Twitter Thread by Ryan Fedasiuk

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Who goes to work for China's defense industry? In our latest, @emily_sw1 and I mapped talent flows between ■■ universities and defense SOEs.

■ We found that U.S. tech companies are indirectly aiding China's military.

Thread: (1/10)

2/10 In our report for @CSETGeorgetown, we measured the relationships between elite ■■ universities and China's defense industry by looking at their Graduate Employment Quality Reports.

Kudos to @alexjoske @ASPI_org for highlighting these sources: https://t.co/vDSdjhyLK7

3/10 We looked at disaggregated employment data for 29 of 45 leading universities—China's Double First Class universities + those administered by MIIT.

Our dataset reflects the career moves of 140,000 Chinese university graduates in 2019.

6,000 took jobs at defense SOEs.

Table 3. Chinese Defense SOEs' New Hires (2019) from Leading Chinese Universities

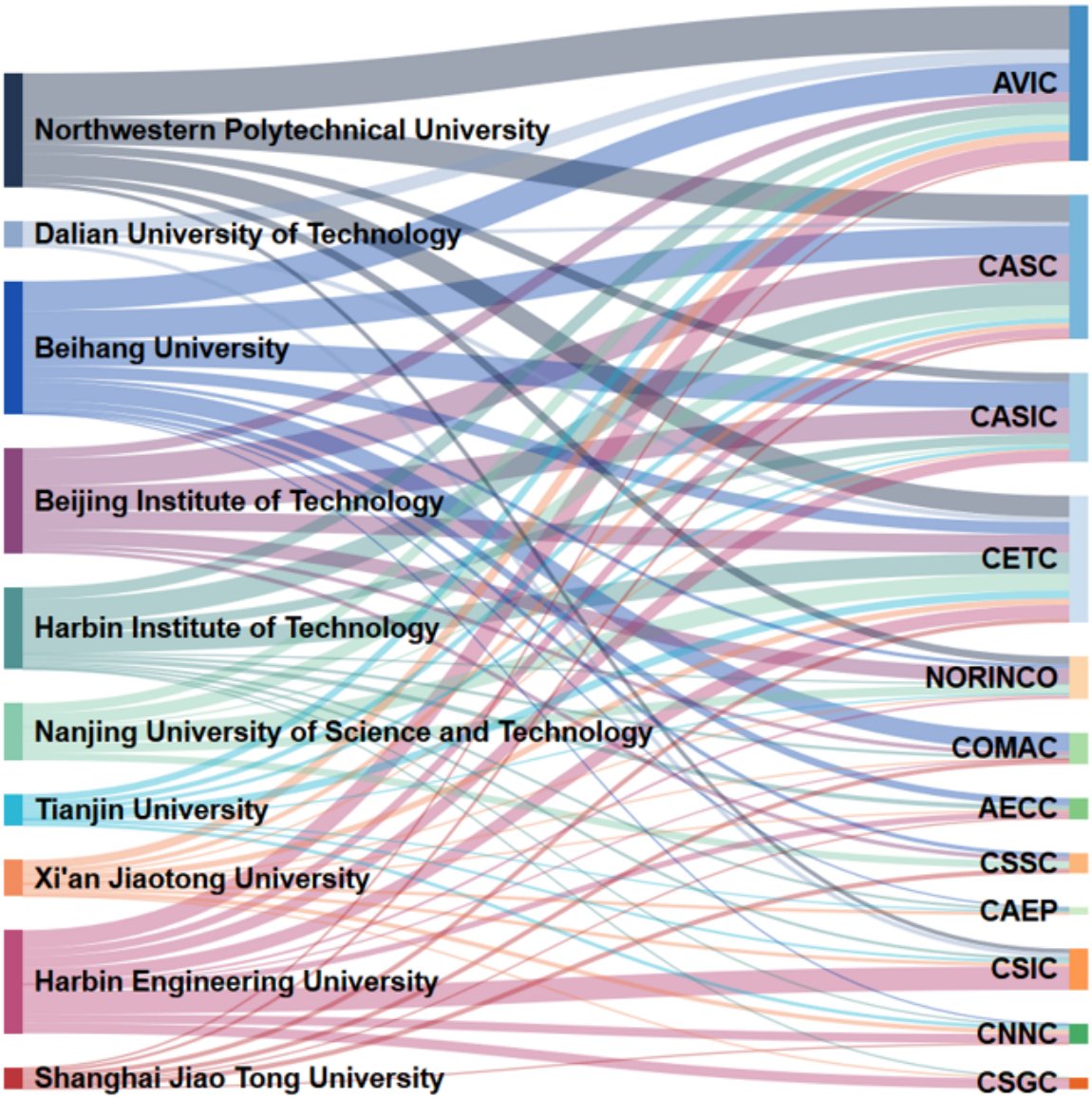
Name	*No. of 2019 Elite University Grads Employed*
China Electronics Technology Group (CETC)	1,370
Aviation Industry Corporation of China (AVIC)	1,210
China Aerospace Science and Technology Corporation (CASC)	1,145
China Aerospace Science and Industry Corporation (CASIC)	697
China Shipbuilding Industry Corporation (CSIC)	322
China North Industries Corporation (NORINCO)	318
Commercial Aircraft Corporation of China (COMAC)	280
China National Nuclear Corporation (CNNC)	209
China State Shipbuilding Corporation (CSSC)	177
Aero Engine Corporation of China (AECC)	164
China South Industries Group Corporation (CSGC)	87
Total: All Eleven Defense Companies	*5,979*

