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The role of migration and higher education policies in international academic mobility. The case of Indian researchers

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Abstract

Governments are increasingly implementing policies aimed at attracting or retaining highly skilled migrants. While a growing number of studies examine the effectiveness of these efforts, the actual mechanisms through which policies may affect the aspirations and abilities to migrate of the highly skilled have not been questioned. This paper explores the roles of migration and higher education policies from both the origin and destination countries in the geographic mobility decisions of researchers, a highly skilled group that has been specifically targeted by such policies (e.g. scientific visas introduced by the EU). Focusing on Indian researchers and using in-depth qualitative interviews, we examine their decisions to study and/or work abroad, to stay or to return to India. More specifically, the paper asks (i) *to what extent are (migration) policies driving Indian researchers' decisions of whether and/or where to emigrate?* and (ii) *do policies attract or block Indian researchers from staying in their initial destination, re-migrating to another country or returning to India?* In seeking to answer these questions, we consider not only the role of state migration policies, but also the institutional practices within higher education or research institutions.

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1 Introduction

‘My cunning plan is that scientists arrive single, fall in love and stay in the UK.’ This statement is extracted from an interview with Sir Paul Nurse, director of the Francis Crick Institute in London, in relation to the goal of the institution to attract *more than a thousand of the greatest scientific brains in the world*¹. Sir Paul Nurse’s recent statement pointed to the role of migration policies in the UK, as an aspect that might be hindering the attraction of the best minds: ‘We need to be able to attract from abroad. The anti-foreigner rhetoric is that foreigners are bad and that we are not open for business, people won’t bother looking at us. The danger is UKIP pushing Tories to the right. Focusing on this negative rhetoric is damaging the UK. It is certainly damaging the kind of research I am putting together. If you go to India researchers read about what is going on here and say: “We will go the US or Germany”². According to Sir Nurse, researchers do not only consider the research quality of the institution when deciding where to take up a professional opportunity, but also the migration policy and rhetoric in the potential destinations.

A similar assumption underlies the adoption, by an increasing number of governments around the world, of skill-selective policies that aim to *attract* foreign talent. As countries compete globally for human capital, such migration policies are seen as pull factors that can draw high-skilled people to the country or as positive signals sending welcoming messages. A growing amount of research (Beine et al. 2010; Ortega and Peri 2012; Czaika and Parsons 2015) seeks to evaluate the effectiveness of such policies, with contrasting findings. While some studies find these policies to have no effect, others show that skill-selective policies do indeed work in the expected direction, increasing the inflows of high-skilled immigrants to the countries that adopt them (Czaika and Parsons 2015). In contrast, the *mechanisms* through which these policies may shape migration decision-making and behaviour have been understudied.

This paper contributes to the literature by unpacking precisely what roles, if any, migration and higher education policies play in students’ and researchers’ choices about whether and where to move. We apply the conceptual distinction proposed by Carling (2002) and later developed by de Haas (2010), between aspirations and ability to migrate, which allows us to distinguish between two potential mechanisms of policy influence. On the one hand, we may expect migration and education policies to *attract* or *deter* students and researchers to/from particular destinations, depending on how welcoming those policies are to the highly skilled, or to academics in particular. Policies would thus play a role in shaping destination-specific aspirations. On the other hand, the policy framework may *facilitate* or *constrain* the ability of students and researchers to join their preferred destination by easing the entry restrictions or providing funding channels specifically for students and researchers. Furthermore, we are not only interested in the first move abroad, but also in how subsequent geographic trajectories unfold, and how policies intervene (or not) in decisions about remaining in the initial destination, moving onward or returning to India.

In evaluating the relative weight of these mechanisms at different stages in students and researchers’ careers, this paper asks the following questions: do students and researchers take into account policies at destination when deciding whether and where to migrate for an academic position? Are academics opting for more ‘open’ countries and not considering more restrictive countries with regards to their migration policy? Are these perceived as an important aspect in retaining researchers in their initial destination or redirecting them to other countries? What types of policies are researchers

¹ *London Evening Standard*; retrieved 14/10/2014

² *Ibid.*

taking into account when making these decisions? Did immigration policies prevent students or researchers from joining their preferred destinations or from settling there?

In order to answer such questions, we mainly use data from 27³ qualitative in-depth interviews with Indian-born researchers, currently working in India or abroad, conducted over Skype, in the framework of the research project *The Drivers and Dynamics of Highly Skilled Migration* (IMI, University of Oxford). We supplement these findings with evidence from an online survey with around 4,600 Indian researchers around the world. These two components studied the educational and professional trajectories of Indian-born researchers, paying particular attention to their mobility choices at different stages in their career.

Our focus on Indians is first of all motivated by the fact that India has the largest diaspora of researchers worldwide, with now 40 percent of Indian-born researchers working overseas (Friedman 2006). Indians are consistently among the largest groups of foreign students and academics in the top destinations for academic migration (such as the US, the UK, Canada, Australia) (see Khadria 2003 for an extensive description of these patterns). Furthermore, their migration destinations have diversified in recent periods (Altbach 2011), but they are still numerically important in the emerging destinations for a qualitative-quantitative analysis to be feasible. Finally, the Indian higher education system has been developing massively over the past decades (Jayaram 2003; 2011), generating new dynamics in the mobility of Indian students and academics.

In this paper, we focus on the relative weight of (perceived) migration and higher education policies in relation to other factors that have been shown to shape researchers' migration decision-making (e.g. perceived prestige of the institution, clusters of scientific excellence, wages, fringe benefits, family proximity, etc.). We examine both decisions to move and decisions to stay, as a consideration of both is necessary for disentangling the relevant factors shaping them. This paper also emphasizes the importance of the policies in the country of origin for understanding the trajectories of Indian researchers, to encourage or deter leaving India, to shape destination aspirations but also to attract talent back. The perception of policies not only designed to attract researchers back but also those relating to the rights of citizens abroad and relationship with the diaspora are taken into account.

2 The role of policies on the mobility of researchers: a review of the literature

The high-skilled workers that are central to this paper are scientists, researchers and/or lecturers hired by universities and research centres. The mobility of researchers is generally regulated by the migration policies that target high-skilled migrants. Foreign researchers tend to bring a particular set of skills acquired through the completion of tertiary education and beyond, and are normally transiting through similar policy channels as other high-skilled workers. These migration policies generally aim to attract workers by easing restrictions to entry (in comparison with those applicable to low-skilled migrants) and granting more generous post-entry rights. It has been argued elsewhere that these policies have become more common in the last decades in the OECD countries (Czaika and de Haas 2013): this set of policies represents around 10 per cent of all policy changes since the 2000s and tend to be less restrictive in entry and post-entry rights (Natter, de Haas and Vezzoli 2014).

