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Skilled Migration and the Brain Drain

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Introduction: New Perspectives on Skilled Migration

By Any FREITAS, Antonina LEVATINO and
Antoine PÉCOUD

Abstract

Skilled migration has been the object of intense scientific and policy debates for nearly five decades. This is quite understandable, as few issues display greater complexity. Skilled migration is marked by a number of fundamental dilemmas and trade-offs, in terms, for instance, of conflicting rights to development, education, (e)migration and equality. It also often opposes political principles, ethical and political imperatives (such as global justice, individual freedom, or the control of people's mobility), as well as actors (such as states, corporations and migrants themselves).

New ideas and perspectives have regularly reshaped the way skilled migration is apprehended; a few buzzwords – brain *drain*, *gain* or *waste* for example – have played a central role in embodying the key arguments and, in some cases, certain policy initiatives. These macro-considerations have developed along more detailed analysis, which addresses different aspects of skilled migration, with a particular emphasis on sophisticated empirical economic assessments of its impact on growth or development. In this context, contributions to this issue attempt to explore the different issues raised by skilled migration in a transversal manner. These include political implications, economic and policy impact, and ethical dilemmas. This introduction provides a short overview of the debates and of the main arguments developed in this issue of *Diversities*.

1. The Diversity behind Skilled Migration

Like many other major policy issues, skilled migration tends to be discussed in general or abstract terms. Such generalization tendency often overlooks the great diversity of empirical cases and the very different situations that the 'skilled migration' or 'brain drain' notions bring together. There is nothing wrong with this; policy debates, especially at the international level, indeed need a simplified cognitive and intellectual framework to move ahead. Yet, looking at the diversity behind skilled migration enables to understand some of the possible biases that characterize current scientific and policy debates.

An obvious starting point here is the definition of 'brains' and of related notions such as 'skills' or 'qualifications'. According to the OECD, 'highly skilled' individuals are those who have completed tertiary education, which in most

countries corresponds to a university degree. It is however common to consider that nurses, IT professionals, school teachers and students are also skilled migrants, even if these professional activities do not always correspond to the OECD definition.

More specifically, the inclusion of students as a particular case of skilled migration raises a number of questions. Students are not (yet) skilled professionals and their emigration does not therefore deprive their country of origin of much-needed workers. Moreover, and as Mary Kritz notes in her contribution to this special issue, their education abroad is often financed by personal/family resources, and/or by host countries' governments and tertiary education institutions (via grants, scholarships, and other exchange programmes). The connection between student migration and brain drain is thus based on the

assumption that students represent a *potential* human capital asset for sending countries; this would then justify policy measures to prevent – or compensate for – the negative outcomes of their emigration.

The definition of ‘skills’ also raises a number of questions. There is a tendency among experts/analysts to focus on a quite reduced number of ‘profitable’ or ‘valuable’ skills, like the ones possessed by engineers, health or IT professionals. Other skills, while also acquired through tertiary education, are rarely considered; graduates in the Humanities or Fine Arts are for instance virtually absent from the discussions. The definition of ‘skilled migrants’ is therefore strongly based on the existing demand (by markets, firms, states), instead of on skills *per se*, or the way they were acquired. ‘Skills’ are thus not neutral or universal, but depend upon a specific socio-economic and political context.

This is all the more clear when one looks at the personal attributes of skilled migrants. Popular notions such as the ‘global hunt for talents’ obscure the fact that the reasons why people move vary greatly, in terms of ‘push’ or ‘pull’ factors, or of personal, family or work-related motivations. Sociologists have long argued that the ‘labour market’ is not a uniform and abstract system, but is pervaded with social ties, networks, etc. There is no reason not to apply these findings to the ‘global’ labour market. Skilled migrants also differ in terms of their region of origin, class, sex or age, which has an impact on their capacity to integrate professionally – and to be recognized as ‘skilled’.

In her contribution to this issue, Yvonne Riaño shows how migrant women who came to Switzerland in the framework of family reunification and/or asylum are not ‘counted’ or ‘categorized’ as ‘skilled migrants’, despite the actual competences and degrees they have. In a similar vein, Jean-Marie Muhirwa’s article on skilled migration from sub-Saharan Africa questions the neutral or invariable character of skills. The authors also cast doubt on the role of migrants’ personal attributes in determining who is recognized as a skilled migrant and in shaping individuals’ perspectives on labour markets outside their coun-

try of origin. These contributions also make clear that the boundaries between ‘skilled’ and ‘unskilled’ migration are often quite porous.

These situations are often addressed as cases of so-called ‘brain waste’ or ‘brain abuse’, which refer to situations in which migrants are unable to use their skills and end up occupying un- or low-skilled job positions in host countries and being discriminated in favour of national workers (lower salaries, more precarious contracts, etc.). Such problems are regularly attributed to recognition issues, as migrants’ degrees and experience would not be properly taken into account. But it is quite clear that factors like ethnicity, gender or religion also matter – thus pointing to the biased construction of an ideal-typical ‘skilled migrant’ that actually leaves many cases out of the picture.

2. A Short History of the Debate

The notion of ‘brain drain’ was first developed in the UK in 1963, to refer to the emigration of British scientists to North America. The term was subsequently widely used and applied to migration from poor regions to the Western world, to the extent that skilled migration within the developed world became an issue of secondary importance in the literature. It is usually assumed that countries in the ‘North’ suffer less from the loss of skilled professionals, and that the greater freedom of movement that exists between them makes their migration less problematic. While these assumptions are relevant, there are nevertheless indications that developed countries are also affected by the ‘brain drain’.

Since the 1970s, discussions on south-north skilled migration have been taking place within the broader framework of development debates. The main idea is that less-developed regions are the ‘losers’ of a ‘zero-sum game’ that see skilled professionals from poor regions move to the developed world. The ‘North’ would attract the ‘brains’ from the South, which would then suffer from a continuous loss of human capital jeopardizing its development. Skilled migration is thus understood as a negative and damaging phenomenon and as both a consequence and a cause of under-development. Politically, great

emphasis is then put on states' strategies and the kind of policies needed to counter (or slow-down) the outflow of trained labour force or to limit its negative effects. It is for example in this context that the well-known 'Bhagwati tax' was conceived, as a way of compensating sending states by taxing skilled immigrants. This negative perception of skilled migration fits into the once-dominant historical-structural Marxist paradigm in social sciences; it was also influenced by 'dependency thinking', which challenged modernization theories by arguing that contact with Western capitalism created (rather than solved) underdevelopment in the Third World, as well as by Wallerstein's world-systems theory and its emphasis on the imbalanced relationships between world regions.

This pessimistic paradigm started to be challenged in the 1990s. The stress was then put on the possible benefits of skilled migration for sending countries. Key arguments here are the impact of remittances on development; return or 'circular' migration and its benefits for sending regions; the positive outcomes of the 'expectation to emigrate' on the education and training prospects of populations in regions of departure; and the role of diasporas in economic and political development. In his contribution to this issue, Jean-Baptiste Meyer provides an overview of some of the core ideas regarding diasporas, whose role would go beyond the transfer of capital and technology and display other assets, like the development of sending countries' local industries, the elaboration of formal or informal networks (such as student exchange programs), or the introduction of political change in sending regions.

This change of paradigm was accompanied by a new terminology: the notion of brain 'gain' (rather than 'drain') became popular, while terms such as 'mobility' or 'circulation', thought to be less static than 'migration', were increasingly used. It was also influenced by the crisis of the historical-structuralism approach in social sciences, by the diffusion of post-modernist thinking and by the emergence of new approaches, which recognized the possibility for individuals to display agency and actively change social structures. The 'poor', then, would no longer be a passive

victim of structural forces, but an actor who can seek to improve his/her livelihood. Rather than a flight from poverty, emigration would represent a livelihood strategy by individuals and households. This led to a new articulation between individuals' rights and states' interests, as skilled professionals' right to emigrate was no longer automatically as a 'problem' for sending states; it could be part of the 'solution' in the framework of a so-called 'triple-win' situation, in which all parties (sending and receiving countries, along with migrants themselves) would gain from the migration process – in sharp contrast with earlier understandings of skilled migration as a 'zero-sum game'.

In this view, migration (and especially the 'mobility' of the highly-skilled) would be a normal process in an increasingly interdependent environment; it would no longer be associated with the loss, but with the 'circulation', of trained workers within a global labour market. In the same vein, individual migrants are conferred a particular role as development actors. As is often the case in globalization debates, discussions have also built upon the importance of transnational networks, new communication technologies, and the role of knowledge in economic development.

This optimistic paradigm has however been criticized. The negative consequences of skilled migration are still regularly highlighted, including the 'inverted technology transfer' that it represents. Economic and financial losses, the decline of long-term productivity, the generation of important fiscal externalities (in particular the important tax burden imposed upon the high-qualified who do not emigrate), as well as the deterioration – or even collapse – of certain (public) services/sectors such as education, health, research and technology, are other negative effects often attributed to the emigration of high-skilled individuals. Jean-Baptiste Meyer notes that diasporas' actual capacity to trigger development and change is in fact regularly questioned. Observers argue that some of the 'success stories' that underlie the belief in diasporas' potential, including in particular the role of Indian diaspora in the U. in fostering an IT sec-

tor in India, are difficult to reproduce. Hence, evidence in other parts of the world does not display the same kind of positive interactions between a sending country and its emigrants.

The same doubts are regularly expressed regarding migrants' remittances, which – it is argued – cannot be substitutes for states' investment in basic services, goods and institutions (education, health, public transportation, housing, etc.). It is precisely the lack of consistent and long-term public investments in these areas that 'push' many high-skilled individuals to migrate. Jean-Marie Muhirwa thus develops a very critical assessment of skilled migration for Sub-Saharan Africa; in particular, he suggests that optimistic econometric studies about remittances often overlook the reality of peoples' lives and that the link between diasporas' transfer of capital and/or technology and development is by no means automatic.

As he further argues, the 'brain drain' in Sub-Saharan Africa is deeply linked to the structural adjustment programmes imposed on many of these countries since the 80s by international financial institutions (like the IMF or the World Bank). These programmes, which include privatization and the cut of public expenses on areas such education and health, have proved unresponsive of economic development, eventually inciting many of skilled professionals to search for better positions abroad. From this perspective, the 'brain drain' appears as a symptom of underdevelopment rather than its cause.

3. Skilled Migration between States and Markets

The changing ideas regarding brain 'drain' or 'gain' do not develop in a vacuum, but reflect broader economic, political and geopolitical trends. This section outlines some of the contextual elements that frame the debates and policies surrounding skilled migration.

The first is the well-known recognition of the role of knowledge and human capital in post-Fordism growth and development. Coupled with demographic changes and ageing in many rich countries, this has spurred policies to attract 'talents' from abroad to address situations of

skilled labour shortages. This gives employers, and especially large transnational companies, an important role. In a context of labour market deregulation and neoliberal beliefs in the virtues of a global 'free' market, the private sector emerges as a key actor in organizing the mobility of skilled workers; the 'brain attraction' and 'circulation' capacity of firms and private companies is enormous in certain fields (such as IT and new technology), and can be further reinforced when coupled with migrants' transnational networks.

Another related indication of these changes is the privatization and internationalization of education. As Mary Kritz details in her contribution, universities and other tertiary education institutions have developed different strategies to attract the most promising 'brains' from all over the world. Scholarship and exchange programmes, along with the creation of international *campi* and diplomas, are some of these 'brain attractive' methods. Given the growth of tertiary education needs in certain parts of the developing world, and the continuous lack of (material, human and institutional) resources and investment in (higher) education in these areas, developing countries have been traditionally the most affected by these 'pull' policies. In terms of funding, these developments rely less on states than on private institutions and the resources of individuals themselves, for whom education becomes an investment to enable higher earnings on the world labour market.

Both the role of private companies and of international education institutions could represent a challenge to states and to their capacity to regulate and control admissions of foreign workers. Yet, it is also apparent that these actors do not necessarily 'compete' with states, but rather work in cooperation with them in the search for the 'best and brightest'. They cannot indeed do without governments' policies (in the field of education, immigration, or labour market) to create the legal and institutional migratory channels for the skilled individuals they wish to bring in. States may also have an interest in attracting promising individuals to study as a way of having access to skilled labour force. Many OECD countries have in the last years tried to facilitate

the transition of foreign students' legal status, smoothing their access to working permits. Foreign students are also a kind of 'investment', as tuition fees have come to represent an important amount of capital transfer, highly profitable to tertiary education institutions and host states' economies. Likewise, some developing countries have encouraged part of their youth to study abroad to benefit from a 'zero cost' education with – hopefully – high returns (if they manage to attract them back or through remittances).