Source: Chinese universities' 2019 employment quality reports.

4/10 We confirmed that ■■ defense giants like CASC, CETC, and CSIC disproportionately recruit from seven universities: the Seven Sons of National Defense (■■■■).

The Seven Sons produced just 16% of graduates in our dataset, but 72% of those who took jobs at defense SOEs.

Figure 1. 2019 Graduate Flows Between Chinese Universities and Chinese Defense SOEs



5/10 Then we started looking into the resources available to Chinese universities, investigating documents from the Ministry of Education.

MOE frequently "asks" foreign companies to help Chinese universities in research & curriculum development—the price of doing business in ■■.

6/10 The Seven Sons benefit from such collaborations, and so does China's defense industry.

At MOE's behest, ■■ tech companies have built the Seven Sons new lab facilities, trained faculty members, and developed course curricula on quantum computing, AI, and chip design.

7/10 MOE documents specify that the ■■-based subsidiaries and joint ventures of

Autodesk, Dell, Google, Honeywell, IBM, Intel, Merrill Lynch, Microsoft, National Instruments, Rockwell Automation, Synopsys, Tektronix, and Texas Instruments

have partnered with the Seven Sons.

8/10 This has serious U.S. national security implications. MOE documents indicate @synopsys partnered with the PLA National University of Defense Technology on integrated circuit design.

Beijing has tried for decades to source the equipment and knowledge to build advanced ICs.

