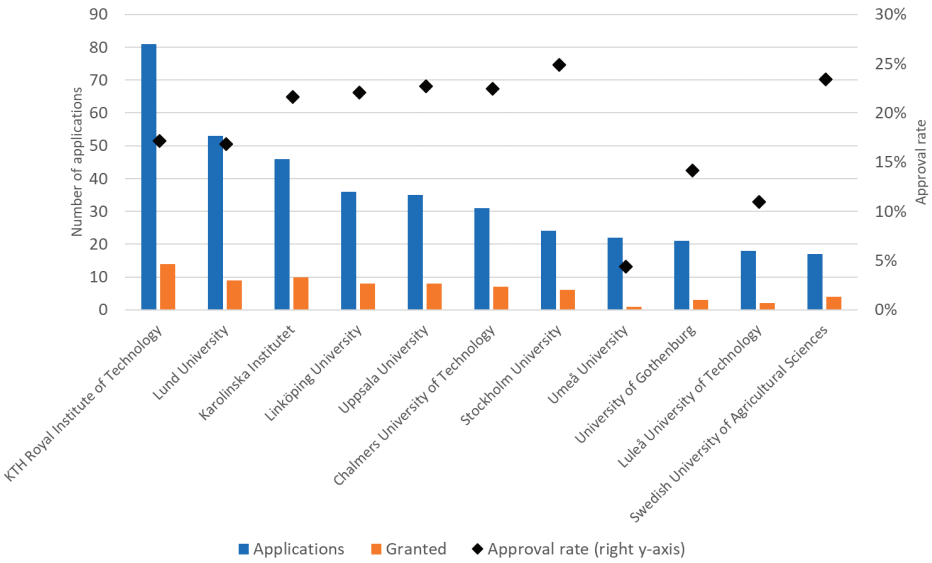
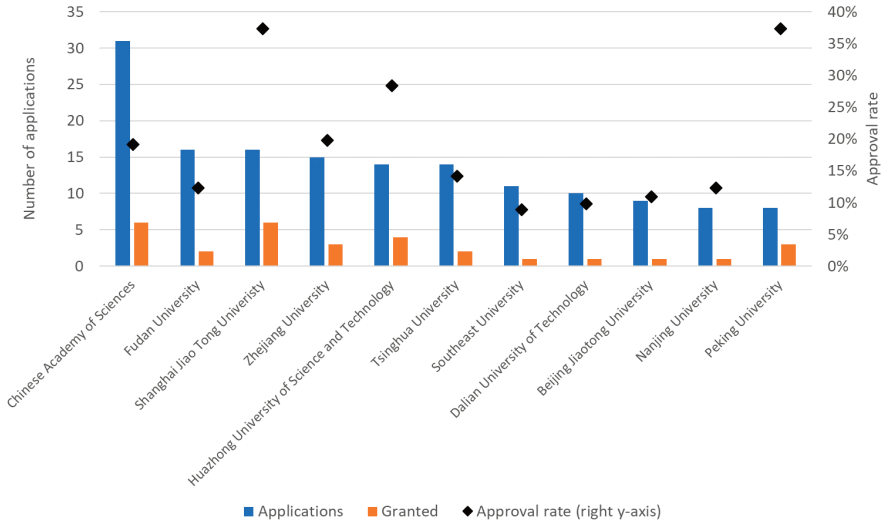
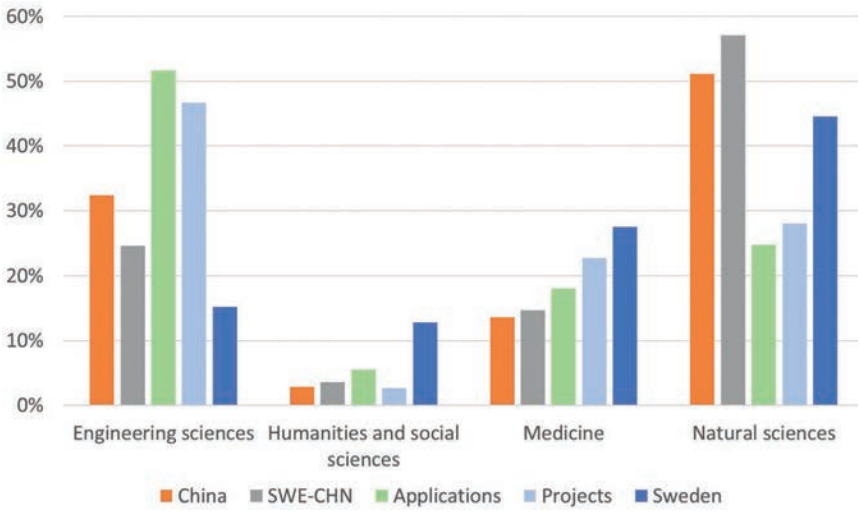


Figure 32: **Most active HEIs in China**



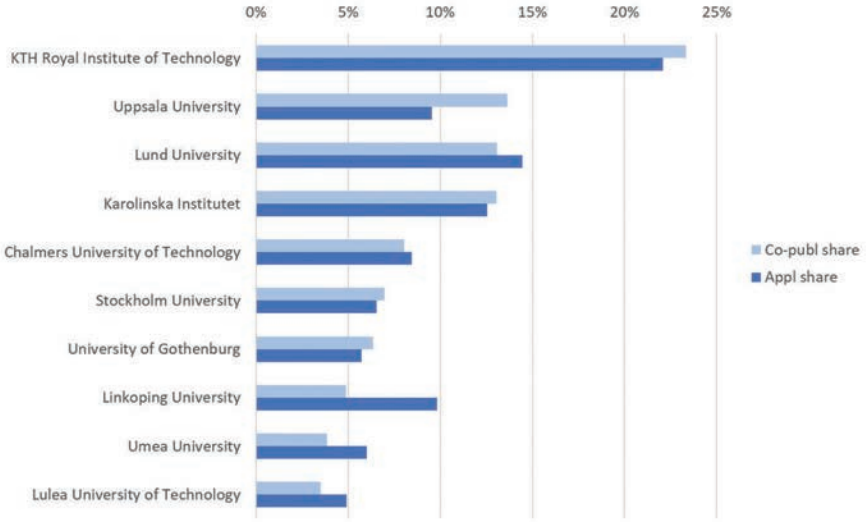
In Figure 33, the scientific profile of the STINT–NSFC mobility programme is compared to the profile of the total volume of co-publications. It shows that the programme has approximately the same distribution over the disciplines as the publications in medicine and the humanities and social sciences. Engineering sciences is overrepresented in the STINT–NSFC programme at the expense of the natural sciences.

Figure 33: **Scientific profiles of publications, applications and funded STINT–NSFC projects**



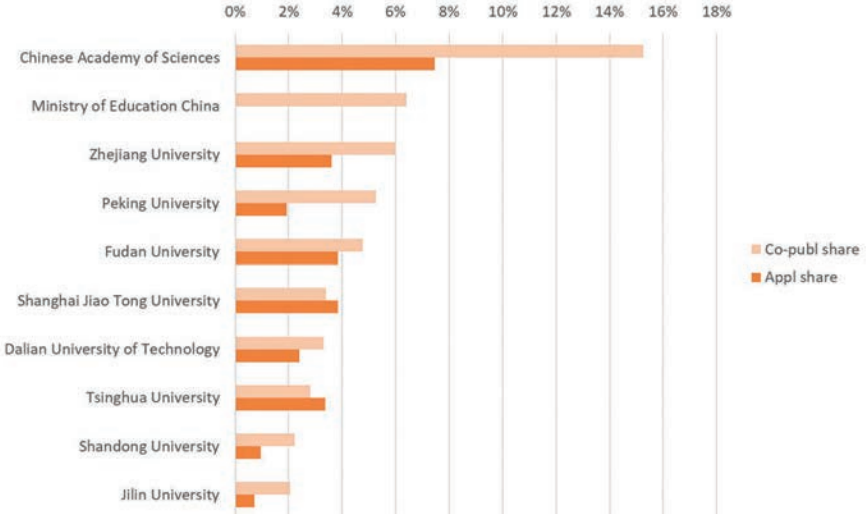
There is high correlation between the production of co-publications and the activity in the STINT–NSFC programme on the Swedish side (cf. Figure 34). Linköping University is more active in the programme than its share of co-publications suggests and Uppsala University slightly less.

Figure 34: **STINT–NSFC applications and SWE–CHN co-publications comparison: Sweden**



Among the Chinese HEIs, the differences are larger (Figure 35). However, it is not surprising that the Ministry of Education does not apply for NSFC funding. It should also be noted that many more HEIs are involved on the Chinese side in co-publications as well as in applications, which makes the comparison less relevant.

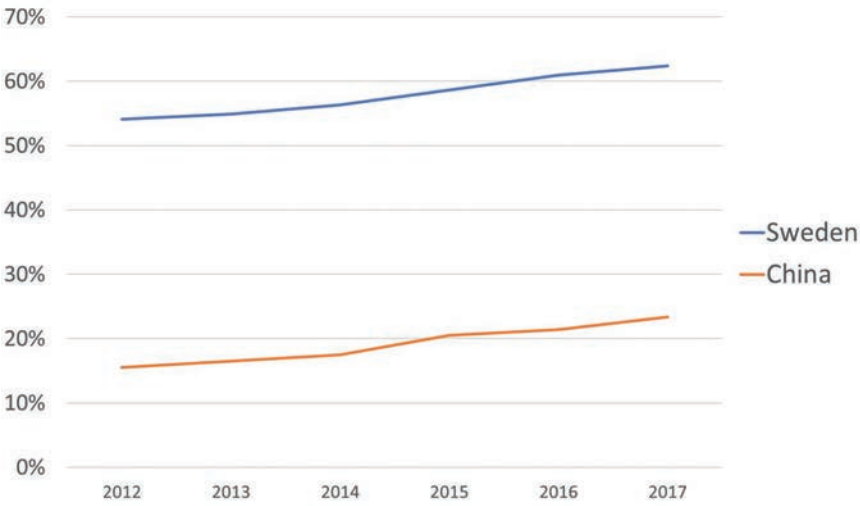
Figure 35: **STINT–NSFC applications and SWE–CHN co-publications comparison: China**



10. What does this study tell us?

The overall data indicate a rapid increase in the number of co-publications involving Sweden and China. Several factors might contribute to this increase. One factor is a global trend towards more international co-publications. Figure 36 shows that the share of international co-publications is steadily increasing in Sweden as well as in China.

Figure 36: **Shares of international co-publications for Sweden and China**



Another factor is that Sweden has hosted many Chinese students at Master and PhD level. Some of them continue as researchers in Sweden or China and their networks and language skills naturally foster collaboration between the countries. A third factor is that China's research profile centres on disciplines that typically engage in extensive international collaboration.

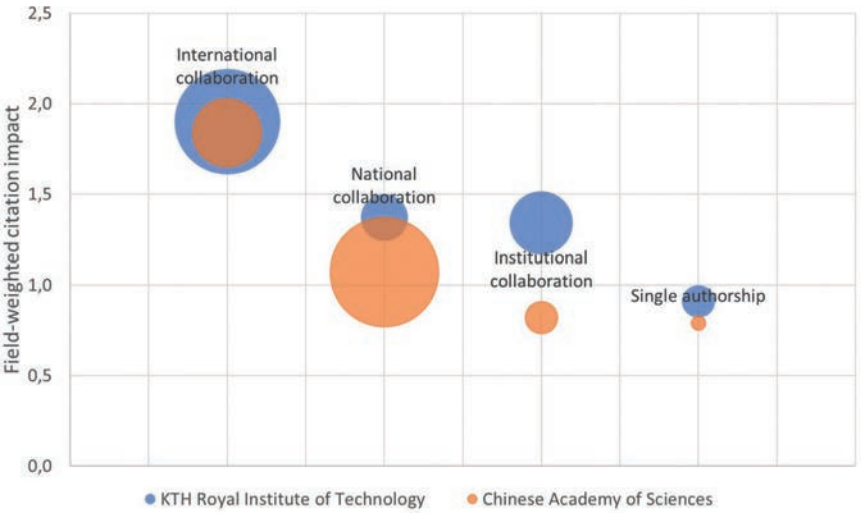
The development of Swedish co-publications with China does not differ much from that of the other countries studied. In relation to all publications involving China, Australia and Canada clearly show higher shares of co-publications with the country, as well as a higher growth rate. As the numbers of Chinese students to these countries also are high, this may be expected. However, the United Kingdom does not show the same relationship: the number of Chinese students is relatively high, but the share of co-publications with China is more modest.

The study of the scientific disciplines represented in the co-publications confirms this focus on the natural sciences, in all and particularly in the hyper-authored publications. All disciplines except the humanities show a growth over the period studied.

In terms of quality, international co-publications often enjoy slightly higher citation impact than national (co-)publications. As an example, Figure 37 shows the shares of each type of publication (bubble size) and the field-weighted citation impact it enjoys (vertical position) for the top Swedish and Chinese institutions in Sweden–China collaboration. All publications during the period 2012–2017 were included.

The bubbles for international collaboration are positioned approximately at an FWCI of 1.8 on the vertical axis for KTH Royal Institute of Technology (KTH) and the Chinese Academy of Sciences (CAS). The size of the bubble is larger for KTH, whereas CAS engages in a lot more national collaboration. Comparatively, the FWCI for CAS's international co-publications differs more from other types of collaboration than that of KTH.

Figure 37: **Relationship between type of publication and its field-weighted citation impact**



A bit more complicated comparison is presented in Figure 38. Here, the bubble size represents the volume of co-publications between Sweden and the country indicated during 2012–2017, and the position indicates

how much better the FWCI is for the co-publications in comparison to all publications involving that country. A position far to the right indicates a high relative citation impact benefit for Sweden, whereas a position at the top of the diagram indicates high relative citation impact benefit for the partner country.

Figure 38: **Relative benefit of collaboration**

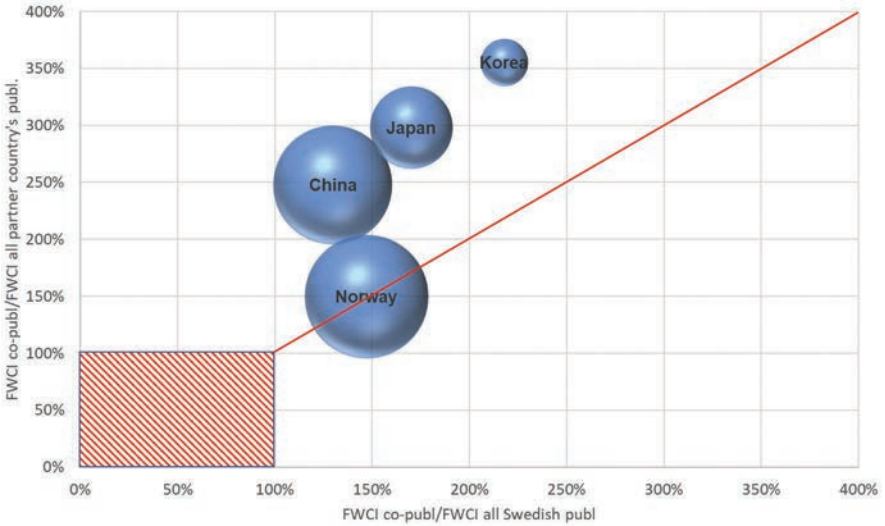


Figure 38 tells us that the number of co-publications with fewer than 100 authors is approximately the same for Sweden – China and Sweden – Norway. All bubbles are outside the red area, which means that all collaborations are resulting in higher citation impacts than the average publications for the countries. A position above the red line means that the relative citation impact benefit is higher for the partner country, whereas a position below means that Sweden benefits the most. Norway is on the red line and the other bubbles are above and thus more beneficial to the partner countries than to Sweden. Among these four countries, collaborations with Korea have been the fewest but also the most rewarding for Korea as well as for Sweden.

As the co-publications between Sweden and China give a relatively high and increasing FWCI, many of the institutions and researchers involved appear to produce high quality research. A look at the most productive researcher, Licheng Sun, confirms this, as he has an FWCI of 2.84 for

publications in 2012–2017.

The analysis highlights that several international co-publications are generated thanks to authors with double or multiple affiliations, of which at least one is in Sweden and one in China. It could be argued that this type of publication does not reflect a true international collaboration. But it could also be argued that such researchers embody an interesting and close international collaboration, as they probably have strong networks in both countries. A detailed study of the most productive researchers indicates that other researchers in China and Sweden often are listed as co-authors in their publications.

Having affiliations in two countries makes it possible to apply for funding in two systems. This might reduce researchers' dependency on mobility funding schemes.

Student mobility data show relatively small changes in the period 2012–2017. Sweden receives approximately four times more students from China than it sends to China. In comparison to other European countries, Sweden is about average when normalising the Chinese incoming student number with the size of the country's population. In comparison to countries with a strong tradition of delivering education to international students, Sweden receives small numbers of Chinese students.

11. Conclusions and recommendations

Publication data indicate that collaboration between Sweden and China has developed rapidly but not very differently from other mature research countries' collaborations with China. Sweden – China research collaboration generates publications with high citation impact. Natural sciences and engineering & technology dominate and this is also reflected in the type of HEIs in Sweden that enjoy the largest shares of co-publications with China, namely universities of technology.

The STINT–NSFC mobility programme does not appear to contribute to a change in the institutional collaboration pattern between Sweden and China, at least not on the Swedish side. However, it appears to intensify collaboration within the engineering sciences.

Given the relatively low overall volume of co-publications between Sweden and China, and the high citation impact such research collaboration yields, the obvious policy recommendation is to support continued growth. This recommendation applies to both countries, even though the relative citation impact benefits so far have been higher on the Chinese side.

On the Swedish side, one approach to supporting growing collaboration could be to involve additional HEIs. Data indicate that more than 90% of the collaboration is facilitated by 10 HEIs and that the top 4 HEIs produce approximately 60% of the co-publications. If not only publications with fewer than 100 co-authors are counted, the dominance of a few HEIs would be even stronger. Closely linked to this, ways of expanding research collaboration between Sweden and China in the humanities and social sciences should also be discussed.

Another aspect to consider is how to promote innovations emanating from these academic collaborations. The share of academic-corporate co-publications among all China-Sweden co-publications is at the same level as for all publications in Sweden and more than twice as high as for all publications in China. Given the size of the Chinese market, the economic potential for successful new products and services is very large.

Finally, student mobility and collaboration in education at all levels is another type of academic collaboration that can be further developed. Several of the large hosts of Chinese students in Sweden have drastically lower numbers of students now than ten years ago. To some extent, student mobility also nurtures research collaborations.

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The Swedish Foundation for International Cooperation in Research and Higher Education, STINT, 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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Developing an integrated platform for improved internationalisation – KI-China strategic platform

Ole Petter Ottersen, president, Karolinska Institutet

Introduction

Internationalisation enhances the performance and global competence of Swedish universities in higher education, research, and innovation. KI is committed to integrate the international perspective throughout the university and aims to pursue high quality and efficient international collaboration to strengthen its position as an internationally leading medical university.

At KI, as in most universities, current efforts to achieve this internationalization agenda are rather fragmented and rely heavily on the initiative and international networks of individual scientists, which results in low efficiency, duplication of efforts, lack of strategic planning and suboptimal usage of resources. It also entails significant risks due to poor knowledge of the milieus where international activities are conducted. To achieve efficiency and sustainability, internationalisation activities should be supported by an integrated and dynamic internationalization platform capable of assisting the activities of individual researchers, as well as promoting new initiatives of relevance for the university.

China has been blooming not only in economy but also in higher education and science during last four decades. For KI, being a passive bystander to this rapid development is no option. KI has actively engaged in Chinese higher education and medical sciences, with established collaboration with over 30 Chinese universities. KI has an increasing number of scientists involved in collaborations with China, and has trained more than 300 Chinese PhDs. The collaboration is characterized by steady increases in both quality and quantity (co-publications doubled every five years reaching about 300 co-publications in 2016). Strengthening and structuring the collaboration with Chinese academic partners is an important goal of the KI internationalization strategy. To this end, we are underway to develop innovative work methods that will allow to address the administrative and scientific challenges that arise from differences in educational and political systems.

Objectives

The overall objective is to use the Karolinska Institutet (KI)-China collaboration as a testbed for new and innovative approaches to internationalization, with particular reference to the challenges and dilemmas embedded in the recent SOU entitled “Internationalisation of Swedish Higher Education and Research – A Strategic Agenda/SOU 2018:3”. Our strategy has a significant dissemination perspective: we want to share with other Swedish universities our experiences in collaborative networking with China so that others can learn of our initiatives – the successful ones as well as those that turned out to be less successful. Our ambition is to encourage creative thinking and debate on how Swedish universities can strengthen and integrate their international operations by building a strategic platform for international collaboration.

Our future strategy will be based on three pillars:

KNOWLEDGE BANK

- To build a database/knowledge bank of KI-China collaboration through an inventory system of activity survey, data collection, and data analysis on KI-China collaboration, as well as by collecting information of national strategy/policy developments, funding opportunities, and high-impact events in Chinese science and healthcare

- To formulate Guidelines for China collaboration based on the knowledge gained from our “Risk Analysis for Academic Partnership in South China”

FACILITATION

- To provide university leaderships with factual information to support evidence-based decision on China collaboration strategies
- To promote collaboration with China by providing researchers with consultancy and guidance, and by organizing university level research workshops with selected Chinese partners, alumni-networking events, student recruitment fairs, and academic visit exchanges
- To enhance the quality of higher education by promoting exchanges and collaboration with selected Chinese partners

ASSESSMENT

- To develop tools for assessing collaboration outcomes and thus reinforce existing partnerships
- To assess the potentials of future partners
- To test new formats for sustainable and efficient collaboration with China

Goals

Our strategy will have short-term, mid-term and long-term implementation goals.

A. Short-term goal – To establish an efficient KI-China collaboration platform

This will include the following activities:

- Build a team of collaboration facilitators – the team will consist of an academic coordinator, an administrative coordinator, a KI alumni coordinator, a local coordinator based in Beijing, and a data manager. The team will be responsible for implementing the collaboration directives of the KI’s leadership, including operating the platform, presenting progress reports and management advices to KI leadership and the Strategic Council for International Affairs. The data manager will be responsible for data collection and analyses of KI-China collaboration.
- Establish a database on China collaboration – information on existing collaborations will be collected through a designed questionnaire to be circulated among KI staff. Relevant data will include information on KI faculty members engaged, collaborative research projects, doctoral student training, student exchanges, partner universities, co-publications, and granted external funding.
- Develop a portfolio of supporting activities – to collect and distribute information on the developments of education, research, and healthcare in China; to provide consultancy to KI faculty and administrative staff with regard to China collaboration; to coordinate academic visit and educational exchanges between KI and Chinese partners; to organize KI Alumni China networking events; and to organize China Faculty as an open and meeting forum for KI staff and students to exchange information, experiences, and opinions on China collaboration in education and research, as well as on Chinese culture and society.
- Develop tools and criteria for assessment of collaboration outcomes - An objective assessment of international collaboration outcome is of key importance for future improvement. We will thus setup the assessment tool for KI-China collaboration, taking into consideration of sustainability of the collaboration, project numbers and sizes, qualities of research and educational exchange, ethical and academic freedom aspects,

collaborative grants, co-publication numbers, etc. The assessment should also provide feedback to the collaborators for improvements.

B. Mid-term goal - to strengthen and establish new strategic partnerships in different focus areas.

KI wishes to cooperate with leading Chinese universities where complementary may be found.

- Stronger partnership at the national and university levels – enhanced connections with the Chinese ministries of Education/Science and Technology/Public Health and with leading Chinese universities, including Peking University, Tsinghua University, Chinese Academy of Medical Sciences, Shandong University, Fudan University, Shanghai Jiao Tong University, Sun Yat-Sen University, and University of Hong Kong.
- Broader collaboration of higher education at all levels in selected subjects and fields and with right partner universities.
- Improved efficiency and productivity of research collaboration by a synergistic combination of top-down and bottom-up approaches.