However, the role migration policies play in shaping the migration choices of researchers to move or stay, have not been extensively researched. Aspects such as incorporation into the labour market, the prestige of the institutions, and the family cycle have been unpacked in much more detail.

³ This paper only analyses 27 interviews of the 40 interviews conducted within the project.

The factors driving the mobility decisions of researchers range from the more ‘intrinsic’ as the ‘expectation for mobility’ (Ackers 2005) that scientific mobility entails as part of professional development, to more tangible factors such as wage differentials, quality of research facilities, and living conditions. The mobility of scientists has tended to be interpreted as a distinctive path for mobility where migration policies seem to have no constraining effect and, where the prestige of the institutions of destination, and professional networks matter in where, how and when to go (Bauder 2012). As Bauder (2012) puts it, academics are affected by ‘rules of mobility that do not apply in other professions’ (Bauder 2012: 3).

Ackers (2005) signals that accessing citizenship rights for workers and their families is important for the retention of scientists in Europe, given that they ‘need to reassure themselves that their mobility will not jeopardize their own citizenship status, their partner’s right to work, and the wider family social entitlement’ (Ackers 2005: 114). The role of policies in attracting professionals has also been analysed through qualitative work in explaining why they fail in particular contexts. Oishi (2012) questions why migration policies aimed at attracting high-skilled migrants in Japan do not have the intended effect given the low success rates in attracting overseas professionals. Despite their openness (reflected in the lack of shortage lists and of labour market tests and their granting access to naturalization after only five years), this research suggests that entry migration policies have a limited effect. Other factors, such as integration policies and business practices, are argued to have a more decisive role in attracting and retaining the high-skilled. According to Oishi (2012), migration policies become rather irrelevant when career opportunities are not satisfactory for high-skilled migrants, when pension schemes are not transferable, or when family life becomes challenging.

Comparative research exploring the decision-making processes of high-skilled British and Indian scientists returning to their countries of origin from the US (Harvey 2009), explains what are the factors behind attracting or retaining scientists. This paper reveals that aspects such as culture, lifestyle and family cycle drive the decisions to return for these two groups, and government regulations play a less significant role (Harvey 2009). This account shows how scientists did not attribute significant weight to the governments in their country of origin in deciding whether to return or not, though Indian scientists were more likely than the British to take this aspect into consideration. However, this account does not disentangle the role of migration policies within these government factors, either in the country of destination or in the country of origin.

In general, this type of mobility seems to be understood as an exemption to the *constraining* influence of migration policies: since research mobility is framed within high-skilled mobility, policies will, when influential, attract talent or at least ease circulation. The data analysed in this paper also take into account the perceived role of other programmes or practices at the institutional level, which come recurrently in the narratives of the interviewees and that are implemented independently of or in conjunction with state-level policies. Institutional practices can be directed at targeting particular workers, students or hunting ‘semi-finished human capital’ (Khadria 2003: 9) such as the holding of fairs in India by foreign universities but also the coordination of visiting/exchange programmes. They can also include policies and practices that indirectly shape the decision-making processes of individuals; for example, having a scheme for job offers for spouses in place seem to be perceived as a key point to change the direction of migration for dual career couples (Guth 2007).

One aspect that has not been explored regarding the impact of migration policies on researchers and academics is the role of the policies in the country of origin in retaining or attracting their high-skilled emigrants back. This is particularly relevant for the Indian case. In a study comparing return migration policies targeting the highly skilled in four major sending countries, Jonkers (2008) shows that the Indian government implements what he calls ‘migrant network policies’, which put in place

programmes that link the Indian diaspora with the country of origin. Despite not recognising dual citizenship for Indians abroad (Jonkers 2008), in the last fifteen years, India has changed its citizenship laws in order to accommodate the rights of its non-residents as well as promoting the return of its talent back (Czaika et al. forthcoming). For example, in 1999 the government introduced the Person of Indian Origin Card (PIO Card) which grants equal rights in a number of areas to Indians who do not reside in the country, including the ability to purchase property, access central and state-level housing schemes and education (their children can access reserved seats under the Non Resident Indian category in Indian universities). These new citizenship regulations are put in place together with the introduction of the Overseas Citizens of India Scheme (OCI), which grants parity with Non Resident Indians in areas such as investment or domestic airfares. In the field of employment, there are no barriers to employment in the private sector, and no work visa is required (DEMIG POLICY DB 2014).

Programmes targeted at bringing researchers back might also shape the perception of the country on the part of its researchers abroad. According to Jonkers (2008), India has not been particularly active in the implementation of programmes to promote the return of scientists, with an embryonic programme established in the early 1980s and being interrupted in 1992. Jonkers (2008) refers to a revival of these programmes in the mid-2000s with the inauguration of the Ramanujan Fellowship to attract scientists and engineers of Indian origin to take up positions in India. India has also established programmes such as 'INSPIRE', aimed at facilitating scholarships for Indian students to study in India, but also at attracting researchers who studied or worked abroad. The 'Assured Opportunity for Research Careers' (AORC) programme aims at attracting and retaining talented scientists, offering doctoral INSPIRE Fellowships⁴ for those in the age group of 22–27 years, in both basic and applied sciences (including engineering and medicine). This scheme also aims at giving opportunities for post-doctoral researchers through tenure track positions for five years in both basic and applied sciences (Czaika et al. forthcoming). The impact of policies to attract talent back is reflected in studies showing that Indian scientists saw the Indian state important in influencing their decision to return to India, in comparison with other national groups (Harvey 2009). However, the relative success of these policies is attributed to the progressive improvement of socio-economic conditions, the development of the private sector, and investment in higher education that India has been experiencing in the last decades. These policies cannot be evaluated in isolation from all these other factors, but they do have an effect in fuelling the career opportunities of the Indian high-skilled population abroad (Jonkers 2008).

While the studies discussed above conduct, to some extent, an empirical analysis of the role of policies in migration and return decisions, they do not make an attempt to theoretically distinguish the different mechanisms through which these may operate. In this paper we argue, following Jorgen Carling (2002) that insights on how policies operate can be gained by 'addressing the *aspirations* and *ability* to move separately' (2002: 5). Having an aspiration to migrate has been defined as believing that migration is preferable to non-migration. However, only some among those who aspire to migrate will also have the ability to do so (Carling 2002; de Haas 2010). In Carling's study of low-skilled migration from Cape Verde, immigration regulations act as one of the barriers to migration, preventing some of the potential migrants from moving to their desired destination. They thus curb the *ability* to migrate. In contrast, Favell's (2008) work on higher-educated Western Europeans migrating within Europe – what he calls the 'Eurostars' – points to EU freedom of movement as one of the factors contributing to *aspirations* to move.