附件一

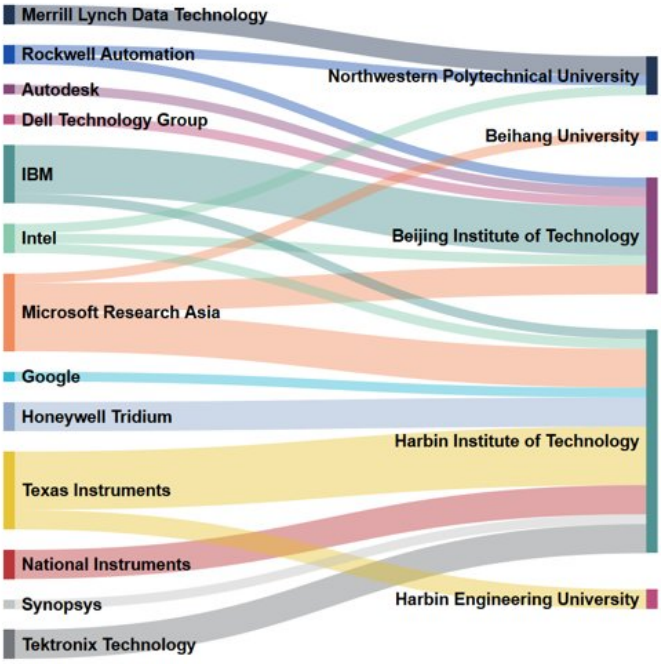
2018年第二批产学合作协同育人项目立项名单（按高校排序）

项目编号	承担学校	公司名称	项目类型	项目名称	项目负责人
201802136028	中国人民解放军国防科技大学	高等教育出版社	教学内容和课程体系改革	军队院校基于MOOC的混合式基础课程教学模式研究—以《理论力学》为例	李海阳
201802136058	中国人民解放军国防科技大学	高等教育出版社	教学内容和课程体系改革	《人工智能入门》在线课程建设	李明
201802186025	中国人民解放军国防科技大学	慧科教育科技集团有限公司	教学内容和课程体系改革	大数据专业课程体系优化项目	唐九阳 赵翔 殷风景
201802290007	中国人民解放军国防科技大学	深圳市鼎阳科技有限公司	教学内容和课程体系改革	基于SIGLENT 电子测量仪器在智能控制方面的实验课程设计	程江华 陶华敏 黄春琳
201802046008	中国人民解放军国防科技大学	北京红亚华宇科技有限公司	师资培训	基于红亚科技产学合作的师资培训项目	韩鹏
201802234013	中国人民解放军国防科技大学	锐捷网络股份有限公司	师资培训	军民融合新技术教学骨干培训	张敏
201802344006	中国人民解放军国防科技大学	新思科技（Synopsys）	师资培训	“集成电路设计”、“ARC处理器”、“FPGA”培训申请	于红旗
201802022050	中国人民解放军国防科技大学	百科荣创（北京）科技发展有限公司	实践条件和实践基地建设	无人机技术与保障任职培训实践基地建设	牛轶峰 王楠
201802089013	中国人民解放军国防科技大学	北京现代中欧软件开发有限公司	实践条件和实践基地建设	智慧物流管理综合实践基地建设项目	杨志伟
201802095040	中国人民解放军国防科技大学	北京永信至诚科技股份有限公司	实践条件和实践基地建设	网络安全防护实验室	刘晶
201802325004	中国人民解放军国防科技大学	无锡泛太科技有限公司	实践条件和实践基地建设	以能力为导向构建物联网实践环境	陈颖文

9/10 Our report indicates the Seven Sons are responsible for training the next generation of China’s defense industry engineers.

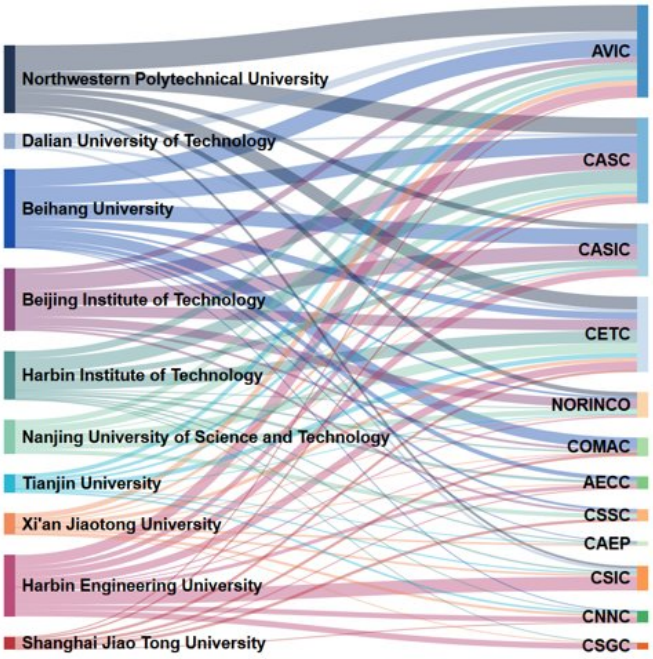
More broadly, U.S. tech companies and universities should step up due diligence when engaging with Chinese research institutions.

Figure 2. No. of U.S. Tech Companies' Cooperative Training Projects Established with Chinese Universities (2018-2019)



Source: 42 cooperative training programs published by the Ministry of Education, 2018-2019.

Figure 3. No. of Chinese Universities' Graduates who Took Jobs at Chinese Defense Companies (2019)



Source: 4,769 graduates' career paths published in 2019 graduate employment quality reports.

10/10 Special thanks to Tai Ming Cheung, @ScottWHarold, and @tiffert for their reviews. Grateful to many folks at @CSETGeorgetown, especially the External Affairs team, who made this report possible.

As always, my DMs are open for any questions: https://t.co/8tOypa53S2