These trends could make up for an ideal world, in which states would help private actors organize the smooth mobility of people. Individuals from all countries, especially from less-developed ones, would thereby have increased access to better quality education and training, and thus improve their chances to find better positions in the international labour market. This would in turn make their personal financial investment in training and education worth the effort. Likewise, by enabling "the right people to be at the right place", this global labour market would enhance economic growth for the benefit for all. There are however a number of reasons to be skeptical of this model. From a political perspective, there are reasons to question the supposed efficiency of states' withdrawal from key sectors such as education and health. From an ethical perspective, the framing of these services in terms of costs and investments, rather than of social benefits and rights, is also quite problematic and echoes some of the main debates of social theory and theories of justice. What is more, the emphasis on skilled migrants overlooks the importance 'unskilled' migrants – who are often viewed as unnecessary or threatening, despite their equally important role in host countries development and economies.

In the same way that 'free trade' is criticized for not being equally beneficial to all, the global mobility of brains does not seem to equally contribute to the development of all states in a balanced and fair manner. As Jean-Marie Muhirwa and Jean-Baptiste Meyer point out, developing countries, such as those of Sub-Saharan Africa, are often not able to make the most of skilled migration, which may in turn create (or rein-

force) inequalities within and between countries. Based on empirical evidence, Meyer argues that developed economies are in reality those that can effectively benefit from skilled migration. They have both the human and economic resources needed to trigger (and maintain) the 'virtuous circle' that skilled migration is supposed to generate. The most underdeveloped and isolated countries, on the other hand, can hardly 'gain' much from the loss of their most skilled.

The case study of school teacher's emigration from the Pacific Islands to New Zealand and Australia, by Robyn Iredale, Carmen Voigt-Graf and Siew-Ean Khoo in this issue, is a good example of countries' structural inequality in the face of skilled migration. The disparities between Australia and Fiji are particularly enlightening: both countries experience structural shortages of school teachers, but only Australia has the (economic, human, institutional) resources to properly address this situation. While Australia has adopted 'brain attractive' immigration policies, many of the small, poor and isolated islands of its neighbouring Pacific have seen their qualified professionals 'fly away' without being able to do much to retain or bring them back.

The situation is made further complex because many countries are in what Isabel Estrada Carvalhais calls a 'semi-peripheral' position. Because they display a mix of developed and less-developed economic features, semi-peripheral countries often need to address both phenomena (the emigration of their 'brains' and the attraction of skilled migrants from abroad) at the same time – without necessarily counting on the best political and policy tools. This situation is quite similar to the so-called 'emerging countries', which have spurred important changes in the dynamics and geography of skilled workers' mobility. The traditional 'poles' of knowledge production and 'brain attraction' (like the United States, Western Europe, but also Russia, Japan and Australia) have been slowly losing their monopoly. They still occupy prominent positions, particularly when considering the number of 'top-quality' education institutions they possess, but no longer hold the privileged positions they used to have in the 80s and 90s.

As both Jean-Baptiste Meyer and Mary Kritz point out, other 'poles' of brain attraction and production, most notably China, India and Brazil, have appeared. Kritz notes that in the past decade Asian countries have increasingly raised the number of students they send abroad. Supported by several policy instruments and incentives to bring back their qualified students, China has for instance been quite successful in the development and diversification of its education, and research and technology sectors. Many African students – the continent with the highest (relative) growth of higher education enrolments in past years – have been choosing 'non-traditional' countries, like China and Malaysia, as destinations to complete their qualification and training abroad.

Likewise, the dynamism of their economies, translated into strong GDP growth rates in the past ten years, has transformed many of these emerging countries into attractive job markets, especially for trained workers. Even if their 'zone of attraction' remains quite regional, as Meyer shows, skilled professionals from different parts of the developed world have increasingly been looking at China, India, Brazil, or even South Korea as potential countries of destination.

4. The Ethics of the 'Brain Drain' and the Responsibility Debate

The mobility of skilled professionals raises some of the deepest ethical dilemmas associated with international migration. If, as argued above, the emigration of trained workers is detrimental to their country of origin and if, in addition, these workers move from poor to rich states, then skilled migration creates winners and losers – and the issue regards whether and how the former should be solicited to compensate the harm done to the latter. This is an extremely tricky and delicate issue, for at least two reasons.

The first regards the nature of the debate, which is inherently political and difficult to ground in unquestionable empirical evidence. The 'loss' of sending states is very complex to assess, to the extent that – as noted above – some analysts argue that there is actually no loss at all and that

the emigration of skilled workers benefits countries of origin. But even if one assumes that there is a loss, determining its exact nature or quantifying it is almost impossible. It follows that the debate on possible compensations always faces a lack of evidence that makes it almost exclusively dependent upon moral and political considerations.

The second issue is even more complex and concerns whom to blame for the loss incurred by the brain drain. There are two main options. The first is to criticize developed receiving countries for attracting and recruiting workers that are much-needed in their developed sending state. Countries in the North would then be obliged to take measures to reduce the impact of skilled migration. These can include for example stricter admission policies, development aid, 'ethical' recruitment codes or return programmes. Yet, the success of such measures in alleviating the costs for countries of origin remains open to debate.

Alternatively, it is possible to argue that individuals themselves are responsible for the burden: by emigrating, skilled professionals jeopardize the socio-economic development of their country and should therefore be asked to compensate. This is indeed the underlying claim of the Bhagwati tax, which proposes that skilled migrants' earnings should be taxed to 'pay back' the benefits they received from the country. Individuals' responsibility to compensate or pay back also underlies return migration claims, even if the 'return' and 'compensation' in these cases are rather less compulsory. Speranta Dumitru's contribution to this issue proposes an assessment of the ethical foundations of these different views. She questions the legitimacy of individual-based penalizing measures, and stresses their incapacity to conciliate states' 'right to development' and individuals' right to emigrate or, more generally, to 'a better life'.

In addition, this focus on either receiving states or individuals omits the responsibility of other actors, like the private sector which, as noted above, plays a central role in shaping the mobility of trained workers. Likewise, sending states also have their share in the responsi-

lity debate. Many experts point out that trained workers who would like to stay in their countries of origin cannot make the most of their competences given the poor institutional, material and economic conditions in which they live. Unless these individuals are given by their home countries the effective means to use their skills and qualification, they will end up suffering from another form of 'brain waste' or 'abuse'.

* * *

All the issues addressed in this special issue that follow are still unresolved. Despite years of

debates, some of the major controversies remain – and are unlikely to disappear from the agenda. What indeed seems clear is that skilled migration, while not new, is at the heart of several major trends in today's world. Knowledge economies, the privatization of education and other services, the emergence of new poles of 'brain attraction', the multiplication of selective migratory policies and the increasing need for trained labour-force in different parts of the world, these are all factors that will make skilled migration an issue of on-going importance in the next decades. In this context, this special issue will hopefully contribute to the still much-needed discussions on the challenges raised by skilled migration.

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Skilled Migration: Who Should Pay for What? A Critique of the Bhagwati Tax

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Abstract

Brain drain critiques and human rights advocates have conflicting views on emigration. From a brain drain perspective, the emigration harms a country when emigrants are skilled and the source country is poor. From the human rights perspective, the right “to leave any country, including one’s own”¹ is a fundamental right, protected for all, whatever their skills. Is the concern with poverty and social justice at odds with the right to emigrate? At the beginning of the 1970s, the economist Jagdish Bhagwati replied in the negative. He imagined a tax on the income earned by the skilled migrants in the destination country, to the benefit of the source country. He thus sought to reconcile the right to emigration and the brain drain effects².

This article argues that there is no need to tax skilled migrants in order to reconcile the right to emigration and social justice. Social justice is not incompatible with the right to emigration but rather with restrictions on mobility. If it is both the case that equal opportunities are a *minimal* requisite for social justice, and that access to opportunities implies freedom of movement, as I shall argue, then the brain drain criticism doesn’t satisfy the minimal requirements of social justice.

The article is divided into three parts. Each part rejects one of the possible justifications of the Bhagwati tax, that is, as a way, for skilled migrants, (i.) to compensate the welfare loss occasioned to their country of origin; (ii.) to discharge for their obligation to the national community when it publicly financed their education; and (iii.) to compensate for the resulting inequality of opportunities between themselves and their non-migrant compatriots.

1. Should all losses be compensated by those who occasion them?

Since the brain drain debate began in the 1960s³, different measures have been suggested to regulate skilled migration. Among those compatible

with the right to emigrate, some are conceived of as incentives to stay in the country, while others as compensations for the welfare loss occasioned by emigration. The tax suggested by Jagdish Bhagwati belongs to the second category. His idea was that rather than seeking to reduce skilled emigration, a poor country may attempt to draw a benefit from it. He then proposed to tax the income the skilled earn in the host country to the benefit of the country of origin. Migrants should pay up to 10% calculated on their revenue net of the host country’s taxes. The fiscal allegiance to the country of origin shouldn’t last more than 10 years, the emigrant being supposed to acquire new citizenship.

¹ Cf. article 13(2) of the *Universal Declaration of Human Rights*, 1948

² First proposed in Bhagwati (1972)

³ The phrase “brain drain” has been coined at the beginning of the 1960s by British tabloids to denounce the emigration of British scientists to the USA; it was quickly taken up by academic journals. See e.g. the debate Maddox (1964) launched in *Science*. Willis Russell (1965) mentioned the phrase among the “new words” that had entered the English language.

Bhagwati justifies this surtax as a form of compensation for the contribution that professionals would have made to the source country had they not emigrated⁴. His ethical reasoning would seem to be as follows:

1. (*Principle of Redress*) Each person should compensate for the losses that their voluntary actions cause to third parties
2. (*Loss*) By voluntarily emigrating and no longer contributing to the country's welfare, skilled workers are causing a welfare loss to that country
3. Therefore, skilled emigrants should compensate the country they leave

Since the beginning of the "brain drain" debate, several economists contested the second premise by denying that the source country suffers any loss of welfare from emigration. Indeed, the contribution they could have made to the country represents rather an *unrealised gain* than a real 'loss'. But it's above all the Principle of Redress (1st premise) that I am contesting here. Indeed, the idea that *the loss of welfare undergone by a country should be compensated by those who have caused it* brings together two assumptions: the first is that all loss should be compensated, and the second that such compensation should be made by those who occasion the loss. Both these assumptions are subject to criticism.

1.1. *Loss or unrealised gain?*

From the beginning of the debate on the brain drain, several economists have denied that a country can show any loss subsequent on emigration, allowing that the loss concerns 'welfare' rather than the number of inhabitants⁵. Firstly, according to these economists there is no loss if welfare is formulated in terms of *income*. Rather, emigration appears to be Pareto-superior: while the emigrant's income is supposedly augmented, the income of those left behind isn't diminished. On the contrary, if the emigrant's work is remunerated at its market value, her departure will

augment the country's capital/work ratio and her absence will allow upgrading of the salaries of her fellow-professionals. In the short term, this upgrading will have the negative effect of augmenting inequalities, but the perspective of higher incomes across the profession will stimulate competition and inspire new postulants wishing to acquire the required expertise. Secondly, there should be no *fiscal* loss. One could imagine that, by her departure, the emigrant would deprive the country of origin of her fiscal contribution. Now, the emigrant certainly takes away her potential for fiscal contribution, but she also withdraws any claim on collective benefits. When her departure is definitive, there is no longer any risk that she will occasion further cost to the public purse. Thirdly, the loss can be formulated in terms of positive externalities – that is, of non-remunerated beneficial effects due to the simple presence of the professional in the collectivity. According to some, this loss would be minimal if organisational skills, creativity, or contribution to political life were linked to the individual rather than to a particular profession⁶. Unless we suppose that such qualities lead to emigration, they would seem to be equally well distributed between movers and stayers.

The above reasoning suggests that, in a given market, the sole negative effects of emigration are due to temporary imbalances. The greater the substitutability of the qualification and the shorter the period of training, the smaller the imbalance generated by emigration. However, not all countries are organised as markets: they cannot easily adjust the available workforce to evolving needs, and don't always remunerate professionals at their just value. The inequalities between countries can be expressed in terms of their capacity to respond to such imbalances. Thus, the more the economy of a country is planned, the less its capacity to replace the workforce. But above all, the more a country lacks resources, and thus the capital to invest in education, the greater the impact of its incapacity to produce and replace skilled workers. It is certainly the case that in poor countries, pro-

⁴ Bhagwati and Delalgar (1973)

⁵ Initially, the brain drain debate opposed nationalist economists such as Pitkin (1968) and internationalist economists such as Johnson (1965) and Grubel and Scott (1966)

⁶ Grubel and Scott (1966)

professionals contribute to collective welfare *much more* than is shown by their pay-checks. It's this marked difference between the value of their work and the salaries they receive that would be redressed by the Bhagwati tax⁷.

