

Prime Minister's Scientist Return to India (SRI) Program: Proposal

Prithwiraj Choudhury and Tarun Khanna¹

The contribution of return migrants, i.e. citizens of a country who migrate to a foreign country and subsequently return to their homeland, in terms of knowledge transfer to their home countries is well documented in the academic literature (Borjas and Bratsberg, 1996; Dustmann et al., 2011; Gaule 2011; Choudhury 2015; Wang 2015).² In the past decade, several countries but notably Brazil, China and Chile have implemented policies to attract returnee scientists. China has implemented several policies such as the ‘Thousand Talents Plan’, ‘Red Son Plan’ and the ‘Changjiang Scholars Program’ to attract and rehabilitate returnee scientists. By all accounts, these programs have been successful in attracting talented returnee scientists’ home. To quote an article in Nature, “*In 2008, China’s central government announced the Thousand Talents Plan: a scheme to bring leading Chinese scientists, academics and entrepreneurs living abroad back to China. In 2011, the scheme grew to encompass younger talent and foreign scientists, and a decade later, the Thousand Talents Plan has attracted more than 7,000 people overall. For Chinese scientists, the scheme has given them a strong financial incentive to return home. For foreigners, it’s an opportunity to join the Chinese system with major administrative hurdles removed.*” (*China’s plan to recruit talented researchers’ Nature, January 17, 2018*).³ The appendix summarizes global policy programs to attract return migrants.

¹ Harvard University. Email ID: pchoudhury@hbs.edu and tkhanna@hbs.edu The authors thank Partha Pratim Chakraborty, William Kerr, Rishikesh Krishnan and Pramath Sinha for useful comments on prior draft.

² Borjas, G. J., Bratsberg, B. (1996) Who leaves? The outmigration of the foreign-born. *Review of Economics and Statistics*.

Choudhury, P. (2015). Return migration and geography of innovation in MNEs: a natural experiment of knowledge production by local workers reporting to return migrants. *Journal of Economic Geography*, 16(3), 585-610.

Dustmann, C., Fadlon, I., Weiss, Y. (2011) Return migration, human capital accumulation and the brain drain. *Journal of Development Economics* 95.1: 58-67.

Gaulé, P. (2011) Return migration: evidence from academic scientists. Brookings Conference ‘Immigration Policy: Highly Skilled Workers and US Competitiveness and Innovation’, Washington, DC, Vol. 7.

Wang, D. (2015). Activating cross-border brokerage: Interorganizational knowledge transfer through skilled return migration. *Administrative Science Quarterly*, 60(1), 133-176.

³ Source: <https://www.nature.com/articles/d41586-018-00538-z>

Proposal

The Prime Minister's Scientist Return to India (PM-SRI) program is aimed at facilitating active interaction/return of around 2000 scientists working at the top global universities with/to Indian universities and research institutions. This number will be reached within the first five years of implementing the program. The program will have two core objectives: to ensure research collaborations between international/returning scientists with Indian academics and to facilitate collaborations between these scientists and Indian industry. For returning scientists, the program will offer three program options: (1) Distinguished scientist return, targeted at scientists of repute working at the top 200 global universities; (2) Research sabbaticals, targeted at scientists working at the top 500 global universities and (3) Young scientist return, targeted at scientists under the age of 40, working at the top 200 global universities. The program will incorporate best practices globally and from prior Indian programs such as the Global Initiative of Academic Networks (GIAN) program and VAJRA.⁴ While the GIAN/VAJRA program have focused on returnees offering teaching courses or research collaborations at Indian institutions, the PM-SRI program will focus on returnees/international scientists establishing deeper research collaborations with Indian academics and Indian industry. Similar to the GIAN/VAJRA program, a pool of resources will be created for the PM-SRI program and such funds will be administered directly by a nimble, small 'PM-SRI' committee. The committee will be mentored by the Principal Scientific Advisor to the Prime Minister and the CEO of the NITI Aayog. Table 1 summarizes the selection criteria for returnee scientists for each of the three sub-programs outlined earlier, the incentive scheme to be offered to scientists, responsibilities of returnees, performance measurement metrics and other details. While all three tracks of the program are principally targeted at global scientists of Indian

⁴ The GIAN program facilitates global academics to offer short-term courses in India and has been implemented by the Ministry of Human Resource Development in conjunction with IIT Kharagpur.

origin, the PM-SRI committee will also invite and approve applications from eligible foreigners including those not of Indian origin.