⁴ <http://www.inspire-dst.gov.in/index.html>; retrieved 18/10/14

In this paper we are interested not only whether individuals aspire to migrate, but also what are their preferred destinations, or how destination-specific aspirations are formed, and whether policy dimensions may shape these. Using the ‘aspiration and ability’ framework, we distinguish between two types of mechanisms through which policies may impact students’ and researchers’ migration: one of attraction/deterrence and one of facilitation/ constraint.

Under the attraction/deterrence mechanism, policies may shape destination-specific aspirations. Based on the discourse surrounding the adoption of skill-selective policies by an increasing number of countries, we may expect them to work by *attracting* highly skilled people – i.e. the easiness of joining the country or generous post-entry rights may directly factor into the researchers’ decision in favour of that particular destination. In contrast, restrictive immigration regulations may deter students and researchers from choosing those countries which did not adopt (sufficiently) welcoming policies for high-skilled migrants. Such a mechanism is implied by Sir Paul Nurse when he argues that Indian researchers will read about what is going on in the UK, and say ‘We will go to the US or Germany’ instead.

A second, and different mechanism would be one of *facilitation/constraint*. In countries adopting skill-selective policies, highly skilled migrants enjoy a number of legal facilities both before and after entry, and may thus be better able to enact their decisions and migrate to the country of their choice. Policies would thus *facilitate* enacting their wish to move to their preferred destination. The reverse would happen in countries that do not adopt high-skilled friendly policies, or who go back to over-the-board more restrictive entry regulations, as was the case in the US after 2001.

Both these mechanisms may be at work simultaneously. However, given the discursive gap between migration rhetoric and migration policy implementation (Czaika and de Haas 2013), deterrence may happen in the absence of actual restrictive policies. Therefore, the two mechanisms are not necessarily directly correlated. Furthermore, their relative weight may be different in decisions of where to (first) move, whether to remain at destination for longer, whether to return to India or move elsewhere. This paper aims to unpack these dynamics at various stages of researchers’ mobility trajectories.

3 Data

The empirical data used in this paper comes both from a web-based quantitative survey of Indian researchers worldwide and from in-depth interviews conducted in a second stage with a sub-sample of the survey respondents.

In a first stage, an invitation to fill an online questionnaire was sent to around 150,000 researchers who published at least one article, research paper, conference proceeding or book indexed in Thomson Reuter’s *Web of Knowledge* database in the last four years in all disciplines. These were selected according to a name-based sampling strategy, targeting only researchers with an Indian surname⁵. Around 19,000 researchers started our survey, amounting to a total response rate of 14.3 per

⁵ In order to determine whether a name was Indian or not, we first generated a comprehensive list of surnames of researchers affiliated at an Indian-based institution and who published an article in the past 12 months that was indexed in the Thomson Reuters *Web of Knowledge* database. We then compared the frequency of each of these 24,000 different surnames within the pool of *Indian-based* researchers to their frequency in the *worldwide* pool of researchers. We considered those names that were more frequent in the Indian pool than in the worldwide pool as Indian (for example: Kumar, Singh). We further selected the names that were similarly frequent in the Indian pool and in the worldwide pool in order to capture such names as D’Souza (that may be Indian but also Portuguese

cent (excluding bounced emails). In this paper, we use only complete answers (i.e. respondents who got to the last question of the survey and submitted their responses) of Indian-born researchers who have obtained their PhD, which gives us a sample size of almost 4,600 individuals.

We use the survey data to examine the relative importance of the facility to obtain legal status/citizenship in shaping decisions to move or return, but also how this factor shapes aspirations for (non) migration in the short-term future. A question asks participants to report how important were a series of factors in their choices of where to study for their highest degree or where to take up their current position. Besides the policy dimension, respondents were asked to evaluate the importance of institutional prestige, research infrastructure, financial aspects, working conditions, lifestyle dimensions and family considerations, among others. This information allows us not only to estimate the relative weight of policies compared to other types of factors in educational and professional choices, but also to see whether policies appear more important in moves to particular destinations and how this may have changed across cohorts. In particular, we expect facility to obtain documents to be a more important motivation behind choosing emerging destinations, such as neighbouring Asian countries, in a context of increasing restrictions for moving or working in the US or the UK.

Qualitative data was also needed in order to unveil the mechanisms through which policies may shape mobility choices. A second stage of our data collection consisted of conducting in-depth interviews with a sub-sample of respondents who expressed their agreement to be contacted for a follow-up interview. Interviewees were selected only if they were born in India and had an academic job (either in a university or a research institute). Both Indians currently living in India and those residing elsewhere in the world were selected. In answering our research question, it is crucial to include non-migrants, which many studies fail to do, or else we ‘select on the dependent variable’ and run the risk of excluding exactly those who might have been prevented from migrating by immigration regulations.

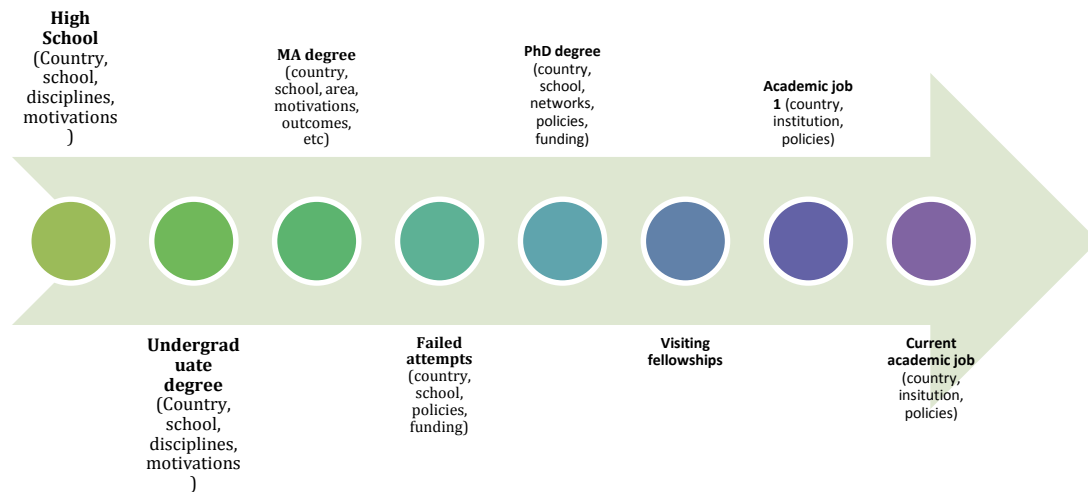
40 interviews have so far been conducted, via Skype, with duration between 40 and 70 minutes, audio recorded and fully transcribed (only 27 to-date). Following the same logic as the online questionnaire, the in-depth interview focused on the professional/life trajectory of the individual, exploring in particular decision-making processes in relation to whether to stay, move, return and the different options of destinations explored.