C. Long-term goal - to share the experience and knowledge gained from the project.

- Generalise and share our experiences with KI colleagues who are engaged international collaboration with other countries.
- Share the new model and positive and less positive experiences of KI-China collaboration with other Swedish universities.

Action plan

1. *National level partnership* - KI and China Scholarship Council (CSC; a division of Ministry of Education) have signed an agreement to collaborate on second and third circle education. CSC will support and facilitate the recruitment of the most competent Chinese students and trainees, while KI will team up the competent researchers, programmes, and institutions for top quality master degree and doctoral education, as well as post-doc training and senior researcher exchanges. Moreover, KI will continue its engagements with National Center of Translational Medicine (Shanghai), SYSU Cancer Center (Guangzhou), and National Center of Cardiovascular Diseases (Beijing) funded by Ministries of Public Health/Science and Technology, and play constructive roles in China's national projects of strategic importance.
2. *University level education collaboration on all three educational cycles* – KI leadership and KI-China strategic platform will formulate university strategies/guidelines and team up multiple departments to reinforce KI's fruitful educational collaboration with Chinese higher education. For the first and second cycle of education, KI and SJTUSM (Shanghai Jiao Tong University School of Medicine) will expand ongoing medical student exchange programme further into the exchange of dental medicine students. The new exchange programme will focus on the clinical rotation of dental medical students by combining the complementary strength of KI and SJTUSM dental medicine training. KI dental students will get access to vast patient numbers and varieties of dental diseases in China, while Chinese students will experience KI's well-developed clinical training system and the advanced primary dental care in Sweden. The partners will also work to promote the development of primary dental care in China and translational research on dental reparative materials. KI is also developing a new collaboration of midwifery training with Fudan University in Shanghai. The collaboration will be exerted as a contracted professional training for both midwifery faculty and midwife trainees. An important character of the educational collaboration is to introduce KI's midwifery education programme, and to emphasize the concept and advantages of

peri-natal midwife care to the current Chinese system of post-natal midwife care. On the third circle and besides KI-CSC collaborative programme, KI and SDU (Shandong University) are working out a future collaborative MD-PhD programme. SDU will choose the most competent medical students to enter the collaborative programme. Upon completing MD study at SDU, the selected students will continue their full PhD training at KI. The partnership aims to foster next generation of physician-scientists and the bridges of future Sino-Swedish collaboration.

3. *Strategic collaboration in selective research fields* - KI leadership has selected and supported KI-China research collaboration in 5 strategic research fields with the most complementary strength and highest scientific potentials. The fields include: 1) Cardiovascular research with CAMS/PUMC (Chinese Academy of Medical Sciences/Peking Union Medical College) and SDU; 2) Infection and immunity with CAMS/PUMC; 3) cancer research with SYSU and SDU; 4) Regenerative medicine with HKU (University of Hong Kong) and SJTUSM; 5) Public health with FDU (Fudan University) and SDU. The strategic research collaboration will be promoted by KI central administration, with means of, e.g., organising academic visit exchanges and high-level research symposia with Chinese partner universities. The coordinator team of KI-China strategic platform will provide information and administrative supports to individual researchers/research groups for more efficient academic exchanges and collaboration fund raising.
4. *New partnership in medical innovation* – KI-Ming Wai Lau Center in Hong Kong is the first academic institution abroad operated by a Swedish university. KI leadership has closely supervised the efficient operation of the center, and is aiming to develop the center as a novel model of internationalisation for Swedish universities. KI leadership and the coordinator team of KI-China strategic platform will work together to facilitate the formulation of the center into a base for a collaboration network with Hong Kong universities for cutting-edge research in reparative medicine, particularly translational stem cell research and development of novel biomedical technologies. Moreover, the centre will also serve as a KI “hub” abroad projecting and facilitating further academic collaboration in the great Pearl River Delta region and in the great China region. The coordinator team of KI-China strategic platform will provide coordinating services for the success of the KI “hub”.
5. *Assessments and sharing experience of KI-China strategic platform/collaboration* – KI-China strategic platform will coordinate/organize annual reviews of ongoing KI-China educational exchanges and strategic theme research collaboration, as well as the performance of KI-China strategic platform per se. The results will be reported to KI leadership and the Strategic Council of International Affairs who will give instructions for further enhancement of KI-China collaboration. Moreover, coordinator team of the platform will organize China Faculty meetings as an information and experience sharing forum for KI researchers and administrative staff engaged in international collaboration with China and other countries. From the second year of the project, the coordinator team will organize symposia of internationalisation with participants from other Swedish universities. We wish to share with and learn from other Swedish universities with regard to new collaboration models and experiences of success, imperfectness, and pitfalls in international collaboration.

Risk analyses

The present proposal of KI-China strategic platform involves medical education, translational research and medical innovation. There are differences in Swedish and Chinese laws and regulations on these regards. The differences should be observed, and the proper handling of the differences needs to be well discussed and executed in each collaborative projects. The collaborative projects should be carried out with clearly defined research tasks and

resource inputs of each partner, as well as clarified ownership of intellectual properties, all of which should be discussed, agreed beforehand, and included in the collaboration agreements.

Sound research ethical practice is of fundamental importance in our international collaboration. The project will make all efforts to ensure that KI and Chinese collaborators practise the same international ethical principles, and observe both Swedish and Chinese ethical regulations. The practice of research ethical principles may differ and should thus be carefully discussed and executed with the same recognition. Moreover, academic freedom is a cornerstone in Swedish international collaboration. KI-China collaboration should therefore be implemented with full academic freedom for both KI and Chinese collaborators.

Significance

The building of a platform for international collaboration with China as a test case will help us develop operation procedures that may be implemented also by other Swedish academic institutions. The key features of our strategy are: i. By establishing a database of current collaboration, their funding instruments and outcomes we will develop a fact-based strategy for internationalization; ii. By developing a support system capable of providing information on local regulations, funding opportunities and opportunities for mobility, we will enhance collaboration efficiency and the quality of the collaborative outcomes; iii. By coupling the promotion of international collaborations with a structured risk analysis and the development of suitable operation guidelines, we will ensure that the collaboration is firmly based on scientific quality and ethical standards.

Challenges for China Research and State of the Field in Europe: Lessons for Sweden

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Introduction

The field of China studies in Sweden as well as in Europe has since the 1980s developed from classical Sinology to increasingly focus on contemporary society. This development is due to changes in China as well as changes within academia in Europe. China's reform and opening up policy, rapid socio-economic changes and growing global role and impact on world economy, have spurred increasing attention among scholars and students within different disciplines. At the same time, the field of Sinology itself and language institutions have also changed and come to address more contemporary issues. Interdisciplinary educational programmes and institutions that focus on contemporary China (or Asia more generally) and sometimes combine language and area studies have been established in many countries. The improved access to data and new opportunities for conducting research in China, including increasing collaboration with Chinese scholars and universities, have helped pave the way for more in-depth research on a range of topics, resulting in a growth of publications and the rise of a new generation of China scholars.

While developments in the field of China research have been impressive since the 1980s, there are many challenges and new issues that need to be addressed. One challenge obviously still is China's authoritarian political system that has a negative impact on scholarship in the country as well as on scholarship abroad, and where recent developments under President Xi Jinping are cause of grave concern. Another challenge relates to the higher education section in European countries and the organizational and institutional set-up of universities that sometimes prevent new approaches and interdisciplinary research/education. The situation varies between countries and even among universities within one country.

The following brief report aim to address some of the trends, challenges and needs, and argues for a strengthening of research on China in Sweden at a critical juncture in time in order to meet new demands. It provides a brief overview of challenges in China and the state of the field and new developments in Europe with a particular focus on the Nordic countries. It pays attention to some interesting cases of relevance to Sweden while acknowledging underlying differences among countries and obstacles in terms of funding and university organization. The report builds upon the author's own experiences and insights from some earlier works on China research in Europe (for example Ash, Shambaugh, and Takagi 2007) and other reports, governmental reports on Sweden's engagement with Asia (for example Framtiden med Asien 1998), and a recent report by two German think tanks, GPPi and MERICS, that outlines China's growing influence in Europe (Benner et al 2018). The latter report calls for strengthening "high-caliber, independent China expertise" within think tanks and universities as well as collaboration among scholars in Europe in order to meet the challenges of a more assertive China. While China's more assertive positioning and influence in Europe and globally is one reason for strengthening critical research (see also Godemant and Vasselier 2017), it should be stressed that there are also many other reasons for why it is imperative to study the contemporary Chinese society. China's development for example challenges many understandings and theories within the humanities and social sciences. Furthermore, understanding

developments in one of the world's largest countries is of an academic and wider human interest regardless of any pragmatic considerations, at the same time as China and Europe/Sweden face many of the same global challenges and therefore also benefit from collaborative research.

Trends and challenges

Developments with respect to research on and in China are complex, challenging, and sometimes contradictory. China's economic rise and impact on world economy, in particular its innovative tech companies, growth of FDIs and companies abroad, and the One Belt, One Road Initiative (BRI) that involves huge infrastructural projects, have generated both interest and concern among policymakers, companies and the general public in Europe. At the same time, China's investments in higher education, R&D, and innovation, have attracted both the attention and admiration of European governments, policymakers and the higher education sector. Many scholars and departments within the technical, natural sciences and medical fields have been particularly attracted to and interested in collaboration with China as it is in the forefront in many fields and Chinese collaborators have significant resources. Many Chinese students within these fields are also studying at European universities. Concomitant with this development we however see an increasing concern among China scholars within the humanities and social sciences. This group is more exposed to and aware of how academic freedom is curtailed within Chinese universities, and how censorship and self-censorship impact research on social, political and economic issues. They are also more likely to themselves experience these restrictions when doing fieldwork and collaborating with Chinese colleagues. This creates a gap in perception and awareness among scholars working with Chinese universities, as well as difficult ethical choices for scholars, universities, funding agencies and governments who are eager to have close connections with Chinese universities and advance scientific knowledge of common interest. It is therefore imperative to strengthen knowledge of the socio-political context within in which the higher education sector operates in China, including the natural sciences, technical subjects and medicine and collaboration with these fields.

Since coming to power in 2012/2013, Xi Jinping has emerged as the strongest political leader since Mao Zedong. During his term in office he has cracked down on civil society and the media, declaring the Internet an ideological battleground, while also strengthening ideological control in universities and curtailing academic freedom (Perry 2015; Zhao 2016; Benner et al 2018). Xi Jinping has now entered his second period in office (2018-2022), and, as a result of constitutional changes passed by the National People's Congress in March 2018, has possibilities to stay on in power beyond that time period. The tightening control of institutions of higher education and worsening situation for academic freedom is thus likely to continue and will also have an impact on scholarship abroad, resulting in increasing difficulties within some fields to engage in collaborative projects and undertake fieldwork and surveys. Another trend is China's more assertive interference in foreign academic scholarship, including setting up Confucius institutes and establishing think tanks (Benner et al 2018). The most notorious cases to date have been the pressure put on foreign publishing houses, such as Cambridge University Press and Springer, to self-censor in order to have a presence in China (Eise 2017). At the same time there have also been reports, particularly from Australia, of Chinese students being vocal in objecting to critical discussions of China's development in classes at universities and at other public events (Benney 2017). Given China's attempt to influence academic

scholarship and ability to push research in certain directions through funding it is crucial that scholars in Sweden and elsewhere continue to engage in critical research on important topics, and that research and education on China is strengthened at Swedish universities. There is also a need for more collaboration and discussions on academic freedom in China by European universities, professional associations, and individual scholars across disciplines.

State of the field in Europe

In a 2007 overview of research within the fields of Chinese politics, economy, and foreign and security policies in Europe, the authors draw attention to new promising developments and different foci of research while also pointing out its uneven development across European countries (Ash, Cabestan and Möller in Ash, Shambaugh and Takagi 2007). The book remains to date the only comprehensive survey of the field of contemporary China research in Europe. However, as the authors already then pointed out, it did not cover all subjects and also left out many countries (for example southern Europe, East and Central Europe as well as the Baltic states). There have been several developments during the past ten years, including establishment of new institutions, emerging fields and topics, as well as a growing number of researchers and Chinese scholars and students at European universities. It is not possible within the framework of this brief overview to cover all countries and institutions or do all of these developments justice, but some developments and new institutions and focus areas will be pointed out as they illustrate some major trends and lessons for Sweden.

1) Institutional developments and national trends

It is probably fair to say that countries such as Germany, France and the UK that already in 2007 had a high concentration of academic institutes focusing on contemporary China, as well as many individual scholars at other institutions, remain the leading research nations on China in Europe. However, we have also seen impressive developments in other countries such as for example Finland, which has developed a special focus on Chinese law (https://blogs.helsinki.fi/chinalawcenter/). Other countries such as Austria, Italy and Switzerland that were quite neglected in the 2007 study has developed particularly strongly in certain fields e.g. law (the University of Turin and the University of Vienna), politics (University of Vienna), media and film (State Universiy of Milan and the China Media Observatory at Università della Svizzera Italiana, Switzerland, http://www.chinamediaobs.org/), and labour issues (Venice University).

In the following the report will focus on research and education on contemporary Chinese society and will thus not address more traditional fields of Sinology such as language, history, literature and cultural studies. However, it needs to be stressed that it is central to be firmly grounded in knowledge of Chinese history, culture and language in order to understand contemporary socio-economic and political developments (see e.g. Barmé 2008).

In France, education and research on contemporary Chinese society remains clustered in Paris and Lyons. The two major research institutes are the Centre for International Studies and Research (CERI) of the French National Foundation for Political Sciences and the Research Centre on Modern and Contemporary China of the Higher School in Social Sciences (EHESS). Although mainly publishing in French, a range of French scholars also publish in English on politics, law, and civil society. One interesting and important French institution is the *Centre for Research*

on Contemporary China (CEFC) established in Hong Kong in 1991 (http://www.cefc.com.hk/centre/about/). It is one of 27 research institutes abroad funded by the French Foreign Ministry and a unique feature among European countries. It also has branches in Taipei and Peking and has in total some six researchers, organises events as well as provides scholarships for Ph.D. candidates. It publishes *China Perspectives* (also in English since 1995) that has developed to become an important journal in the field of contemporary China studies.

In Germany, the GIGA Institute for Asian Affairs in Hamburg (https://www.giga-hamburg.de/en/giga-institute-of-asian-studies), established already in 1956, remains an important centre for research on China and also houses the open access journal *Journal of Current Chinese Affairs* that developed from the German language monthly journal China Aktuell. Likewise, the East Asian Institute of the University of Duisburg has developed a strong profile on Chinese politics in particular. In recent years the University of Cologne has developed a strong focus in the field of Chinese law and society with the recruitment of Björn Ahl and Susanne Brandstäter. Freie Universität Berlin also has a strong focus on contemporary Chinese law and politics as well as environmental issues (including scholars such as Klaus Mühlhahn, Katja Levy, Elena Meyer, Genia Kostka https://www.fu-berlin.de/en/einrichtungen/fachbereiche/fb/gesch-kultur/orient/sin/index.html). Many other universities such as for example University of Tübingen are also particularly strong in the fields of Chinese politics and economics. Furthermore, many more traditional institutions of Sinology address new aspects and flows of ideas and cultural exchanges, including has developed more transregional approaches to the study of China (and Asia). Special mention should be made of the University of Heidelberg, its cluster of excellence Asia and Europe in a Global Context (http://www.asia-europe.uni-heidelberg.de/en/) and Centre for Asian and Transcultural Studies (CATS) https://www.cats.uni-heidelberg.de/ , and the Global and Transregional Studies Plattform at the University of Göttingen (https://www.gts-goettingen.de/).

One of the newly established research institutes in Germany is the Mercator Institute for China Studies (MERICS), which was established in 2013 as a Stiftung Mercator initiative. It today employs some 35 people and has rapidly become one of the largest international think tanks providing more policy-oriented research on a range of issues related to contemporary Chinese society and China's global role. What is interesting is that it not only addresses foreign policy issues and general political topics but also social issues and new and hot topics such as digital developments and the environment. It collaborates with universities in Germany and elsewhere as well as has a fellowship programme that brings German and international scholars to Berlin. What is interesting from a Swedish perspective is that MERICS is funded by a private foundation. Many other German foundations such as Robert Bosch Stiftung, Heinrich Böll Stiftung, and Konrad-Adenauer Stiftung have also over the years engaged in support of research and conferences on China as well as developed different collaborative projects. Sweden in contrast lacks this kind of private foundations and initiatives to support either research in universities or independent research institutions on China.

The UK has a long tradition of Sinology with renowned institutions such as the School of Oriental and African Studies (SOAS), Oxford University and Cambridge University. In a 2016 report on the state of the field of China studies in the UK it was mentioned that as many as 35 research institutes offered some kind of courses related to China (BACS 2016). In 2002, the Contemporary China Studies

Program was established at Oxford with a grant from the Leverhulme Trust, which runs seminars and workshops and host postdoctoral fellows and visitors. In 2008, the Oxford China Centre was created as a hub to further collaboration among scholars at the university and host different activities (http://www.chinacentre.ox.ac.uk). Its new building (2014) has a library that houses parts of the Bodleian Libraries' Chinese book collection. Other leading centres for research on China includes University of Leeds, University of Sheffield and University of Nottingham. The latter has a China Policy Institute that publishes policy briefs and blogs about contemporary China. The China Institute established at King's College London in 2008 was re-named the Lau China Institute after receiving a major donation from Dr Lau Ming-Wai, a King's College London alumnus in Hong Kong. It today conducts extensive research and also has a large number of affiliates at other departments within the university. In 2017, the University of Manchester got a donation from Dr Lee Kai Hung, a Hong Kong businessman, philanthropist and honorary graduate of the university, that enabled the establishment of the Manchester China Institute (https://www.mci.manchester.ac.uk/). At the University of Glasgow, the Scottish Centre for China Research, brings together scholars from different universities who are engaged in research on contemporary China (https://www.gla.ac.uk/schools/socialpolitical/research/sccr/).

Other institutions in the UK include Chatham House (https://www.chathamhouse.org/about/structure/asia-pacific-programme/about), Great Britain China Centre (http://www.gbcc.org.uk/about-us), and China Dialogue (https://www.chinadialogue.net/), that provide valuable and updated information on contemporary China and organise different events.

From a Swedish perspective it is interesting to see the important role played by private donations, especially from alumni and wealthy businessmen, supporting research and chairs (for example at least two on China at Cambridge University), although this dependency may create problems when the funding come from people with vested interests or backing from China. Another striking feature is the large number of Ph.D. students enrolled in programmes on China and the high percentage of Chinese students among them.

In the Netherlands, the Sinologische Institut at Leiden University and the International Institute for Asian Studies (IIAS) are two of the leading institutes with a focus on contemporary China, although the latter more in the form of guest researchers. Leiden has attracted a number of international scholars and has in recent years also built up expertise in the field of studies on digital developments (Florian Schneider, Rogier Creemers and Daniella Stockmann until she moved to a position in Berlin). At Delft University of Technology, Professor Peter Ho is a leading scholar on land issues in China.

2) European networks and associations

One of the oldest associations devoted to Chinese studies is the European Association for Chinese Studies (EACS) established in 1975 with around 1200 members (http://chinesestudies.eu/). It arranges a bi-annual conference that however still is quite heavily dominated by more traditional Sinology, such as linguistics, literature, pre-modern history, archaeology and art, although having an increasing number of panels devoted to contemporary issues on politics, economics, media and other social issues. It runs a website that provides valuable information about upcoming conferences and events in Europe, as well as distributes a newsletter and at times also organises summer schools. Another network is the International Conference on

Agriculture and Rural Development in China (ICARD) that grew form a European network (ECARDC) and took the new name in 2017 to underline its international dimension (http://www.icardc.org/about/). In 2006, motivated by a research project on law implementation in China, and with funding from SSAAPS (discussed below), the Centre for East and South-East Asian Studies arranged a network meeting with scholars in Europe, China and the US working on law from an interdisciplinary perspective. The network resulted in the establishment of the European China Law Studies Association (ECLS) that today has some 300 members from around the world (http://www.ecls.eu/). Since 2007 it has arranged annual conferences in different cities (including Hamburg, Bologna and Turin, Vienna, Copenhagen, Oxford, Helsinki, Hong Kong, Cologne, and Rome).

In 1997, the European Alliance for Asian Studies was established by GIGA, IIAS, and NIAS (https://asiascholars.eu/). Today the alliance has a total of 12 members (including the Centre for East and South-East Asian Studies at Lund University). Its aims to "build high-quality border-transcending research, teaching and public services, including scholarly networks within Europe and beyond. It also encourages linkage between academic and non-academic actors, aiming to develop a model of how Asian studies in European academia could respond to political, economic and heuristic shifts and contexts." Its website highlights member institutions' events, courses, and research projects.

At the EU level, the EU-China Academic Network (ECAN) was established in 1997 with the goal to bring together specialists on contemporary China working in EU Member States. It aimed to foster a community among EU specialists on contemporary China in universities and research institutions, share research findings on China's current and future development and seek ways of stimulating collaborative research, and to promote links between academic experts and European policymakers (Ash 2007). The network was after a break restarted in 2007 (ending in 2013) and administered by a consortium consisting of the School of Oriental and African Studies (SOAS), the Asia Research Centre (CBS), the Institute for East Asian Studies, University of Duisburg-Essen and the Centre Asie, Institut Francais des Relations Internationales-IFRI. It among other things commissioned policy briefs and organised conferences.

At the national and regional level there exist a range of associations such as the British Association for Chinese Studies and the Nordic Association for China Studies (https://nacsorg.wordpress.com/) that organise conferences and other events.

3) European funding and collaboration

It is difficult to get a good overview of how many EU grants, including Horizon 2020, ERC grants, and Hera projects, have been awarded for research on China. However, it is quite interesting that several ERC grants recently have been awarded for research on different aspects of the Chinese digital society. In 2011, David Miller at LSE got a grant that aimed to studied social media in different parts of the world and also involved two China scholars addressing social media in rural respectively urban China. In 2014, Daniella Stockmann, then at Leiden University and today at the Hertie School in Berlin, received a ERC starting grant focusing on the Chinese Internet, and in 2015 Christian Göbel, Vienna University, received a ERC grant looking into e-governance and protest. In 2017, two scholars at Stockholm University also received a ERC grant to study social media in China.

Other major recent joint European projects for example include a project on new forms of political representation involving scholars from Germany and France (

https://representativeclaims.wordpress.com/about/), and a project with scholars from Germany, France, the UK and the Netherlands working on immigrants in China (https://immigrantchina.net/about/). These projects rely on different national and university research funding.

Given the fact that the research environment at many European universities and in many countries is quite small, networking and collaboration, in particular in order to help create an environment for Ph.D. students, is often seen as crucial. Special Ph.D. workshops have become a feature in the work of many national and regional associations and institutions, for example the British Postgraduate Network for Chinese Studies, the Nordic Association of China Studies and the Nordic Institute of Asian Studies Nordic Council. The *Made in China* journal (discussed below) organised its first summer school devoted to labour issues in 2017, and is in 2018 organising its second summer school in Italy.

4) Communication and publications

The oldest China focused journal in Europe, the *China Quarterly* was established in 1960. It remains one of the most authoritative journals in the field, and it was of great concern to scholars when the news broke in 2017 that Cambridge University Press had given in to Chinese demands to delete a range of articles on more sensitive topics for the Chinese audience. The press eventually gave in to the pressure and critique and after some astute work by the current editor. However, it clearly showed how market concerns may lead even established publishers to give in to censorship. In Germany, the *Journal of Current Chinese Affairs* has become an important journal, whereas another European based journal is *China Information*. Three journals address different legal issues: the *China-EU Law Journal* published by the China-EU law school since 2013, the *China Law and Society Review* established in 2016 (Brill), and the *Chinese Journal of International Law* established in 2010 (Oxford University Press). A recent journal that although not exclusively addressing China has a strong China focus through one of its editors, Florian Schneider, is *Asiascape: Digital Asia* (Brill) established in 2014. As the name indicates it focuses exclusively on articles exploring different aspects of the digital in the realms of social, cultural, and political developments.