Still, however great the difference between the value of a professional's work and her remuneration, it doesn't mean that the country loses through emigration. On the contrary, since the end of the 1990s, numerous studies have shown that poor countries gain from emigration⁸; these studies generally go beyond the short-term effects of the professional's *absence* from the country. And her sole presence – as Bhagwati admits – doesn't guarantee productivity as, without the appropriate conditions, "the brain (...) can drain away faster sitting in the wrong place than travelling abroad to Cambridge or Paris"⁹. Indeed, emigration represents a net gain for poor countries if we take into account other variables: the *diaspora effect* (remittances, commercial and technological exchange due to the diaspora); the *prospective effect* (the influence of the prospect of emigration, and notably on personal and institutional investment in education); and the *return effect* (returning emigrants have greater human, financial, and organisational capital)¹⁰. If we refer only to remittances, one can regret that the amounts sent by the skilled migrants are not directly proportional to their income¹¹. Nevertheless, the total value of what is received by developing countries from remittances is considerable: it exceeds foreign economic investment in poor countries and represents today more than four times the aid to development¹². In other words, what is achieved by migrants on a voluntary basis largely exceeds what is realised by States on an altruistic basis and by entrepreneurs on a commercially-interested basis.

⁷ Bhagwati and Delalgar (1973: 94).

⁸ See for example Mountford (1997) or Beine et al. (2001)

⁹ Bhagwati (2004: 214)

¹⁰ For a brief presentation, see Kapur and McHale (2006)

¹¹ Faini (2007)

¹² Cf. Human Development Report (2009: 78). The evaluation concerns the year 2007 and doesn't take into account money transferred through official channels.

1.2. *Should unrealised gain be compensated?*

The boon that the diaspora effect represents for many developing countries is not a reason to discard their claim to be compensated for the absence effect. Indeed, which court would invalidate a demand for damages solely because the plaintiff possesses other sources of income and hasn't suffered an overall loss?

Let us suppose that the absence effect implies a loss: is it the case that *all* loss should be compensated? Besides the case of emigration, we don't usually hold that, for a country, the simple fact of having suffered a loss justifies indemnity. Here, the abolition of slavery is a good counter-example. After a lively debate, historians agree today that, the decision to abolish slavery was economically irrational for the countries concerned. Some have gone so far as to describe the loss suffered by the British Empire by the neologism *econocide*, or 'economic suicide'¹³. This might seem excessive but, whatever the value of the loss occasioned, we wouldn't hold that the British Empire or its successor should be compensated for it – and all the more so, that those who should bear the compensation cost are the very beneficiaries of abolition. The mere existence of a loss doesn't justify compensation: only 'unjust' losses, we believe, should be indemnified. Therefore, the questions of what is just and of what one is entitled to are prior to and should be decided before discussing the value of any loss. Is then a country entitled to the non-emigration of its brains?

Entitlements to compensation are usually justified by two reasons: firstly, by the value of the positive externalities of the skilled' presence in the country and, secondly, by the cost of their education¹⁴. I will discuss the second reason in the next section, while focusing here on the first one. By definition, externalities refer to benefits which are not remunerated. Usually, when migration is not the issue, we don't claim we have a *right* to benefit from one's unpaid work or from one's presence in the neighbour-

¹³ Drescher (1977), see also Eltis (1987) and Fogel et al (1989-1992)

¹⁴ The second justification will be addressed in the following section.

hood. When valuable people stop generating benefits (either because they've changed their profession or because they've moved to a different place) we don't usually claim that they should compensate us for our *unrealised gain* – for that which we *would have* gained had the situation remained unchanged. This is perhaps because we usually respect their will to change occupations and places *as a right*, that is, despite the negative effects its exercise can have on us. When it comes to migration, this respect fades and we start to calculate the unrealised gain and to ask the skilled migrants to compensate for it. How come we deny a right that both we intuitively recognise and is acknowledged by the Universal Declaration of the Human Rights?

In some cases, the denial of the right to emigration can be explained by a bias. The legitimate concern we have for the poor countries where basic needs are not satisfied may come to override any other concern and to distort our judgement. We see the emigration of the skilled only as a means to deprive those who are already poor of an opportunity to become a little less poor. However small and however unrealised the gain would be, our concern for the very poor renders plausible the principle that *unrealised gain should be compensated by the person who occasions it*.

To see how the bias works, let us analyse how it trapped some feminist authors¹⁵. Traditionally, feminists oppose the sexual division of labour and the relegation of women to childcare. But recently, Arlie Hochschild, a feminist sociologist, coined the phrase *care drain* to describe the loss of care produced in poorer countries by women who leave their families and migrate to work as caregivers in richer countries¹⁶. Hochschild sought to criticise globalisation and indeed, our natural empathy for children deprived of their mothers' presence gives an easy support to such criticism. But the idea that women's migration produces care drain implicitly reaffirms the sexual division of domestic labour, by which women should be present to care for their (own) chil-

dren. Hochschild *exclusive* concern for the children's loss of care leads her to ignore the situation of migrant mothers. She is neither puzzled that all over the world, some women are always associated to carework – unremunerated in the poor countries and badly remunerated in the rich countries – nor that most migrant domestic workers support their families in the poor countries at the cost of discrimination, downgrading, and exploitation in the rich countries¹⁷. She takes mothers', not fathers', departure as a loss without inquiring why fathers' migration doesn't generate a 'care crisis'. For, indeed, fathers' absence remains unnoticed not only by researchers but by children themselves. As a survey has shown, the wellbeing of children whose father is a migrant is equal to or even higher than that of children who have no migrant parent¹⁸. Given the pre-existing sexual division of domestic labour, can anyone be surprised that mothers' migration has noticeable effects in terms of care?

This example illustrates how the exclusive focus on the immediate loss caused by emigration distorts our judgement. Considering migration as an isolated event and assessing it by its immediate consequences on third parties overlooks the pre-existing scarcity and overestimates the migration's effect. In the above example, taking the care drain as caused by mothers' migration is overlooking why fathers' migration might not cause a loss. Should a remedy to the care drain address mothers' migration? If children's care,

¹⁷ For an analysis of the over-representation of migrant women in care activities and the downgrading of migrant graduates, see the OECD Report (2006). This phenomenon is overlooked by Hochschild (2002:16) who associates the migration of a woman with engineering degree with the *care drain* rather than with the *brain drain*. On the invisibility of the women's skilled migration, see Kofman (2000), Morrison et al. (2007), Docquier et al. (2007).

¹⁸ Cf. the survey realised by the Soros Foundation (2007) on a sample of 2037 Romanian children. In answer to the question "What do you feel about ... your health, your family, and your life in general?" the children of non-migrant parents and the children of migrant fathers make a similar appraisal of their welfare. Indeed, the value of the subjective index of welfare is *higher* when the father is absent than when both parents are present – cf. Soros Foundation (2007: 27-28).

¹⁵ Dumitru (2011)

¹⁶ Hochschild, A. (2001); Ehrenreich and Hochschild (2002)

and not women's migration, is our concern, the best political response is not one which tries to keep mothers either in their homes, or in their homelands. Indeed, when women begun to work outside the home, there was a loss of care, but however important, this care drain is not a reason to override the women's right to work. The best – and, indeed, the only acceptable – policy is one that *adapts* the care of children to the women's freedom to work and to move.

Similarly, it is sometimes assumed that to deal with poverty, a country cannot but tie the citizens together in the homeland. In the brain drain debate, the suggested policies are even more brutal than in the care drain debate. For indeed, no-one has yet foreseen to respond to the loss of care through emigration policies that forbid mothers, rather than fathers, to leave the country or which oblige women, rather than men, to compensate for their departure through taxation. In the brain drain debate, interdictions and taxes are often advanced as solutions, in disregard with the human right of emigration and despite the discrimination they operate between skilled and unskilled people with regard to a human right. Now, the analogy with the care drain solutions suggests that if the brain drain critics are concerned by development should worry how the poor countries can respond to the existing needs, without denying the workforce's mobility. To overemphasise the immediate effects of individual mobility is to work with a short-term concept of development.

2. *Éducation oblige?*

If a country's unrealised gain cannot justify compensation by skilled emigrants, could the public financing of their studies provide a better justification? This hypothesis would seem to depend on a principle of fairness which holds that anyone who benefits from the cooperative labour of others – as invested in public education – should assume reciprocal duties¹⁹. The reasoning is as follows:

4. (*Principle of Reciprocity*): No-one should benefit from the cooperation of others without assuming reciprocal duties
5. (*Public Education*): Anyone who studies in a public establishment is benefiting from the co-operation of others.
6. Therefore, anyone who studies in a public establishment should assume reciprocal duties.

“*Éducation oblige*” would be the conclusion of this argument which implies that education creates obligations. One would agree with the dictum, without agreeing on who is obliged to whom and how much.

2.1. *Who is obliged to whom?*

The answers to the question of *who* might be under an obligation as a result of education vary according to the views of public education. A first view, much present in the literature on the brain drain, affirms premise (5): education is a privilege made available by collective efforts. When a community decides to allocate its resources to education rather than to other ends, it is making an investment and has the right to expect a return; and the poorer the country, the graver the graduate's departure seems. Julius Nyerere, a former Tanzanian president, went so far as to compare the skilled emigrant to a traitor:

“Some of our citizens will have large amounts of money spent on their education, while others have none. Those who receive this privilege therefore have a duty to repay the sacrifice which others have made. They are like the man who has been given all the food available in a starving village in order that he might have strength to bring supplies back from a distant place. If he takes this food and does not bring help to his brothers, he is a traitor.”²⁰

By contrast, in the literature on equal opportunities, the view of public education is opposed to that expressed in premise (5). On this view, education is a source of obligation not for the younger generations who benefit from it, but for the older ones who must finance it. All the theories of equal opportunities consider educa-

¹⁹ Rawls (1971, §18) takes this principle from Hart (1955: 185).

²⁰ Speech by President Julius Nyerere, 12th May 1964, quoted by M Sinclair (1979 : 19)

tion not as a privilege, but as a means to improve one's opportunities to find work and to live a better life. All things being equal, the higher a person's level of education, the lesser her chances to be constrained by poverty. Education is meant to grant access to the widest possible range of opportunities. If the range of opportunities were equally open to every person whatever their origins, this would imply – as the philosopher Darrell Moellendorf remarks – that

“...a child growing up in rural Mozambique would be statistically as likely as the child of a senior executive at a Swiss bank to reach the position of the latter's parent”²¹.

One needs not to endorse Moellendorf's ambitious ideal to realise just how opposed these two views are. They diverge on the role of older generations: while, on one view, older generations are *obliged* to ensure the financing of education, on the other, financing education is a choice that a community *can* make if it expects a return on the investment. They also diverge on the goal of education: while for the one education is a means of ensuring greater personal freedom, by allowing a person to aspire to the *highest possible* standard of living, for the other it's a means of *limited improvement* of a person's lot, on the condition that that person in turn improves the lot of the community as a whole. Finally, they diverge over the link between the child and the family: while one holds that education should *free* the child from the possible disadvantages of their family origins, the other sees education as *attaching* the child's lot to that of their community of origin.

One might claim that poverty explains a great deal of the divergence between these two views. A poor country is obviously not freer to invest in education than is a rich country, but the cruel lack of resources requires well-thought out political choices. If limited public funds are spent to the benefit of some members of the community, who thereafter emigrate, the funds will be entirely lost to the community. This being the case, a poor country would seem to have no

other choice than to cling to the links that favour the national community.

Does the validity of the dictum “*éducation oblige*” therefore depend on the poverty of the country? In fact, it rather depends on the value one attaches to national frontiers than on any concern for poverty as, setting aside the international context, there's little credibility to the idea that the poorer one is, the greater one's duties with respect to one's community of origin. Let's imagine for a moment a country where university fees are largely ensured by families or by village communities. Some families or villages are poor; others are better off. If education incurs greater obligations for the poor, it follows that children from an unfavourable background should return to work in their family or village, unless they pay some special tax. The first consequence of our dictum would be *the more that one is born in circumstances of poverty, the less one is free to prosper* and, conversely, *the richer one is, the fewer obligations one has*. It's hard to imagine that such a principle would be accepted in any theory of social justice whatsoever. The second consequence is that certain young people born in poor families or villages would refuse subsidised education, hoping rather to earn more in exchange for non-qualified work in the richer areas. If their calculations were correct, the consequence of our dictum would be *the poorer one is, the less incentive one has for escaping poverty through education*. This is certainly not the goal of development policies.