The interviewers used a semi-structured interview guide, which enabled a structured conversation allowing for cross-comparison across the different cases but also giving enough freedom for the interviewee to further elaborate. The conversation followed a biographical approach, from the moment they started their undergraduate degree and sometimes further back. There are obvious limitations when inquiring about decision-making processes in a biographical or retrospective design, as individuals may reinterpret their past choices in light of the consequences these had (or alter their stated preferences), thus ensuring a retrospective consonance between their actions and preferences. In an attempt to minimise this, we also ask about future aspirations.

Some of the themes touched upon were: important factors in their decisions to stay in India, emigrate, re-emigrate somewhere else or come back, and particularly the role of friendship and academic networks, migration and integration policies, socio-economic background; perception of changes of higher education institutions and research in India; intersection of family and life cycles with professional life. This paper will focus solely on the reflections of the interviewees on the knowledge

or Brazilian). We excluded names that were more frequent worldwide than in India (the most extreme example being Wang or Kong).

of state and institutional policies in deciding whether to move, whether to stay, re-emigrate or return to the country of origin. The interview timeline follows the graphical representation included below:



4 Findings

4.1 A limited role of migration policies in attracting students and researchers to particular destinations

The immigration policies of destination countries do not seem to play a key role in students' and researchers' decisions of where to move for their degrees or for a professional opportunity. The vast majority of our interviewees did not take this aspect into consideration when choosing between potential destinations, nor were they discouraged from applying abroad because of expected legal difficulties. First of all, our interviewees were not usually informed about the immigration regulations of the countries they were considering. Ashish, a mathematician in his 30s currently working in the Czech Republic, had no knowledge of migration policies in Europe before he actually had to apply for a work permit for the job he was offered:

I have not much knowledge on that. Because I have mostly concentrated on the research work that I would like to improve. So I was not much interested to know about all these matters [immigration policies]. (Ashish, mid-30s, Mathematics, Czech Republic)

According to several interviewees, the migration of the highly skilled, and scientists in particular, is not constrained by national boundaries. Immigration requirements are perceived as a bureaucratic hurdle at most, to be dealt with once the decision has been taken, rather than as a barrier or opportunity to be factored in the choice. The idea that researchers' migration is entirely guided by science and unconstrained by borders is illustrated in Arjun's discourse, a geneticist in his mid-40s, currently based in the US:

I believe – again – it [decision of where to move] will be driven by the science. If the science is really strong I would be happy to jump through any kind of hoops that are required. (...) I don't find myself restricted to any boundaries. Wherever the science takes me I have no problem going. (Arjun, mid 40s, Genetics, USA)

Other factors are more influential on the choice of location, most importantly the reputation of the particular institution or centre in their (sub-)field. The attractiveness of research clusters that concentrate eminent researchers in a particular domain has already been noted in previous work (Ackers 2005; Williams et al. 2004). Rather than thinking in terms of countries when making their decisions, many of our interviewees were directly contacting reputed researchers in their field and choosing to join the centres at which they were based. When asked how she chose the countries and institutions to whom she applied for a post-doctoral position, Raheel, a biologist in her early forties who subsequently returned to India, says:

Whatever I did my PhD on, I would look up papers that were very similar, very close, and I would just make one application. (Raheel, early 40s, Biology, India returnee)

A similar approach was taken by Arjun when he looked for a PhD programme in the US:

I knew the researchers working in drosophila (...) So I applied to all those places all over the world, where they were working on these specific aspects. (Arjun, mid 40s, Genetics, US)

A research environment that closely matches their own research interests and profile was thus often preferred to other considerations, as Sajid, an applied physicist who came to a destination he knew nothing of – Taiwan – for his PhD, declares:

I found that this university is one of the best universities in Taiwan in the engineering field, and doing very good in applied science. So I decided to come and chose this university for my research programme. And even I got some offer from Singapore and South Korea, but I found that the field was not interesting. I want to focus especially on device fabrication. (Sajid, early 30s, Physics, Taiwan)

In some cases, however, the country 'brands' also played a role, with the US, followed by the UK, being the leading and most wanted destinations in most fields. Two types of decisions were particularly guided by a country rationale: first, decisions to study abroad, usually for a lower-level degree (i.e; bachelors and masters), where students are less driven by a specific research interest and more influenced by a general hierarchy of places in their decisions. Second, those who finished all their studies in India, sometimes also had a first post-doctoral position there, but needed to get international work experience in a 'good country' if they wanted to obtain a permanent position at a reputed Indian institution. Sajid's case illustrates how these priorities or preferences shift across the career stage. When applying for his masters, he was set on the US because that 'was the place to go':

That time [in his Masters] I decided to go abroad for research. Especially my focus was on United States, generally because everyone wants to go there. (Sajid, early 30s, Electrical Engineering, Taiwan)

After applying unsuccessfully to the US during his studies, several years later he turned down a post-doc opportunity in the US in favour of Canada, because of a better research fit:

So I got now a post-doc offer from Canada, and also one from the US. But I want to go to Canada because there the research background is very close to my research. (Sajid, early 30s, Physics, Taiwan)

Finally, other factors were also found to matter, such as the research infrastructure and facilities available, particularly for students in applied sciences, as Arun's case illustrates. Arun is in his mid-30s and also a post-doctoral fellow in Taiwan:

I was also offered a PhD programme from the Indian Institute of Technology, but I'm telling you very frankly that their research facilities are still not up to the level as should be for a top research programme. (...) My professor visited Taiwan, Singapore and he told me that there are facilities, that...electrical tools are very good compared to India (...) so this was also the one positive point to come here. (Arun, mid-30s, Electrical Engineering, Taiwan)