One of the interesting new additions in the field of journals devoted to contemporary China is the *Made in China* journal, an open access journal that was initiated by several postdoctoral scholars based at the China in the World Center at Australia National University in 2016 (http://www.chinoiresie.info/made-in-china-quarterly/). They include Ivan Franceschini who graduated from Venice University and is a Marie Curie postdoctoral fellow currently based at ANU and Venice, and Nicholas Loubere, who got his Ph.D. from Leeds University and in 2016 was a postdoctoral fellow at ANU, but since January 2017 is employed at the Centre for East and South-East Asian Studies, Lund University. The journal has within a short period of time become an essential source for those interested in in-depth information about developments in the field of labour, rights and civil society, and the journal today receive some 10,000 downloads for each issue.

5) Emerging topics and trends

Developments in China have an influence on emerging research fields at European universities. One of the strongest such trend is in the field of Internet studies that has developed as digital technologies now permeate how Chinese people work, communicate and play, as well as how the state rule and conduct ideological work.

Among the first groups of researchers in Europe were Jens Damm and Gudrun Wacker in Germany and Johan Lagerkvist in Sweden. In recent years more individual scholars and groups of scholars have begun to study different aspects of the Chinese digital society. They for example include a group of seven scholars that all originally were based at the Centre for East and South-East Asian Studies (https://www.ace.lu.se/research/research-clusters-and-research-projects/digital-china). Other larger projects include Daniella Stockmann and her collaborators in the ERC funded project Authoritarianism 2.0 (initially based at Leiden University), Florian Schneider and Rogier Creemers (Leiden University), and Christian Göbel and his team at Vienna University. Other topics that have received increasing attention are issues related to the environment with scholars establishing projects in different universities (recent larger projects include one on low carbon innovation in the UK https://steps-centre.org/project/low-carbon-china/ and a project on pollution and climate change at Oslo University http://www.hf.uio.no/ikos/english/research/projects/airborne-pollution-china/). Many other topics also receive scholarly attention, including gender, migration, civil society developments and minority studies. The One Belt, One Road Initiative have also received increasing research interest with Oxford University establishing the first research centre on the topic (https://www.law.ox.ac.uk/one-belt-one-road). In Sweden, the Stockholm International Peace Research Institute (SIPRI) has initiated a project on the One Belt, One Road Initiative (https://www.sipri.org/news/2017/new-sipri-research-21st-century-maritime-silk-road), and a new research network, Stockholm Belt and Road Observatory, is just about to start.

6) Nordic universities, collaboration and trends

The establishment of the Nordic Institute of Asian Studies (NIAS) in 1968 with funding from the Nordic Council of Ministers is an example of early Nordic collaboration in the field of Asian studies (http://nias.ku.dk/what-nias). The institute has played an important role over the years, hosting several generations of Nordic scholars, running visiting scholars programme and a library (until it was integrated with Copenhagen University), arranging conferences and hosting master students and Ph.D. students. NIAS is also home to NIAS Press that has published the works of many Nordic scholars. Since 2005 NIAS is a part of University of Copenhagen (institutionally placed at the Department of Political Science). NIAS has in recent years seen cuts in its Nordic funding, and today only has few permanent researchers with only one working on China. It remains partly funded by the Nordic Council of Ministers, in addition to receiving funding from the University of Copenhagen and 23 Nordic member universities through what is called NIAS Nordic Council (NNC). It is currently facing further cuts and an out-phasing from the Nordic Council of Ministers, something that would seriously threaten the institution and Nordic collaboration. One important feature is NIAS LINC, the library and information centre, which provides valuable data bases, journals and newspapers, including in Chinese (for example CNKI) to member universities. No Nordic or Swedish university would probably be able to shoulder this costs on its own, and member universities have in the last two years been vocal in their support of NIAS and the services it provides. The NIAS NNC also holds annual conferences and Ph.D. workshops on Asia that are hosted by the different member institutions. They are international in scope and provide a good platform for the scattered Nordic community of China (and Asia) scholars.

Another example of Nordic collaboration is the Nordic Centre at Fudan University, Shanghai. It is a collaboration between 25 member institutions in

Denmark, Finland, Iceland, Norway and Sweden (http://www.nordiccentre.net/). Although having multiple focuses, for example being a platform for Chinese students and scholars who study the Nordic countries, it has played an important role for Nordic students and scholars studying China. The Nordic Centre thus provides funding for conferences and also serves as a host institution for Nordic scholars.

In Denmark, China research is concentrated in Copenhagen, Aarhus and Aalborg. In 2008, University of Copenhagen launched a new research initiative entitled Asian Dynamics (ADI), with the aim to position the university more strategically in the field of Asian studies and with an explicit acknowledgment that a narrow disciplinary focus does not suffice in order to capture the complex changes in Asian countries (Køpenhavn Universitet 2008). In the proposal it was stated that the aims were to create "a platform for developing new competencies at the University of Copenhagen based on research on social, economic, political, cultural, and religious complexities in Asia and their rich historical, philosophical, and intellectual underpinnings." The ambitious initiative was launched jointly by the humanities and social science faculties and included annual investments of 6,5 million DK for positions, conferences and new cross-faculty courses. Although Copenhagen at the time already had quite a large group of scholars focusing on Asia in various departments (around 43 positions), the new initiative meant recruitment of professors in different disciplines (anthropology, political science, economy) with a focus on Asia. Currently ten associate and full professors are employed with partial or full funding from ADI, one with an explicit focus on China and at least another also addressing China. Copenhagen has recently seen some cuts in funding in the humanities that also has affected Asian studies. However, it has quite a lot of Ph.D. students and postdoctoral scholars working on Asia at different departments (https://asiandynamics.ku.dk/english/research/postdocphd/). In 2013, The Fudan-European Centre for China Studies was established in partnership with the University of Copenhagen and based at NIAS. The Centre is a strategic initiative of Fudan University to advance China studies in Europe and the first such centre to be established in Europe. It is headed by a scholar from Fudan University and hosts guest scholars, organise seminars and other events (https://www.fudancentre.eu/our-mission/).

Another ambitious Danish initiative is the China-Danish Center established in 2010 (http://sdc.university/about/about-sdc/). It is a partnership between eight Danish universities, the Chinese Academy of Sciences (CAS) and the University of Chinese Academy of Sciences (UCAS) with the aim to increase collaboration and student and research mobility between China and Denmark. It has several affiliated masters programmes and employs many Ph.D. students in the fields of life sciences, food and health, social sciences (welfare and innovation management), nanoscience, sustainable energy, water and environment.

In Norway, the major centre for research on China is the Department of Culture Studies and Oriental Languages at the University Oslo, although there are researchers at other institutions such as for example the Fridtjof Nansen Institute (on environment in China). In Finland, the major centres include the Centre for East Asian Studies at the University of Turku, and the Department of World Culture at the University of Helsinki, which also houses the Finish China Law Centre. In addition, the Finnish University Network for Asian Studies, organises courses and events and involve scholars at different universities in the country (http://www.asianet.fi/about-us/).

China studies in Sweden

Sinology in Sweden dates back to eminent scholars such as Bernhard Karlgren and a bit later Göran Malmqvist. Their influence is still felt and much work on China continues to take place at language departments, first mainly at Stockholm University, Lund University and Gothenburg University, and later also Uppsala University. Today research on China is in addition mainly concentrated to the Centre for East and South-East Asian Studies, Lund University, the Stockholm China Economic Research Institute, the Swedish Institute of International Affairs (UI), and the Stockholm International Peace Research Institute (SIPRI), with individual scholars at other departments and universities.

The second generation of China scholars who took up positions, or were promoted as, professors in the late 1980s and early to mid-1990s, mostly focused on history and literature. They include Torbjörn Lodén (Stockholm) working mainly on literature and history of ideas, Lars Ragvald working on literature but shifting his interest to work on a dictionary (Lund), Roger Greatrex working on Song history (Lund), and Michael Schoenhals working mainly on the Cultural Revolution and more generally on pre-reform PRC history (originally in Stockholm and then in Lund). The former three have now retired. In the 1990s, there emerged a new group of scholars and Ph.D. students who addressed diverse topics, but as they took their degrees at language departments at Stockholm and Lund still mainly addressed literature, language, culture, and history. (Uppsala only began offering a Ph.D. programme in 2017 and their first candidate also focuses on literature.) Of those who have received their Ph.D. since the 1990s, two are today professors at Uppsala University working on literature (Lena Rydholm) and minorities and minority languages (Joakim Enwall), two are lecturers at Gothenburg University working mainly on poetry and intellectual history (Martin Svensson Ekström) and missionary history and religion (Fredrik Fällman), one is professor at Lund University working on topics such as human rights, media, Internet, cultural heritage, and documentary film (Marina Svensson), and one is professor at Stockholm University working on China's global role, Internet, and civil society developments (Johan Lagerkvist). Today there are very few Ph.D. candidates in any of the language departments. In Lund there is currently only one Ph.D. student enrolled, in Stockholm there are two, and in Uppsala only one.

It was only in the late 1990s that the first Ph.D. students working on China were recruited within other disciplines and departments than the language departments. Three Ph.D. students defended their thesis in the field of political science (one in Lund and two in Uppsala), one received his degree in peace and conflict studies (Gothenburg), and one got his Ph.D. in law (Lund). It is difficult to know how many Ph.D. candidates working on contemporary China are enrolled in or recently have graduated in different departments. To the best of my knowledge, and the figure might be slightly higher, in the last ten years one student graduated from global studies (peace and conflict theory) at Gothenburg University, one graduated from the department of political science at Stockholm University, one graduated from the department of political science at Uppsala University, two from the department of sociology at Lund University, one from the department of political science at Linnaeus University, one from the department of anthropology at Stockholm University, and one from the department of economics at Gothenburg University,

whereas three are currently enrolled in the department of sociology, respectively at the school of social policy at Lund University.

Currently Lund University probably has the highest number of researchers working on China in Sweden: four (plus one postdoctoral fellow) at the Centre for East and South-East Asian Studies, two at the sociology department, one at the School of Economics, and two at the language department.

It is interesting to note that Sweden has seen a quite strong trend of recruiting German scholars working on China, which shows both the strength of China research in Germany (and possibly a lack of positions there) as well as the lack of Ph.D. students in Sweden and few possibilities for young researchers in Sweden to focus on China. At the Centre for East and South-East Asian Studies at Lund University, for example, since 2006 four out of eight postdoctoral fellows recruited to work on China have come from Germany (one with a Ph.D. from Leiden although a background in undergraduate studies in Germany), whereas the other four came from respectively China (two), Denmark, and the US. A professor with a focus on Chinese economy at Lund University was also recruited from Germany, whereas one professor and one lecturer at the Department of Asian, Middle Eastern and Turkish Studies at Stockholm University came from Germany. Looking at other international recruitments, to the best of my knowledge and excluding Chinese language teachers, one lecturer has been recruited from Norway (Lund University), one lecturer from the UK (Lund), and another lecturer from Italy (Gothenburg University), in addition to an American anthropologist and professor working on China but not recruited for her area expertise (Gothenburg University). Three of the four Ph.D. students recruited to language departments are also internationally recruited, whereas three currently working in other departments at Lund University also are internationally recruited. While the international recruitment in the field of China studies is very positive it may also very well reflect the fact that few Swedish students are encouraged to work on China at the undergraduate and master level or are encouraged or able to do a Ph.D. on China.

There have been some attempts to establish larger research environments in the form of centres or networks over the years. Already in 1983 the Centre for East Asian and Pacific Studies (CEPAS) was established at Stockholm and at its height had several scholars working on the region, including at least one on China. The Centre published working papers and organising many events but was eventually closed. In 2010, the social science faculty at Stockholm University established a network, the Forum for Asian Studies, which works to strengthen research on Asia at the university, organises seminars and conferences as well as give minor grants and travel grants, although none work on China (https://www.asianstudies.su.se/about-us). In Stockholm there is also the Stockholm China Economic Research Institute (SCERI) at the Stockholm School of Economics, which having been initiated in 2006 took its current name in 2013. It receives funding from Ericsson but has only one permanent staff working on China. The institute organises conferences and host guest scholars.

The largest existing centre that both conducts teaching and research is the Centre for East and South-East Asia Studies established in 1996 at Lund University with special government funding. It builds on previous work on the region at the university. The organizational set-up of the Centre at first prevented any permanent staff apart from the director and administrative staff. The Centre could therefore at first only recruit postdoctoral fellows but in 2012 its directives changed and permanent positions became possible. The Centre has a masters programme in Asian studies but a Ph.D. programme was not allowed as the Centre organisational was

placed outside of the faculties (only faculties can run Ph.D. programmes at Lund University). This has prevented the Centre from more actively advancing China (and East and South-East Asian) studies at Lund University. By 2019, the Centre, like all other interdisciplinary centres at Lund University, will have been organizationally moved to a faculty. This move, although not based on more thorough discussions and considerations, will enable the Centre to finally develop its own Ph.D. programme. The Centre currently has three permanent positions on China, whereas one researcher and one postdoctoral scholar also currently work on contemporary China.

In 2001, the Swedish School of Advanced Asia Pacific Studies (SSAAPS) was set up and jointly funded by Riksbankens Jubileumsfond and STINT with the intention to further Asian Studies at Swedish universities. It involved scholarships for Ph.D. students, travel grants, funding for workshops and conferences, and later also postdoctoral fellowships. Of the nine Ph.D. positions (partly funded by SSAAPS) two focused on China and of the six postdoctoral fellowships four went to scholars focusing on China (Geschwind 2008). In terms of research funding the Swedish Research Council has on a number of occasions announced special funding for collaborative research with China, in 2013 together with FAS and Formas that also included social sciences (although no project in that area got funding in the end), and later also in collaboration with Natural Science Foundation of China (NSFC). STINT has also on several occasions, most recently in 2018, provided funding for research collaboration in the natural sciences with Chinese universities.

Apart from universities, a range of other institutions including SIPRI, the Institute for Security and Development Policy (ISDP), and the Swedish Defence Research Agency (FOI) also conduct research on various aspects of China's foreign policy and defence issues. In addition, Stockholm China Forum is a transnational platform for European, Chinese, and American policymakers and academics to discuss various strategic policy issues. It is funded by the Swedish Foreign Ministry and the German Marshall Fund of the US (http://www.gmfus.org/forum/stockholm-china-forum).

Conclusion: Needs and challenges for China research in Sweden

It is instructive to note that quite a lot of the research on China in Sweden remains concentrated in language departments, including the only specific Ph.D. programmes, in contrast to developments in many other countries in Europe. There exists no China centres or other forms of cross-faculty institutions in Sweden trying to promote closer collaboration among China scholars across the disciplines similar to the Asian Dynamics Initiative at the University of Copenhagen. Although the Centre for East and South-East Asian Studies at Lund University is interdisciplinary in character it has until 2019 been outside of the faculties. Scholars working on China at other departments, although growing, are quite few and scattered which prevent the establishing of larger research projects and environments. Furthermore, language departments by and large are not as well equipped or interested in addressing social and political issues (with some exceptions in terms of recent Ph.D. and recruitments). It is disappointing to note that 20 years after a major government report on the Future with Asia, very few Ph.D. theses focusing on China have been produced in Sweden. Swedish universities have not really fulfilled the expectation that China studies would become more embedded within the disciplines that was envisioned by the SSAAPS initiative.

One of the reasons behind the low number of Ph.D. students working on China is the lack of senior scholars with expertise within the disciplines. In contrast with

Denmark (Asian Dynamics Initiative) and most European countries, disciplines and universities in Sweden are quite adverse to make recruitment with an area focus, such as setting up chairs on Chinese politics or other similarly specialised chairs. The only such recruitment was a Gad Rausing Professor of International Economics with a special focus on China established with an external grant in 2004 at the School of Economics at Lund University. Initiatives such as the Asia Dynamics and the Sino-Danish Centre, for example, would be difficult to imagine in Sweden at the moment. Another more general problem is of course the low number of Ph.D. students across disciplines and universities in Sweden with the exception of some fields within the natural sciences and medicine. With the move to the Centre for East and South-East Asian Studies to the Joint Faculties of Humanities and Theology in 2019 it will be possible to develop a Ph.D. programme in area studies but it is not likely that it will be a large environment due to the general funding situation. The reluctance of Swedish universities to make targeted investments in China studies is one strong impediment to strengthening research on contemporary Chinese society. Sweden also differs from the UK, where donations from alumni have been instrumental for some recent initiatives and establishment of China centres, and from Germany, were many more funding agencies are active. In France, there has on the other hand been a strong government involvement as exemplified with the establishment of CEFC.

It is also noteworthy that since SSAAPS, the major funding agencies such as the Swedish Research Council, Riksbankens Jubileumsfond, and STINT, have been more willing and interested in providing special funds for collaboration with China in the field of natural sciences rather than supporting research within the social sciences. This being said however, several individual research projects on China have been awarded in the general competition for research grants.

There does not at the moment seem to be any visions or forthcoming initiatives either at the government level, at individual universities or among the major research foundations, which would be much needed in order for Sweden to provide high quality research on China. There is a growing need for research on contemporary Chinese society at Swedish universities and Sweden is unfortunately today lagging behind many other countries in Europe in this respect.

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COMMERCIALISATION OF INNOVATIONS
INITIAL CONSIDERATIONS WHEN ENTERING CHINA[1]

Expansion into China is essential for any international business wanting to position itself for future growth. Whether your innovation is already part of an existing business or you are a start-up, it is important to define the purpose or reason for wanting to expand the business into China. With a population of 1.4 billion, including a rapidly expanding middle class, China is set to become the next consumption superpower.

PART I – THE COMPANY COMMERCIAL PERSPECTIVE

1. Where should the expansion preferably start?

To get the business from an idea to viable product can be an overwhelming task and will require a well-thought through strategy and methodology. It is important to immediately start to think about each step needed to move forward, namely how to build a business, how to finance the business, how to protect the innovation, how to run a business efficiently and how to expand your innovation in order commercialise it in a manner that fits your business strategy, goals, beliefs and ethics.

Before considering entering the China market, it is advisable to first look at the structure of your business in Sweden and the importance of taking ownership and safeguarding your innovations in Sweden and Europe. It is generally best to ensure that "your house is in order" in Sweden before contemplating any expansion into China.

If this is not in place already, establishing a company in Sweden owning the innovation should be considered. Moreover, it will be easier to enter the Chinese market if an entity has already been established in Sweden.

The main form of business vehicle used in Sweden is the limited liability company (Sw. *aktiebolag*). The process of establishing a limited liability company in Sweden is relatively easy. This can either be done by forming and registering a tailor-made company with Swedish Company Registration Office (Sw. *Bolagsverket*) pursuant to the requirements set out on the web site of the Swedish Company Registration Office or by buying an already existing shelf-company. The minimum share capital requirement in Sweden for a limited liability company is 50,000 Swedish krona.

2. Why entering the Chinese market?

Expansion into China is essential for any international business wanting to position itself for future growth by finding capital and business partners. As many foreign enterprises can attest, entering the China market requires companies to navigate a unique set of legal, business and cultural issues.

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[1] Before starting to elaborate on various business and legal issues, it is important to stress that this note is not prepared to provide an exhaustive legal analysis, but has been prepared to serve as an initial guidance for either already existing Swedish companies, or persons who have not established a business, having a great idea or innovation. It is always advisable to get legal advice before starting any business, expansion or when protecting intellectual property.

Whether you are looking to establish a manufacturing facility, a distribution network or a comprehensive business in China, a strategy and methodology should be shaped in order to help you to quickly understand what you need to know about expanding into China and what it is likely to cost you.

3. What is the Chinese Legal Landscape like?

Since opening up in 1979 and with China joining WTO in 2001, Chinas economy has grown rapidly and the legal system has developed allowing foreign investors to invest and establish business in more sectors and industries which previously were closed or restricted for foreign investments.

Having said this, the legal landscape is still to certain extent uncertain and evolving. Political events can lead to immediate, and even retrospective, changes in law. Legislation is often incomplete and complicated, with regional variations and applications of the law and interpretation of the law. Differences exist between central and local authorities, and between local authorities in different places in China. Depending on where you are in China, inconsistences and unpredictability as to the application and interpretation of the law may exist. This may sometime be beneficial and sometimes detrimental. It is a double edged sword which should be handled with care. Moreover, intellectual property issues still remains an issue in China and the enforcement of foreign or Chinese judgements and arbitral awards in China remains a challenge. Dispute resolution in China is an elaborate process and that local courts are still often influenced by local considerations and connections.

4. How to enter the Chinese market?

There are various ways of entering the Chinese market. Depending on how much money and time one is prepared to spend, investments in China may be through the establishment of green-field operations, through the acquisition of an already existing company (in whole or in part) or through other less costly and time-consuming arrangements, such as manufacturing and distribution arrangements.

4.1 Entering the Chinese market by establishing an entity

In China there are several types of companies that can be set up by foreign investors. These companies are commonly known as foreign investment enterprises (**FIE**). Generally, a Swedish company may set up its own wholly-owned subsidiary in China, enter the Chinese market by partnering up with a local Chinese company or purchase equity in an already existing Chinese company.

Some industry sectors do not permit foreign investment. For foreign direct investments (**FDI**) and foreign investment by ways of merger and acquisition of domestic Chinese enterprises, government approvals are in general no longer required if the enterprise is engaging in businesses outside the so-called "negative-list" for foreign investment, which is approved and publicised by the State Council in China on a periodical basis. A recordal system has been instituted to replace the approval system for projects not subject to the "negative list".

Investments into the industries on the "negative-list" are more tightly controlled and would be subject to approval from various PRC authorities while some industries are prohibited for foreign investors. According to the current negative list, restricted industries include precious metals mining, educational and childcare institutions, medical institutions and some telecommunications activities. For certain

restricted industries, approval for the foreign investment will only be granted if the foreign investor is a minority shareholder in a Chinese owned company or is in a joint venture with a Chinese partner.

The main types of investment vehicle available for a foreign investor in China are in short, to mention a few, listed below. They all have different requirements and challenges and are all tailor-made companies. It is not possible to purchase a shelf company in China because if a company is not operational under a certain period of time it may be dissolved and approvals and registration have to be obtained and be made before the purchase of an already existing Chinese company has taken place, which can be administrative cumbersome as further describe under section 4.2.

*4.1.1 Wholly foreign-owned enterprise (**WFOE**)*

WFOE is a limited liability company with no shares. Each foreign investor will instead hold a proportion of the registered capital corresponding to the amount of investment it has made in the WFOE. There is no minimum statutory registered capital, but in reality the authority will look require a minimum registered capital corresponding to the actual amount the company is required to run its business until it can break even, unless it operates in certain regulated industries. Cash contribution can be non-cash consideration, including intellectual property rights. There may be a maximum 50 investors and the board of director may have three to 13 members. A supervisory board may be required with at least three supervisors. Depending on the ownership structure and scale of the WFOE, an executive director instead of a board and one or two supervisors instead of three may be sufficient.

WFOE is the most popular investment vehicle for foreign investors as the foreign investors will retain full control over the company without having to compromise with any local Chinese partner. This means that no negotiations are required to establish a WFOE. This means that the foreign investor retains 100% control over the management, financial affairs and operations of the WFOE, as well as the foreign investor's intellectual property rights and confidential information. To be entirely successful in operating a WFOE in China, the foreign investor needs to have an excellent understanding of the Chinese business, legal and cultural environment as the foreign investor has no local party to rely on. Moreover, to operate as a WFOE, the foreign investor must have the financial and human resources (including local contacts) to be able to operate independently in China.