2.2. What is one obliged to?

The problem with the brain drain criticism is that it cannot draw on the principle of reciprocity. Even if education is supposed to generate obligations for those who benefit from it (premise 5), the obligations the brain drain criticism assigns to the skilled largely surpass the requirements of reciprocity. I'll argue that neither a return to the country of origin nor the Bhagwati tax can be defended in the name of reciprocity.

In the Tanzanian president's indictment above, the obligation not respected by the graduate is the return to the country. Nyerere compares the skilled migrant to one who has been given

²¹ Moellendorf (2002 : 49)

all the food available in a starving village in order to bring supplies back from a distant place, but who thereafter refuses to return and help her fellows. This comparison suggests an instrumentalist and collectivist view of education: to educate an individual is to give her the means to help her own community. Though, the value of the help remains unspecified. The analogy creates the illusion that a *simple act* – that of “bringing back the promised supplies” – suffices to discharge the graduate’s obligation. But the promise she has made is not clear: what is the value of the promised supplies, and if supplies are the stake, why cannot they be routed without the professional’s physical return? One can find strange that the return to the country is supposed to be a return with precisely what is owed to the community, while not returning makes her a traitor. For if the *value* of the supplies is defined by the *fact of returning*, one may wonder how education can generate such an obligation that one cannot discharge other than by working *for one’s own community, for as much and as long as the latter needs it*. If this is the case²², the choice amounts to either enslaving oneself to one’s community or being a “traitor”. Can reciprocity command such a choice?

As a matter of fact, such an obligation largely surpasses the requirements of reciprocity: investing in one’s education cannot yield an obligation, for the beneficiary, to *indefinitely* work for the financing community. Even if the value of the investment was indexed to the resources available to the community by taking into account the share of such expenditure for a community with few assets, it should always be possible to *specify* the value owed in return. Outside the migration field, any contract conditioning a scholarship on the requirement that the grantee works for the sponsoring community *for as much and as*

²² Nyerere’s disregard for the freedom of movement and for monetary value of goods seems to be corroborated by certain historical facts. In his Arusha Declaration (1967), he affirmed that development based on “money” fails. To fulfil the unity and self-sufficiency of the country, the creation of *Ujamaa* (literally, *togetherness*) villages, that he was to promote as an alternative, consisted in the forced displacement and relocation of peasants living in isolated farms.

long as the latter needs it would be qualified as a contract of ‘self-enslavement’ and declared void. Why do skilled migration critics consider it unproblematic?

As Fernando Tesón points out, concern over the brain drain is incompatible with due respect for self-ownership²³. Indeed, to suppose that a country is morally allowed taking measures to regulate movement of “its” professionals is to deny those people the rights over themselves, that is, the rights to choose where, for whom and for which amount of money they work. In other words, skilled people are treated not as self-owners, but as the apprentices of feudal Guilds who, in exchange for their apprenticeship, were bound to work for a given period in the service of the master who had taught them their trade²⁴. While this period was limited to several years in medieval times, the State, which plays nowadays the role of feudal masters, claims to own “its” professionals for lifelong. “The slavery of the talented”, a phrase that Ronald Dworkin coined to describe regimes in which the community claims to have a right over the exercise of individuals’ talents, is nowhere better suited²⁵.

Now, not only is criticism of the brain drain incompatible with self-ownership, it also establishes and justifies an *appropriation mechanism* for individual talent. By financing their education, the State is held to acquire property rights over the exercise of individual talent. To the extent that it is supposed to both yielding duties for the professional and granting rights to the collectivity, education becomes the tool by which the latter enslaves the former, a way of treating others

²³ Tesón (2008); see also Dumitru (2009 : 130)

²⁴ There are differences between the requirements formulated by critics of the brain drain and Guild laws. Among others, the seven years of apprenticeship determined the exercise of any trade, with an obligation of supplying unremunerated work. But, unlike obligations to the State, obligations to a master came to an end after a certain predefined period. For a critical analysis of the guild system, see Adam Smith (1776) Book 1, Ch. 10.

²⁵ This expression is due to Dworkin (1981: 312). The idea was first suggested by Nozick (1974: 279), in response to Rawls (1971: 106) who considered the distribution of talent in a given society as a “*collective asset*”.

as merely means to an end, by taking “people’s abilities and talents as resources for others”²⁶.

If the obligation of definitive return to the country of origin seems hard to defend, what about the Bhagwati tax? Some authors have held that:

“...even a contract of short duration that calls for the performance of routine and unobjectionable tasks is a contract of self-enslavement and therefore legally unenforceable if it bars the employee from substituting money damages for his promised performance.”²⁷

Seen from this angle, payment of a tax does indeed seem to offer a solution and saves the dictum *éducation oblige* from the domain of ‘contracts of slavery’. The Bhagwati tax (like the Soviet exit tax²⁸) by allowing the possibility of buying back one’s debt is compatible with one’s right to emigration. But is it morally justified?

In truth, the Bhagwati tax is confronted with the same difficulties as an obligation to return to the country. The first is the difficulty of not being justifiable by the principle of reciprocity. The Bhagwati tax does not actually *reimburse* a fixed debt. It doesn’t not because the tax was conceived of as compensation for the absence effect rather than as a reimbursement of investment in education²⁹, but is rather due to its being indexed to the income of those who are supposed to pay it. It doesn’t because a deduction of 10% of skilled emigrants’ income over 10 years means that in some cases their education will have been repaid several times over while, in other cases, it’ll be far from full repayment. For instance, two graduates from the same Tanzanian college won’t discharge their duty of reciprocity at the same rate if one emigrates to South Africa and the other to Switzerland. The Bhagwati tax doesn’t represent

²⁶ Nozick (1974: 228).

²⁷ Kronman (1983: 779).

²⁸ In theory, the Soviet tax offered the graduate a choice between reimbursing the cost of his education and exercising his profession on the spot. Admittedly, if the cost had to be reimbursed before departure and was assessed as being equal to the benefit the graduate would have brought had he worked on the spot throughout his life, the model would maintain the situation of slavery despite offering the theoretical possibility of monetary compensation.

²⁹ Bhagwati & Dellalpar (1973)

the monthly repayments of a student loan, but rather levies a tax on non-resident citizens³⁰.

The second difficulty arises from the way the Bhagwati tax is linked to talent. Even if it doesn’t grant the State the right to enslave the educated, it nonetheless establishes a form of *intellectual property over human individuals*. In the same way that the author of a book has the right to a percentage on each copy sold without being the owner of each copy, the State claims a right over each professional’s value. While not being the owner of each individual, it perceives a percentage on each departure for a foreign country of the talents it has educated. Investment in education thus becomes a source of *royalties* for the State.

Some will find nothing objectionable in this kind of property. If the author has rights over her work as a result of the resources and the labour she has invested in it, why should the State not have rights over the people as a result of the resources it spent on their education? Yet, this analogy is questionable for at least three reasons. The first lies in the asymmetry between the raw materials of, respectively, the author’s work and that of the educating State. Allowing that labour grants rights over the raw materials it transforms³¹, the “raw materials” are inert matter in one case and human being in the other. Secondly, unlike labour transforming inert matter, education is not transforming minds unless their possessors make an *effort*. Indeed, education is viewed by critics of the brain drain as a simple good, a good that one can benefit from as one consumes a bowl of rice. However, education – and particularly higher education – is a good that can be “consumed” only as the result of significant efforts by the “consumer”. Thirdly, if work on a person grants rights over that person, there are perhaps more legitimate claimants than the State. Indeed, the principal work involved in *making* a human being is the “painful,

³⁰ Citizenship as the basis of contribution is employed by the United States and by fiscal regimes inspired from the American model, in the Philippines, New Zealand and – formerly – Mexico. For an analysis, see Pomp (1989).

³¹ Locke (1690: Book II, Ch. 5)

prolonged and risky labour ... of a woman who produces a baby"³². Would it not therefore be more appropriate to levy the Bhagwati tax to the benefit of mothers, rather than the State? And if thereafter a person's life is saved by a doctor, would this latter not be in a position to proclaim "santé oblige" and feel entitled to a part of the future income of the patient? Given the conflict between the claims of so many "owners", it is hard to see how the monopolistic claim of the State can be defended.

To sum up, the dictum "éducation oblige" does not justify anything more in the name of reciprocity than the cost of the education itself. The view of education as investment and as a means of collecting royalties for the State is diametrically opposed to the view of education as a way of ensuring people's access to opportunities. If we recognise that "people do not spring up from the soil like mushrooms"³³, but that they require help in becoming adults, then older generations cannot refuse to invest their resources in education just because such investment doesn't seem sufficiently profitable to them. It may be true that "éducation oblige", but the obligation concerns above all the older generations. They fund education to increase young people's opportunities and they publicly fund it to decrease inequality of opportunities between them. In the same way, the burden on poor countries can be avoided as I'll show in the next section, by a taxing, at a global level, the highest incomes³⁴ – be they of migrants or not.

3. Why migration should not be taxed?

If the Bhagwati tax cannot be justified either by unrealised gain or by investment in education, why not use it to redress inequality of opportunity³⁵? If migration increases opportunities for some, revenue could be used to compensate for lower opportunities of their non-migrant compatriots. The reasoning favouring the tax would be as follows:

³² Shaw (1984: 21).

³³ Kittay et al (2005: 443)

³⁴ For a defence of the idea of a global fund, see Steiner (1999) and Pogge (2001).

³⁵ McHale (2009: 381) discusses the use of the Bhagwati tax to aliment a development fund.

7. (*Equality of opportunities*): Justice requires to equalise opportunities, by any means including taxation
8. (*Migration*): Through migration, the opportunities' level of some becomes higher than that of their non-migrant compatriots
9. Therefore, justice requires to tax migrants to compensate for the lower opportunities' level of their non-migrant compatriots

The above reasoning depends on two assumptions. The first is *nationalist*: the group of individuals among whom opportunities should be equally distributed is restricted to the national community. The second is *sedentarist*, as I call it: to stay in the country, rather than to move is supposed to be the "normal" conduct. Should these two assumptions be absent, an alternative conclusion would be:

- 9*. Justice requires that migration (as an access to opportunity) be favoured for all

I won't defend the conclusion 9* here. Rather, this section is devoted to rejecting the conclusion 9 which states that in so far as it increases the access to opportunities for some, migration should be taxed to compensate for the lower opportunities of others. To grasp why taxing mobility is unacceptable, one should ask, without having a prior commitment to *global* equality of opportunities, firstly, whether equality of opportunity can be achieved in segregated territories and, secondly, whether access to greater opportunities is an appropriate object of taxation.

3.1. Separate, but equal... opportunities?

Nowadays, the most popular agenda amongst the egalitarian thinkers has two objectives. The first is to favour equality of opportunities which appear "to many writers to be the *minimal* egalitarian goal, questionable (if at all) only for being too weak".³⁶ The second is to diminish global inequalities, but in the context of separate states – indeed, the slogan of this objective could well be "equal *but separate*". But is such a programme coherent?

³⁶ Nozick (1974: 235 – my emphasis); Moellendorf (2002: 49)

By its primary justification, the notion of equal opportunities is a notion of global justice³⁷. The idea that no-one should be disadvantaged because of their social origins, sex, or the of skin's colour is justified by the fact that none can choose the circumstances of their birth. Now, as one's country of birth is no more 'chosen' than are one's social origins, the scope of the ideal of equal opportunities should be global and indifferent to the country in which one happens to be born. But, for the sake of the argument, let's avoid here all recourse to positions not easily accepted by the critics of the brain drain and limit our arguments to a single country: are equal rights compatible with a country divided into "equal but separate" regions?

One could hold, as did Judge Henry B. Brown in the well-known case of *Plessy vs. Ferguson*, that separation is compatible with equality. According to Brown, separation is not of itself liable either to reduce the privileges, immunities, or property of any person, or to deny equality under law. One could say that separation is only offensive when it is accompanied by inequalities and serves to amplify them. But once we have ascertained that opportunities are strictly equal in each region, the separation between regions is no longer objectionable.

This argument constitutes a real challenge for the theoretician of equal opportunities. If two regions enjoy equivalent opportunities and the inhabitants of each have the same access to the opportunities available in *their* region, but not to those of the other, can we still hold that the regional frontier deprives these people of equal access to opportunities?