Thus, our findings based on the Indian case confirm previous research (DTI 2002; Mahroum 2001; Ackers 2005), arguing that researchers are better described as 'knowledge migrants' rather than 'economic migrants'. Yet, economic factors, while not of primary importance in the first stage of the application process, often turned out decisive when students or researchers had to choose between different options. Arjun described himself as entirely driven by science when making his decisions about where to move (as discussed above), but economic considerations played an important role in reducing the available and feasible options along his career:

So I had three offers in my hand and I was concerned at that time what to take. Like I said, my choice was driven by the fact that I wanted to study and make money and the other two options did not allow me to do that. (Arjun, mid 40s, Genetics, US)

So what Paul did [PhD supervisor] was that he wanted me immediately. And at Temple university the person was asking me to wait till fall, because she didn't have funding. Paul had funding and Paul could support me from the spring semester. So I offered to come here to join him. So that's how it worked out. (Arjun, mid 40s, Genetics, US)

Aditya also recollects the availability of scholarships as a secondary reason for ending up the in US for her PhD

I was still studying from home and not earning any money, so I thought that going to the US will give me a reasonably good scholarship so I could sustain myself and do my studies. So this is the sort of thing, nothing out of the ordinary let's say. (Aditya, early 40s, Physics, India returnee)

The fact that immigration policies of destination countries do not factor prominently in the decision-making process of students and academics is also confirmed by results from our online survey. We asked our respondents to rate the importance of a series of eleven factors in two key career decisions along their trajectories: the choice of where to study for their PhD and of where to take up their current employment. 'Legal facilities' was the factor that tried to capture some of the aspects of immigration regulations, and turned out to be at the bottom of the hierarchy of factors. A vast majority of respondents considered the prestige of the institution (85 per cent), the research infrastructure (87 per cent) or the funding available (75 per cent) as very important or essential in their decision of where to study for their PhD. In contrast, legal facility was deemed equally important by only 50 per cent of the respondents. There was more diversity in the factors driving the decision of where to take up their current employment, but legal facilities was again at the bottom of the list (20 per cent compared to 52–53 per cent who considered prestige of the institution or future employment prospects as very important/essential).

4.1.1 Migration policies as facilitating/constraining migration behaviour

While policies may thus not shape destination-related *aspirations*, they may still shape students' and researchers' *ability* to reach their desired locations. We systematically asked our interviewees, both those who moved abroad and those who spent their entire career in India, whether they had negative experiences with the visa or work permit application process, or with family reunification in case they were bringing dependents with them (or entering with their spouses). Very few of our respondents reported being unable to migrate to their preferred destination because of legal issues. For most it was a relatively smooth process, lasting under a month, though in some cases – mostly for those taking up employment abroad – that process was delayed for up to a few months.

The few cases where the students or the researchers experienced major difficulties and were eventually refused entry involved the US and took place in the few years following the events of 9/11. For a year and a half, Nishat prepared her GRE exams and applications to a PhD programme in the US, got accepted by all of them only to see her visa rejected by the Embassy. This was happening in 2002, as she says, 'too soon after 9/11':

It was always my ambition to go to the US, so I applied for an MBA program in 6 different US universities including a couple of Ivy League Universities. I got into all six of them, I had extremely good scores plus scholarship, unfortunately I didn't get a visa. But by that time I'd already sort of made up my mind that I wanted to go abroad so the UK was sort of like a second/third option for me. (...) At that time it was too soon after 9/11, you know, there was political tension with India and Pakistan, both countries had undertaken nuclear tests, the US had issued a travel ban so... . (Nishat, mid 40s, Management, UK)

We do not find any other time trend in our data, for example younger generations reporting more positive experiences which could be linked to the progressive adoption by many Western governments of favourable policies towards the highly skilled.

Our findings thus suggest that migration policies do not factor in Indian students' and researchers' decisions about where to migrate, nor did legal issues generally prevent them from reaching their preferred destination. However, we cannot conclude from this that migration policies do not constrain academic mobility. Immigration regulations may reduce their ability to study or work abroad through another channel, of which academics themselves are not necessarily aware. They may affect the recruiters' willingness to consider the applications of nationals from certain countries, for whom the legal procedure is expected to be time-consuming and costly. This may particularly be the case for research project-based positions, which often have a tight timeframe and cannot afford waiting several months for the new recruit(s) to join the team. Large universities, with well-staffed international offices, can absorb the costs of recruiting foreigners, but smaller institutions are less equipped to do so.

I knew it would be difficult because as a non-European you just don't have the options and as I said, it's just everywhere you go – they come up with this – you're not a European. I actually applied – even here I've had lots of bad experiences. I mean I invariably applied for lots of jobs and most of the jobs I was over-qualified. I was quite often interviewed by people without a masters degree and all the time they would always say oh yeah sorry, you can't apply for a work permit. I actually found a job with a higher education college. At that time it was a place in Birmingham (...) And they offered me a job and I actually handed in my resignation at the place that I was doing full-time teaching and I was on the verge of relocating and then they came back and said oh sorry, you can't apply for a work permit. You know, head shot, typical head shot. And they didn't even explore the possibility of seeing if it would be ok, all they had to do was just fill out a form, which they didn't do, they simply said oh, we can't apply for a work permit, we won't get it, blah blah. So yeah, it was – that was difficult. (Nishat, mid 40s, Management, UK)

Nishat only managed to find a job at a ‘fully-fledged university’, as she calls it, who applied for her work permit and obtained it within a week. None of her previous applications to smaller institutions were successful because of the long and costly process that obtaining the work permit involved for the institution. Furthermore, in countries where nationality (or a long-term residence permit) is required for obtaining grants, foreigners may be additionally discriminated against, as one of our interviewees observed in his university in the US:

I don't see the impetus for our calling people from abroad, but selecting from the current pool that is there in the US. Because the immigration has frankly gotten more expensive. And so the researchers want to conserve their funds along those lines. It would be ideal for them to have somebody who has a green card or a US citizenship because then they can be eligible for training grants or apply for their own fellowship funding (...) They can prioritize those candidates, for whom it's easier from a legal point of view. (Arjun, mid 40s, Genetics, US)

4.2 Migration policies redirecting and/or retaining the mobility of researchers

As we have discussed in the previous section, migration policies do not seem to be a central element in the aspiration-capability nexus for Indian researchers when deciding whether to move and where to go. Policies of the (chosen) destination country did however have more of an effect on subsequent career choices – both in terms of professional opportunities and their geographic locations. The different policy regimes create different opportunity structures that both facilitate and constrain the decision-making processes for subsequent moves or decisions to stay. Our interviewees have extensively addressed these impacts: the effects of the policies regulating their post-entry rights seem to have a larger impact in their capabilities to stay, move or return than when deciding to enter a particular country for the first time. In other words, migration policies are perceived to play a decisive role into retaining you in a particular position and/or country, or redirecting you somewhere else.

