

Institution: The Open University		
Unit of Assessment: C14 Geography and Environmental Studies		
Title of case study: Addressing gender inequalities in IT: UK and India		
Period when the underpinning research was undertaken: 2008-2020		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s):	Role(s) (e.g. job title):	Period(s) employed by submitting HEI:
Dr Parvati Raghuram	Professor of Geography and Migration	2005-Present
Dr Gunjan Sondhi	Lecturer in Geography	2016-Present
Period when the claimed impact occurred: 2017-2020		
Is this case study continued from a case study submitted in 2014? No		
1. Summary of the impact		
<p>Research by geographers at The Open University has helped stakeholders address the problem of gender inequalities in male-dominated labour market sectors such as Information Technology (IT). Impact from our research findings has directly: advanced professional practice with regard to retention and progression of women in the IT sector in India; changed understanding within sectoral stakeholders of the barriers to women's entry into male dominated labour market sectors such as IT in the UK; and established a pipeline to shape international and national policy dialogues on women, labour market and migration.</p>		
2. Underpinning research		
<p>Experiences and career progression of skilled migrant women in the workplace have largely remained invisible within migration research unless they are moving within feminised sectors of the labour market (such as nursing and care). Existing research on these feminised sectors is predominantly framed in two ways. First, these women are seen to be moving away from oppressive gender norms of the sending country. Second, once women move to the receiving country, they are seen to suffer from the double burden of managing transnational and local caring responsibilities, as well as economic and other disadvantages associated with being a migrant. Research has thus almost exclusively focused on women performing feminised labour.</p> <p>Research in Geography at the Open University led by Professor Parvati Raghuram has challenged this framing by foregrounding skilled female migrants in their role as workers first. Raghuram has established a distinctive conceptual research agenda on skilled female labour migration in male dominated sectors that examines the structures and inequalities of labour markets in receiving countries [O1], shifting the focus from feminised labour to gendered labour markets. It has overturned existing understandings by demonstrating that sending countries can have different, higher, representations of women in some skilled sectors and that the gendered nature of a skilled labour market is not universal. This research identified factors that stratify migrant outcomes across interconnected sites and scales [O2, O3], thus setting a framework for analysing the geographies of skills.</p> <p>This agenda is advanced methodologically by Dr Gunjan Sondhi's research. Her research on international student migrants from India to Canada evidenced the importance of a comparative perspective in understanding how skills development, migration regimes and familial practices are gendered and intersect differently in each context [O4]. This is one piece in a small yet emerging body of work that provides detailed gendered analysis of international student mobility to show how it is place-sensitive. Sondhi's research challenges the negative gender stereotypes through which women of the global South are usually examined [O5]. The methodological originality of comparative research in this field, and global relevance of gendered analysis of migration and education, has meant that this body of work is shaping broader discussions on gender and student migration by scholars in geography, migration and across different sending and receiving countries.</p>		

These conceptual and methodological innovations have been furthered through the ESRC funded grant *Gender, Skilled Migration and IT: a comparative study of India and the UK* (GSM-IT). The project compares the experiences of migrant and non-migrant Indian professionals and migrant and non-migrant UK professionals within the IT sector, to develop conceptual insights into the gendered structures of the IT labour market in both India and the UK. This research has created new knowledge on the value of comparative methods deployed across two countries, and of understandings from migrants who move between countries, in shaping cross-country learning.

GSM-IT research has produced key publications: *Women and IT Scorecard (WITS) 2017 and 2018* [O6], which has identified the factors that a) enable women's entry and progression within the IT sector in India, and b) the limitations in the sector that lead to poor retention of women in the sector. The comparative advantage that the Indian IT sector offers suggests specific action points for the UK IT industry as it seeks to remedy low participation of women in the sector. These findings are summarised in the report *Bridging the IT skills gap: lessons from India and Women IT Expatriates: global lessons from India*.