WFOEs can only be engaged in sectors or industries in which sole foreign ownership is permitted. This means that WFOEs are not permitted to engage in any activities or industry sectors as a result of the "Negative List", a described in more detail under section 4.1.

*4.1.2 Equity joint venture (**EJV**) and cooperative joint venture (**CJV**)*

There are two types on joint ventures in China, namely EJV and CVJ. It has become notably more difficult to have CJV registered during the past couple of years and the most commonly used joint venture vehicle in China is the EJV. During the past couple of years we have seen a "come-back" of foreign investors entering the Chinese market by establishing a joint venture with a local Chinese party after years of preferring to establish WFOEs.

A joint venture is not as quick and easy to establish as a WFOE as negotiations to agree a joint venture agreement with the Chinese party may take time. Joint ventures are not always permitted to engage in all activities or industry sectors as a result of the "Negative List", a described in more detail under

section 4.1. For certain restricted industries, approval for the foreign investment will only be granted if the foreign investor is a minority shareholder in a Chinese owned company or is in a joint venture with a Chinese partner.

As opposed to a WFOE, a foreign joint venture party may have less control over its intellectual property rights and confidential information and should make sure that those are correctly and efficiently protected.

Certain minority shareholder protection are given by law, i.e. that certain decisions may, for example, need unanimous board consent, including any amendment to the joint venture's articles of association or increasing or reducing registered capital. Those minority shareholders protections which are not regulated by written law should be negotiated between the parties and included in the joint venture agreement.

Both EJV and CJV are limited liability companies with no shares. Having said this, there is also an unincorporated form of CJV available, i.e. it is an unincorporated non-legal person, i.e. the partners of that CJV have unlimited liability. This is a highly unusual company form.

In case of an EJV, each foreign investor will instead hold a proportion of the registered capital corresponding to the amount of investment it has made in the EJV. All profits, losses, liabilities, board of director representation and distribution of surplus assets on liquidation are allocated in proportion to each party's registered capital. The level of management control of the company is also subject to each party's ownership in the company.

In case of an CJV, there is flexibility in that the profits, losses, liabilities and board representation are not necessarily allocated in proportion to each party's registered capital, but allocated according to the parties negotiated position set out in the joint venture agreement.

The amount contributed by a foreign investor in both an EJV and CJV can generally not be less than 25% of the registered capital, unless approved otherwise by the relevant authority on a case-by-case basis. There is no minimum statutory registered capital, but in reality the authority will require a minimum registered capital corresponding to the actual amount the company is required to run its business until it can break even. Having said this, companies in certain regulated business may have certain minimum registered capital requirements. Cash contribution can be non-cash consideration, including intellectual property rights. If a Swedish investor would like to contribute its intellectual property rights towards the registered capital then these rights will be valued by a state-run valuation company. It should be noted that the valuation process may be administrative cumbersome and attention should be paid to the valuation received.

The board of director may have three to 13 members. A supervisory board may be required with at least three supervisors. Depending on the ownership structure and scale of the joint venture, an executive director instead of a board and one or two supervisors instead of three may be sufficient.

On a final note, nor an EJV or a CJV can be listed on the stock market as the investors do not hold and cannot issue shares in this kind of FIE. Should the parties wish to list the company then they can either convert the company from a joint venture to a FICL, as further described under Section 4.1.4, or

create an offshore holding company owning the joint venture in China for the purpose of listing the offshore company.

*4.1.3 Foreign Invested Partnership Enterprise (**FIPE**)*

FIPE has been allowed to be established since March 2010. FIPE is not a legal entity as such. It is established by two or more foreign entities or individuals with or without a Chinese partner.

A foreign investment vehicle, for example a WFOE, but not a Chinese holding company, may be a partner in a FIPE. FIPE can either be:

- a general partnership, whereby profits and losses are shared joint and severally; or
- a limited liability partnership, where by profits and losses are shared in accordance with the partnership agreement.

In case of limited liability partnership, there has to be at least one general partner and at least one partner with limited liability. The general partner will act on behalf of the entire partnership, while a limited liability partner cannot act on behalf of the entire partnership. There are certain tax benefits in establishing a FIPE.

4.1.4 Driving forces

The business model of the foreign investor will be the driving force when choosing the right investment method and vehicle. In the case of a manufacturing company holding trade secrets, confidential processes and sensitive intellectual property rights, a WFOE may be the most sensible choice. Moreover, by having a WFOE, the foreign investor will not have to take into consideration any Chinese party's consideration or management style, which could possible lead to disputes. Having said this, in the case that the foreign investor may need knowledge about the local Chinese market and business environment or have access to a Chinese party's already established distribution network and manufacturing facilities, the partnering with a local Chines party by establishing a joint venture may be the better choice.

There are also possibilities to set up liaison offices, holding companies and regional headquarters and branches or expanding existing business by converting exiting WFOE or ECJ/CJV to a foreign investment company limited by shares, which is a type of FIE which can issue shares to the public and list on the Shanghai or Shenzhen stock exchange.

4.2 Entering the Chinese market by acquiring a Chinese company

As an alternative to setting up a new FIE, a Swedish company may look at acquiring an existing entity in China. One should note that existing companies come with unknown liabilities, which will be assumed by the company purchasing the Chinese company.

M&A in China is a regulated process subject to government involvement and control, although recently we have seen some relaxation of government control such as the delegation of approval power from central authorities to local authorities and a relaxation of foreign exchange control and FDI investment approval or recordal (as applicable) requirements. Note that the Swedish company will still have to comply with the Chinese foreign investment restrictions, such as, complying with the

"Negative List", as further described under section 4.1. On the other hand, the Chinese government is trying to strengthen its regulations on certain aspects of M&A, such as the tax authorities' increased scrutiny on the use of offshore vehicles for acquisitions and the introduction of a national security review requirement.

To acquire a Chinese company can be both cost and time consuming and will require approval/recordation and registration where the purchaser is a foreign company or even a foreign owned PRC company (even if there has been some relaxation to these rules). Foreign investors are unable to directly acquire operating business and assets in China, and, as such, it must first either incorporate an entity in China or invest in a fully owned Chinese company. Once the foreign investor has invested in the Chinese company, the Chinese company will convert and become an FIE (as opposed to a domestic Chinese company which a foreign company cannot own).

In order to avoid the above mentioned approval/recordation and registration, an off-shore entity holding the company in China may be the preferred option. When buying the off-shore company, no approval/recordation and registration will be triggered in China although Chinese tax authority has increased its scrutiny on the use of these kinds of offshore vehicles for acquisitions.

A prospective purchaser who has made a decision to acquire a company will be concerned to ensure that the acquisition will be a success, in both the short term and long term perspective. Hence, a potential purchaser will want to be sure that the seller and the target company has good title to the assets being purchased and to know the full extent of any entailed liabilities that target company may have. As such a legal, financial and commercial due diligence must be carried out to assist the purchaser in deciding whether it wants to proceed with the acquisition and, if so, at what price and on what terms.

If a transaction meets the notification thresholds, notification is mandatory to the Chinese competition authority and the transaction cannot be completed until either clearance is received or the waiting period expires. Violation of the filing obligation may lead to a fine, an order to unwind the transaction and possible civil and criminal liabilities.

Parties may also choose to notify a transaction on a voluntary basis even if the thresholds are not met, where competition concerns might be raised. The Ministry of Commerce (MOFCOM) is able to review non-notifiable transactions and impose remedies if it finds that the concentration has eliminated or restricted competition.

In addition, there is a national security review procedure in China. A filing for a national security review is required for investments in the defence sector or in any other sector which has a bearing on national security and involves industries such as major agricultural products, energy sources and resources, infrastructure and transportation facilities and key technologies.

4.3 Entering the Chinese market by other arrangements – Do I even need a company in China?

There are also other arrangements which may be more time and cost efficient for foreign companies wishing to carry out activities. The following options could be considered.

4.3.1 Representative offices

A Swedish company can also open a representative office in China, which is not a legal person. Pursuant to Chinese law, a representative office is not permitted to engage in profit-making business activities.

Representative offices are set up with the purpose of representing the foreign company in China and having a presence without setting up a subsidiary. Generally it is used so that the foreign investor can see what the Chinese market is like before seriously entering it. A representative may engage in the following activities:

- lease office and arrange for utilities;
- purchase office supplies;
- coordinate issuance of work permit and visas for foreign staff;
- opening foreign and local currency bank account;
- displaying an office sign and distributing office material; and
- employing local staff through labour service organisation.

Up until 2011 before the new rules to further tighten the regulation on representative offices in China, many foreign companies used to operate its business in China through a representative office as it was cheaper and easier to establish than, for example, a WFOE. It should be noted that the Chinese authorities have tighten their rules and do not accept this behaviour. The consequences of not following the rules applicable to foreign representative offices in China are strictly followed and can become very expensive.

4.3.2 Manufacturing arrangements

If a Swedish investor is not looking to set up an operation in China, then an alternatively is to enter into manufacturing arrangements or processing and assembly arrangements. The benefit for using an arrangement like this is that it generally does not require any capital investment by the Swedish investor.

In the case of a manufacturing arrangement, the main idea is that someone else manufactures the Swedish company's innovation or products in China whereby the Swedish company grants a non-exclusive right to a Chinese manufacturer to manufacture and package the products according to specifications provided by the Swedish company.

In case of a processing and assembly arrangement, the main idea is that the shipment of raw materials and semi-finished products shall be manufactured in China.

The main issue for a Swedish investors with regards to these kind of arrangements would be that the manufacturing, testing and quality assurance is consistently maintained in order to ensure that a manufactured product is safe for humans and environment and that the ownership and protection of the intellectual property right relating to the products and the innovation are protected, including any improvements, alteration and modifications of the products or the innovation.

Tax, foreign exchange, customs and approval issues should be carefully considered when applying any of these arrangements.

4.3.3 Licensing agreement

In a typical licensing agreement between the licensor and the licensee, the licensor grants the licensee the right to produce and sell goods, apply a brand name or trademark, or use patented technology owned by the licensor against royalty payments. In China, to mention a few, know-how license agreements, trademark license agreements, patent license agreements are commonly used. For Swedish investors with great products but no ability to manufacture them, licensing may be a suitable alternative to get those products to market.

The license agreement should normally include (i) monitoring and quality assurance provisions whereby the Swedish party requires specific tests and monitoring in order to protect the product or innovation, (ii) payment provisions whereby the parties may agree that the licensee should, for example, pay an initial advance against royalties and that any continuing royalty payments are based on sales volumes. Royalty payments are generally paid based on a percentage of the sales volume or on a flat rate, and (iii) territory and exclusivity provisions whereby the licensee will grant an exclusive right to make and sell the product or innovation in a defined territory, such as China.

When dealing with the various license agreements, particular care and consideration should be taken as to the protection of intellectual property rights and transfer pricing issues, as applicable.

Before entering into a licence agreement make sure (i) that your intellectual property rights in China are registered, (ii) that if someone else is going to use your brand name make sure to minimise any potential reputational risk and maintain quality control, (iii) that if license payment is based on sales volumes make sure to create a robust method to monitor the sales, (iv) that you are aware of every potential tax payment and, if possible, negotiate that your Chinese licensee assumes responsibility for all taxes in China, and (v) that the choice of governing law in the license agreement is well thought through. If the Chinese party has assets in Sweden, then Swedish law may be the most suitable governing law, while it may be better to choose Chinese law in circumstances where the Chinese party only has assets in China as Chinese courts do not enforce Swedish court judgements in China. An arbitration clause is generally prefer as those are generally enforceable in China.

Finally, if you are going to seek to enforce your licensing agreement in China, it is important that you have registered it with the relevant Chinese authority as you are required to do so under Chinese law.

4.3.4 Distribution agreement

Swedish companies that are not looking to set up operations in China may often as an alternative enter into a distribution agreement whereby the Swedish company supplies goods to a Chinese distributor who will distribute those goods in a pre-defined territory, such as China. Sometimes the supplier may also be the manufacturer, or may itself be a distributor re-selling another party's goods. Having said this, the Swedish supplier will have to comply with applicable Chinese import regulations. In this context, it is worth notice that certain attention should be paid to the so called special economic zones or export processing zones as there may exist incentives applicable which could be beneficial.

Distribution agreements may be either an exclusive or non-exclusive agreement and are commonly used by parties who are not established in China. There are no specific laws regulating distributions.

4.3.5 Special economic zones and export processing zones

Over the last three decades, the expansion of export processing and special economic zones has made important contributions to the growth of China's economy. Like Shenzhen special economic zone which was successfully established in early 1980s has provided an early access for foreign investors into China.

When entering the Chinese market, a thorough review should be carried out of the main special economic zones in China, such as the Shanghai Free Trade Zone and the newly approved economic zone in Hebei province which will focus on building clusters of high-tech and innovative businesses, and analyse what kind of incentives the zone may be able to offer foreign investors. By entering China through one of the zones could lower the initial start-up costs significantly or provide other useful incentives.

4.3.6 Other consideration

The overall strategy and business model of the Swedish investor will be the driving force when choosing the right investment arrangement. There are also other possibilities, which have not been covered in this paper, such as setting up agency or franchise arrangements in China.

4.4 Entering the Chinese market by having Chinese investors investing in the company in Sweden

We have during the last couple of years seen a change in how Chinese investors would like to structure their foreign investments in Swedish. Chinese investors have been looking to either obtain a 51% shareholding in the Swedish company for consolidation purposes back in China or obtain a minority shareholding in the Swedish company with a wish that the Swedish company thereafter establishes a WFOE in China (which is wholly owned by the Swedish company) or a joint venture with the Chinese investor holding a majority shareholding in the joint venture in China (while holding a minority shareholding in the parent company in Sweden).This structure will require time and money in order to achieve it as there are so many levels which need to be implemented. Having said this, the structure may also be achieved by first carrying out the initial investment in Sweden with the intention to start the establishment of a WFOE or joint venture in China at a later date. This will not only allow the parties to get to know each other, but also spread time and money required for the project over a couple a years.

To successful achieve this kind of multi-layered investment, it is important to, firstly, understand, among others, all Chinese and Swedish regulatory requirements in order for the Chinese investor to be able to make an investment into a Swedish company and remit cash from China to Sweden. Secondly, it is equally important to understand the Chinese regulatory requirements for that Swedish company, having a Chinese investor, in turn being able to either establish a WFOE or EJV in China. All external and internal approvals, consents, verifications and other requirements for an overseas acquisition and then re-entry into China needs to be identified and dealt with.

PART II – THE INTELLECTUAL PROPERTY PERSPECTIVE

It is always advisable to take immediate action to protect your intellectual property before you do anything in China. Many lack an understanding of the basic legal intellectual property protections available in China and the consequences of not having appropriate protection.

5. Intellectual property rights

The main intellectual property rights available in China are in short outlined below.

5.1 Patents

5.1.1 What types of patens exist?

Patents generally include the following:

- invention patents;
- utility model patents, and
- design patent.

5.1.2 What can be patented?

In the case of an invention or utility model, they must be novel, inventive and practically applicable to be patentable. In the case of a design patent, it must have distinctive features that are easy to recognise and not conflict with other person's prior and existing legal rights.

The following items are not patentable in China:

- any invention-creation that is contrary to the law or social morality or that is detrimental to public interest;
- invention-creations relying on genetic resources of which the acquisition or use is not consistent with the provisions of the laws and regulations;
- scientific discoveries;
- rules and methods for mental activities;
- methods for the diagnosis or treatment of diseases;
- animal and plant varieties;
- substances obtained by means of nuclear transformation; and
- two-dimensional designs of images or colours or combinations of the two that mainly serve as indicators.

5.1.3 How is a patent protected?

Patent applications for registration must be made to the Chinese State Intellectual Property Office (SIPO).

5.1.4 What rights does a patent owner have?

The patent owner has the exclusive right to use the invention and prevent others from using it without his or hers consent. SIPO and the Chinese courts are responsible for enforcing patent rights, and, if

anyone infringes those rights, they can impose (i) fines; (ii) confiscation of illegal proceeds; (iii) injunctions; or (iv) damages. There is also criminally liability for serious violations.

5.1.5 What is the term of protection?

The terms of protection for invention patens is 20 years from the date of filing and for utility model patents and design patents are ten years from the date of filing. These terms cannot be extended.

5.2 Trade marks

5.2.1 What can be registered as a trademark?

Trademarks normally apply to branding protection. A trade mark can including any or a combination of the following:

- text;
- graphic;
- letter;
- number;
- three-dimensional symbol;
- combination of colours; and
- sound.

The trademark must have distinctive, easily recognisable features, and not conflict with other person's prior and existing legal rights.

5.2.2 How is a trademark protected?

Trademark applications must be filed with the Trademark Office of the State Administration for Industry and Commerce (SAIC). Unregistered marks are not protected under Chinese law, unless they are well known trademarks.

5.2.3 What right does the trademark owner have?

The owner of a registered trade mark can use the mark exclusively and prevent others from using the mark without his or hers consent. SAIC and the Chinese courts are responsible for enforcing trademark rights, and, if anyone infringes those rights, they can impose (i) fines; (ii) confiscation of illegal proceeds; (iii) injunctions; or (iv) damages.

5.2.4 What is the term of protection?

Trademarks are continuously protected and may be extended every ten years.

5.3 Copyright

5.3.1 What constitutes a copyright?

Copyright applies to intellectual creations in the literary, artistic and scientific domains, provided they are capable of being reproduced in a certain tangible form. The owner of a copyright has the right to

prevent other persons from copying or reproducing the work without his consent, unless it is proven that such person created the same or a similar work without copying the copyrighted work.

5.3.2 How is a copyright protected?

Copyrights are automatically protected on the work's creation. The General Administration of Press and Publication and the Chinese courts are responsible for enforcing copyrights. If anyone infringes those rights, they can impose (i) fines; (ii) confiscation of illegal proceeds; (iii) injunctions; or (iv) damages.

5.3.3 What is the term of protection?

In the case of an individual, the copyright protection lasts during the life of the author plus an additional 50 years. While, in the case of a legal entity, the copyright protection will last for 50 years from the date of the first publication or, in the case of unpublished works, from the date of the creation.

5.4 Designs

Design intellectual property usually refers to two or three dimensional designs, such as colours, patterns or shapes, but not the functionality of the design. In the case of registered designs, they can be protected in the same ways a patent as described in more detail above. In the case of unregistered designs, they can be protected in the same way as a copyright as described in more detail above.

5.5 Trade secrets[2]

5.5.1 What is a trade secret?

Trade secrets and confidential information (**Trade Secrets**) are information of any type that is valuable to its owner because it is not generally known in the industry and its owner has taken reasonable steps to maintain the information in confidence. Trade Secrets arise automatically if a company takes the appropriate steps to maintain the information as a secret, which means a Trade Secret should be able to endure forever.

5.5.2 When do you protect information as a Trade Secret?

Most products and services can be protected by a combination of intellectual property rights. For example, in the case of computer software, it can be protected by patents, copyrights, trademarks and trade secrets. Microsoft protects certain functions of its Windows software with patents, it uses copyright to protect the actual code of the Windows software from copying, it uses trademark law to protect the "Microsoft" and "Windows" trademarks which identify the product and it uses trade secret law to protect the structure and methodology of its source code.

However, once a patent is issued, Trade Secrets in the part of the computer software protected by the patent will be disclosed and will no longer be protected by trade secret law. Because patent applications are published and made available to the public during the application process, inventions covered by patents are not protectable as trade secrets. Some companies may want to keep an

[2] Majority part of this section 5.5 is based on an article by my colleague William (Skip) Fisher and some parts are based on an article by my colleague Victoria Lee.

invention as a Trade Secret for competitive market reasons and so may opt not to pursue patent protection and instead rely on Trade Secrets to protect their intellectual property assets.

Some information may not be protectable as intellectual property other than as a Trade Secret. Examples of such information can include pricing and cost information (but not if that information is readily ascertainable from customers), profit margin information, recipes and customer lists (unless readily ascertainable from public sources).

5.5.3 Ownership of intellectual property

Many partnerships in China involve a foreign company licensing or otherwise providing Trade Secrets to a Chinese company for use in China ("**Background IP**"), and the Chinese company subsequently creating improvements on or derivatives of the Background IP ("**Foreground IP**"). The foreign company will want to retain ownership of the Background IP and, quite possibly, will want to obtain ownership of or rights to use the Foreground IP. This is possible in China with some caveats.

Under the PRC law, the ownership of intellectual property provided by one party to another, or of intellectual property created by one party in performing under a contract, is governed by the contract between the parties. Thus, even if a contract between a foreign company and a Chinese company is governed by Chinese law, the foreign company can retain its ownership in Background IP and acquire ownership of Foreground IP. There are, however, mandatory Chinese regulations that apply to technology licensing transactions between a foreign licensor and a Chinese licensee (such transactions are considered technology "imports") regardless of the law governing the license agreement, and, under these technology import regulations, the foreign licensor cannot require the Chinese licensee to assign Foreground IP to it without paying reasonable consideration.

Foreign companies providing Trade Secrets to Chinese partners should also consider issues relating to the Chinese partner's employees as the risk of leakage lies mostly with individual employees and it is those employees who will be developing Foreground IP. Employees of a Chinese partner who develop Foreground IP in the course of their employment generally do not own the IP.

In sum, under Chinese law and with properly-drafted contracts, a Chinese partner can acquire ownership of Foreground IP developed by its employees, and then assign the Foreground IP to its foreign partner for reasonable consideration.

5.5.4 What about Trade Secrets in China?

Putting intellectual property ownership aside, foreign companies in China have historically been concerned about providing their Trade Secrets to Chinese partners and for protecting their Trade Secrets for fear of leakage and lack of confidence in the ability to enforce their rights should their Trade Secrets be improperly disclosed or used in China. Their concern correctly focuses on the risk of unauthorised use or disclosure of the Trade Secrets by either (i) an employee of the Chinese partner (most common); or (ii) the Chinese partner itself. While such risk certainly exists in China (as it exists elsewhere), the legal regime in China for protecting Trade Secrets, especially against misappropriation by employees, has improved significantly in recent years. As a consequence, while many foreign companies acknowledge that enforcing Trade Secret rights in China remains challenging, they

nonetheless now have sufficient confidence in the legal system to place their Trade Secrets in China, albeit with appropriate contractual and physical safeguards.

Trade Secrets are a protected property right in China and are currently protected by variety of Chinese laws and enforcement mechanisms. In short, the legal framework in China provides owners of Trade Secrets with (i) legally cognisable rights in their Trade Secrets; (ii) protection for their rights as "trade secrets" under Chinese law and/or as confidential information under contractual obligations (in an NDA as further described under section 7); and (iii) remedies against both a company that infringes its rights and its employees or former employees who infringe its rights.

5.5.5 Enforcement of Trade Secrets in China

Enforcement of intellectual property rights in China has been steadily improving, and the environment is now such that foreign companies are willing to conduct activities in China that require placing Trade Secrets in China (this was not the case ten years ago). Such activities we have observed or assisted with over recent years include:

- establishing R&D facilities or otherwise conducting R&D here, which requires injection of Background IP and know-how;
- entering into development or collaboration arrangements with Chinese partners, which requires licensing of Trade Secrets;
- setting up manufacturing facilities that require proprietary manufacturing processes and know-how; and
- working with Chinese partners and other service providers, where the provision of Trade Secrets is needed to perform the services.

When infringement of Trade Secrets occurs, foreign companies are now more willing to take action in China to enforce their intellectual property rights, including initiating civil infringement actions. Statistics show foreign companies have a relatively high win rate in such cases, though some cases are harder to prove due to limitations on evidence collection. Trade secret cases can be challenging to prove anywhere in the world, and limitations on evidence collection in China can make them challenging as well. Despite this challenge, there are several recent cases that illustrate the trend toward better enforcement.