A clear example of this mechanism is the existence of a post-study visa scheme, which is acknowledged as the main policy tool of retaining researchers in the labour market. The possibility of ‘staying’ on a post-study visa and just ‘give it a try’ has been narrated for interviewees staying after postgraduate education as both shaping the aspirations to stay and the capabilities to do so. They also express how the retention capacity of the countries is diminished when these channels are not present. This has been narrated for example by Kiran, an Indian scientist based in London who arrived to complete her doctorate in a prestigious British institution, when she explains that the elimination of the post-study visa in the UK did not allow a close friend of hers to take up offers despite her suitability for the jobs:

I didn't have any problem getting the visa to come here. And I had institutional support. When I had to exchange my visa when they gave me the post-doc. But when I switched to what was then called the HSMP or highly skilled migrants program and that was, that program has now been discontinued, so people can't apply. For example my flat mate, she's an economist, she's Indian like me and she did her PhD at the institution A, and after that she applied for a job and got a job but because there was no possibility of post study visa, it took her 8 months for her visa to come through. Some departments won't wait. (Kiran, mid 30s Physics, UK)

The extension of post-entry rights to family members is also signalled as a central element to be able to stay. For example, a fast track to grant a residence and work permit for spouses is regarded as a key mechanism for attracting foreign researchers. And moreover, institutional practices that facilitate employment for spouses in the same institution are considered as one of the optimum mechanisms to attract and retain workers. A researcher employed in a US business school, who narrates how they decided where to go in the first place, reflects thus:

I've chosen that university because they did employ my wife; they offered her a position there. I got two other offers, but with no offer for spouse. She finally found a job elsewhere, but this was a key factor in deciding where to live. You cannot live apart for many years, so this really helped to make the final decision and we moved there together. (Saqib, early 50s, Economics, US)

Hence, when post-entry rights are limited, the aspirations of researchers to stay do not match the capabilities to do so. For example, for researchers in destinations in Asian countries where access to permanency rights were difficult to reach, the migration regulations were impacting their aspirations to stay. This is the case for Sajid, a physicist based in Taiwan will soon move to Canada. He did not consider settling in Taiwan since, besides language and cultural differences, the Taiwanese government does not offer permanent residence to foreigners, according to his information. He was also encouraged in his decision to move to Canada by the ease of accessing post-entry rights in the new destination:

When I finished my PhD degree [in Taiwan] then immediately after one month I got the letter from the Immigration Office of Taiwan saying that you are no longer a student and please write why are you staying here [...] My professor offered me a position but it was in process. When my student status was finished then it took I think 3-4 months to get the work permit from Taiwan government. Before I don't know if I get the permission from the labour department and from Taiwan government for to work in Taiwan, because I was no more a student. So it was a little bit more difficult than for a normal student [...] they told me that it is difficult to get visa and the work permit, it's a long process, 6-8 months process. So this is the situation here. Now in Canada, in case of my post-doc in Canada, my professor told me that you will get a work permit. This is in process. (Sajid, early 30s Physics, Taiwan)

For those researchers who aspire to stay in their country of destination, the capabilities to do so seem to pass through the access to permanency rights and citizenship acquisition, which allows them to increase their horizontal mobility. This impact is observed when Rita states that one institution had shown interest in her taking up employment in a lab since she has learnt and developed a particular set of skills for her PhD. She wanted to take on that job, but the timing of a work permit through the sponsorship system finally impacted on her suitability for this position, since the department needed to hire someone who could begin the job as soon as possible. The institutional practices when complying with immigration regulations have made more difficult the matching of her talent with the needs of that particular department. She explains it in this way:

I got offered a job as a researcher but they wouldn't take me because I had no work visa at that time. That was quite surprising because my CV was quite research oriented, and they wanted me on board. But then, the process of facilitating a work permit was much more complicated than that. (Rita, late 30s, Biology, UK)

This is also articulated by Priya, who says that if you want to stay and move between institutions and jobs, you better have acquired citizenship:

You can apply for jobs, but then when you say you have the right to work in the country in your application things are smoother. And you don't want to be a hurdle for the institution who wants you, to go through all the sponsorship system. Now I can apply for anything when I want to. (Priya, mid 30s, Physics, UK)

The migration regulations that apply to high-skilled workers are very rarely considered as a mechanism that would deprive them from following the aspired-to career path, unlike the case of lower-skilled workers who are understood to be more constrained by migration regulations. One of our interviewees aspired to horizontal mobility in order to escape from abusive employment relations, but they were blocked due to the contract being tied to a particular employer:

When I worked in Institution Y my boss was a British-born Indian, well, he was born in India, moved to Britain when he was 10 or something so a British Indian. And I worked for him, he was my boss. And for five years he made my life hell. I couldn't, that was the reason I left. I mean I just held on till I got my indefinite leave to remain but for every single day the man tortured me. He had a problem with independent, educated, successful minority women. He openly claimed that he was sexist, he didn't like educated, successful... he had very regressive attitudes towards ethnic minority women [...] So when I had the indefinitely to remain I didn't need to be tied to that institution any more, so as soon as I had my indefinitely to remain, [...] I started applying for jobs almost straight away. (Nishat, mid 40s, Management, UK)

Therefore, access to post-entry rights (e.g. permanency rights in particular, or holding permits not linked to a particular employer) seems to shape the aspirations to stay, but also the capabilities to do so. However, our analysis also shows how the relation between access to entry rights and capabilities to stay do not necessarily map onto each other. Also for those Indian researchers who aspire to return to their country of origin, move elsewhere, or engage in transnational academic careers, access to permanency rather fixes you in a particular territory, limiting the capabilities to leave. This 'involuntary immobility' (Carling 2002), has been an unexpected finding related to high-skilled migrants who are often assumed to be 'hyper-mobile'. For example, some of our informants underline that the time limitation of the visa to the position you are holding limits the exploration of new avenues for searching for jobs elsewhere in the world. This is what, for example, Vivek, a top biologist in a world famous US institution reflects on regarding the possibilities of extending your visa beyond your contract:

Now that I am in the US, I realize that in Germany it's very nice that you can extend your visa by staying within the country. But in America the system is very different. Once your visa expires you are allowed to stay in the country, but the thing is if you leave the country, you cannot enter unless you get a new visa issued from your home country. And this kind of limits the mobility an international researcher requires. Because for example your visa is to the end of this month, you can keep staying and moving within the US. But suppose you want to visit UK you still have friends and family there, you want to come back, then coming back would be difficult because yes, depending on whether you are from UK or you are not from UK, you have to get a fresh visa issued. So that's a difficult process. (Vivek, early 40s, Biology, US)