The answer one gives to this question is fundamental for theories of justice in the field of migration. Indeed, a large number of authors adopt a position that I would call "*sedentarist*": they consider mobility to be an exceptional condition that in no way characterises "human nature" and that can be explained by the presence of inequalities:

³⁷ For the development of this argument, see Carens (1987) and, more recently, Caney (2001), Moellendorf (2002), Loriaux (2008) etc.

"...human beings move about a great deal but not because they love to move. They are most of them inclined to stay where they are, unless their life is very difficult there."³⁸

These authors consider that, in the absence of inequalities, there would be neither migration nor other changes:

"Imagine a world in which there are no significant political and wealth variations among bounded membership units. (...) In such a world nothing is to be gained by tampering with the existing membership structures (...) there is no motivation for change and migration."³⁹

Taking migration to be invariably forced, these authors propose trade-offs between development aid and migration to bring "equilibrium" to "migratory pressure". Any preference for migration seems to them either rare or eccentric:

"Persecution, oppression and lack of opportunity are surely the principal migration incentives (...). An individual might seek to migrate in order to get as far away from his family as possible, to master a foreign language or to live in a country where people take siestas. *For simplicity, I will assume that such preferences cannot be expected to favour one country over another.*"⁴⁰

On the political level, these authors maintain that persuading governments and compatriots to accept more foreigners is a second-best solution to the problem of global inequalities:

"If [this] is a worthy cause, it is so in virtue of the protection it affords to persons who are badly off."⁴¹

To sum up: if being sedentary is considered as the most "natural" behaviour under conditions of equality, a world with "equal but separate" regions doesn't seem to pose any problem. But is being sedentary compatible with equal opportunities?

It's more likely that the ideal of equality such thinkers have in mind is an equality of *results* rather than of opportunities. These views of equality are distinct. Firstly, final results and

³⁸ Walzer (1982: 38)

³⁹ Shachar (2009: 5)

⁴⁰ Cavallero (2006: 105 – my emphasis)

⁴¹ Pogge (2005 [1997]: 713)

the opportunities of obtaining such final results are two different things. As an illustration, the example given by Sven Hansson is telling: “if I am certain to receive payment to my bank account for this month’s work, it would seem unnatural to say that I have an opportunity to receive my salary”⁴². Secondly, it follows that these views stand in different relations to action. While the equality of results is indifferent to what is done by individuals, equal opportunities concern *access* to opportunities: they specify the conditions under which the *action* of individuals might be accomplished. Thus, sedentarist thinkers see human individuals as simple recipients of a redistribution of resources, while on the ideal of equal opportunities they are agents in movement.

Attachment to equal results and to a sedentarist view explains why we’re tempted to believe that a country with two equal but separate regions respects the equal opportunities of its inhabitants. When thinking of the value of the stakes⁴³, our attention is drawn to the *equality* of opportunities to the detriment of *access* to opportunities. But boundaries and segregation are incompatible with (equal) access to opportunities. To see why boundaries cannot equalise opportunities, imagine a policy dividing professions: half of them being set aside for women and half for men, so that no woman is entitled to exercise a profession reserved for men, and vice versa. The distribution is equal in all respects: remuneration levels in each category are the same (i.e., the best job for men is as highly-paid as the best job for women and this holds for any wage level); the distribution of job profiles within each group are the same (i.e., there are as many men as women occupying well-paid jobs – a proportion also strictly observed for lower-paid jobs); and the symbolic value of jobs is equivalent (jobs for men have as much social dignity as jobs for women). Would we call this professional segregation a policy of equal opportunity? It would seem more appropriate to call it a policy of *equal discrimination*: men and women are equally dis-

criminated against when they are given separate, though equal, opportunities.

The difference between a policy of equal discrimination and equal opportunities is evident: only the second opens the *totality* of positions *to all*. This is a minimal condition for social justice and one that is often considered to be insufficient – indeed, a large number of authors agree with Rawls that a regime where “*all* have at least the same legal rights of access to *all* advantaged social positions”⁴⁴ represents no more than a *formal* equality of opportunities. On a more sophisticated (yet still insufficient) view, “positions are to be not only open in a formal sense, but ... all should have a fair chance to attain them”⁴⁵. This implies more proactive policies – in education, for example – that ensure that “those who are at the same level of talent and ability, and have the same willingness to use them, have the same prospects of success, regardless of their initial position in the social system”⁴⁶. Taken as a policy of equal opportunities, the aim of education is to maximise individual access to opportunities – the invariable object of such policies is to allow individuals to go beyond the opportunities to which their origins would seem to predestine them. To be educated is to be able to leave, should one so desire.

It’s now a little clearer why geographical and social mobility go hand in hand. If the *minimal* political goal of social justice is to allow access to the widest range of opportunities, wherever such opportunities are to be found, then *equal opportunities imply freedom of movement*. Rawls counts freedom of movement and the free choice of occupation as primary goods – that is, among those goods that are useful to us whatever our life plan. He remarks that “freedom of movement and free choice of occupation against a background of diverse opportunities (...) allow the pursuit of diverse final ends and give effect to a decision to revise and change them, if we so want”⁴⁷. Not being a defender of cosmopolitanism, Rawls refers here to freedom of movement

⁴² Hansson (2004 : 306)

⁴³ “Stakes equality” is half-way between equal opportunities and equal results. For a defence of the notion, see Jacobs (2004)

⁴⁴ Rawls (1999 : 103)

⁴⁵ Rawls (1999 : 103)

⁴⁶ Rawls (1999 : 104)

⁴⁷ Rawls (1993 : 224, 366)

within the confines of the State. Nonetheless, the link between freedom of movement and access to opportunities seems to him to be necessary.

3.2. *What's wrong with the brain drain debate*

By its scope, the programme of those who criticise the brain drain is a programme of social justice. Its goal is to ensure – albeit in the context of distinct states – a real improvement of opportunities for the most needy. But even though it recognises that education and migration are indeed ways of accessing opportunities, the critics of the brain drain reprimand those who choose them.

The consequences of their criticisms are sometimes surprising. Take the Bhagwati tax: those who should pay are migrant graduates. If education and migration are equally ways of accessing opportunities, then the Bhagwati proposition amounts to a tax on... social mobility. This principle would seem strange to us outside the context of the debate on immigration, as we usually tax income and not the individuals whose income increases. Should the child of a poor peasant who leaves for the city to study and earn a hundred euros more pay a special tax? Ought he be made to pay a tax that wouldn't be paid by the non-migrant child of a banker whose income is high but stable? For not everyone is concerned by the Bhagwati tax, but only migrant graduates who attain a high level of income. Isn't the improvement of levels of opportunity the goal of a minimally-just programme? What is it that strikes false in the critic of the brain drain's attachment to social justice?

We can venture two hypotheses to explain this dissonance between attachment to social justice and criticism of the brain drain: the first is *national prioritarianism*⁴⁸ and the second, *sedentarism*. What is national prioritarianism? As we've seen, the nationalist's principal ethical concern is his country. The critics of the brain drain recognise that improving levels of opportunities is a fundamental goal, but underline that they're solely concerned with making improvements *within* the country. Access to opportuni-

ties outside the country isn't considered to be a successful outcome of their programme. Moreover, their judgement depends on a strict version of prioritarianism: priority is given to improving the levels of opportunity for the most needy, and any improvement to the levels of opportunity available to other citizens is morally questionable unless it leads to an improvement for the most needy. For this reason, nationalist prioritarians find it entirely unacceptable that some should accede to greater opportunities by education and/or immigration but should not thereafter help improve the lot of their compatriots.

This hypothesis renders the social justice programme of the critics of the brain drain coherent and understandable. But it has insufficient explanatory power. If the critics of the brain drain were just concerned with the lot of the neediest, they should be the first to defend the migration of poor or less-qualified workers. The ex-World Bank economist Lant Pritchett has shown that policies favouring migration of the less skilled are effective tools in the fight against poverty. He regrets that development is seen as a policy concerned with places rather than with people. Such approaches are to him immoral, as "it is people, not patches of earth, who have well-being"⁴⁹. He suggests a change of paradigm, asking not at all rhetorically:

"How long should transfers through aid be the only mechanism for promoting development? How long must only *Bolivia, Armenia, or Nigeria* figure on the international agenda and not *Bolivians, Armenians, or Nigerians*?"⁵⁰

But the majority of critics of the brain drain wouldn't defend access to opportunities in the rich countries for less-qualified workers from the poor countries⁵¹. Either their prioritarianism isn't authentic, or it doesn't represent the *sole* value they would defend.

But neither is nationalism an explanation of their attitude. In its recent manifestations, criti-

⁴⁹ Clemens and Pritchett (2008: 395)

⁵⁰ Pritchett (2006: 140). For an estimation of compatriots' income gains see Pritchett (2008)

⁵¹ With a few exceptions, see for example Chauvier (2006) for a defence of rationed migration comprising the poorest inhabitants of the poor countries.

⁴⁸ The term "prioritarianism" is due to Temkin (2000).

cism of the brain drain has begun to target the *migration of the skilled within a country*. The NGOs who come to the aid of poor countries and who employ local personnel at higher salaries than are available to the generality are now accused of poaching talent or undermining public services:

“The rapid proliferation of NGOs has provoked a “brain drain” from the public sector by luring workers away with higher salaries, fragmentation of services, and increased management burdens for local authorities in many countries.”⁵²

Sometimes, emphasising that *foreign* NGOs harm state authorities suggests a nationalist approach:

“There is growing recognition of the danger posed by indiscriminate recruitment by foreign agencies of skilled health professionals from the public sector in developing countries (...) This “local” brain drain is potentially damaging to the effective delivery of health services in a country, where it constitutes a huge financial loss and could have a negative effect on the economy.”⁵³

But, however deplorable it might be, internal migration – and particularly that of health workers – not only concerns foreign NGOs:

“Within developing countries, internal migration flows generally from the primary level to hospitals, from rural to urban areas, from clinical and research positions to managerial posts, and from the government service to the private sector.”⁵⁴

Here, the criticism is certainly directed against *all* access to opportunities. Justified by the country’s medical needs, the reprimand takes in any professional change, as if healthcare workers should remain rooted to the spot where they happen to be.

What’s wrong with criticism of the brain drain is not so much its nationalist approach, but rather its sedentarism. The debate on the internal or local brain drain does indeed show to what degree one can be sedentarist and thereby criticise all social ascension. But this view of the world also shows that sedentarism is incompatible with free access to opportunities. Rather than a world in which we are “equal but sepa-

rable”, the critics of the brain drain seek a world that is entirely immobile.

4. By way of conclusion: who should pay for what?

In so far as migration provides access to opportunity, taxing skilled migrants amount to taxing the social mobility. Rejecting the Bhagwati tax is in no way to suggest that skilled migrant should not pay taxes. If the reduction of inequality of opportunities is a minimal goal of social justice, then both migrants and sedentary people are under an obligation to contribute. The idea of a tax which is global in scope is neither new nor eccentric. Indeed, development aid already constitutes a global tax; it aims to reduce unequal opportunities in terms of life expectancy, education, and income worldwide. Development aid is presently paid by states, but individuals with high incomes, be they migrants or not, could contribute as well. Migrants already remit four times more than is currently earned by development aid. However, social justice forbids that they should do so alone, or on account of their mobility.

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⁵² Pfeiffer et al. (2008: 2134)

⁵³ Deribe Kassaye (2006: 1153)

⁵⁴ Marchal and Kegels (2003: S89)

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The Invisibility of Family in Studies of Skilled Migration and Brain Drain

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Abstract

Despite being the dominant mode of legal entry for the past two decades in the European Union, few studies of skilled migration and brain drain have focused on the so-called 'family migration'. Yet, recent studies suggest that many skilled immigrants, particularly women, are part of this category. This lack of interest for the family migration (and its economic impact) has also overshadowed the high-skilled profile (and potential) of many women who enter destination countries as family migrants. This paper examines the characteristics of the labour market participation of 50 skilled immigrant women from countries outside the European Union, including Latin America, the Middle East and South-eastern Europe, who have migrated to Switzerland in the context of family reunification. The author argues that if skilled women are able to achieve a professional integration equivalent to their skills, and develop networks of cooperation with other professionals in their countries of origin, the problem of 'brain drain' may be avoided and channelled towards 'brain gain'. The empirical results of the qualitative study show that the majority of skilled women face the undervaluing of their credentials and work experience, which results in their underemployment. The question is thus raised if the debate around 'brain drain' should be in such cases reformulated in terms of 'brain waste', a phenomenon that not only affects the countries of origin but also the countries of destination. Finally, the paper examines the strategies that skilled migrant women develop to improve their integration into the Swiss labour market, which can ultimately lead to networks of cooperation with their countries of origin.