Table 1: PM-SRI Program Details

<p><u>Track1: Distinguished Scientist Return</u></p> <p><u>Selection Criteria</u></p> <ul style="list-style-type: none">• This track aims to facilitate ‘brain-circulation’ of distinguished global scientists, by offering them permanent (dual) appointments at Indian institutions• Open to tenured (or equivalent) academics at top 200 global universities.• Target: 250 scientists to return in first five years of program <p><u>Incentives to scientists</u></p> <ol style="list-style-type: none">1. Scientist given ‘Chair Professor’ appointment at Indian institution of choice2. Scientist eligible to maintain dual appointment at foreign university and Indian institution3. Scientist to be additionally awarded title of ‘PM-SRI Distinguished Scientist’4. At Indian Institution, scientist to be compensated according to highest salary band5. One-time relocation costs of \$50,0006. One-time research budget of up to US\$ 1 m to set up lab/commence research project. Will vary according to field and project undertaken.7. Yearly travel budget of \$10,000 guaranteed for first five years upon return8. Scientist eligible to apply for expedited visa (similar to GIAN visa) and expedited OCI card9. Spouse of scientist eligible to assistance from designated agency for employment search and eligible to receive expedited visa10. For each distinguished scientist, up to three foreign collaborators eligible to receive expedited visa <p><u>Additional Responsibilities</u></p> <ol style="list-style-type: none">1. Spend about three months every calendar year at Indian institution2. Mentor at least two Indian PhD scholars/post-doctoral scholars every calendar year, at least for first five years3. Present research at science-industry symposium organized by NITI Aayog, CII, FICCI, etc.4. Mentor one (geographically proximate) ATAL Tinkering lab or equivalent interaction according to expertise or inclination.
<p><u>Track2: Research Sabbaticals</u></p> <p><u>Selection Criteria</u></p> <ul style="list-style-type: none">• This track aims to facilitate temporary return migration of global academics on research sabbaticals lasting up to three years• Scientist remains employed at foreign university during period of research sabbatical• Open to all professors, associate professors, assistant professors (or equivalent) at top 500 global universities (by QS or THE ranking)• Target: 1000 scientists to return in first five years of program

Incentives to scientists

- Scientist submits proposal for research sabbatical and is hosted at Indian institution of choice
- Scientist to be awarded title of 'PM-SRI Research Scientist' on completion of sabbatical
- One-time relocation costs of \$10,000
- One-time research budget of up to \$100,000; eligible to apply for research budget "top-ups" of \$50,000 every year, for up to two more years based on productivity
- Yearly travel budget of \$5,000 guaranteed for first three years upon return
- Scientist eligible to apply for expedited visa (similar to GIAN visa) and expedited OCI card
- Spouse of scientist eligible to assistance from designated agency for employment search and eligible to receive expedited visa

Additional Responsibilities

- Spend at least three months every calendar year at Indian host institution for at least three years and/or a total of nine months at Indian host institution
- Mentor at least one Indian PhD scholar/post-doctoral scholar during research project
- Present research at science-industry symposium organized by NITI Aayog, CII, FICCI, etc.

Track3: Young Scientist Return

Selection Criteria

- This track aims to facilitate permanent return migration of young scientists under the age of 40. Open to PhDs and post-doctoral scholars at top 200 global universities (by QS or THE ranking).
- The program will also fund scholarships for up to five years for Indians who want to pursue a PhD at a top-200 global university with the condition that such scientists have to return to India after completion of their PhD
- Target 1000 scientists to return in first five years of program

Incentives to scientists

- Scientist given tenure-track appointment at Indian institution of choice (scientist submits three choices for host institution at time of application, host institute will have to agree to employment.)
- Scientist to be additionally awarded title of 'PM-SRI Research Scientist'
- At Indian Institution, scientist to be compensated according to eligible salary band
- One-time relocation costs of \$10,000
- One-time research budget of up to \$150,000; eligible to apply for research budget "top-ups" of \$50,000 every year, for a total of up to five years
- Scientist eligible to apply for expedited visa (similar to GIAN visa) and expedited OCI card
- Spouse of scientist eligible to assistance from designated agency for employment search and eligible to receive expedited visa
- The program will also support 200 applications every year of students admitted to PhD programs at the top-200 global universities and will award scholarships worth \$20,000 per year for at least five years to each student, with a provision that selected candidates will return to

India for at least five years and will apply for the PM-SRI Young Scientist program at the end of their PhD program

Additional Responsibilities

- Mentor at least one Indian PhD scholar/post-doctoral scholar each year for the first five years upon return
- Mentor one (geographically proximate) ATAL Tinkering lab or mentor students in a school or college nearby

Appendix: Examples of Return Migration Policies Implemented by Other Countries

Country	Year	Details
Brazil	2011	Scholarship program aimed at attracting top, young researchers living abroad, especially Brazilians, to conduct research in Brazil. Financial Incentive for entry for high-skilled. Details: http://www.cienciasemfronteiras.gov.br/web/csf-eng/opportunities-for-individuals-from-abroad
Chile	2008	Becas Chile Scholarship program provided financial support to Chileans or foreigners with Chile permanent residency to seek overseas higher education and required that the individual returns and works for least 2 years upon completion of education. Details: http://www.guninetwork.org/articles/chile-scholarship-programme-csp http://portales.mineduc.cl/index.php?id_portal=60
Chile	2009	Program Attraction and Integration (PAI) of advanced human capital aimed at strengthening academic, scientific and technological capabilities of Chilean institutions. Details: http://www.conicyt.cl/pai/category/lineas-del-programa/insercion-en-la-academia/
China	2008	Thousand Talents Plan aimed to recruit young overseas Chinese scholars with a start-off package of \$1M RMB plus tax benefits over the next five to ten years. Details: http://www.1000plan.org/en/
China	2009	'Red Son Plan' or 'overseas cash for the country service action plan' is an initiative that supports talented students to get higher education overseas but requires them to return to China after graduation. Details: http://www.1000plan.org/qrijh/channel/57
China	2011	'Changjiang Scholars Program' is a special high-level talent program aimed at revitalizing China's higher education system. This program increased salary of recipients to \$360, 000 RMB/year and gave recipients an award of \$1M RMB over 5 years. Financial Incentive for entry for high-skilled: Positive http://baike.baidu.com/view/56929.htm?fromtitle=%E9%95%BF%E6%B1%9F%E5%AD%A6%E8%80%85&fromid=3501759&type=syn