3. References to the research

- O1. Raghuram, P.** (2008) Migrant women in male dominated sectors of the labour market: a research agenda, *Population, Space and Place*, 14, 1, 43-57. ISSN: 1544-8444. <https://doi.org/10.1002/psp.472>
- O2. Raghuram, P.** (2014) Gendered skilled migration and gender-segregated labour markets. In: *Harnessing Knowledge on the Migration of Highly Skilled Women*, OECD-IOM. Geneva. pp. 91-106. https://publications.iom.int/system/files/pdf/iom_oecd_gender.pdf
- O3. Kofman, E., and Raghuram, P.** (2015) *Gendered migrations and global social reproduction*, London: Palgrave, pp. 264, ISBN: 9780230537088. <https://doi.org/10.1057/9781137510143>
- O4. Sondhi, G., and King, R.** (2017) Gendering international student migration: an Indian case-study. *Journal of Ethnic and Migration Studies* 43(8): 1308–1324. <https://doi.org/10.1080/1369183X.2017.1300288>
- O5. Ortiga, Y.Y., Chou, M-H., Sondhi, G., et al.** (2019) Working Within the Aspiring Center: Professional Status and Mobilities Among Migrant Faculty in Singapore. *Higher Education Policy* 32(2): 149–166. <https://doi.org/10.1057/s41307-017-0078-0>
- O6. Raghuram, P., Herman, C., Ruiz-Ben, E., and Sondhi, G.** (2018) *Women and IT Scorecard - India, 2018*. Women and IT Scorecard - India. Milton Keynes: The Open University. <https://doi.org/10.13140/RG.2.2.29158.68160>

Grant: Gender, Skilled Migration and IT: a comparative study of India and the UK (Jan 19-March 20) UKRI/Economic & Social Science Research Council: GBP446,159 awarded to **Gunjan Sondhi**.

4. Details of the impact

Context

Underrepresentation of women in the IT sector has been a chronic global problem, including in the UK. The challenges identified by UK stakeholders centre on the 'pipeline' – women's recruitment, retention and progression (eventually into leadership roles). According to a Women in Tech 2019 study, tackling gender equality in the IT labour market and supporting women to get into leadership roles, could contribute to filling the UK's skills shortages and is thus worth GBP2.6 billion per year to the UK economy.

Research by **Raghuram** and **Sondhi**, conducted as part of GSM-IT project, addresses the gender inequalities inherent to the IT sector in the India, the UK and globally. Uniquely, the research looked to India's success in recruitment, retention and progression of women in the IT sector to understand the barriers women faced in the UK. The UK figure of 15% women in the IT labour force stands in stark contrast to India's success story of attaining a critical mass at 35% of women in IT. The GSM-IT project took this as a starting point to compare the experiences of migrant and non-migrant IT professionals from the UK and India to identify the gender specificities of each labour market. The research findings directly impacted professional practice in India, changed understanding of the barriers to entry in the UK, and is shaping national and international policy.

Impact on professional practice

In India, GSM-IT has been immediately impactful in changing professional practice through partnership with the National Association of Software and Services Companies (NASSCOM). NASSCOM is the world's largest IT sector trade body, representing India's sector globally. It represents over 90% of the Indian IT industry and its members spearhead about GBP150,000,000,000 worth of business. NASSCOM partnered with the Open University, its first research collaboration with a UK university. Working in partnership with NASSCOM, the team developed and tested a tripartite model for impact through co-production, industry/sector outputs and continued engagement (COE). CEO of the NASSCOM Foundation, NASSCOM's charitable arm, spoke highly of this positive relationship saying, "[...] *it has been a great journey for us having worked with the OU for the last couple of years. This IT scorecard has been of immense value to us*" [C2].

The *Women and IT Scorecard (WITS)* 2017 and 2018 [C6], and *Women in IT Leadership* [C6] reports were published as NASSCOM co-badged outputs and offered to industry partners through its publication portal. The reports lauded the success of the Indian IT sector for attaining a critical mass (at 35%) of women in the sector's technical labour force. The findings, however, also pointed to the poor record of the sector in retaining and progressing women, particularly into leadership roles.