This impact on the capabilities of leaving the country where you reside is also reflected by those who want to go back to their country of origin. The restrictions to permanency can actually hinder mobility trajectories and make them stay until they manage to achieve greater mobility rights. Those researchers who aspire to return to India often indicate that they delay this move in order to wait for permanency rights. This is the case of Parvati, who explains that her husband and she aspire to move back to India, but they would like to keep the door open to Canada, since they do not know whether they will enjoy their working life back home. This is making them hold onto the current jobs they have for one extra year until they manage to get their permanency rights granted and renounce the offers they had in India:

We would like to go back to India, my husband is not particularly happy in his current job. But then we are thinking, 'if we stay for one more year, we will qualify to apply for permanent residence. This will make things much easier in case we want to come back. (Parvati, mid 30s, physicist, Canada).

The nature of research requires international movement through the pursuit of foreign degrees, through short visits, attending conferences or research meetings. For those researchers who aspire to go back to India but want to stay in touch and have a fluid transnational academic life, acquiring permanency rights or even citizenship appears an ideal strategy. This is narrated by Rajesh, who gained his PhD in Germany and now lives and works in the US. He explains how migration regulations should take into account the previous trajectory in the country, given the issues he encounters every time he wants to visit the lab he used to work before in:

For me the fact that I was living in Germany for quite some time and I had very strong professional relations there, now if I want to visit Germany, I have to go through this entire process of immigration, like application for visa and Schengen, all these things. If people who had been in Europe before, if there are some special relaxed bureaucracy. Some facilities, because they know that you did your PhD there. For professional reasons you need to head up to this country. And it's every time you have to go through this process it costs money and more than that it costs time. The entire process of filling up the forms, going to the embassy personally, putting the passport and this and that. (Rajesh, mid 30s, Mathematics, Germany)

For other researchers, the possibility of transition through different countries seems to be the ideal way of living academic life: being able to have multiple affiliations is highly regarded by some of our interviewees but migration regulations constrain these chances. Siddharta, an Indian physicist in a Belgian university states how ideal would be to have the right passport to transit between India and Europe:

My wife and I keep discussing about this. So, it's something [the passport] that allows us to freely move between places. So I would like to really have something in a foreign country, and also back in India, and something that allows me to work half-time here, in a, in a foreign country, and then spend half time in India, or like, even on a yearly basis, we spend one year here, one year in India... (Siddhartha, mid 30s, Physics, Belgium)

In summary, a greater access to rights seem to be perceived as a factor facilitating capabilities in different directions: it conditions and matches the aspirations to stay, but also facilitates the capabilities to move in different direction: horizontally – within the same country – elsewhere in the world, or back to India. A higher restriction of post-entry rights (fixed to a particular employer, lack of study visa) can have an expelling effect (looking for countries with greater post-entry rights), but also a retention effect, meaning the foreign researcher remains until they manage to acquire more rights to follow their path. However, for those researchers who had very clear aspirations of mobility to return to India (i.e. post-doc stage in order to reintegrate back home) with no aspiration to engage in transnational mobility, the post-entry rights were not perceived as either facilitating or constraining these decisions. The short–mid-term move was narrated as rather instrumental in order to have better chances of getting a job opportunity back in India, for which post-entry rights in the country of destination did not play a major role in their trajectories.

4.3 Academic recruitment practices in India ‘pushing researchers to migrate’

Finally, our findings show that policies in countries of origin may also play an important role in shaping academic mobility patterns. In particular, changes in the higher education landscape in India have transformed, to some extent, the dynamics of students’ and researchers’ international migration.

With post-secondary enrolments growing at an accelerated rate, the Indian higher education system has massively expanded over recent decades, and in particular in recent years. Most of this increase is accounted for by low-quality, often private, ‘teaching colleges’ (Jayaram 2003). At the bottom of the academic hierarchy in India, these teaching-focused colleges may also offer permanent positions, but the low salaries and the high teaching load prevent research activities. At the same time, there has been a more moderate increase in high-quality institutions such as the Indian Institutes of Technology or the Indian Institutes of Management, who opened new branches, as well as in research institutes, admitting doctoral-level students only (Jayaram 2003; 2011). Researchers and academics employed in such institutions enjoy more time to carry out research and have more autonomy in their work, better research infrastructure and facilities, high-level students with whom to work and better salaries. These positions are thus highly coveted within India.

These developments have changed the structure of opportunities and constraints faced by Indians who wish to engage in an academic or research career in at least two ways. On the one hand, compared to older generations, Indian students have now more opportunities to undertake a relatively high-level undergraduate and graduate education within India. This applies more to the disciplines in which India has particularly invested, such as the natural sciences, both theoretical and applied, and much less so to the social sciences and humanities.

On the other hand, international experience has become a must for getting a permanent position in the core of higher-level institutions in India. Elite institutions specifically target Indians educated abroad, offering more generous research grants or industry–academic collaborations in order to attract these researchers back home. For instance, at IIT Delhi, two-thirds of academics now have a PhD or post-doc from a foreign university, IIT Bombay has hired more than 100 Indian assistant professors with international experience in the past three years (UCR 2013). Indians with international experience also have preferential access to governmental research fellowships offering good salaries and considerable research autonomy.

DBT is Department of Bio-Technology, so it's a Government organization that is wanting people in other countries, Indians in other countries to try for possibilities back in India. (...) I think the scientific scenario seems to be improving.. they want to bring in the kind of cutting edge research that's happening elsewhere to India. DBT is trying to find people worldwide, who have gained experience other than Indians in India have. So that will increase the richness of the progress. (Arjun, mid 40s, Genetics, US)

Thus, opportunities at the top have considerably shrunk for those without international experience, a fact evoked by most of our interviewees. Our findings thus illustrate what Louise Ackers (2005) has called an ‘expectation of mobility’, which may blur the boundaries between ‘voluntary’ and ‘forced’ migration. This is expressed by a great number of our interviewees, for example Aditi wanted to work in one of the IITs after finishing her PhD but she realized that it was impossible without first going abroad:

I think in my field and science and engineering I wanted to eventually go back to India and get a job. That was my idea. I wanted to go at IIT when I graduated but there's more than one IIT in India. But they are very clear, they will not take someone how has just stayed at one place. They want you to get exposure and learning things. And it's pretty most there that in the field unless you go abroad and you get some different exposure and learn new things, you are not really finishing your education anyway. That's why I wanted to go abroad. (Aditi, late 30s, Applied Physics, UK)

This was also what pushed Ashish to go for his post-doc in the Czech Republic: he knew he needed international experience if he wanted to get a good position that leaves time for research back in India.