Introduction

In recent years immigration policies in Switzerland, and in Europe more generally, have emphasized the recruitment of skilled immigrants to bolster local human resources and thus the numbers of skilled professionals have significantly increased. Whereas in 1990 only 22.5% of economically active foreigners in Switzerland were highly skilled, this percentage had increased by the year 2000 to 62% for recently arrived migrants (Pecoraro, 2004). Nevertheless, despite the increasing quantitative and qualitative importance of skilled migration, our understanding of this phenomenon, and of the potential associated losses and gains, for both the countries of origin and destination, remains limited for the following reasons.

First, there has been a tendency in the literature on brain drain to imagine skilled migration as a predominantly male phenomenon (Chiswick and Miller, 2007) and to ignore skilled immigrant women (Kofman and Raghuram, 2006). This view is inadequate in view of two contemporary trends. On the one hand, international migration has become increasingly feminized in the past decade: more than half of the individuals who migrated to Europe in 2005 were women (Morison et al 2008). In Switzerland, the increase in the numbers of female immigrants is particularly high for originating countries outside the European Union. For example, whereas in 1980 only 48% of all Latin American immigrants were women, by the year 2005 the percentage had increased to 65%. In the case of Asian immigrants,

the percentage of women increased from 46% in 1980 to 55% in 2005 (Swiss Federal Statistics 2008). On the other hand, in recent years, there has been an increase in the educational level of women migrating to Switzerland. Some 40% of non-EU working women have tertiary education whereas this rate is only 18% among their Swiss counterparts. Many of the skilled women currently living in Switzerland have migrated in the context of family migration either through marriage with a Swiss- or European national or in the context of family reunification with an individual of the same national origin (Swiss Federal Statistics 2008). Despite their growing quantitative and qualitative significance, skilled migrant women have not received enough attention by Swiss researchers (Riaño 2003, Riaño and Baghdadi 2007a). A similar situation was earlier observable in the international literature (Kofman 2000). In recent years skilled migrant women are increasingly becoming a focus of attention (Purkayastha 2005, Kofman and Raghuram 2006, Liversage 2009). It remains however largely unknown to what extent they are able to transfer their educational resources and achieve a professional integration equivalent to their skills, particularly in the case of those skilled women who have migrated as part of family migration flows.

Second, despite being the dominant mode of legal entry for the past two decades in the European Union states, few studies of skilled migration and brain drain have been concerned with the study of family migration. Indeed, a large part of the literature on skilled migration and brain drain has dealt only with labour migrants largely ignoring skilled migrants who are present in family and refugee streams. Recent studies in the UK and Canada suggest that many skilled immigrants, particularly women, do not cross international boundaries as labour migrants but in the context of family migration, marriage or seeking asylum (e.g., Kofman, 2000; Ruddick, 2004, Creese et al, 2010). In OECD countries the majority of migrants enter for family reasons, which include the categories of “accompanying family of workers”, “family reunification” and “family formation” (OECD 2006a). Family-related migration plays an enormous role in Swiss immi-

gration. Nearly 40% of Switzerland’s immigrants migrate for reasons of marriage or family reunification, while only 25% of the immigrants enter for reasons of employment (Swiss Federal Statistics 2008). One of the reasons that the ratio of family-related immigration to economic immigration is so high is that the Swiss government strictly limits the number of employment immigrants, whereas family migration is not so tightly controlled. Feminist researchers have pointed out that many family reunification policies in destination countries are guided by traditional ideas about gender roles i.e. that the role of migrant women is to enable migrant men to settle down in stable communities. Neglect of the economic significance of family migration has concealed the skill-level that many women entering as family migrants bring with them and discounted their potential contribution to the labour market (Kofman, 2004; Kofman and Raghuram, 2006, Kraler et al, 2010, Riaño 2010). Researchers in Australia have shown that because immigration authorities view spouses as dependants, rather than as principal applicants, women’s skills may not be counted and they may not gain access to settlement services (Iredale, 2004). Our understanding of how ideas about gender roles and family reunification policies impact on how skilled migrant women integrate in the labour market remains so far insufficient. We also have limited understanding of the strategies that women devise to improve their chances of getting access to the labour market.

Third, debates “brain drain” and “brain gain” have given insufficient attention to how the skills of professional migrants are actually used in the countries of destination. Whereas “brain drain” has been conceptualised as the large-scale emigration of individuals with technical skills and knowledge (Straubhaar 2000, Pellegrino 2001), “brain gain” has been seen as a means for source countries to actually benefit from the emigration of skilled professionals via remittances and other components of knowledge transfer (Bach 2008). Recent research results set the assumptions under which the brain gain approach is based, however under question. Studies carried out in countries that have promoted skilled immigra-

tion for a long time (such as Canada, USA, Australia, New Zealand, and the UK), have shown that skilled immigrants belonging to visible minorities face the undervaluing of their credentials and work experience, resulting in underemployment and de-skilling (Henderson et al. 2001, Man 2004, Dumont and Liebig 2005, Grant and Nadin, 2007, Purkayastha 2005, Kofman and Raghuram 2006, Liversage 2009). Recent research in Switzerland also shows that many skilled immigrants encounter significant difficulties when they try to transfer their educational resources across international boundaries and achieve a professional, which is equivalent to their skills (Pecoraro 2005, Riaño and Baghdadi 2007a, Gerber 2008, Salomon 2010). The question thus needs to be raised to what extent it can be assumed that a brain gain via the transfer of knowledge to the countries of origin will take place, when skilled immigrants face precarious labour market situations and experience de-skilling.

The aim of this paper is to contribute to filling the above gaps by studying skilled migration and brain drain from a gender perspective that gives particular attention to family migration, family reunification policies and gender roles. The analysis focuses on a case study of 57 skilled immigrant women from countries outside the European Union, including Latin America, the Middle East and South East Europe, who have migrated to Switzerland in the context of family reunification and asylum seeking¹. The following four issues are examined: (a) their situation of integration in the Swiss labour market (b) the factors that may shape their access to qualified positions (c) the strategies that women devise to counteract the hurdles they face. The underlying hypothesis of this paper is that if skilled migrant women are able to achieve a professional integration that is equivalent to their skills, and develop networks of cooperation and knowledge exchange with other professionals in their countries of origin, a transfer of knowledge might be

possible, thus resulting in brain gain for both countries of origin and destination.

The paper is structured in five parts. The theoretical and methodological approaches are firstly introduced and the reasons that motivated the study participants to leave their countries of origin as well as their educational qualifications are subsequently examined. The third part presents the situation of women's participation in the Swiss labour market and discusses its implications for brain gain. The fourth section examines the role of social discourses on gender and ethnicity in shaping the labour market participation of migrant women and the final section describes the strategies that women use to improve their professional integration.

1. Approaching the Situation of Skilled Migrant Women in the Labour Market

What are useful conceptual approaches to examine the situation of skilled migrants in the labour market? The concept of human capital, according to which the social position of an individual in the labour market is directly related to his/her level of education, is often used for that purpose. This concept has been questioned in recent years for not taking issues of place, gender and ethnicity into account. Feminist authors argue that the value given to an individual's resources, such as for example professional skills, is not universal but depends on the specific socio-spatial context where the individuals are located and on their gender and ethnicity (Creese et al, 2010). Thus, "*what* is regarded as a marketable skill may be dependent on *who* possesses the skill" (Anthias 2001: 378). For example, ethnic origin may be an impediment for accessing the labour market, as some jobs and economic rewards are seen as more appropriate for some ethnic groups than for others. Or, women may be excluded from occupations defined as masculine, and certain jobs associated with or performed by women may be given a different (lesser) economic value. Conversely, ethnicity and gender are at times considered valuable (McDowell 2009). Gendered characteristics such as communicative abilities or physical traits may be estimated as valuable

¹ This paper draws on a larger study, the "Social Integration and Exclusion of Immigrant Women in Switzerland", carried out under the Swiss National Research Programme (NRP 51) on "Social Integration and Social Exclusion". For details see www.immigrantwomen.ch

resources that an individual brings to the market. Ethnicity-specific skills, such as familiarity with a certain culture, language ability, or other facilities to interact, may also facilitate entry into the labour market (Anthias 2001). Thus, in conclusion, gender and ethnicity intersect to determine the position of an individual in the labour market. The approach of “intersectionality” (e.g. Nash 2008), whereby the interplay of several categories of difference is examined to understand the social position of an individual, is indeed gaining increased attention in studies of social (in)equality. Thus, the following question will be addressed in this paper: *how do gender and ethnicity interact to shape the position of skilled migrant women in the Swiss labour market?*

The above question was investigated using the methodological framework of participatory research (Pain 2004). The specific approach combines the theoretical premises of *educación popular* (Freire 1970), post-colonial theory, and feminist theory. The general aim was to include the analytical voice of migrant women in the research process, and to establish more equal relationships between academics and those outside academia (Riaño and Baghdadi 2007a). For this purpose, a specific type of participatory workshop by the name of MINGA was designed. Through this vehicle, both academics and people outside academia jointly produce knowledge. It consists of an interactive process whereby a group of 5 to 6 migrant women meets with the researchers; each woman narrates her own migration history and afterwards the group analyses each individual’s story. Thus, women expand their knowledge by participating in the analysis of both their own migration histories and those of others. A total of 12 MINGA workshops were carried out in the cities of Zurich, Bern and Aarau with the total of 57 migrant women. Problem-centred interviews were also conducted with each of the women in order to gain further insight into crucial topics that emerged from the workshops. The combined methods of participatory workshops and problem-centered interviews were very useful for gaining deep insight into the professional biographies of skilled migrant women.

2. Case Study: Migration Patterns and Educational Qualifications

The 57 skilled women participating in this study originate from 20 different countries in Latin America (Argentina, Bolivia, Brazil, Colombia, Dominican Republic, Mexico, Nicaragua, Peru, Venezuela), the Middle East (Iran, Iraq, Yemen, Lebanon, Libya, Morocco, Tunisia, Turkey), and South East Europe (Bosnia, Kosovo, Montenegro), belong to the middle- or high class in their countries of origin, and have contrasting religious backgrounds (Christian/Muslim)². The groups chosen for this study are very good examples of current migration trends in Switzerland. The numbers of Latin American women have more than tripled in the past decade, they are increasingly well qualified (55% have either completed high school, vocational training or university education) and 50% of those over 20 years old have migrated because of marriage to a Swiss national (SFS, 2000). The number of Muslim migrants, particularly from the Middle East and South East Europe, has doubled in the past decade and the percentage of women has increased from 36% in 1990 to 45% in 2000. Women with Muslim backgrounds are also increasingly well qualified.

The strategy for choosing the research partners followed the principle of ‘theoretical sampling’ (Glaser, 1992), whose aim is not accurate statistical representation but gaining a thorough understanding of the studied phenomenon by detailed analysis of relevant case studies. Choosing relevant case studies consisted of choosing those individuals who represented the range of situations among first-generation skilled migrant women, such as entry status (marriage, family reunion, study, work, asylum-seeking), age (28 to 60 years), time of residence (3 to 30 years), residence status (yearly permit, permanent residence, Swiss citizenship) and marital status and family situation (single, married, divorced, with and without children). The research partners were found through personal contacts, leaflet advertising, the ‘snowball’ principle and through

² The empirical study was carried out in 2004 and 2005 in the cities of Zurich, Bern and Aargau together with Nadia Baghdadi. See Riaño and Baghdadi (2007) for an initial discussion of empirical results.

Reasons for mobility / migration	Latin America	Middle East	South East Europe	Total
1. Advance her qualifications and/or travel				
• Followed by marriage with a Swiss	17	5	-	22
• Still studying	-	2	-	2
2. Marriage with a Swiss	10 (With a Swiss man living in Switzerland)	2 (With a countryman living in Switzerland)	2 (With a countryman living in Switzerland)	14
3. Escape persecution	3	11	1	15
4. Work opportunities	1	1	1	3
5. Reunification with parents	-	-	1	1
Total	31	21	5	57

Table 1. Reasons for the Mobility / Migration of Skilled Migrant Women

collaboration with migrant women organisations that provided further contacts with skilled migrant women. At the time of the interviews, study participants were, on average, 40 years old, had lived in Switzerland for a total of 11 years, and were residents of Zurich, Bern and Aargau, the three most populated German-speaking cantons of Switzerland.