NASSCOM's Diversity and Inclusion arm immediately responded to the latter findings on the sector's shortcomings. It developed the Women Wizards Rule Tech (W2RT) programme as a direct response to *WITS*. This introduces women to future and emerging technologies, in order to support women's career retention and progression within the sector. NASSCOM Foundation CEO said, "[...] *we have looked at the report very closely in trying to basically come out with programmes and to ensure those gaps which are existing [are closed] [...] W2RT was actually started because of this report [...]. We have more than 100 firms participating in it as I speak, and we are only on cohort two*" [C2].

The impact of *WITS* and its influence on the development of the W2RT has also been recognised in Silicon Valley, USA: "*The program [W2RT] focuses on leadership training and career development and builds on findings in the Women and IT Scorecard–India 2018 report produced by NASSCOM and The Open University UK that flexible work, work-from-home, parental leave, healthcare, and anti-harassment policies could increase the number of women at the senior level in IT firms*" [C2]. Together these represent an impact on work practice and a recognition of the urgency of this issue across two world-leading centres of IT employment and innovation.

W2RT, currently running its third cohort, has reached 4,500 women from 100 companies since it was developed and piloted in 2018. The programme has contributed to the continued personal and professional development of the participants, for example "*I am encouraged to learn emerging technologies in the industry and take my career to next level*" [C2]. This approach is now recognised as best practice with the NASSCOM Foundation CEO commenting, "*The collaboration in this project has already changed the services we offer, and opportunities that women can avail themselves to support their career progression into future leadership roles within the IT sector in India and on the global stage*" [C1].

Impact on understanding of barriers to women's entry and progression in IT

GSM-IT findings published in *WITS* have shown UK stakeholders that growth in the numbers of women working in the IT sector can be achieved. This research has changed stakeholders' understanding of barriers to women's entry and retention in the sector. By comparing findings from India and the UK, the research challenged conventional wisdom that technology is seen as masculine and therefore is off-putting for women, and instead pointed to national specificities of the gendered status of IT. A representative from IBM stated "*think having looked at the report [...] that came through really loud and clear for me as well, you know, we cannot say that women can't do tech, or we can't do STEM, it's just crazy [...] and it's more about the environmental and the societal factors*" [C7]. This changed understandings of the barriers women face in the sector amongst key stakeholders (BCS Women), practitioners (Stemettes), and policymakers (techUK) [C3].

The key figure from *WITS* that 35% of the Indian IT labour force are women [C6] has been positively disruptive for many UK stakeholders. Speaking at a GSM-IT seminar in her capacity as a representative of the British Computing Society (BCS-women), Sharon Moore, MBE, the current CTO for Public Sector for major global IT company says of the *WITS* report, "*What was really clear to me is [...] the competency of women [...] cannot be questioned whatsoever [...] Although we still hear some of that sometimes*" [C3]. Hence, the project provides evidence to UK stakeholders that women have the potential to work to the same skill level as men, challenging prevailing prejudices.

Second, *WITS* has made practitioners aware that addressing the under-representation of women requires cultural change across society. [Text removed for publication] founder of Stemettes, a social enterprise promoting young black girls into STEM careers, says the *WITS* report indicates a need for cultural change: "*status is the word that's used in the report around what it's seen like to be an engineer [...] there's definitely lots to be learnt in terms of how engineers and technologists are seen in India ... that we're still missing in the UK, and quite a lot of the success [encouraging diversity] in India builds on those assumptions; we can't ignore them*" [C3]. GSM-IT project findings have made practitioners recognise that it is insufficient for the sector to change, or to provide programmes that attract women to STEM. Rather, it requires cultural transformation; the *status* of STEM in the UK needs to be improved so that women are attracted to the sector. The Senior Policy Advisor at techUK, says "*the other recommendations that the project has found about the need to shift the balance and look at every stage of the pipeline when attracting women into STEM, so looking at attracting girls into tech*" [C7].