Contractual confidentiality obligations between business partners, and between a Chinese partner and its employees, are allowed and generally enforced under China law. Collaboration and development agreements, license and service agreements, and labour and other contracts between employer and employee should contain provisions concerning the confidentiality and use of Trade Secrets. Such contracts will be important, and might be dispositive, in any future trade secret enforcement action in China, whether civil, administrative or criminal.

In conclusion, where a foreign company chooses or needs to provide Trade Secrets to a Chinese company as part of their business arrangement, the company can minimise risk to its Trade Secrets by (i) ensuring adequate ownership, confidentiality and use provisions are in its contract with the Chinese company and, for highly sensitive Trade Secrets, in the contracts between the Chinese company and its employees with access to the Trade Secrets, and (ii) ensuring adequate physical security/IT

measures are in place at the Chinese company's facilities. If the company's rights in the Trade Secrets are infringed by the Chinese company or its employees, and assuming there is evidence to prove this, the company should have a reasonable chance at enforcing its rights against the infringer in China either for trade secret infringement pursuant to existing Chinese law or for breach of confidentiality obligations under the applicable contracts and laws.

6. Processes and routines

It is important that a company set up robust processes and routines when it comes to the company's intellectual property and the protection thereof.

The company must identify each intellectual property it has and decide whether all or part of the intellectual property should be registered or filed in order to gain necessary protection. As stated above under Part II, section 1, it is advisable to register the intellectual property both in your own home country/Europe and in China, if you own it. Note that your intellectual property protections obtained in Sweden or Europe will not protect you in China. Separate registrations and filings needs to be done in China as described under this Part II.

If a company cannot afford or do not wish to protect all of its intellectual property, then it is important to identify which intellectual properties should be protected whether in the home country and/or when entering China. Moreover, by registering or filing an intellectual property right will make it public, which is also a consideration which needs to be taken into account. Are we prepared to make the intellectual property public?

This means that preventative measures are crucial, in particular with regards to intellectual property which is not registered or filed. Protection for those intellectual property can be achieved by entering into an NDA (see section 7 for more detail) and identify what is a trade secret (and protect those legally and contractually). Companies should consider creating comprehensive trade secret policies and regular training, as well as establishing strategy and processes for having evidence to support possible trade secret claims. Legal actual should be last resort.

7. Non-Disclosure Agreement (NDA)

It is advisable to enter into an NDA in order to protect your intellectual property regardless of any arrangement when entering China. Confidential information should be defined to cover all information which should stay confidential, including ideas, concepts or products.

The NDA needs to further create a contractual obligation stating that the confidential information should not be used in a way that will compete with your own business. This means that you will be able to rely on the NDA in case of breach of a non-permitted use of the confidential information (which is defined to cover you intellectual products, ideas and concepts).

The NDA needs to ensure that your confidential information is not disclosed to the public by considering adding that disclosure to its group members should not be allowed and that a breach of that non-disclosure will make the Chinese party to the NDA fully liable for the breach of disclosure by a group member to any third party.

Moreover, the NDA should also include a provision prohibiting the Chinese party from copying your product, circumventing your business and selling the product directly to your own customers. Governing law and jurisdictions of the NDA should also be considered by assessing the factors relevant on a case-by-case basis.

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DLA Piper is a global law firm with over 90 offices in more than 40 countries, positioning us to help companies with their legal needs anywhere in the world. We provide clients with trusted local

expertise and access to seamless multi-jurisdictional legal capabilities across a range of services and sectors.

DLA Piper Stockholm office employs over 100 lawyers and **DLA Piper China** has offices in Beijing, Shanghai and Hong Kong with over 200 lawyers. Both DLA Piper Sweden and DLA Piper China provide a full range of services in commercial law, such as Corporate, Real Estate, M & A, Banking & Finance, Employment, Intellectual Property & Technology, Tax, Restructuring & Insolvency, Litigation & Arbitration, DLA Piper also has specialist lawyers in Retail/Franchise, Private Equity, Energy, Compliance, EU & Regulatory, Insurance & Reinsurance, Public Procurement, Transport & Logistics and Life Science.

Marianne Ramel, a partner in the DLA Piper Stockholm office, heads the China desk in Sweden. Marianne has extensive experience in cross-border transactions, with a particular emphasis on the Chinese market. Having worked and studied in various periods in China since 1988, Marianne has given advice on some of the largest foreign investments in China, as well as on outbound Chinese investments. Marianne is now advising Swedish companies in achieving their strategic and commercial plans in China, as well as Chinese companies investing in Sweden.

HANDELSHÖGSKOLANS I STOCKHOLM INLAGA TILL REGERINGSKANSLIET – UNDERLAG TILL SYLVIA SCHWAAG SERGERS RAPPORT AVSEENDE INNOVATION, FORSKNING OCH HÖGRE UTBILDNING I RELATION TILL KINA

Handelshögskolans i Stockholm Kina relaterade verksamhet

Handelshögskolan i Stockholm (HHS) startade 2007 med stöd från företaget Ericsson China Economic Research Center, en forskningssatsning med fokus på den kinesiska ekonomin. Handelshögskolans ledning såg ett stadigt växande behov av arbetet på centret och tog därför beslutet att etablera ett permanent institut. 2013 etablerades sålunda Stockholm China Economic Research Institute (SCERI) som ett oberoende forskningsinstitut vid HHS. Forskare vid institutet bedriver forskning inom ekonomi och finans med fokus på Kina och dess grannländer. Denna forskning publiceras i en working paper serie och har också blivit publicerad i form av ett stort antal artiklar i ledande internationella tidskrifter. Institutet erbjuder även kurser på mastersnivå med fokus på ekonomierna i Kina och Ostasien. Forskare vid SCERI har bedrivit forskning i samarbete med forskare på ett flertal ledande akademiska institutioner i Kina och Hong Kong, inklusive Peking University, Fudan University, Shanghai University of Finance and Economics, Southwestern University of Finance and Economics och Chinese University of Hong Kong. Institutet har också sedan en längre tid tillbaka ett fördjupat samarbete med National School of Development vid Peking University. Samarbetet har bland annat omfattat gemensamma forskningsprojekt och gästvistelser. Genom detta samarbete hålls även en årlig internationell konferens på temat den kinesiska ekonomin.

Handelshögskolan i Stockholm Executive Education (SSE Exed) har sedan många år tillbaka haft såväl program med deltagare från Kina, som utbyte med skolor då våra program har genomförts i Kina. Program som har genomförts har bl.a. varit för Shanghai Advanced Institute for Finance (SAIF), Tsinghua University, People's Bank of China School of Finance. Samarbeten med kinesiska skolor i Kina har varit med Fudan University och Hong Kong University of Sciences and Technology. I tillägg får vi en rad frågor från kinesiska företag och organisationer som vill komma till Sverige för besök. I nuläget är ett antal under förhandling.

Inom ramen för HHS Executive MBA program (SSE MBA Executive Format) genomförs en av de obligatoriska programmodulerna i Hong Kong/Shenzhen. Modulen som är en integrerad del av EMBA-programmet genomförs i samarbete med Hong Kong University of Science and Technology.

Under den senaste tre-års perioden har HHS tagit emot kinesiska Executive MBA grupper för halv- och heldagars program från följande kinesiska lärosäten;

- Cheung Kong Graduate School of Business, Beijing
- Antai College of Economics and Management, Shanghai Jiao Tong University, Shanghai
- China Europe International Business School, Shanghai.

HHS har sedan ett antal år tillbaka studentutbytesavtal med ett flertal lärosäten i Kina; Tsinghua University, Fudan University och Hong Kong University of Sciences and Technology. Under det

senaste året har vi inlett samarbete med ytterligare två lärosäten; University of Hong Kong och Shanghai Jiao Tong University. Flera av dessa skolor ingår i två av de nätverk som HHS är med i; Partnership in International Management (PIM) samt CEMS - Global Alliance for Management Education.

Kinesiska studenter ökar i antal hos HHS. Innevarande läsår hade högskolan 8 kinesiska PhD studenter utav totalt 120.

År 2017 sökte 192 studerande från Kina till HHS fem olika masterprogram, 90 antogs och av dessa började 27 hösten 2017 (enrolled students). År 2018 ökade antalet sökande till 226. Av dessa har 113 antagits, HHS vet först i augusti hur många av dessa som faktiskt kommer att påbörja sina studier.

De kinesiska studenterna är den näst största internationella studentgruppen på masternivå efter Tyskland. Vid den senaste antagningen, höstterminen 2017 utgjorde gruppen;

- bachelornivån 0% (program ges på svenska, först hösten 2018 kommer ett program att ges på engelska, BSc in Retail Management)
- masternivån 25%
- PhD-nivån 13%.

Den stora majoriteten av de kinesiska studenterna är fullt betalande. En utav de kinesiska masterstudenterna erhöll 2017 fullt stipendium från Svenska Institutet.

Handelshögskolans i Stockholm Studentkår, SASSE, har under årens lopp i egen regi ordnat diverse aktiviteter relaterade till Kina.

Slutligen vill vi framföra en önskan om att det vore mycket värdefullt om det i samband med detta projekt skulle kunna genomföras ett benchmark-projekt med "case-studies" över hur olika internationella akademiska satsningar har lyckats eller misslyckats i Kina. Hur har internationella universitet med campus i Kina lyckats (NYU i Shanghai, den danska storsatsningen etc.)? Hur fungerar några utav de etablerade dubbel degrees mellan internationella och kinesiska universitet? Hur har KIs satsning i Hong Kong utvecklats? En sådan redogörelse skulle vara ett värdefullt underlag i samband med svenska lärosätens utvärdering av eventuella framtida satsningar i relation till Kina.

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20 juni 2018

STRATEGISKT ARBETE MED INNOVATION I KINA – PERSPEKTIV FRÅN BUSINESS SWEDEN

30 maj, 2018
Bilaga till kunskapsunderlag för regerings arbete med forskning, utbildning och innovation i Kina

1. BAKGRUND

Business Sweden har översiktligt belyst hur temat innovation kan kopplas till de svenska företagens strategiska affärsutveckling i Kina, samt hur företagen kan bidra till den bilaterala innovationsagendan och hur detta kan bidra till att positionera Sverige som innovationspartner till Kina.

Utöver det arbetar Business Sweden kontinuerligt med strategi- och affärsutvecklingsfrågor tillsammans med svenska företag i Kina. Innovationsfrågor utgör ofta en central del av sådana projekt, vilket ger oss en god inblick i företagens syn på innovationsklimatet i Kina.

Nedan text beskriver Business Swedens syn på hur svenskt och kinesiskt näringsliv kan engageras i officiella innovationsinitiativ.

Intresse och behov från näringslivet

Svenska företags innovations- och FoU-verksamhet sker i ökande grad nära marknaden, och är inte begränsat till huvudkontoret. Detta har sin grund i flera faktorer, bl.a. behovet av att lokalanpassa sitt produkterbjudande, behovet av att anpassa sig till lokala digitaliseringstrender (särskilt i länder som Kina), och ökande behov att samarbeta med lokala innovationsekosystem för att hitta nya teknologipartners. I takt med att den teknologiska utvecklingen accelererar blir det allt svårare för företagen att ha all kompetens inom företaget, därav behovet till kontaktytor mot lokala och globala ekosystem.

Även de största företagen är i ökande grad beroende av nätverk i kombination av kompetenser och partners för att kunna få till en komplett affärsmodell. Storbolag är idag även alltmer beroende av samverkan med startups. Vi observerar även att fler företag kopplar sina strategiska mål till att möta samhällsutmaningar, inklusive Agenda 2030.

Genom vår kontinuerliga dialog med svenska och kinesiska företag har Business Sweden utrönt hur temat innovation spelar in i deras etablering och affärsutveckling i Kina, och hur offentliga initiativ kan stödja företagen.

Bolagen ser en strategisk fördel med tydligare positionering till innovation och vill finna nya former för att utveckla hållbara affärsidéer som möter sociala utmaningar och industriella behov genom o*pen innovation* och *co-creation* tillsammans med partners.

Att samverka med bolag, forskningsinstitut, investerarnärverk och den lokala startupscenen i Kina ligger i linje med många svenska företags strategi för marknaden.

Mindre svenska bolag, inklusive startups utan närvaro i Kina, ser ofta ett värde i att delta i sammanhang med stora svenska och kinesiska företag. Partnerskap med stora företag är ofta avgörande för mindre företags framgång i Kina.

Ett innovativt format för att öka näringslivets engagemang

Nedan diskuteras hur ett format och en operativ mekanism kan utformas och avgränsas, vilka skärningspunkter som finns gentemot befintliga initiativ samt vilka resurser som krävs för att driva och kvalitetssäkra arbetet.

Formatet som föreslås har ambitionen att spegla den ovannämnda dynamiken och de förutsättningar som råder på marknaden. Utformningen och interaktionen bör följa en *open innovation* och *co-creation* modell.

Vi ser följande operativa framgångsfaktorer för formatet:

- Hur bra vi är på att attrahera ledande intressenter inom respektive område
- Konkreta resultat med bäring på affärsutvecklingen för respektive företag och med koppling till samhällsutmaningar och Agenda 2030
- Hur unikt är nätverket och hur effektivt är utbytet mellan partnerna

En stor del av arbetet, framförallt initialt, kommer därför fokusera på att attrahera rätt partners från både svensk och kinesisk sida. Skapa engagemang och ihop med svenska partners utveckla ett effektivt format för interaktion enligt en *open innovation*-modell.

Ett tydligt industriengagemang, inklusive privat finansiering, kvalitetssäkrar det operativa arbetet samt stärker initiativets långsiktighet. Modellen har som mål att undvika att skapa parallella strukturer, är virtuell och flexibel i sin natur, med arbetsgrupper och mekanismer som kan öppnas och stängas vid behov. Initialt vill vi också lyfta fram innovations- champions/partners för att med hjälp av dessa driva igång olika processer och teman.

Inriktning och tematisk fokus

Inriktning är behovsdriven och kommer från deltagande företag/intressenters agenda. Däremot vore det en styrka om teman, i olika hierarkier, kan kopplas, enligt agendan från det övergripande partnerskapet. Tex ta sin utgångspunkt i Agenda 2030, sedan sektorspecifikt enligt Sveriges samverkansprogram och finna sin konkretisering i teman/nischer/frågeställningar från deltagande ledande partners.

2. MÅLBILD

Från Business Swedens perspektiv bör nya initiativ på området ha som mål att positionera svenska företag som innovations- och teknologipartners, stödja deras teknikutveckling och innovationskraft. Stödja svenska SME:er och start-ups i Kina med nya kontaktytor och partnerskap.

Värde för deltagande företag - Innovationspartnerskap ger svenska företag lokal exponering och globalt teknikledarskap

Deltagande svenska företag (och även kinesiska) ges möjligheten att:

- Accelerera sin affärsutveckling genom marknadsnära innovationsprojekt (även *business modelling, proof of concept*, etc.)
- Få tillgång till nätverk och sammanhang för att driva strategiska frågor, t.ex. koppla upp sig mot ledande partners, beslutsfattare, teknikkluster och pilotmiljöer
- Positionera sig som innovationspartner mot nyckelkontakter
- Löpande företagsspecifikt stöd och koordinering i den mån upplägget erbjuder – förkvalificering av B2B-möten, formulering av tematiskt focus m.m.
- Tillgång till finansiering från privata aktörer
- Mindre företag såväl kinesiska som svenska får värdefull chans att exponeras mot stora svenska och kinesiska företag – potentiella kunder och partners

Värde för kinesiska intressenter

- Innovation som fokuserar på sociala utmaningar, t.ex. energi, mobilitet och vatten
- Affärsnära och flexibelt format som inkluderar privat finansiering
- Koppling mellan marknadsnära forskningsprojekt och policyutbyte
- Kanaler som förenklar för kinesiska företag att få tillgång till globala affärsstrukturer, investera i Sverige och för startups att använda Sverige som en språngbräda till den europeiska marknaden

3. FRAMGÅNGSFAKTORER – UTGÅNGSPUNKTER

Framgångsfaktorer för en lyckad industriell komponent inom ramen för partnerskapet:
I syfte att realisera ovan beskriven potential ser Business Sweden följande sju centrala framgångsfaktorer för det industriella innovationspartnerskapet:

1) Marknadsnära arbetssätt med fokus på konkreta resultat för engagerade partners
Komprimerade projektcykler på 3-12 månader för att skapa kritiskt momentum. Förlängs eller fortsätter i annan/egen regi.

2) Open-innovation modell. Den marknadsnära innovation som behöver bedrivas i ett öppet forum, med flera partners och adressera sociala utmaningar

3) SME-fokus. Föreslaget format utgår ifrån rådande *best-practice* inom det internationella innovationsekosystemet i syfte att accelerera startups. För mindre företag är kontakt med stora internationella företag som potentiell kund/partner en nyckel till att kunna skala upp sin verksamhet. För stora att kunna hålla sig ájour med ny teknik. Således finns en samberoende

och det industriella innovationspartnerskapet katalyserar denna co-creation-process genom att sammanföra CEOs för innovativa startups med CTOs på ledande storföretag. För ett SME är det svårt att approchera potentiella kunder, investerare och lokala beslutsfattare. Det industriella innovationspartnerskapet utgör ett nätverk av förkvalificerade partners och fungerar således som ett brohuvud för mindre företag att etablera sig på en ny marknad. Således bidrar föreslagen modell till ökat startuputbyte.

4) Koppling till den bilaterala nivån: Koppling till det bilaterala innovationspartnerskapet ger det industriella utbytet bättre förutsättningar att attrahera kinesiska storbolag, forskningsinstitut, startup och investerare till arbetsgrupperna.

5) Kommunikationskanal. En kommunikationskanal, t.ex. en hemsida kopplat till social media, underlättar informationsspridning, varumärkesbyggande och presentation av resultat. Dessa konkreta projekt som initieras i form av tekniska piloter, lösningar på sociala utmaningar, gemensamma forskningsprojekt och ingångna affärspartnerskap kan med fördel kommuniceras som resultat och substans av det bilaterala partnerskapet.

6) Koordinerande funktion. Ett projektkontor som ger support att koordinera, katalysera, strukturera, kvalitetssäkra, länka till andra och avrapportera arbetet. Projektkontoret arbetar *back-office* och kräver ingen ny struktur, och utgörs av en virtuell plattform med neutral design och drivs av befintliga Team-Sweden aktörer lokalt i Kina, men kan drivas operativt av Business Sweden – som är den enda främjarorganisationen med en högt skalbar organisationsstuktur. Samtliga svenska och kinesiska intressenter presenteras som jämbördiga medlemmar i partnerskapet.

7) Styrmekanism med följande uppgifter:

- Formulera de tematiska fokusområdena. Harmonisering av de strategiska samverkansprogrammen och agenda 2030 med företagens forskningsagendor
- Bjuda in partner och stakeholders. Genom styrningens nätverk aktiveras potentiella partners som t.ex. universitet, startup-nätverk m.m. Styrningen stöttar även med att distribuera inbjudningar för de olika arbetsgrupperna till relevanta partners
- Kvalitetssäkra verksamheten. Genom att få regelbunden återrapportering ifrån projektkontoret kvalitetssäkrar styrningen det industriella innovationspartnerskapet
- Säkra finansiering for modellen. Då styrningen består av såväl statliga som privata aktörer har den möjlighet att säkra långsiktig finansiering som gör innovationspartnerskapet hållbart och självgenererande över tid

Bilaga - Exempel på förlopp och tematik

Baserat på ovan föreslagna mål och struktur, följer nedan ett exempel på hur arbetet kan förlöpa rent praktiskt:

***Challenge* som adresserar sociala utmaningar och förkvalificerade möten är kärnan i mekanismen**

1) Approchera och säkra engagemang ifrån företag och externa partners
2) Lansering av bilateralt innovationspartnerskap – t.ex. i samband med ett högnivåbesök
3) Kommunikationskanal upprättas – syftet är att sprida information och *showcases*
4) Styrningen synkroniserar målsättning, tematiska områden och tidplan
5) Arbetet initieras i de tematiska arbetsgrupperna initieras – företagsrepresentanter, forskningsinstitut och representanter ifrån finansieringsinstrument samverkar i syfte att definiera kravspecifikation för uppkommande *challenges*
6) En *Challenge* utlyses[1], givet ovan kravspecifikation, och relevanta inkubatorer, startupnätverk, universitet och branschorganisationer aktiveras i syfte att bjuda in relevanta aktörer
7) Workshops i Kina – möten med förkvalificerade potentiella partners
8) Arbetsgrupp formas för att initiera ett projekt som adresserar utmaningen
9) Koppling av initierade marknadsnära forskningsprojekt med finansieringsverktyg
10) Kommunikation av resultaten, inkl. rapportering till den bilaterala nivån enligt överenskommet upplägg

[1] Formerna för *challenges*, och mekanismen för hur de beslutas, tas fram i samråd med aktörer inom det bilaterala partnerskapet.

Landrapport: Kina

Författare: Johan Gunnarsson
Sektion: Externa relationer
Avd: Internationell marknadsföring och rekrytering (IMR)

Introduktion

Kinesiska studenter tillhör en av de större grupperna internationella programstudenter i Sverige, även om de numera ur ett ansökningsmässigt perspektiv är färre till antalet (2 671)[1] än sökande från länder som Indien (5 964), Bangladesh (4 557), Pakistan (3 705) och Nigeria (2 759). Men kinesiska sökande uppväger detta på ett flertal olika sätt; de söker i hög utsträckning ämnesmässigt bredare än många andra grupper, en stor andel kinesiska sökande gör kompletta ansökningar och betalar anmälningsavgiften och de är i mindre utsträckning beroende av stipendier för att kunna finansiera sina studier. Lägg där till att en stor del av de kinesiska studenter som söker sig utomlands är akademiskt mycket kapabla.

Allt detta göra kinesiska studenter till en attraktiv grupp, för rekryterande universitet runt om i världen. Kinesiska studenter vet om detta, och det färgar deras beteende i ansökningsfasen – framför allt så ser man ofta att kinesiska studenter ”shoppar runt” mellan olika alternativ: man söker ofta till flera olika universitet i flera olika länder, och tar sedan det bästa erbjudandet som uppenbarar sig.

Kinesiska studenter söker sig i väldigt stor utsträckning till traditionella länder som USA, Australien och Storbritannien och för många är andra länder inte något alternativ. Sverige är ett land som de flesta kineser visserligen känner till, men gemene man förknippar inte nödvändigtvis Sverige med högre utbildning. Många svenska universitet är i regel mer kända för sin forskning än sin utbildning, så trots att kinesiska akademiker i regel är bekanta med Lunds universitet, är varumärket inget hushållsnamn bland (yngre) studenter som står i beredskap att söka studier utomlands.

Många kinesiska studenter som söker till Sverige har redan någon slags relation till landet. Kanske har man varit här (eller i ett grannland) på utbyte tidigare, somliga har släkt och vänner här och andra är kanske bara allmänt intresserade av Sverige/Norden, och har på egen hand skaffat information om att studera i Sverige. Många har dessutom ambitionen att stanna i Sverige efter avslutade studier, för att skaffa arbetslivserfarenhet – att återvända hem med bara ett diplom från ett utländskt universitet ses numera av många som något av ett personligt misslyckande, och är inte längre någon garanti för att kunna bli erbjuden ett attraktivt arbete.

Sverige var av naturliga skäl en betydligt mer attraktiv destination för kinesiska studenter, före studieavgifter för utomeuropeiska studenter infördes år 2011. Lunds universitet tappade ca 75% av sökande på avancerad nivå från Kina mellan 2010 (sista året utan studieavgifter) och 2011 (då avgifter infördes) – i MASTERHT10 sökte 2 013[2] kinesiska studenter till Lunds universitet, i MASTERHT11 var den siffran 532. LU har ökat sedan dess, men på ett nationellt plan går det trögt – den årliga mängden sökande från Kina ligger envist kvar på samma nivå som år 2013, på ca 2 500 individer / år.