If we want to get good research facility, to work, we have to go for a good institute in India, and to get in good institutes, they also require – there is a specific norm that you must have some good collaboration with a foreign scientist. So that also sometimes forces people to go outside. (Ashish, mid-30s, Mathematics, Czech Republic)

Furthermore, the international experience is particularly valued if it was obtained in a ‘good country’, meaning the traditional duo US and UK duo, followed by Canada and, fourth, Australia. While Asian countries have increasingly made efforts to attract foreign researchers, and a growing number of Indian students and academics have turned to these destinations who often offer more generous funding, these are still at the bottom of the ‘international exposure’ hierarchy for recruiters back in India. This puts those who went to less traditional destinations, such as Taiwan or the Czech Republic, in the position to move again, this time closer to the ‘core’ of the international academic system, to the US or to Canada.

But I want to go there [Canada] because in India, if I want to be a professor in India in the Institute of Technology, then we have to take some experience from an English-speaking country, so from United – UK, US, Canada. So I have to take some experience, 1–2 years, for assistant professorship position in India. (...) Interviewer: And you don't think that experience in Taiwan, is that not so good? Interviewee: Not enough. Because, I'm telling you one very personal thing, in India, they give the first preference for students, PhD or post-doc from English-speaking countries, and then the other countries. So if one student is coming from US, Canada or UK, and another student is coming from an Asian country, then in India they will give first preference to the English student or students coming from English-speaking countries. (Sadiq, early 30s, Electrical Engineering, Taiwan)

In fact in India, they also don't consider Czech Republic as a place to improve research profile. They thought, maybe it is US, or the UK, or... Some leading countries. So that is the brand name of the branded countries in their minds, so... they don't try to understand what is the research depth actually. (...) Yeah, if really I were not thinking of go back to India I will – then the branding doesn't matter at all. (Ashish, mid-30s, Mathematics, Czech Republic)

Thus, graduates who do not have an intrinsic preference for going abroad, and who finished all their education in India, are faced with an increasing pressure to get 'international exposure' and therefore have to look for a post-doc abroad. However, they have to navigate a tight calendar, since for many entry-level jobs candidates have to be under 35 years. Thus, higher education policies in India do not only shape the aspiration to migrate and the preferred destination, but also the time spent abroad. Our interviewees generally agree that the optimum duration spent abroad is between two and four years. Beyond that reintegration becomes difficult as the age barrier may be crossed and researchers who have been away too long may run the risk of losing valuable Indian networks back home.

5 Discussion and conclusion

This paper contributes to the understanding of the role of the migration policies and institutional practices from both the origin and destination countries in the geographic mobility of Indian researchers. Using an aspirations-capability approach framework, this paper examines how migration policies and institutional practices influence the retrospective, current and future decision-making processes of researchers in relation to whether to stay in India, move elsewhere, stay abroad and/or return to the country of origin. Our findings from the quantitative survey suggest that the easiness of obtaining visa as a factor conditioning where to move has a relatively small weight in comparison with other factors. The prestige of the institution, its research facilities or family circumstances outweigh the influence of the migration policy regulations. This is also supported by the qualitative results, where our interviewees do not perceive entry policies as a key factor conditioning their decisions to move. Researchers generally allude to not having been particularly informed about the migration regulations of the country of destination and experienced the process as an inevitable bureaucratic hurdle.

However, the fact that researchers do not acknowledge a significant role of entry policies in attracting or deterring mobility decisions does not mean these do not have an effect on their *abilities* to move. A few interviewees evoke negative experiences with the immigration process and having been refused visa to study or work abroad. Furthermore, the facilitation/constraining role of policies may also shape other actors' decisions, in a way that student and researchers themselves may be unaware. If the administrative procedures for obtaining a residence or work permit are long and costly and if administrative support with these issues is low, a foreign candidate may be given less priority in the

application process. These aspects are however beyond the scope of this paper, which focuses on the narratives of the researchers in relation to the interaction with the policy framework. Future research should complete the picture by studying hiring practices in higher education and research institutions and their interaction with immigration policy regulations.

The impact of the policies becomes more prominent in drawing the subsequent moves researchers make: the aspirations and capabilities to stay in the country of destination, move elsewhere or go back to India seem to be impacted by the regulations to a greater extent. Our findings show that policies have more of a retention/redirecting effect, which is strongly related to the access to post-entry rights (e.g. permanency rights, citizenship rights). This greater access to rights conditions (im)mobility in different directions: it influences the aspirations to stay in the country of destination, facilitating longer term settlement (e.g. post-study visa channel, access to permanency rights). But it can also facilitate the capabilities to move in different directions: (i) horizontally – in search of attractive positions within the same country since there is no need to be attached to a single employer; (ii) elsewhere in the world or (iii) to go back in India, with the possibility for engagement in transnational mobility patterns or leaving ‘the door open’ to come back. A higher restriction in post-entry rights (fixed to a particular employer, lack of study visa) can have an expelling effect (looking for countries with greater post-entry rights), but also a retention effect, until the foreign researcher manages to acquire more rights to follow their path without the penalization of not being able to return.

This paper has also shed light in the role of the country of origin policies and institutional practices into the mobility trajectories of researchers. Increasingly, international experience is seen as a requirement for attaining a good academic or research position within India. This puts a growing pressure to migrate on academics who might not have otherwise had the aspiration to move abroad. Furthermore, it shapes destination preferences as well, as an experience from the more reputed Anglo-Saxon countries (the US, UK, and, further behind, Canada and Australia) is much more valuable than one from other European countries or Asian destinations, irrespective of the prestige of the institution. Last, the timing of migration is also shaped by institutional practices and norms: as 35 years is the age-limit for getting into entry-level permanent positions, Indian graduates looking for an international experience after their PhD should not stay abroad longer than 4–5 years, or else their chances of re-integration in India are diminished. At the same time, changes in the Indian higher education system, and increased government investment in a ‘core’ of high-quality institutions (the IITs, some research-only institutes and national universities) has increased students’ *ability* to move abroad with an Indian PhD (obtained from these institutes). Thus, these shifts in the country of origin have created the aspirations and, for some, also the ability to move, giving rise to a different mobility pattern where migration is a strategy for better returning.

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