Thirdly, *WITS* [C6] has helped policy makers such as techUK recognise the role of parents in encouraging the pursuit of careers in STEM broadly, and specifically in IT, to address the gender skills gaps, and the leaky pipeline. The Senior Policy Advisor at techUK, says "*I continually speak about how the findings from this project has, I guess, embedded and demonstrated the importance of pathways into a STEM career*" [C7]. "*we need to encourage parents to take alternative pathways into STEM seriously, and encourage their children into these careers, but it's really tough to do when [...] IT has a perception problem, I think. So, there's a lot that we can learn from this project*" [C3].

In addition to the direct impact on the Indian and UK IT sector, GSM-IT research findings also extended globally to impact other sectors and regions. International organisations have used insights from *WITS* to challenge conventional understanding of the barriers to women's entry into IT professions and offered best practice on how to address the problem. For example, a DFID funded report entitled *Gender Inclusion in Hiring in India* published by the Shell Foundation recommended companies use more gender-balanced forms of recruitment (offline instead of online), directly citing findings from the *WITS* report [C3, C6]. Similarly, the McKinsey Global Institute's *The Power of Parity* report targeting Asian businesses and national stakeholders cites the *WITS* report in its recommendation that "*targeted support for women when they become mothers is important to raise retention and enhance their career progression*" [C3]. Following the

WITS report, it directly links maternity, career retention and progression with well-managed return-to-work policies after maternity leave.

Impact on policy, nationally and internationally

The impact of GSM-IT on policy-making is ongoing as the research has established a pathway for our findings to enter the policy development pipeline. During the first year of the project, in January 2017, the Industry and Parliament Trust convened a breakfast meeting at the Houses of Parliament with senior parliamentarians and industry leaders [C3] to disseminate our project findings and its' impact. GSM-IT was undertaken by partnering with techUK, the UK's technology trade association, NASSCOM's UK counterpart, who hosted the project's end of award and report launch event in March 2018. techUK actively engaged in the event and endorsed the findings through tweets by techUK's Deputy CEO [C3]. This collaboration has continued as evident in the GSM-IT seminar in which the current Policy manager for Skills, Talent and Diversity participated as panellist, alongside representatives from BCS-women, Stemettes and NASSCOM.

GSM-IT research has increased engagement with industry, policy-makers and civil society actors as evidenced by invitations to **Raghuram** from influential and policy-shaping organisations to review current policies and their effects on women migrants debates and to shape future policy on gendered migration. The German Federal Agency for Civic Education commissioned an overarching review piece on EU and female migration public policy at national level (Germany) [C4]. GSM-IT is also making significant intervention to EU-India migration policy. At the invitation of key international stakeholder, International Labour Organisation (ILO), members of GSM-IT are submitting written evidence that will serve as the background paper for policy dialogue between India and EU members [C4].

WITS 2017 and *2018* have become benchmarks against which firms measure their gender representation [C5]. The publications have been cited in over 20 news and magazine articles between 2017 and 2018 and have been read 1,800 times according to statistics on ResearchGate, where the reports are hosted in the public domain [C5]. Internationally, the *WITS* reports have become the baseline through which gendered participation in the Indian IT sector is analysed [C5].

5. Sources to corroborate the impact

- C1.** Testimonial Letter from Ashok/NASSCOM D&I/NASSCOM Foundation.
- C2.** Written testimonials and feedback relating to the impact on practice of W2RT.
- C3.** Written testimonials and transcripts of GSM-IT impact on changing understanding (excerpts of Seminar transcript).
- C4.** Impacting policy pipeline (Shell foundation, McKinsey, BPB, ILO-India).
- C5.** Data on media coverage and publication of WITS.
- C6.** Published WITS reports.
- C7.** Transcript from Seminar of Best practices for recruitment and retention of women in IT.