Med denna rapporten försöker författaren ge en bild av hur situationen för rekrytering av kinesiska studenter ser ut idag på en internationell nivå, på en nationell nivå och här på Lunds universitet.

[1] Siffror från NyA (2018-02-06)
[2] Kuben

Kinesiska studenter till utlandet

Mängden kinesiska studenter som läser utomlands har vuxit med ca 30% mellan 2011-2017, enligt siffror sammanställda och publicerade av UNESCO[3]:

Outbound internationally mobile students by host region

Land	2011	2012	2013	2014	2015	2016	2017
China	656 205	701 393	719 202	768 278	818 803	847 046	847 259

Trots detta har mängden kinesiska studenter som har valt att studera i Sverige minskat, under motsvarande tidsperiod (se nedan). Siffror från 2016 och 2017 för Sverige saknas, men väldigt liten skillnad uppvisas i siffrorna för Sverige mellan 2013-2015. Nederländerna och Danmark uppvisar liknande tendens under samma period. De största vinnarna är de traditionellt största marknaderna (USA, Australien, UK och Canada):

Inbound internationally mobile students by country of origin (China)

Land	2011	2012	2013	2014	2015	2016	2017
Sweden	4 070	3 246	2 547	2 373	2 337	-	-
Netherlands	3 068	4 638	-	4 717	4 804	-	-
Denmark	1 078	915	1 204	1 168	1 116	1 285	-
Germany	-	-	19 441	21 886	23 616	-	-
UK	65 906	76 913	81 776	86 204	91 518	-	-
Australia	90 175	87 497	87 980	90 245	97 387	112 329	-
Canada	26 238	34 602	42 011	50 031	54 660	60 936	-
USA	178 890	210 452	225 474	260 914	291 063	-	-

Det finns olika anledningar till att Sverige som destination inte uppvisar samma positiva utveckling som många andra länder. Den främsta anledningen är att vi har gått från att vara ett land där det var helt gratis att studera, till ett land där det kostar lika mycket som (eller mer än, i fallet Tyskland) alternativ som uppfattas som likvärdiga. Att det en gång var gratis att studera i Sverige lever delvis kvar i folks medvetande, och det kan ha en dämpande effekt på folks aptit att söka till Sverige.

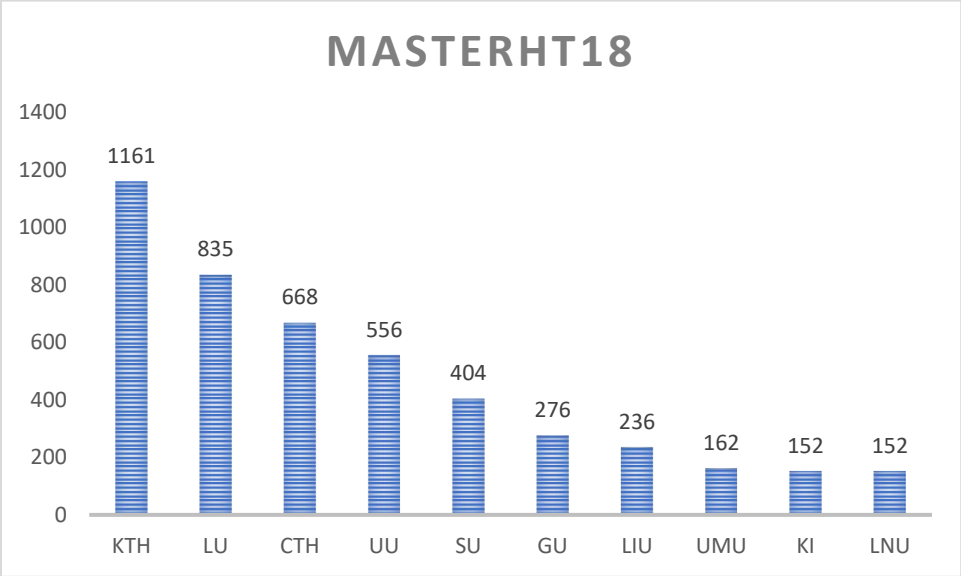
Utöver detta så saknas för Sveriges del de kraftiga ekonomiska incitament (för agenter och mottagande lärosäte), som till stor del förklarar den intensiva trafiken till lärosäten i anglosaxiska länder.

Under tidsperioden så har Lunds universitet klarat sig relativt väl. Från 532 ansökningar i MASTERHT11 till 883 ansökningar i MASTERHT17[4] – en ökning med ca 66%.

[3] http://data.uis.unesco.org/Index.aspx?queryid=172

[4] Kuben

MASTERHT18 sökande meritland Kina till Sverige (Top 10)[5]



Totalt sökte 2 609[6] studenter med meritland Kina till ett eller flera internationella Master's-program i Sverige, i ansökningsomgången MASTERHT18 (meritland används som proxy för nationalitet, eftersom denna uppgiften inte får registreras). Av dessa sökte 835 studenter till minst ett program på Lunds universitet – alltså ca en tredjedel.

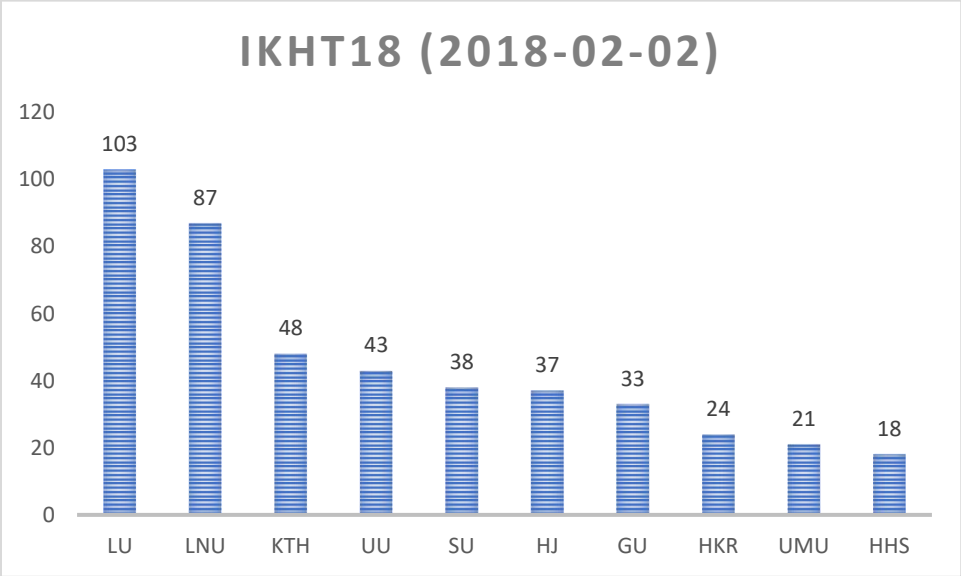
Bland svenska universitet är det KTH som presterar bäst i Kina, följt av Lunds universitet, Chalmers universitet, Uppsala universitet, Stockholms universitet och Göteborgs universitet. Ranking, prestige och karriärmöjligheter efter avslutade studier brukar nämnas som de främsta faktorerna, som avgör var kinesiska studenter väljer att studera.

KTH i synnerhet har ett formidabelt rykte i Kina, och man samarbetar också effektivt med partneruniversitet i landet för att rekrytera från dessa. Det är också så att föräldrar och studenter ofta ser en investering i en teknisk utbildning som ett tämligen säkert kort, sett till framtida karriär. Detta innebär också att konverteringsgraden för studenter till tekniska utbildningar ofta är högre än många andra ämnesområden. Bland de mer allomfattande svenska universiteten så är Lund i topp, med Uppsala, Stockholm och Göteborg som närmaste konkurrenter. Lunds ranking, historia och breda portfölj av internationella Master's-program brukar lyftas fram som våra främsta tillgångar. Baksidan med att vara allomfattande är att folk har svårt att lista ut vilka våra "bästa" ämnesområden är – något som man oftare tillfrågas om i Kina, än i andra länder.

Vårt nationella antagningssystem gör det möjligt för studenter att söka upp till fyra program, antingen fyra på samma universitet eller genom att välja ett program på fyra olika universitet – programmen måste rankas i prioritetsordning. Vi observerar ofta att en student som kanske sökt ett program på KTH i förstahand ofta väljer att ansöka till Chalmers i andrahand, vilket då lyfter Chalmers i statistiken. Samma fenomen gäller för alla universitet som har liknande utbud av program.

[5] Siffror från NyA (2018-02-02)
[6] Uppgifter hämtade från NyA 2018-02-02

IKHT18 sökande meritland Kina till Sverige (Top 10)[7]



Möjligheten för kinesiska studenter att studera på grundnivå i Kina styrs i princip helt och hållet av deras resultat på nationella kinesiska högskoleprovet Nationel Higher Education Entrance Examination – i folkmun ”gaokao”. Det krävs ett väldigt bra resultat på detta provet för att studenter ska ha möjlighet att läsa vid något av Kinas mest prestigefulla universitet (ffa universitet inom projekten 985 och 211 – numera ersatt av projektet ”Double first class”[8]). Studenter som inte presterar väl på ”gaokao” (eller av andra anledningar inte vill studera i Kina) söker sig utomlands. Till Sverige kommer dock bara en bråkdel av dessa.

De huvudsakliga skälen till att inte fler studenter från Kina söker program på grundnivå i Sverige är dels det allmänt magra utbudet av internationella program, samt det faktum att villkorad antagning till sökande till grundnivå inte erbjuds, vilket innebär att gymnasister som läser på sista året i Kina inte kan söka till Sverige samma år som de tar examen. Det här betyder i praktiken att utomeuropeiska studenter måste vara villiga att ta ett så kallat ”gap year” mellan avslutade gymnasiestudier i hemlandet, och det år då de kan påbörja sina studier i Sverige.

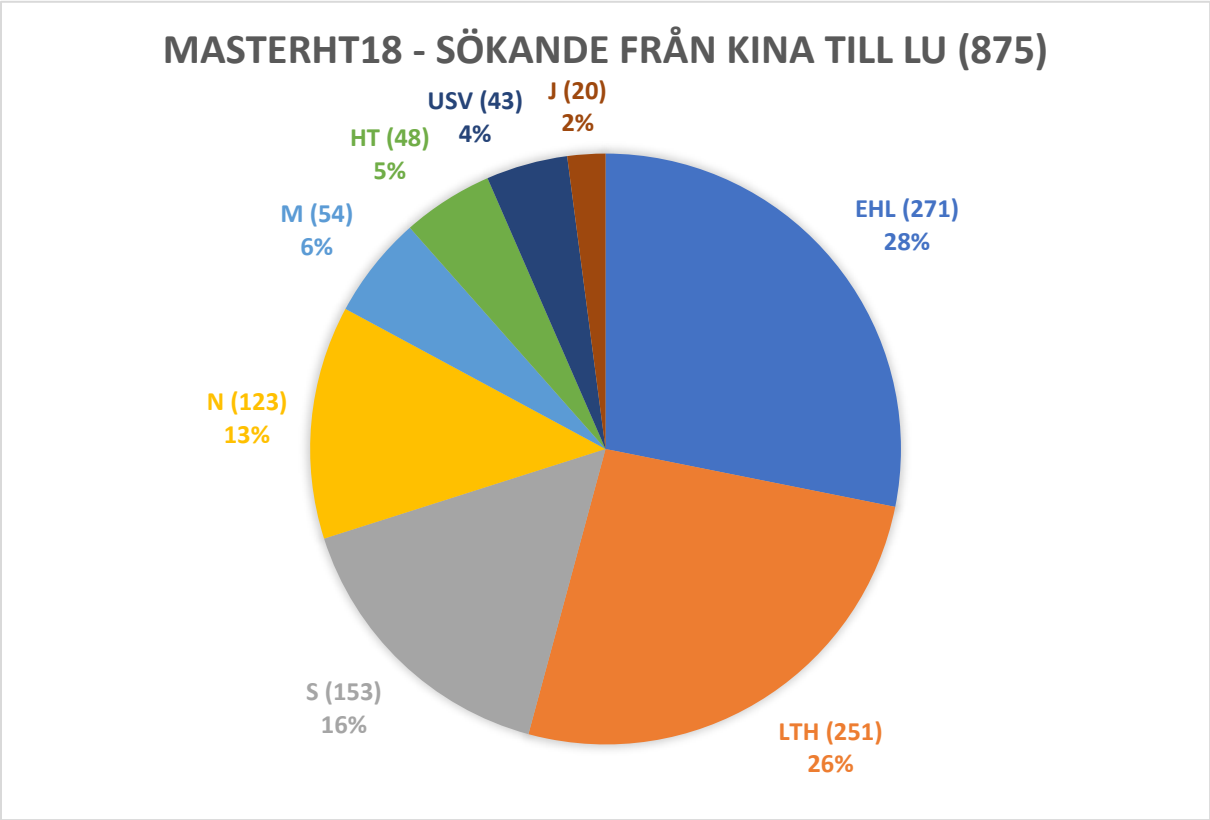
Kandidatprogrammens behörighetskrav ställer också till problem i somliga fall, då UHR bedömer[9] att bl a kinesiska studenter inte per automatik når upp till önskad nivå i ämnen som t ex matematik och fysik, för att vara behöriga att söka våra naturvetenskapliga utbildningar på grundnivå (ca hälften av våra internationella kandidatprogram erbjuds inom naturvetenskap). Lägg där till att söktrycket på de program som kinesiska studenter oftast uppfyller behörighetskraven till är väldigt stort (1 595 sökande till International Business och 913 sökande till Development Studies i IKHT18)[10]. Resultatet av allt detta är att endast ett fåtal kinesiska studenter per år påbörjar studier på grundnivå i Lund (3 st i IKHT17)[11].

Det finns anledning att tro att intresset från kinesiska gymnasister att läsa utomlands redan på grundnivå kommer att öka de närmaste åren. Utöver den tidigare nämnda svårigheten (även för

[7] Siffror från NyA (2018-02-02)
[8] http://www.moe.gov.cn/srcsite/A22/moe_843/201709/t20170921_314942.html
[9] https://bedomningshandboken.uhr.se/utlandska-gymnasiala/alla-lander/kina/
[10] statistik.uhr.se
[11] Kuben

duktiga kinesiska gymnasister) att bli antagna till de bättre inhemska lärosätena, så är det så att fler och fler kinesiska studenter läser på internationella gymnasieskolor, IB-program – både i och utanför landets gränser. För många av de här studenterna är det inget alternativ att läsa på universitet i Kina, de har helt enkelt lärts upp från grunden för att studera internationellt. Ur ett rekryteringsperspektiv är denna gruppen intressant av flera olika skäl; de talar/skriver/läser engelska väl, har de följt internationella läroplaner så gör det att de i högre utsträckning uppfyller våra behörighetskrav och slutligen så är förmågan att finansiera studier utomlands god, hos denna gruppen.

Vad söker kinesiska studenter till på LU?



(Källa: Kuben 2018-02-26)

Enligt data från Kuben hade LU fått ansökningar från 875 kinesiska studenter per 2018-02-26. Det är värt att notera att vår statistik bygger på angivet **meritland.** Det här innebär att kinesiska studenter som läser utomlands på grundnivå inte omfattas av statistiken (läser de sin Bachelor i Australien kommer de att betraktas som australiensare i vår statistik). Vi ser att EHL är den största mottagaren av ansökningar från kinesiska studenter, följt av LTH, S och N. EHL utmärker sig även positivt om man tittar på andelen förstahandsansökningar:

Område/fakultet	Antal ansökningar	Förstahand	Andel förstahand
EHL	271	185	68%
LTH	251	111	44%
S	153	96	63%
N	123	56	46%

M	54	13	24%
HT	48	24	50%
USV	43	28	65%
J	20	11	55%
TOTALT	**875**	**524**	**60%**

EHL är ett föredöme i det att man har ett brett och attraktivt utbud av internationella program – studenter hittar de program som de normalt förväntar sig att ett topprankat internationellt universitet ska erbjuda (frånsett möjligtvis ett MBA-program). Flera av programmen ges därtill i en 1-årig version, vilket är attraktivt för studenter som vill minimera sin studietid (och tillhörande ekonomisk investering). Slutligen så är EHL:s program i en internationell jämförelse mycket konkurrenskraftigt prissatta. Även S och USV presterar något över genomsnittet.

Trots att Lunds universitet har ett mycket gott forskningsanseende i Kina inom ingenjörsvetenskap, naturvetenskap och medicin, så underpresterar vi inom dessa ämnesområdena på utbildningssidan. Detta förklaras främst av att många kinesiska studenter anser att KTH och Chalmers är Sveriges mest seriösa tekniska universitet. Dessvärre så förstärks denna bild av det faktum att vårt internationella programutbud inom ingenjörsvetenskap inte på långa vägar speglar Lunds egentliga förmåga – vi saknar t ex internationella program inom väldigt många traditionella ämnen som t ex civil engineering, mechanical engineering och computer science – listan kan göras lång. Det är inte sannolikt att denna situation kommer att förändras före ett bredare internationellt programutbud kan erbjudas.

Konvertering (LU)

Om man tittar på konverteringsgraden hos kinesiska sökande till LU, så ligger denna (undantaget bottenåret MASTERHT12) i regel mellan 8-9%, av det *totala antalet sökande*. Som jämförelse så ligger konverteringsgraden hos några av våra andra större länder på ca 5% (Indien och Turkiet), 3% (Indonesien) och 1% (Bangladesh). USA utmärker sig i sammanhanget positivt, med en konverteringsgrad på ca 12% - men här måste man ha i åtanke att det kommer en betydligt större andel avgiftsbefriade studenter från USA jämfört med de övriga nämnda länderna.

Konverteringsgrad, sökande från Kina:

Omgång	Sökande	Förstahand	Antagna (1)	Antagna (2)	Registrerade	Konvertering
MASTERHT11	532	250	124	73	46	8,6%
MASTERHT12	583	302	103	85	29	4,9%
MASTERHT13	596	300	132	107	53	8,9%
MASTERHT14	675	366	135	106	57	8,4%
MASTERHT15	656	358	148	114	58	8,8%
MASTERHT16	796	466	139	97	64	8,0%
MASTERHT17	883	519	192	135	81	9,1%

(Källa: Kuben)

Att vi tappar (kinesiska) studenter mellan antagna i urval 2, och de facto registrerade, beror ofta på att de har sökt och blivit antagna till lärosäten i andra länder och/eller ovilja eller oförmåga att finansiera studier i Sverige med egna medel. Vi förlorar antagna studenter till andra länder för att våra antagningsbesked levereras relativt sent (slutet av mars/början av april), efter en för studenten

lång väntetid – upp till i värsta fall mer än 5 månader, om studenten har sökt tidigt (det finns visserligen en möjlighet för våra program att erbjuda förhandsbesked om antagning – ”preliminary assessment letter”, men detta uttnyttjas enligt vad vi erfar endast sparsamt, och inte sällan i en sen fas av ansöknings- och antagningsprocessen).

Under denna tiden hinner lärosäten i andra länder ta emot ansökningar, behandla dessa och skicka ut skarpa antagningsbesked (ofta med svarskrav inom två veckor eller liknande). Studenter i denna situationen blir stressade och tackar ja till dessa antagningsbeskeden, då det känns riskfyllt att vänta på ett svenskt antagningsbesked som kommer långt senare (och som dessutom kanske inte är positivt).

Allt detta har en negativ effekt på vår konverteringsgrad. Duktiga kinesiska (och andra) studenter blir uppsnappade av lärosäten i andra länder, under tiden att deras ansökan behandlas i Sverige.

Var kommer våra kinesiska sökande från?

Majoriteten av de sökande i MASTERHT18 kommer från Kinas ekonomiskt mest utvecklade delar, med Peking och Shanghai i spetsen. Det är dock värt att poängtera att statistiken bygger på den adress studenterna anger vid själva ansökningstillfället. Eftersom många kinesiska studenter (från olika delar av landet) läser på universitet i Peking eller Shanghai då de söker till Lund, anger de därför dessa städer som sina bostadsorter.

Kinesiska förstahandssökande till LU (MASTERHT18) geografiskt ursprung topp 10:

Stad	**Antal**
Peking	78
Shanghai	75
Wuhan	18
Hangzhou	15
Guangzhou	13
Shenzhen	12
Chengdu	12
Nanjing	9
Suzhou	9
Tianjin	9

(Källa: NyA 2018-02-02)

De flesta av Lunds universitets partneruniversitet är belägna i Peking och Shanghai (med omnejd), och detta bidrar möjligen till att göra oss till ett alternativ för studenter i dessa regionerna. Det kan kanske också antas att människor från dessa städerna är lite mer världsvana och internationellt orienterade rent allmänt, och därmed möjligen mer benägna att våga testa något icke-traditionellt alternativ, som Sverige trots allt får betraktas som.

Kopplingen till Guangdong är däremot svagare, vilket också avspeglar sig i ansökningsstatistiken. Människor från denna delen av Kina är kanske också något mindre benägna att söka sig till nordliga breddgrader för studier.

Konkurrenter (internationellt)

Många kinesiska studenter söker program på flera universitet i flera olika länder, före de beslutar var de faktiskt ska förlägga sina studier. Det är rimligt att förmoda att studenter som är duktiga nog att bli antagna vid LU, också är duktiga nog att bli antagna vid en rad andra universitet på liknande nivå runt om i världen.

Våra främsta konkurrenter ligger ffa i norra Europa: Nederländerna, Tyskland, Danmark, Finland och Norge. I synnerhet Nederländerna och Tyskland marknadsför sig aggressivt i Kina, och båda länderna är populära val för kinesiska studenter (inte minst Tyskland, där det fortfarande är i princip gratis att studera). DAAD (Tyskland) och Nuffic Neso (Nederländerna) har sedan flera år en permanent fysisk närvaro i Kina, med syfte att marknadsföra utbildning, forskning osv i landet. Finland var tidigare gratis för utomeuropeiska studenter att studera i, men avgifter har införts och det återstår att se vad detta innebär – sannolikt kommer de att behöva göra samma resa som Sverige gjorde, då avgifter infördes här. Norge är fortfarande gratis att studera i, men höga levnadskostnader avskräcker många utländska studenter. Danmark attraherar en del studenter från Kina, men få danska lärosäten bryr sig om att marknadsföra sig utomlands.

Marknadsföring

Svenska universitet samarbetar på flera olika marknader för att tillsammans marknadsföra Sverige och sig själva, men denna typ av samarbete sker i tämligen liten utsträckning i Kina. De flesta universiteten från Sverige arbetar var för sig, vilket har flera olika förklaringar – Kina är en tämligen ”mogen” marknad, och de flesta svenska lärosätena har arbetat med landet under en relativt lång tid. Man känner sina partneruniversitet, man har sina alumner och det finns gott om marknadsföringsaktiviteter tillgängliga, om man väljer att lägga resurser på det. Kina pekades tidigt ut som ett av de viktigaste länderna för rekrytering, i samband med att studieavgifter infördes i Sverige. Det fanns inga etablerade strukturer och former för marknadsföringssamarbete universitet emellan vid denna tidpunkten, så de flesta valde att på egen hand ta sig an utmaningen.