What are the reasons that motivated the study participants to leave their countries of origin? The answer is rather complex. Traditional migration models are insufficient to explain the variety of reasons and the multiplicity of steps that characterise their migration. As will be seen below, although all women come from low-income countries their main motive to migrate is not simply to improve their material lives. As presented in Table 1, the variety of their motives include: (a) the desire to advance their qualifications and/or “see the world”; (b) found a (transnational) family; (c) escape persecution; (d) look for new job opportunities; and (e) be reunified with their parents.

(a) Advance her qualifications and/or travel. The largest number (24) of women in this study initially leave their countries of residence to study or simply see the world. These are women

whose stated main aim to carry out undergraduate or postgraduate studies in North America or Europe, to follow French or English courses in Canada or Australia, or to travel to visit their families, attend a conference or simply get to know other countries. A recurring theme in women’s narratives is that many associate living abroad as an opportunity of to break with traditional gender roles and gain more independence as women. What happens after they live their countries? While studying and travelling abroad several women (22) meet their future Swiss partners whom are either studying at a foreign- or a Swiss institution or simply living there. The newly formed bi-national couples are confronted with the decision of where to live if they are to stay together. This new situation sets the original plan of a short-termed migration into question. Some women, however, do return to their countries, others move to a third country and others yet stay in Switzerland. After a long period of decision-making, typically taking between one and six years, all of the 22 women decide to permanently migrate to Switzerland to join their Swiss partners, thus officially entering the country as “marriage migrants”. According to women’s narratives, their final decision to move to Switzerland is also motivated by their imagina-

tions of the country as a place of more equality between men and women and by the idea that Swiss (European) men may be more respectful of women than their countrymen (for further details see Riaño and Baghdadi, 2007b).

(b) Marriage with a Swiss. These are women who typically meet their future Swiss partners while living and working in their countries of origin. There are two typical situations. The first is the case of Swiss men who are visiting some (or several) Latin American country for purposes of travel, work or cultural exchange programmes. The second is the case of Swiss men who have double nationality and are visiting their families in their countries of origin in the Middle East or South East Europe. Similarly to the situation described above, the newly formed couples are confronted with the decision of where to live if they are to stay together. Following the same pattern as described above, it is in all cases the women who decide to leave their country of residence to join their Swiss partners. What motivates such decision? A combination of factors appears as common to women from Latin America and the Middle East: on the one hand the idea that they need to give importance to their partners careers, which is best fulfilled in Switzerland, and on the other, the idea that Switzerland is a country where more gender equality can be achieved than in their own countries. The wish of living in a more secure country is an additional motivating factor in the case of the woman from Kosovo.

(c) Escape persecution. Persecution is another major factor pushing the study participants to leave. Women from Turkey, Iraq, Lebanon, Kosovo and Colombia testify that they were pushed to leave their places of residence following threats to their lives and/or to the lives of their partners. The 8 women from Turkey were persecuted after the military putsch in Turkey in the 1980s for being members of political opposition parties and/or for being supporters of Kurdish autonomist efforts. Similarly, the two Iraqi women and their husbands were persecuted by the Saddam Hussein regime for being politi-

cal opponents. The woman from Kosovo and her partner were persecuted for being members of an Albanian organization fighting against the Serbs. The three women from Colombia were persecuted for carrying out professional activities as community workers or judges that were contrary to the interests of paramilitary groups, several of which were linked to the Colombian army.

(d) New job opportunities. Although the desire to have better access to work opportunities may be a second thought for some women when leaving their countries, it is interesting to note that only in two of this study's cases women did leave with the specific purpose of increasing their earnings. In a first case, an Argentinean teacher who had Swiss nationality (her Swiss father had immigrated to Argentina) decided to move to Switzerland when she and her husband lost their savings to build a house following the country's economic crisis of the 1990s. In another case, a Bosnian woman came to Switzerland in the 1990s to improve her income by working as a guest worker in the tourist sector. She stayed on and later completed professional studies as a laboratory assistant.

(e) Reunification with her parents. This is the case of a Bosnian woman who came to Switzerland with her mother and siblings as an eighteen year old to be reunified with her father who had previously immigrated to Switzerland as a guest worker. The guest worker system no longer exists in Switzerland.

To conclude, we have seen that the majority of the study participants entered Switzerland as (bi-national) marriage migrants (36) and refugees (17). This reflects two larger trends. First, marriage with a Swiss has become a main factor in women's migration to Switzerland, particularly those from non-EU countries. In 2007, 37% of all marriages in Switzerland were between a Swiss citizen and a foreigner. Over two thirds of these marriages were between a Swiss man and a foreign woman (SFS, 2006, 2008). Secondly, the fact that the number of non-EU women entering

Areas of geographical origin / Level of skills and study fields at time of migration		Latin America	Middle East	South East Europe	Total	
Highly skilled	Fields of study	Commercial & business admin.	7	3	3	12
		Social and behavioural sciences	8	1	-	9
		Mass communication	4	-	-	4
		Law	3	1	-	4
		Fine arts and architecture	3	1	-	4
		Education science and teacher training	2	2	-	4
		Humanities	1	1	-	2
		Medical science & health related	1	1	-	2
		Computer science	1	1	-	2
		Engineering		-	1	1
	Agriculture	1	-	-	1	
Skilled	High-school (later further education in Switzerland)	-	10	1	11	
Total		31	21	5	57	

Table 2. Education Characteristics of Skilled Immigrant Women at Time of Migration to Switzerland

Source of all tables: MINGA workshops and biographical interviews (Riaño and Baghdadi 2007a)

the country to work is insignificant, which may reflect the fact earlier mentioned that the Swiss government strictly limits the number of labour migrants from non-EU countries, whereas family migration is not so tightly controlled.

The above description has also shown that gender ideals and the desire to break with traditional gender norms play a main factor in the migration of the study participants. Further, it has also shown that although the initial migration of nearly 40% of the study participants (22) is for reasons of study or travel, their final migration is for reasons of (bi-national) marriage. From that moment onwards, they are no longer considered by the authorities, by statisticians and by social scientists as *skilled migrants*, but as *marriage migrants*. Not only do they disappear from the statistics on skilled migrants but also they are also treated by the authorities as dependants and no longer as migrants with an economic potential. Factors of gender clearly need to be given more attention in studies of skilled migration.

What are the educational characteristics of the study participants? Using OECD (2002) defi-

nitions, the study includes both skilled (having completed at least secondary education) and highly skilled (university degree or equivalent) migrant women. Regional differences can be observed regarding the educational qualifications of study participants, at the time of their migration to Switzerland: whereas Latin American women arrive after the completion of their tertiary education (which they obtained in their countries of origin or abroad³), only about two-thirds of the women from the Middle East and Southeastern Europe had completed a similar level of education. Women from the latter region tend to arrive at a younger age and thus 40% of them carry out their tertiary studies in Switzerland. As seen in Table 2, the two most prevalent fields of study among the highly skilled study participants are commercial and business administration and the social sciences, which together make up nearly 50% of the total. Professions such as law, fine arts and architecture, education sci-

³ Twenty-six of Latin American women studied in their countries of origin and a further five obtained their degrees at university institutions in the UK, Russia, USA, Argentina and Germany.

ence and teacher training are second in numerical frequency, followed by humanities, medical science and computer science. Engineering professions are a rare occurrence. Besides being highly skilled at the time of arrival to Switzerland, 88% of Latin American women had worked as skilled professionals either in their countries of origin or elsewhere. This percentage is much lower (30%) for women from the Middle East and South East Europe because many more arrive at a younger age. All the women considered in this study speak German (the official language of the Cantons where they live) fluently and, besides their mother tongues, they are able to speak an additional two to three languages.

3. Characteristics of the Labour Market

Participation of Skilled Migrant Women

In this section, the characteristics of the labour market participation of the skilled immigrant women are assessed, at the time of their biographical interviews. Three most typical types of participation could be observed: (a) not in the labour market (30%), (b) employed below skill-level (25%), and (c) employed according to skill-level (45%). As women's employment is in many cases discontinuous and characterized by lack of long-term prospects, we introduced a further differentiation of short-term and long-term employment for types (b) and (c). From the results presented in Table 2, we can conclude that over half of the interviewees do not use their skills in the Swiss labour market because they are either not integrated in the labour market at all or because they work below their skill-level. Even amongst women who work in positions suited to their skills, half of them face precarious situations because their employment is characterized by discontinuity and instability (short-term employment). These are the cases of women who prefer to create their own, potentially unstable, employment, such as by working from home as occasional translators, report writers or video producers, rather than be unemployed. Thus, only a minority (12%) of skilled migrant women is able to occupy positions in the upper segments of the labour market, at a level

that corresponds to their skills, in employment with long-term prospects. The results of this case study are comparable to those of the 2004 European labour survey: 20% of non-EU immigrant women working in Switzerland are in jobs for which they are overqualified (in contrast to 13.8% for EU-women and 7.6% for Swiss women) (Dumont and Liebig 2005).

Tables 3 and 4 examine the differences between the labour market participation of skilled women from Latin America, the Middle East, and Southeastern Europe. A very interesting difference emerges. The percentage of Latin American women who are employed in positions that correspond to their skills and have long-term prospects is three times lower than that of women from the Middle East and Southeastern Europe. Why this difference? In principle, and as explained before, at the time of their arrival to Switzerland, Latin American women have a higher level of education and professional experience than their counterparts from the Middle East and Southeastern Europe. However, as tables 3 and 4 show, the majority of Latin Americans have gained their degrees *outside* of Switzerland, whereas a large number of women from the Middle East and Southeastern Europe do their tertiary education *in* Switzerland. Thus, in the end, what counts most for successful labour market participation is not the amount of knowledge that an individual has but the *place* where that person earned her degree or professional experience. Having studied in Switzerland counts more than any amount of degrees or experience gained elsewhere. This result supports the findings obtained by other researchers elsewhere (Bauder 2003, Man 2004, Dumont and Liebig 2005, Pecoraro 2005, Liversage 2009, Creese et al 2010) showing that having institutionalized cultural capital is no guarantee of access to upper segments of the labour market for immigrants. It is difficult for immigrants to transfer their institutionalised cultural capital because the standards for valuing institutionalized cultural capital change across boundaries. This points out at the limitations of human capital theory and at the need to include a geographical perspective in

Area of geographical origin / Type of labour market participation		Latin America	Middle East / South East Europe	Total
(a) Not in the labour market	Not economically active (housewives / students)	5	5	10
	Unemployed	4	3	7
(b) Employment below skills	Short-term employment	3	1	4
	Long-term employment	7	3	10
(c) Employment according to skills	Short-term employment	9	7	16
	Long-term employment	3	7	10
Total		31	26	57

Table 3. Characteristics of Labour Market Participation of Skilled Migrant Women

Characteristics of labour market participation		Number	Place where last degree was obtained		
			Country of origin	Switzerland	Other
(a) Not in the labour market	Not economically active (housewives)	5	3	1	1
	Unemployed	4	3	1	.
(b) Employment below skills	Short-term employment	3	3	-	-
	Long-term employment	7	7	-	-
(c) Employment according to skills	Short-term employment	9	6	-	3
	Long-term employment	3	1	2	-
Total		31	23	4	4

Table 4. Characteristics of Labour Market Participation of Skilled Latin American Women

Characteristics of labour market participation		Number	Place where last degree was obtained	
			Country of origin	Switzerland
(a) Not in the labour market	Not economically active (housewives, students)	5	3	2 (students)
	Unemployed	3	3	-
(b) Employment below skills	Short-term employment	1	1	-
	Long-term employment	3	3	-
(c) Employment according to skills	Short-term employment	7	4	3
	Long-term employment	7	1	6
Total		26	15	11

Table 5. Characteristics of Labour Market Participation of Skilled Women from the Middle East and South East Europe

Participation in the labour market		Professional training	Actual occupation
(a) Not in the labour market	Not economically active	Medical doctor (Peru) Lawyer (Libya)	Housewife
	Unemployed	Electrical engineer (Kosovo) Systems engineer (Mexico)	Unemployed
(b) Employment below skills	Short-term employment	Primary school teacher (Lebanon) Agronomist (Colombia)	Supermarket cashier Fruit stand seller
	Long-term employment	Lawyer (Venezuela) Economist (Kosovo)	Factory worker Cleaning lady
(c) Employment according to skills	Short-term employment	Architect (Turkey) Political scientist (Peru / USA)	Freelance artist Freelance consultant
	Long-term employment	Business administrator (Mexico) Social Anthropologist (Turkey)	Bank manager University lecturer

Table 6. Examples of Economic Occupations of Skilled Migrant Women

studies of skilled migration that takes account of the role of place.