Svenska Institutet utför en del aktiviteter i Kina för att marknadsföra Sverige, men man har ingen sammanhängande närvaro, ingen fast personal (ett försök med detta gjordes kort efter att avgifter infördes i Sverige, men övergavs inom ett år) och/eller kontor i landet. Personal från ambassad och konsulat hjälper till vid evenemang, samt frivilliga från organisationen Sweden Alumni Network in China (SANC)[12] Sammantaget är dock intrycket att Svenska Institutets insatser i Kina är väldigt blygsamma i omfattning, jämfört med motsvarande insatser från organisationer som Nuffic/Neso (Nederländerna), DAAD (Tyskland), Campus France (Frankrike) och British Council (UK) m fl

Exempel på marknadsföringsaktiviteter som Lunds universitet genomfört i Kina är deltagande på kommersiella mässor, mässor på partneruniversitet, stipendietävlingar, Study/Work in Sweden-event, Pre-departure event, webinars, presentationer på universitet, alumni-event, social media-aktiviteter (ffa Weibo) och olika typer av aktiviteter med / i regi av agenter (presentationer, studentintervjuer, utbildning etc). Det går inte att peka ut någon enskild aktivitet som marknadsföringsmässigt överlägsen någon annan, idén har varit att satsa brett för att få ut sitt varumärke.

Kommersiella mässor har under en längre tid varit en stapelvara för rekryterande universitet i Kina, men för Lunds universitets del har dessa blivit mindre och mindre relevanta för varje år – studenter

[12] http://sanc.org.cn/homepage

som söker sig utomlands är tämligen sofistikerade nu för tiden, och använder i högre grad internet och andra kanaler för att ta reda på var och vad de ska studera. Det kan dock vara fortsatt intressant med mer fokuserade mässor (t ex enbart EU-universitet) där målgruppen är mer klart definierad och motiverad. Vissa av våra partneruniversitet (Peking University och Fudan University/Nordic centre) har arrangerat mässor för sina partneruniversitet, med varierande resultat.

Digital marknadsföring i Kina är något problematisk, då i princip alla våra ordinarie kanaler för social media sedan länge är blockerade i landet (Facebook, Youtube, Instagram, Twitter m fl). Det råder ingen brist på kinesiska alternativ till dessa - Lunds universitet har t ex ett officiellt Weibo-konto (knappt 6 000 följare i dagsläget). Weibo har dock tappat något i popularitet på senare år, och numera är Wechat den mest populära plattformen. Dessvärre är det inte tillåtet för utländska företag och organisationer som inte är formellt registrerade i Kina att starta officiella Wechat-konton (man är då hänvisad att starta konton som endast användare utanför Kina kan få åtkomst till). Det inkommer regelbundet förfrågningar från kinesiska internetportaler fokuserade på utbildning, om att annonsera eller på annat vis exponeras på dessa. LU har konsekvent tackat nej till detta, då det är oklart vilket resultat detta kan ha, samt är dyrt. Kinesiska studenter uppger ofta att de inte använder, eller förlitar sig på information från, denna typ av portaler.

Presentationer på universitet runt om Kina har utförts – och utförs – när tillfälle ges, ofta inför 50-100 åhörare åt gången, beroende på tid och plats. Många av de här presentationerna har arrangerats av lokal agent i samarbete med någon slags studentorganisation på det universitet presentationer ska ges (agenter är i övrigt oftast bannlysta från kinesiska universitetscampus). Varierande resultat då LU har haft liten möjlighet att påverka vem som dyker upp, men det är givande att möta och lyssna på kinesiska studenter i deras verklighet.

Agenter brukar också ofta inbjuda intresserade studenter till mer småskaliga presentationer på sina kontor, åtföljda av samtal/intervjuer för att säkerställa att studenterna har en rimlig chans att bli antagna vid Lunds universitet sett till deras kvalifikationer och andra förutsättningar. Inte sällan följer föräldrar med till dessa träffarna, då de vill bekräfta att agenten verkligen är en legitim representant för ett visst lärosäte (mer om agenter nedan).

Pre-departure event arrangeras i anslutning till att sökande studenter får sina antagningsbesked – vanligtvis i slutet av mars / början av april. Syftet med dessa är att universitet ska få tillfälle att möta och samtala med antagna studenter, som står inför ett av sina livs viktigare beslut. Pre-departure ses som en viktig komponent i vårt konverteringsarbete, och utförs på alla våra viktigaste marknader. I Kina så arrangerar ambassad (Peking) och konsulat (Shanghai) pre-departure event, med stöd av Svenska Institutet. Vanligtvis deltar Sveriges större universitet med personal på plats (övriga är med via Skype).

Webinars är något vi bara använt oss av i mycket liten utsträckning, men som vi fr o m i år (2018) kommer att använda oss av i betydligt större och mer regelbunden omfattning – både generella och landsspecifika webinars kommer att genomföras med hjälp av Adobe Connect. I Kina har webinars framför allt använts för att utbilda agenter, men några enstaka webinars för studenter har också genomförts.

Vi använder ofta **nuvarande studenter och alumner** i vårt marknadsföringsarbete. Typiskt så använder vi dessa för att hjälpa oss med mässor, vid webinars, på social media och för vårt konverteringsarbete (bland annat så ringer nuvarande studenter från Kina upp alla nyantagna studenter, för att informera och besvara frågor om livet som student i Lund). Renodlade alumni event har anordnats i Peking och Shanghai oregelbundet, men dessvärre har vi inget etablerat och självgående alumninätverk i Kina, och på denna punkten ligger vi bakom många andra rekryterande

universitet. Detta är en av våra svagaste punkter rent allmänt, eftersom våra alumner är bland våra bästa och mest lojala ambassadörer.

Agenter

Agenter är en naturlig del av ekosystemet för rekrytering till högre utbildning i Kina. Långt ifrån alla kinesiska studenter använder agent då de söker sig utomlands, men många gör det, och till vissa marknader gör majoriteten det. Agenter har inte alltid ett gott rykte, men många kinesiska studenter antar att det är lättare att bli antagen någonstans om man använder en agents tjänster. Det är inte alltid studenterna själva som fattar beslut om att använda agenters tjänster – ofta är det föräldrar som insisterar på detta. Många kinesiska föräldrar har inga, eller mycket små, möjligheter att införskaffa pålitlig information om lärosäten i olika länder. Ovana att använda internet i kombination med magra kunskaper i engelska språket gör detta besvärligt. Då känns det tryggare att vända sig till en lokal agent som kan hjälpa till med både information och praktisk hjälp med själva ansökan (och som dessutom kan hållas ansvarig om något går snett). Agenter i Kina tar betalt för de tjänster som de tillhandahåller, exakt hur mycket beror på vilken typ av ”paket” man beställer. Inte sällan hjälper agenter till med att göra ansökningar till flera olika universitet i flera olika länder, för att maximera studentens möjlighet att bli antagen någonstans.

Enligt uppgifter publicerade på International Consultants for Education and Fairs (ICEF) hemsida[13], använder 49% av kinesiska studenter som studerar utomlands, agent. Det finns framför allt en stark tradition att använda agent för studenter som söker sig till Australien, Nya Zealand, Kanada och Storbritannien. Ekonomiska incitament för agent (och mottagande universitet) är framför allt det som driver denna trafiken.

Sverige är i sammanhanget en liten spelare, och kinesiska agentfirmor kanske mest är intresserade av samarbete för att kunna visa upp en bred portfölj, snarare än de facto möjlighet att göra affärer på att skicka hit studenter. Svenska universitet har dessutom (från agentens synvinkel) nackdelarna av att ha tämligen stränga behörighetskrav, samt ett nationellt antagningssystem, vilket gör oss långsamma och mindre flexibla än lärosäten i många andra länder.

Agenter arbetar på provisionsbasis – ersättning betalas endast för studenter som framgångsrikt söker, blir antagna, betalar studieavgift och kommer hit och registrerar sig. Men för att agenter ska kunna arbeta optimalt krävs regelbunden utbildning, kontakt och att lärosätet ställer upp på de aktiviteter som agenten arrangerar (exempelvis mässor, presentationer på universitet eller intervjuer med studenter). Detta arbetet kan vara både tidskrävande och kostsamt, beroende på ambitionsnivå. Kinesiska agenter kan ha 20-30 kontor runt om i landet, och arrangerar mässturnéer på dessa tre gånger om året.

Lunds universitet arbetar för närvarande med fyra olika agenter i Kina, och i MASTERHT17 kom 29 kinesiska studenter (av totalt 78 avgiftsbetalande) via agent som LU har avtal med – alltså en dryg tredjedel. Av dessa läser 10 på LTH, 6 på N, 6 på EHL, 3 på S, 2 på USV, 1 på M, 1 på J.

Kostnader

Många kinesiska familjer sparar pengar för att klara av att betala barnets studieavgifter och relaterade kostnader, utan att behöva låna eller på annat sätt ordna fram pengar. Den robusta ekonomiska utvecklingen i landet samt det faktum att den kinesiska valutan är väldigt stark, gör att

[13] http://monitor.icef.com/2014/09/the-agent-question-new-data-has-the-answer/

det numera inte är något större besvär för kinesiska studenter att finansiera studier utomlands. Det ska dock poängteras att långt ifrån alla kinesiska familjer har det tillräckligt gott ställt för att klara av dessa kostnader – många studenter är beroende av stipendier för att kunna läsa utomlands, framför allt de som kommer från Kinas relativt sett fattigare provinser i inlandet.

För de som har pengar uppfattas inte nivån på studieavgifter och levnadskostnader i Sverige som något större hinder för att söka sig hit – tvärtom upplevs studieavgifterna i Sverige som avsevärt billigare än i t ex USA (som många jämför med). Sverige har dock ett rykte om sig att vara ett tämligen dyrt land att leva i, jämfört med t ex Tyskland och Nederländerna.

Stipendier

Stipendier är av intresse för kinesiska studenter, och beroende på den enskildes förutsättningar, kan det vara avgörande för om denne ska kunna komma hit eller ej. Men relativt få kinesiska studenter räknar med (eller behöver) allomfattande stipendier – inte sällan räcker ett mindre stipendium för att en student ska kunna fatta beslut om att komma hit. Sedan studieavgifter infördes 2011 har ca 120[14] kinesiska studenter tilldelats något slags stipendium av Lunds universitet (Lund University Global Scholarship).

Kinesiska studenter kan även söka till Svenska Institutets stipendieprogram (”Swedish Institute Study Scholarship”) men tämligen få brukar tilldelas detta, då fokus främst ligger på fattigare utvecklingsländer. Det kan även tilläggas att behörighetskraven diskvalificerar många kinesiska studenter, då 3 000 timmars arbetslivserfarenhet (eller motsvarande) krävs – väldigt få kinesiska studenter har detta då man av tradition förväntas ägna sig helt åt studier fram till dess att man är helt klar med dessa.

Kinesiska studenter som blir antagna till våra program kan söka stipendier från China Scholarship Council (CSC), men det är oklart i vilken utsträckning detta sker. Det kommer an på studenten själv att söka och bli antagen i konkurrens, för att sedan kunna söka stipendium hos CSC. China Scholarship Council har vid tidigare kontakt främst visat intresse för att sponsra doktorander, och hantering av detta ingår inte i Internationell Marknadsföring och Rekryterings uppdrag. Följaktligen skedde ingen förhandling vid tillfället.

Universitetssamarbete

LU samarbetar med flera av Kinas absolut bästa universitet; Peking University, Tsinghua University, Fudan University, Xiamen University och Zhejiang University, för att nämna några. Utbyten på olika nivåer sker löpande, och somliga fakulteter/institutioner har mycket goda kontakter med sina motsvarigheter på några av dessa universiteten. Men ur ett studentrekryteringsperspektiv är detta en tämligen outforskad resurs, och här ligger LU efter andra universitet, som arbetar nära sina partneruniversitet för att rekrytera direkt från dessa.

Många kinesiska universitet förväntar sig att deras ambitiösa och internationellt orienterade studenter kommer att söka sig utomlands för studier på avancerad nivå, och i vilket fall som helst har de oftast ingen egen kapacitet i form av (internationella) Master’s-program och utbildningsplatser, för att på avancerad nivå kunna utbilda lika många studenter som de gör på grundnivå.

Det finns flera sätt att arbeta med rekrytering av studenter från partneruniversitet – men för det

[14] Källa: Daniel Gunnarsson / LUGS koordinator

första måste ju frågan över huvud taget lyftas med dessa. Insatser som sedan skulle kunna diskuteras är t ex att skicka akademisk personal till dessa lärosätena för att hålla föreläsningar (och samtidigt marknadsföra våra Master's-program). Man kan diskutera att erbjuda studenter från partneruniversitet en garanterad rabatt på studieavgiften, möjligen kan man erbjuda expresshantering av deras ansökningar (med eventuellt förhandsbesked) osv.

Summering

Kinesiska studenter är eftertraktade av rekryterande lärosäten i de flesta delarna av världen, eftersom de i högre utsträckning än de flesta andra nationaliteter har förmågan och ambitionen att klara av studier utomlands, och dessutom kan finansiera detta utan större problem. Dessutom är marknaden tillräckligt stor för att även små spelare – som Sverige är i sammanhanget – ska kunna ha en chans att konkurrera om duktiga studenter därifrån.

Det finns möjligheter för LU att attrahera fler kinesiska studenter, men för att vi ska kunna växa mer än bara blygsamt, måste systemförändringar ske – framför allt behöver hela den svenska ansöknings- och antagningsapparaten reformeras så att den ligger mer i linje med sina motsvarigheter i andra länder som kinesiska studenter söker till. Därtill måste våra program vara betydligt mer villiga att hantera ansökningar på löpande basis, och snabbt vara beredda att skicka ut förhandsbesked när duktiga studenter dyker upp.

Några av de största hindren för ökad rekrytering från Kina:

- Det svenska ansöknings- och antagningssystemet (långsamt/ej flexibelt)
- Otydlig koppling till karriär efter avslutade studier inom vissa ämnesområden och begränsad support från LU gällande praktik, extrajobb, jobb
- Omöjliga behörighetsregler (e.g., till naturvetenskapliga kandidatprogram)
- Demografi – mängden kinesiska studenter mellan 18 – 24 år minskar kommande år[15]
- Ökad konkurrens både internationellt och nationellt (kapacitetsutbyggnad)

Men det finns även möjligheter för Lund att öka andelen kinesiska studenter, utan att ovan nämnde hinder elimineras.

- Bättre/mer samarbete med partneruniversitet
- Etablera ordentliga alumninätverk och använda dessa mer systematiskt i rekryteringssyfte
- Tydliggöra karriärmöjligheter, samarbete med svenska företag som vill anställa kinesisk personal
- Lansera Double Degrees eller Joint Programmes med kinesiska partneruniversitet
- Fler sökande och förbättrad konverteringsgrad till LTH/N/M med särskilda insatser (stipendietävlingar, rekrytering från partneruniversitet på fakultetsnivå, rabatt/stipendier till partneuniversitetsstudenter)

//Johan Gunnarsson (2018-05-01)

[15] http://monitor.icef.com/2017/09/chinas-college-aged-population-decline-2025/

2018-05-15

Teknikföretagen

Teknikföretagens inspel till Regeringens arbete för svensk-kinesiska samarbeten inom främjande av innovation, forskning och högre utbildning

1. Inledning

Teknikföretagen har 4 000 medlemsföretag. Tillsammans står de för en tredjedel av Sveriges varuexport med 300 000 anställda i Sverige och 700 000 i utlandet. För varje jobb inom industrin i Sverige skapas ytterligare ett jobb i andra sektorer. Bland medlemsföretagen finns stora globala koncerner, medelstora, diversifierade bolagsgrupper och små företag med en handfull anställda. Gemensamt är att de bedriver en omfattande handel med omvärlden, vilket innebär att de konkurrerar på en global marknad.

Kina är såväl en viktig marknad som ett viktigt produktionsland för svensk teknikindustri. Många företag har i första hand genomfört en marknadsdriven expansion i landet i syfte att sälja mer genom sin närvaro.

Teknikföretagen sammanställer årligen uppgifter för antalet anställda i olika länder i 31 stora svenska teknikkoncerner. Av dessa har alla utom några få, betydande verksamhet i Kina. Antalet anställda i Kina i de aktuella teknikkoncernerna är nästan 68 000 personer enligt den senaste sammanställning.[1] Motsvarande siffra för Sverige är samtidigt ca 110 000 personer. På tio år har antalet anställda i Kina mer än fördubblats samtidigt som antalet anställda i Sverige minskat något.

Exporten av teknikvaror till Kina är betydande och uppgick 2017 till drygt 32 miljarder SEK. Därmed är landet den 7:e viktigaste exportmarknaden för teknikprodukter från Sverige. Att bara titta på exporten innebär dock att Kinas betydelse för svensk teknikindustri underskattas. Detta eftersom en betydande del av det som säljs i Kina produceras lokalt i bolagens anläggningar där. Flera av bolagen bedriver också relativt omfattande FoU-verksamhet i Kina.

Sammantaget är bolagens verksamhet och försäljning i Kina helt central för de svenska teknikkoncernerna.

2. Utgångspunkter för en strategi

Behovet av en övergripande svensk strategi gentemot Kina är lika uppenbar som frågan är komplex. Under decenniet efter finanskrisen ser vi hur den globala världsordningen är under snabb förändring där världens ekonomiska centrum flyttas från atlantekonomierna till Stilla Havsregionen med Kina som främsta draglok. Hur västvärlden ska förhålla sig till Kinas uppstigande till världsmakt blir en alltmer strategisk fråga.

[1] Se rapporten *Svenska teknikkoncerners anställda i världen – Teknikföretagens analys 2017*. De senaste uppgifterna i rapporten avser 2016.

Svenska aktörer gentemot Kina, både från näringsliv, akademi och civila samhället har länge efterfrågat en tydligare strategisk inriktning för arbetet med Kina. Det gäller både generella riktlinjer, organisatoriska frågor och mer operativt och handfast förhållningssätt samt utformningen av olika stödformer, finansiella och andra.

Önskvärt skulle vara att initiera en bred strategi gentemot Kina. Det skulle innebära att många av de svåra ”målkonflikter” i samarbetet med Kina inte kan undvikas att bli fäst på papper. Det gäller flera kontroversiella frågor, inte minst hur hantera det hårdnande klimatet för fri- och rättigheter, frågor om kinesiska investeringar i Sverige och uppköp av ”svenska” företag, konsulära frågor med flera.

3. Vad bör en samarbetsstrategi med Kina innehålla

Make in China 2025

År 2015 lanserade kinesiska regeringen ”Make in China 2025”. Det är en tioårig strategisk och långsiktig industripolitisk plan för hur Kina ska ta globalt ledarskap inom tio olika industrigrenar.

Det här skall ske i det nya näringslivsklimat som nu växer fram i Kina där marknadsreformer är på reträtt och där kontrollen skärps över både den privata och statliga sektorn. En rad faktorer kommer dock enligt kritiker att verka tillbakahållande för genomförandet av den ambitiösa planen. Det gäller faktorer som ”mismatch” mellan politiska prioriteringar och industrins behov; Fixeringen på kvantitativa mål; Svag omställningsförmåga till ny teknik på grund av brister i utbildningssystemet; Svårigheter att permittera arbetskraft m.fl. Inte desto mindre fruktar många av Kinas konkurrenter att Make in China 2025 kommer innebära väldiga utmaningar i förhållande till ett Kina som bestämt sig för att redan i ett medellångt perspektiv skapa globala ledarföretag inom innovation och forskning. Inom de strategiska sektorer som finns identifierade inom ramen för Make in China 2025 har marknadsandelar för inhemska leverantörer definierats som de facto utgör marknadsaccess hinder för svenska företag. Inom vissa särskilt viktiga sektorer för Sverige uppgår marknadsandelar för inhemska leverantörer upp till 75%.

För svensk industri är Make in China 2025 särskilt utmanande då satsningen fokuserar på många av de områden där svenska företag sedan länge har ett försteg. IFU-strategin behöver därför ge en grundlig beskrivning av det kinesiska initiativet. Det behövs också en initierad bedömning av satsningens realiserbarhet och vad den kan innebära för svensk del. Vidare bör den söka reflektera landets problem med bristande transparens, juridiska osäkerhet, korruption, tvingande regler för teknologitransfer till inhemska aktörer och mycket låg respekt för immaterialrätt. Strategin bör även beröra frågor om hur andra konkurrerande västländer” (bl. a inom EU) förhåller sig till Make in China.

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Organisations- och Finansieringsfrågor
Viktigt är att organisations- och finansieringsfrågorna ges en central roll i IFU-strategin. Viktigt är också att strategin präglas av långsiktighet som inte i olika avseenden förändras vid eventuella regeringsskiften.

Viktigt är också att strategin spänner över och skapar synergier mellan flera politikområden med innovations, forskning- och utbildning i fokus, ibland även med en nordisk dimension. För det konkreta samarbetet i Kina spelar svenska sektor- och expertmyndigheter som Vinnova, Energimyndigheten, Naturvårdsverket med flera en viktig roll för att bygga långsiktiga samarbeten med motsvarande kinesiska myndigheter.

Strategin behöver också anlägga ett genomtänkt värdekedjeperspektiv med kopplingar mellan innovationssamarbete, projektdesign, förstudier, finansieringsupplägg för genomförande, konsortiebildningar. Det fordrar dock att statliga finansieringslösningar och finansieringsinstrument från olika politikområden och departement på ett planerat och samordnat sätt kan erbjudas under hela värdekedjans olika moment.

I Kina saknas dock inte finansiella resurser för lovande projekt. Det innebär att tillgängliga svenska finansiella resurser framförallt behöver inriktas på mycket tidiga faser i ett forskningsprojekt eller förstudier för projektutveckling av smarta elnät, avfallshantering mm. Det kan också gälla insatser av karaktären ”Seed money”, finansiering av Demo-projekt, stöd till dokumentation av intressanta referensprojekt mm

Det är ofta kombinationen av svensk smart teknik och smart finansiering som ger framgång för svenska samarbeten och lösningar i Kina.

Se även appendix för erfarenheter från miljöteknikområdet.

4. Skydd och säkerhet

Sverige bör ha ett tydligt nationellt budskap kring skydd och säkerhetsaspekter gentemot Kina. Ett antal exempel på områden att lyfta är följande:

- Utländska investeringar/screening. FDI syftar till att skydda innovationerna, Europas konkurrenskraft. Det är viktigt att Kina förstår den europeiska oron och respekterar att Europa – liksom Kina själva – vill försäkra sig om ett skydd inom vissa strategiska områden. Detta bör inte endast röra företagen utan hela innovationssystemet.

- Upphovsrätt/cyberattacker. Det finns inga förutsättningar för internationella regelverk som förhindrar och vi är, nationellt, inte rustade att skydda vårt samhälle. CloudHopper är ett tydligt exempel. Det bör vid

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alla samarbeten skrivas in i eventuella avtal att samarbetet kan avbrytas i de fall kinesiska statsaktörer otillbörligt nyttjat data (i synnerhet via IT-attacker) för att stjäla information, patent, kunnande, affärshemligheter, osv.

- Kinesisk underrättelselagstiftning som tvingar kinesiska bolag och medborgare att på statens begäran bistå underrättelseverksamhet riktat mot utländska intressen. Denna lagstiftning har förutom cyber även konsekvenser för forskningssamarbeten samt FDI dvs förvärv av svenska företag och oberoende ställning.

- Integritet/fri forskning. På motsvarande sätt som ovan bör det vid eventuella samarbetsavtal stå klart att avtal kan sägas upp om akademisk frihet, integritet inte respekteras.

- Exportkontroll. Teknik- och kunskapsöverföring är inom områden med militär applikation begränsat inte enbart av vår nationella exportkontrollagstiftning utan även av EU:s regelverk för produkter med dubbel användning. Därför är det viktigt att detta sätter ramen först, dvs så inte samarbetet talar om AI och autonoma system utan att se att det finns restriktioner för dessa områden med Kina.

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Appendix

Svensk-kinesiskt samarbete – erfarenheter från miljöteknikområdet

I Regeringskansliets uppdragsbeskrivning ingår att ”tillvarata kunskap och analyser från tidigare insatser, exempelvis internationella miljötekniksekretariatet (IMT) och Centec”. Många erfarenheter kan dras av det långvariga miljötekniksamarbetet med Kina. Det gäller lyckade satsningar men också brister och missförstånd både på den kinesiska och svenska sidan.

Decennierna efter kulturrevolutionen inledde Kina en snabb industrialisering som efterhand skapade omfattande och växande miljöproblem med luft-, vatten- och markföroreningar. För att aktivt motverka denna utveckling beslöt regeringen i början av 00-talet att ett flertal städer skulle utses till ”EKO-städer”. Men man saknade ett statligt Miljödepartement, miljölagstiftningen var bristfällig, riktlinjerna för genomförande av miljöinsatserna var oklara, effektiv miljöteknik saknades eller var föråldrad och framförallt saknades modern kunskap om stadsplanering.

Sverige sågs som ett föregångsland på miljöområdet och år 2002 inleddes ett nära samarbete kring den ”hållbara staden”. Vi hade god ”timing” och intresseväckande ”storytelling” om hur Sverige sedan 1950- och 60-talen långsiktigt och systematiskt tagit itu med liknande miljöutmaningar som Kina då brottades med. Vi kunde framförallt presentera ett pedagogiskt planeringsinstrument för hur man bygger och uppnår synergier mellan EKO-stadens olika infrastruktursektorer – det då nya svenska konceptet SymbioCity, baserat på Hammarby Sjöstad.

SymbioCity var också ett instrument för marknadsföring av svensk miljöteknik och en exportplattform som skapade ny samverkan mellan 100-tals stora och små företag runt om i Sverige. Sett över tid har konkreta affärer för de svenska företagen varit relativt få i förhållande till nedlagda resurser. Orsakerna är flera:

- Brist på kinesiska byggherrar som har förståelse för och ser en kommersiell uppsida i att anamma (något dyrare) svenska lösningar.
- Kinesiska stats- och stadsadministrationer präglas av många ”stuprör” få ”hängrännor”
- Brist på kinesiska projektkonsulter som förstår värdet i svenskt processtyrningskunnande och brist på kompetenta beställarorganisationer.
- Stort fokus läggs i Kina på investeringskostnaden, alltför lite på drifts- och underhållskostnader och förståelsen för Life Cycle Cost och kvalité är ofta svagt
- SymbioCity var för mycket ett planeringsinstrument för stadsbyggnad och för lite ett affärskoncept
- SymbioCity saknade en genomtänkt svensk finansieringsstrategi
- Det var för konsultdrivet med många förstudier men få leverantörskontrakt
- Det var svårt få de svenska företagen att i konsortier samla sig till systemerbjudanden

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För Kina och för många kinesiska städer har de omfattande svenska insatserna varit av stor betydelse som lagt grunden för en ganska bred uppfattning om Sverige som ett land med avancerade tekniska lösningar. Hammarby Sjöstad utgör fortfarande ett av Sveriges viktigaste ”show-case” för smart teknik inom infrastruktur, dit ett mycket stort antal delegationer från Kina sökt sig – inkl. Xi Jinping.

När lärdomarna av tidigare års arbete med SymbioCity väl dragits finns därför all anledning överväga innovations-, forsknings-och utbildningssamarbete inom det breda området miljö- och klimat. Här finns sedan länge en påtaglig ”good will” och viktiga personliga nätverk som utgör en mycket viktig grund för förtroendefullt samarbete i Kina. Ett ytterligare viktigt skäl för ett nära samarbete är Kinas storskaliga satsningar inom ramen för Agenda 2030.

Ett viktigt initiativ är det ”Urban Living Lab” (ULL) som nu etableras i Hammarby Sjöstad/ElectriCity. Där kommer städer i bl.a. Kina att erbjudas konkret inriktade kurser inom vattenrening och avfallsteknik, smarta elnät, demo av svenska pilotprojekt och ”best practices. Men också mer generell tekniköverföring och gemensam teknikutveckling. Avsikten är också att lägga grunden för svensk export i senare skeden.

Ett första avtal om ett Urban Living Lab har ingåtts mellan Teknikföretagen och dess systerorganisation Confederation of Indian Industries CII. Städer som ingår i Indiens väldiga satsning på ”Smart Cities” kommer med CIIs hjälp att kunna erbjudas deltagande i satsningen på Urban Living Labs. Det kommer att utgöra ett nav för svenska städer som vill söka eller fördjupa samarbeten med utländska städer. I Kina bör goda förutsättningar finnas för samarbete. Där har just vänortssamarbeten varit en mycket viktig plattform för gemensamma initiativ på många olika områden. Det är ingen tillfällighet att en uppsjö av kinesiska investeringar i”start-ups” i Västra götalandsregionen beror på det nära och långvariga vänortssamarbetet mellan Shanghai och Göteborg.

Det är dags att ta Kina på allvar!
Om vi inte gör det löper vi allt större risk att Kina till slut inte längre tar Sverige på allvar.

Kina växande inflytande globalt på områden som ekonomi, geopolitik, miljö och utbildning är nu så stort att det kräver en nationell samling i Sverige för att vi som land ska förhålla oss till det på långsiktigt bästa sätt. Kina är idag Sveriges största handelspartner i Asien och vår tionde största handelspartner globalt. Kina bedöms under det kommande decenniet gå om USA i BNP-storlek och bli världens största ekonomi. Landet gör också stadigt stora framsteg inom forskning, utveckling och innovation, samtidigt som det är världens största utsläppare av koldioxid. För vårt eget lands framtid och välfärd är det därför av högsta vikt att alla delar av svenska samhället och näringsliv skaffar sig en långsiktig och samtidigt följsam strategi för att vi kollektivt ska få ut det bästa av samarbeten med Kina och kinesiska aktörer.

Alltför länge har vi levt med daterade och inte sällan ytliga, eller rent av felaktiga, uppfattningar av Kina. Kinas mindre transparenta styrelseskick och sätt att bedriva politik och ekonomi har inte underlättat, men det är, i min mening, ingen ursäkt för att vi själva inte ska anstränga oss att verkligen förstå Kina på djupet. Det är inte enbart Kinas fel att vi vet mindre än vad vi borde veta om Kina! På grund av det förhållandet riskerar vi att fatta felaktiga beslut vilka baserats på felaktigt underlag. Detta riskerar dessutom att skrämma bort samarbetspartners i Kina som vi verkligen skulle ha stort värde av att fördjupa samarbeten med.

Personligen har jag haft glädjen och nöjet, och stundom frustrationen, att följa Kinas utveckling kontinuerligt sedan mitt första besök i landet 1980, och har bott sammanlagt 18 år i olika delar av landet; först som student, doktorand i sinologi för att sedan bli verksam i näringslivet inom life science, finanssektorn samt i media.

Lösningen på många av de problem jag lyft fram ovan är, enligt mig, lättare att hitta än man kan tro vid första anblick. Det finns mycket och gedigen kunskap om Kina i många delar av det svenska samhället, alltifrån politiska kretsar, näringsliv, samhälle, kultur och universitetsvärlden. Problemet har varit, och fortsätter att vara, att man i Sverige inte vänt sig till rätt kinaexpertis för att få de rätta svaren. Alltför ofta har man istället varit fången i en filterbubbla och inte sökt efter ny kunskap om Kina utan nöjt sig med att få bekräftat det man redan vet, eller tror sig veta, om Kina. För mig är det självklart att vi måste ha rätt förståelse om Kina för att vi ska kunna fatta de klokaste besluten. Det är beklagligt att denna insikt fortfarande inte slagit rot i Sverige.

Vad är då mina lärdomar från alla mina år med Kina?

Sverige är, trots att det är litet och på långt avstånd från Kina, ett land som Kina betraktar med både intresse och respekt. Förvånansvärt många kineser känner till

långt mycket mer om vårt land än vad svenskar i gemen känner till om Kina. Det som gör detta konstaterande än mer paradoxalt är att vi i Sverige med vårt öppna samhälle har mycket större tillgång till data och information om Kina än vad som är tillgängligt för gemene kines vad gäller information om Sverige på grund av Kinas uppenbara brist på öppenhet.

Sveriges litenhet gör att vi som land måste vara klokare än de stora länderna i världen i allt vi företar oss i våra relationer och samarbeten med Kina.

Vi har absolut ingen anledning att skämmas för vårt eget kunnande om landet och vi ska sluta att, ibland slaviskt, gå i de stora ländernas, inte minst USAs, fotspår när det gäller synen på Kina. Olika länder har, och kommer alltid ha, olika slags relationer med Kina. I det senaste årens utveckling i världen, när växande nationalism och avståndstagande från frihandel och multilateralism börjat märkas, är det än viktigare för ett land som Sverige – som skapat sitt välstånd med handel och investeringar och ett bejakande av frihandel - att säkerställa att vi besitter egen och djup kunskap om Kina, liksom givetvis beträffande alla andra länder.

Att vara långsiktig och samtidigt flexibel att ändra kurs eller fokus, de gånger det påkallas på grund av större förändringar i Kina av politisk eller ekonomisk natur, är en inställning eller reflex som vi alltid måste bära med oss och vårda. Att inte falla offer för flockbeteende, när till exempel andra länder får för sig att allt i Kina måste göras i Shanghai, utan att hitta samarbeten med partners i städer och regioner i landet där det kan finnas en bättre jordmån för fruktbart samarbete, är en annan aspekt som också måste genomsyra Sveriges relationer med Kina.

Många kineser har studerat, forskat eller arbetat i Sverige. Den kinesiska kontingenten studenter och forskare i Sverige är ansenlig och har inte minskat i omfattning. Dessa människor, som efter sin hemkomst får betydelsefulla positioner i universitetsvärlden, näringslivet eller politiken, utgör en reserv av ”good will ambassadörer” som inget annat vill än att hjälpa till att främja relationerna mellan våra två länder. På samma sätt är det många svenskar som studerar och forskar i olika ämnen vid olika lärosäten i Kina. Vi skulle få ut mycket positivt om vi uppmärksammade, uppmuntrade och stöttade dessa människor bättre än vad som hittills varit fallet.

En komplett och djup förståelse av ett land måste innefatta kunskaper på alla områden om Kina, alltså även inom humaniora, samhällsvetenskaper och juridik utöver forskning, teknik och utveckling. Med en sådan kunskap kan vi bättre förstå på vilka områden vi kan göra fruktbara insatser i Kina och på samma sätt få en överblick på de områden där vi faktiskt kan lära oss av Kina.

Med en djup förståelse för Kina, dess ekonomi och näringsliv är vi också bättre rustade och blir klokare i att välja de samarbeten som långsiktigt är mest

gynnsamma för Sverige och svenska aktörer. Fortsätter vi däremot på den inslagna vägen är risken för mig uppenbar att vi gör oss irrelevanta och ointressanta för bra kinesiska samarbetspartners på olika områden.

Jag ser därför det uppdrag som regeringskansliet givit professor Sylvia Schwaag Serger att skriva en status- och framåtblickande rapport om svensk-kinesiskt samarbete inom innovation, forskning och högre utbildning som det första steget som Sverige måste ta för att på sikt ska få bästa utväxling på samarbeten med Kina. Detta första och lovvärda steg måste sedan följas av åtskilliga andra steg, och på många andra områden, för att vi så småningom ska kunna stoltsera med att vara den nation i världen med de bästa kunskaperna om Kina och därmed hanterar våra komplexa relationer med landet på klokast sätt. Det är helt enkelt som det kinesiska ordspråket lyder: ”千里之行始于足下” ”En tusenmila resa börjar alltid med det första steget”!

Är det något jag verkligen lärt mig under mina idag 38 år är med Kina så är det att långsiktiga, genomtänkta och djupa relationer ger de bästa resultaten, oavsett om det gäller forskning & utveckling eller kultur eller näringsliv.

Jag ställer gärna mina kunskaper och erfarenheter om Kina till förfogande i kommande projekt med detta fokus.

Frédéric Cho
Founder Frédéric Cho Advisory AB och vice ordförande Sweden-China Trade Council

PM: samarbete med Kina inom högre utbildning, forskning och innovation

SI:s perspektiv på ett strategiskt, långsiktigt förhållningssätt

SI har tagit dela av underlag (PPT) från referensgruppsmöte och instämmer i behovet av en bättre koppling mellan forskning, innovation och högre utbildning i samarbetet med Kina. SI har en relativt omfattande verksamhet riktad till Kina med inriktning på kommunikation om Sverige och samarbete inom högre utbildning, forskning och innovation, se sammanställningen i bilaga 1 nedan. I linje med den pågående Internationaliseringsutredningens delbetänkande föreslår SI att regeringen, Regeringskansliet och berörda myndigheter, i samråd med lärosätena, arbetar strategiskt och operativt för att stödja svenska lärosätens samarbete i länder där det bedöms önskvärt. (SOU 2018:3, sid 218).

SI bidrar på olika sätt till regeringens exportstrategi. Sedan 2016 har SI i uppdrag att särskilt bidra till insats 20) Stärkt talangattraktion i Exportstrategin, vilket har medfört ökade resurser för skräddarsydda besöksprogram för nya målgrupper och länder, för att främja Sveriges attraktivitet som studiedestination och kunskapsnation samt för att stärka relationer genom alumnnätverk, med särskilt stöd till utlandsmyndigheterna. SI:s roll har varit att synliggöra Sverige som innovationsland, Sverige som näringslivsnation och Sverige som land att investera i. SI har i samarbete med en bredd av svenska aktörer, utvecklat ny kommunikation och nya stöd inom dessa områden, t.ex. inom regeringens samverkansprogram för innovation, inom den svenska start up-scenen och på området Sverige som näringslivsnation. SI har dessutom utvecklat en ny form av besöksprogram för särskilt kvalificerade målgrupper utomlands inom områden som innovation och entreprenörskap.

Svenska kunskapsmiljöer har en unik kapacitet genom den samverkan som finns mellan utbildning, forskning, näringsliv och innovationssystemet. Ett flertal aktörer är aktiva inom dessa områden, också på den internationella arenan. SI:s bedömning är att det emellertid saknas en aktör som har det samlade uppdraget att synliggöra Sveriges

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styrkor och särart i utlandet och att utveckla en enhetlig och sammanhållen berättelse för ett starkt genomslag i ett ”internationellt skyltfönster”. SI har genom sitt uppdrag och långa erfarenhet av samverkan och kommunikation, inom bland annat högre utbildning, innovation och näringsliv en unik position och möjlighet att bidra till en samlad kommunikation om Sverige som kunskapsnation.

För att underlätta samordningen och ett strategiskt, långsiktigt förhållningssätt i samarbetet med Kina vill SI särskilt lyfta fram följande:

- En inventering/kartläggning av befintlig svensk närvaro i Kina och samarbetsavtal av strategisk karaktär inom högre utbildning, forskning, och innovation. En sådan inventering (i den mån den inte redan finns) bör ligga till grund för en bedömning av vilka väsentliga styrkor, utmaningar och eventuella luckor som finns i samarbetet.

- En nationell strategi för samarbetet bör adressera behoven av att stärka förmågan hos aktörer (näringsliv, offentlig sektor, akademi, innovationssystem) att hantera komplexiteten i samarbete med Kina, inkl. MR och värderingsfrågor. Den gemensamma Strategin för arbetet med Sverigebilden utgår ifrån idén att samverka och samskapa kring globala utmaningar i linje med Agenda 2030. SI strävar efter att föra en dialog med våra målgrupper om utmaningar och frågor som är relevanta för dem. Sverigekommunikationen lyfter inte bara Sveriges styrkor, utan kommunicerar även utmaningar och svårigheter som vi står inför, liksom möjligheter att finna gemensamma lösningar på gemensamma utmaningar. något som är relevant inte minst i Kina.

- En strategi för samarbetet med Kina behöver också adressera mottagarkapaciteten i Sverige och behovet av en väl genomtänkt mottagarorganisation för kontakter och besök från kinesisk sida. Här kan SI potentiellt spela en roll som faciliterande och koordinerande aktör.

- Förstärkt synlighet i Kina genom tydligare och mer strategisk kommunikation om Sverige på mandarin. SI ser för närvarande över kommunikationen på http://sweden.cn/. Det innebär en möjlighet för en tydligare tematisk profilering av sajten med fokus på bl.a. innovations- och hållbarhetsfrågor.

- SI bedömer att innovations- och forskningsråden har potential att i än högre grad kunna arbeta strategiskt med främjande och kommunikation om Sverige som kunskaps- och innovationsnation. SI har ett uppdrag inom ramen för Exportstrategin att ta fram material för utlandsmyndigheters och andras kommunikation (s.k. *toolkits* om de strategiska samverkansprogrammen). SI har även möjlighet att stödja UM:s lokala arbete med att aktivera dessa och skapa lokala kommunikationsaktiviteter. Utifrån denna plattform och en kommande kan en större satsning göras i Kina i samarbete med innovations- och forskningskontoret på ambassaden Peking, Gk Shanghai, Vinnova och STINT.

- Ledarskapsprogram och dialogplattformer för policyutbyte (inom t.ex. innovationspolitik, omställningsförmåga, hållbarhet). Här har SI en naturlig roll och omfattande erfarenhet av att ordna kortare och längre program av hög kvalité och relevans i nära samverkan med berörda aktörer i det svenska innovationssystemet. SI har till Näringsdepartementet lämnat förslag om bl.a. ömsesidiga residensprogram för entreprenörer i inkubatorer och Science Parks.

- Ett flertal svenska lärosätena har en aktiv studentrekrytering från Kina; man eftersträvar samtidigt en diversifiering i den internationella rekryteringen och kanske inte fler studenter från just Kina. Dock vore det möjligt att på olika sätt stärka svenska lärosätens utbyten och samarbeten med kinesiska lärosäten inom ramen för befintliga och nya utbytes och samarbetsavtal. Bl.a. har KTH etablerat ett omfattande samarbete med Shanghai Jiao Tong University kring student- och lärarutbyten samt ett Swedish Centre i Shanghai. En annan tänkbar modell är *KTH Global Development Hub (*https://www.kth.se/om/internationellt/projekt/globaldevelopmenthub/uppdrag-och-mal-1.779721) en utbildnings- och samarbetsmodell där studenter från KTH och partneruniversitet utvecklar förmågor, nya affärsmodeller, teknologier och tjänster som löser samhällsutmaningar. Modellen är framtagen för KTH:s samarbete med partnersuniversitet i Afrika, men principiellt intressant även för samarbeten med kinesiska lärosäten med fokus på agenda 2030.

Till sist vill SI understryka värdet av att den studie som nu görs för att underlätta samordningen och ett strategiskt, långsiktigt förhållningssätt i samarbetet med Kina skulle kunna fungera som modell och tillämpas i princip i alla de länder i vilka Sverige har innovations och forskningskontor och ett prioriterat Team Sweden-perspektiv.

Bilaga: aktuell verksamhet i Kina med fokus på högre utbildning, forskning och innovation

1. Kommunikation och evenemang inom innovationsområdet

Nya toolkit – Smarta städer, Cirkulär och biobaserad ekonomi, Uppkopplad industri och nya material
Framtagande av toolkit för kommunikation av regeringens strategiska samverkansprogram, varav två är färdiga (Smart Cities, Fashion revolution) och ett blir klart inom kort: "Uppkopplad industri och nya material" för publicering på www.sharingsweden.se (Toolkit tas fram för samtliga program i nära samverkan med bl.a. Vinnova)

Sweden.cn – med generell kommunikation om Sverige

Besöksprogram kopplat till toolkit Smart Cities - For a Sustainable Future

Smarta städer använder informations- och kommunikationsteknik för att förbättra kvaliteten, prestanda och interaktivitet hos offentliga tjänster, minska kostnader och resursförbrukning och förbättra kontakten mellan medborgare och myndigheter. Social, miljö - och ekonomisk hållbarhet i en helhet. SI:s ambition är att koppla besöksprogram till flera av samverkansprogrammen.

2. Marknadsföring av Sverige som studiedestination

Målgruppsnära, direktkommunikation mot studenter:
- Study.sweden.cn – sajt med basinformation
- Närvaro på Weibo, Wechat och andra sociala medier
- HT17 gjorde vi en jämställdhets-/HBTQ-kampanj med innehåll i våra digitala kanaler och fysiska event i Peking och Shanghai.

Stöd till vidareförmedlare:
- Utbildar och finansierar ambassaden och GK att hålla pre-departure event (för antagna) samt delta i studentmässor. Till hösten är det diskussion om att de ska ordna egna event eller hitta en ny mässa då vi inte varit nöjda med resultatet de senaste par åren. De har också börjat testa med universitetsbesök, där de besöker ett campus och ger en presentation om Sverige som studiedestination.

Kina är vår andra största marknad efter Indien och växer varje år.

3. Alumnverksamhet

8 maj 2018: Presentation om alumni och Sweden alumni Strategy Guide på regionalt främjarmöte i Shanghai. Deltagare från SI är Linnéa Lindgren och Kristina Pernevill. Planerade aktiviteter 2018 i alumnföreningens chapters i Shanghai och Hangzhou. Fler aktiviteter kan tillkomma under året. **2018 Activity Plan:**

1. SANC ZJ annual meeting, participants:menbers, boardmenbers,"Fika",main topics:Old Strories,Where I Am Now and Opportunities;2018 activity plan.
2.May Salon: Entrepreneur VS Jobs,we'll invite alumni of entrepreneurs and working in companies to share their stories;
3. September Meet with Swedish companies: we'll try to connect with HRs of local Swedish companies to see opportunities for our alumni and discuss some work related topics.
4.November The 2018 Sino-Swedish Innovation & Entrepreneurship Forum& Match Making, Hangzhou is a city thrived of entrepreneurship and innovation, which could be a sub-forum for this event.
5. December Nobel night: we'll have a get-together and watch Nobel Prize Award Ceremony together,discussing Nobel prize owners, unfolding memories-Coming back to Sweden-Chasing Beautiful School Days

4. Stöd till svenskundervisning

Det finns svenskundervisning vid 5 universitet i Kina – Peking, Hong Kong och tre i Shanghai. Se: https://svenskaspraket.si.se/for-larare/universitet-med-svenskstudier/

Förra läsåret läste 195 studenter svenska i Kina. Det största stödet vi ger är lektorsstipendium till svensklektorn i Shanghai och Peking: Beijing foreign studies University., Annika Ljungvall, lektorsbidrag per år 150 000 kr SISU/Fudan Shanghai, Lin Engdahl, lektorsbidrag per år 150 000 kr. En lärare, Yunlu Shen (Lovisa) från Shanghai har fått bidrag till korttidsvistelse i Sverige vid Umeå universitet (Arctic Research Centre) för forskning inom projektet：Swedish role in Arctic governance and the potential of Sino-Swedish Arctic cooperation samt för att diskutera akademiska utbyten mellan SISU universitet och Umeå universitet. Januari-februari 2018.

Inom svenskundervisning ger vi dessa stöd till alla universitet:

- förmedlar lärartjänster och ger bidrag till utlandslektorer i svenska – *detta stöd gäller inte alla universitet*
- ger bidrag till inköp av läromedel och annat undervisningsrelaterat material
- ger bidrag till gästföreläsningar och evenemang vid de utländska universiteten
- arrangerar lärarkonferenser i och utanför Sverige
- utlyser stipendier för svenskstuderande och svensklärare
- arrangerar sommarkurser i svenska språket och kulturen
- informerar om föreläsare, läromedel, skönlitteratur och metodik
- erbjuder en gratis nybörjarkurs i svenska, learningswedish.se
- samlar texter och länkar om svenska språket och Sverige på vår webbplats.

5. Ledarskapsprogram

SI genomför ett ledarskapsprogram *SI Mangagement Programme* (SIMP) för unga företagsledare från bl.a. Asien med inriktning mot hållbart företagande, i vilket Kina ingår. Syftet är att bygga ett varaktigt, aktivt nätverk med fokus på hållbart företagande och stärka relationer mellan de deltagande länderna. Se: https://si.se/en/apply/leadership-programmes/management-programme-asia/