Skilled immigrant women are not only faced with the problem of not being able to transfer their institutional cultural capital, but are confronted with the problem of loss of confidence and loss of autonomy. Having to work in low-skill and low-paying jobs, or not been able to participate in the labour market at all, means for several women becoming economically dependent of their partners or on social welfare. This problem is accentuated by the fact that many of the interviewed women see professional integration as one of the few existing possibilities to gain social recognition in the context of a society that see them as the less valuable “other”. A further more significant problem that many of the interviewed women face is professional de-skilling. As shown in Table 5, several of the skilled women in this study carry out occupations well below their skills and original socio-professional status. After years of working in such professions it becomes very difficult for them to go back to their professions of original training: not only because they lose their original skills but also because they do not develop contacts with the professional networks leading to such positions in the labour market. This implies that migration does not necessarily result for many of the skilled

migrant women in this study in an improvement in socio-professional status; but it rather leads to a loss of socio-professional status.

The results of this case study are comparable to those of the 2004 European labour survey: 19.8% of non-EU migrant women working in Switzerland are in jobs for which they are over-qualified (in contrast to 13.8% for EU-women and 7.6% for Swiss women) (Dumont and Liebig, 2005, p. 7). Statistical analyses on the overall situation of skilled migrants in Switzerland also show the relatively disadvantaged situation of migrant women with young children in finding a job commensurate with their education (Pecoraro 2010). The overall situation of migrant women in OECD countries is similar. If we look at the percentage of women in jobs for which they are overqualified we observe the following situation: whereas only 11.26% of native-born face such situations the percentage of foreign-born that are in the same situation amounts to 30.56% (OECD 2006b). The overall situation of skilled migrants in OECD countries is characterised by the fact that they are more likely to be working below their qualifications than a person born in those countries (OECD 2008, Huber et al 2010).

At this point the question needs to be raised of how the former results are to be interpreted in terms of the relationship between the women’s

situation in the labour market and its potential implication for brain drain or brain gain. This question is undoubtedly a complex one, which requires further detailed empirical research to be satisfactorily answered. However, some first thoughts are presented here. The brain gain approach assumes that skilled migrants gain new qualifications, which they can transfer to the countries of origin. Such an assumption implies that skilled migrants gain stable professional positions, which give them an adequate basis to establish networks of cooperation and knowledge transfer across borders. However, taking the results of this study into account, which show that most study participants experience de-skilling and/or are in instable positions in the Swiss labour market, it seems questionable to associate skilled migration with brain gain, since individuals have not only lost their original skills but are also far too preoccupied with insuring their own survival to embark on activities of knowledge transfer. None of the women interviewed in this study reported having established networks of cooperation and knowledge transfer with their countries of origin. Although it can be argued that there is no guarantee that skilled migrants will carry out activities leading to brain gain once they have obtained adequate and stable jobs it is also true that there is even less guarantee that this will be the case when they face precarious situations in the labour market.

According to the literature, the most commonly known cases of knowledge transfer are in the cases of skilled migrants who work in scientific institutions and transnational corporations in the fields of science (e.g. natural sciences) and technology (e.g. IT sector), many of which are in a favourable position to further develop their professional skills and establish networks of cooperation and knowledge transfer. Getting access to such positions however does not seem to be an attainable possibility for many skilled individuals from countries outside the EU. For example, none of this study's participants who had professions in the fields of computing, engineering or architecture, was able to obtain a job at all: at the time of the interviews they were all unemployed. Further, only two of the study par-

ticipants were able to get a job in an academic institution. As it was shown above, there seems to be a consensus among researchers that the majority of skilled countries from countries outside EU face a devaluation of their qualifications and progressive de-skilling.

Observing the difficulties that many skilled migrants from countries outside the EU face in the labour markets of North American and European countries several authors have started to use the term "brain waste", where the skilled and the educated leave their home country, but then make little use of their skills and education in the host country (Mattoo et al 2005, Englmann & Müller 2007, Riaño & Baghdadi 2007a). It seems rather paradoxical to observe that brain waste not only affects the migrants themselves but also points out to the inability of host countries to provide skilled migrants with jobs that are adequate to their skills, make proper utilisation of the available resources in institutionalised cultural capital and thus make full use of skilled immigrant's potential for the country's socio-economic development. Some authors go further to speak about "brain abuse", where the labour of skilled immigrants is devalued in the host countries (Bauder 2003).

It has been argued that the remittances that the migrants send to their countries of origin can also be seen as a form of brain gain. This might be true but it needs to be examined in great empirical detail to assess how families in the countries of origin actually make use of economic remittances. We would like in this paper to shift the perspective of analysis by considering the perspective of the women themselves, i.e. the impact that remittances may have on their own professional advancement. Several study participants acknowledge that they regularly send remittances to their families to help them out with every day needs. Although they are very happy to be able to help their families out some of them also report that sending such remittances represents a burden for their professional advancement. Because they feel the pressure to regularly send money abroad some of them have been constrained to take positions in the labour market, which are below their quali-

fications and professional expectations. Having to send money abroad also limits the amount of available resources to invest on gaining new qualifications (i.e. training programmes, language courses, etc.). From this follows that we need a more differentiated perspective of analysis to brain gain that not only takes account of the actual use that families make of economic remittances but also examine the implications of having to send money across borders for the professional advancement of skilled migrant women.

Understanding the Problems Facing Skilled Migrant Women in Switzerland

How can the precarious situation of the majority of skilled migrant women be explained? What are the main problems that they face when trying to gain access to skilled positions in the labour market? This study shows that socially prevailing ideas about gender and ethnicity, and the official policies, social practices and resulting arrangements, are factors of major importance in hindering the professional integration of skilled migrant women.

The Role of Social Discourses on Ethnicity in Professional Integration

Our study shows that ideas about ethnicity, as imbedded in migration policies and in the minds of institutional representatives and employers, play a main role in shaping skilled migrants' access to the labour market. Migration and settlement policies are a prime example. Immigration policies in Switzerland have traditionally been conceptualized according to the ethnic discourses of *Überfremdung* and "cultural distance" (Riaño and Wastl-Walter 2006). This conceptualization has produced a stratified system of civil rights that, up until some years ago, discriminated between Swiss and non-Swiss populations; more recently, in agreement with European policies, it has changed so that it now discriminates between EU- and non-EU nationals. Thus, ethnic origin determines the right to immigrate: whereas immigration to Switzerland is possible for all EU nationals, independently of their skill level, only highly skilled non-EU nationals are allowed to immigrate to Switzer-

land. Also, EU nationals are able to change their one-year residence status (B-permit) to a permanent residence status (C-permit) after only five years of residence in Switzerland, whereas non-EU nationals must wait a total of ten years. Because most employers require a C-permit for skilled positions, this policy acts as a significant barrier to accessing the skilled labour market. Besides, non-EU nationals must prove, before they can obtain a visa for the job that they have been offered, that there is no other EU- or Swiss national who can occupy that job. Thus, in practice, it is extremely difficult for immigrants originating from countries outside the EU to obtain a skilled job, or a well paid skilled job, because immigration regulations impose a set of rules that reserve employment in skilled occupations for workers from Switzerland and the EU. The following example illustrates the difficulties that non-EU skilled migrant women face when trying to obtain a work permit, even when they are married to a Swiss:

"As I came here to live with my Swiss fiancé I didn't realise how difficult it would be to get a job. First of all I didn't know anyone and I also needed a work permit. That's why we decided to marry a bit earlier than planned. But I still didn't get a work permit. It turned out that in order to get a work permit I needed to first get a job offer. But I didn't know anyone... After several months I finally got an offer from an international environment organisation to do some consultancy work. But they were not prepared to take the responsibility of applying for a work permit for me"... (Political scientist from Columbia University (USA), born in Peru)

The realization of the institutional cultural capital of immigrants from countries outside the EU is further hindered by the lack of recognition of their educational qualifications. Whereas in recent years, academic institutions and employers have increasingly recognized the foreign credentials of EU citizens, there is much reluctance towards accepting the credentials of immigrants from countries outside the EU. This situation is further complicated by the fact that Switzerland, as a federal nation, has no uniform credentialing system. Each canton making up the Confederation has a different educational and accreditation system.

Many Swiss employers undervalue the professional qualities, educational resources, and professional experience of immigrants from Latin America, the Middle East and Southeastern Europe. They imagine that immigrants from countries outside the EU are less professionally capable than Swiss or EU nationals, and thus have lower class status. The migrant women of Islamic background in our study report that, despite the fact that they do not wear headscarves it seems very difficult for them to advance professionally. The following example illustrated the case of an anthropologist from Turkey with an Islamic background, shows that her origin, her gender and her religion seem to have played a negative role when she applied for a leading position at the NGO where she was working:

“I cannot say that being a foreigner played the only role; I would say as a woman you have difficulties, one way or another. There were two applicants at the end. He was a man and I was a woman. He was a Swiss and I was a foreigner. And I think religion also played a role, although that was obviously never mentioned”. (Anthropologist from a Swiss University, born in Turkey).

Further, many employers exclude immigrants from skilled positions by demanding a language level that is equivalent to that of native speakers. Thus, ethnicity, or being perceived as an “other,” is a significant disadvantage for immigrants from countries outside the EU, when it comes to accessing the upper segments of the labour market.

The Role of Social Discourses on Gender in Professional Integration

Ideas about gender roles, as embedded in family reunification policies and the minds of employers, play a major role in shaping skilled migrant women’s access to the labour market. For example, skilled migrants from countries outside Europe who enter Switzerland with a marriage visa (most commonly women) are subject to regulations that are not designed to stimulate their economic integration, but rather to allow them “to remain with their husbands”. Foreign spouses initially receive a yearly permit (“B-permit”), which until recently with no explicit permission

to work. As explained, Swiss employers tend to solicit job applications from C-permit holders, who are permanent residents, rather than from B-permit holders, who are only annual residents. Furthermore, foreign spouses with a B-permit do not have a status independent of their spouse, as they are only allowed to stay in Switzerland as long as they remain with their spouses (though after 5 years of successful marriage they get independent status). The great majority of marriage-migrants are women, and thus the visa restrictions on foreign spouses mostly affect them. This example shows how immigration policies are conceived according to traditional ideas on femininity that construct foreign wives as homemakers, rather than “economically productive”.

Traditional ideas about gender roles and institutional arrangements for child-care (or the lack thereof) are a further impediment to this population’s labour market participation. Insufficient childcare facilities, and the discontinuous school schedules for children in Switzerland, forces one of the parents—usually the mother—to remain at home. The following quote illustrates how the traditional idea that “good mothers stay at home” still underlies the thoughts and actions of some Swiss institutions and Swiss families thus creating and maintaining boundaries that limit the access of married migrant women to the labour market:

“To study and to work are both very important for me. But the external pressure! The [Swiss husband’s] family! The institutions! They all want me to stay at home because I have a child. Everyone used to ask me: Why do you want to work? Brazilians are good mothers. They stay at home. You are behaving like a Swiss” (Lawyer from the Federal University of Rio de Janeiro, born in Brazil).

Skilled migrant women are faced with the reality that they must rebuild their social and cultural capital because they have lost their social and professional networks, and their institutional cultural capital is not valued. However, the conditions for migrant women who want to acquire new skills are very difficult. Insufficient child-care facilities in many areas of Switzerland make it difficult for all mothers of young children to com-

bine a career and family life. Migrant women, however, are faced with the further difficulty that their families live abroad and thus they cannot count on a social network of support for looking after their children. Language requirements in the labour market add a further difficulty as illustrated by the following quote:

“The language is a very big obstacle for finding a job. When you look at job advertisements they either demand German as a mother tongue or an impeccable spoken style. Besides, flexibility is also required and that is very difficult for me because I have a family. As we all know, child-care services are very poorly developed here and school children come home for lunch and are back again by three o’clock. That is why it is very difficult for women in Switzerland to combine profession and family. That’s why I am looking for a 50% job” (International business manager from Lima University, born in Peru)

In some bi-national families, the educational advancement of the migrant woman is given a lower priority than that of the Swiss husband. Since his educational qualifications have a higher value in the labour market than those of his foreign wife, he is the one who has the potential to earn a good salary to support the bi-national family. Furthermore, migration policies in Switzerland do not support the transfer and re-creation of social and cultural capital because they assume skilled migrants do not have any problems integrating. Gender-biased immigration policies, patriarchal ideas about gender roles, the lack of child-care facilities, and insufficient policies supporting skilled migrant women produce unequal opportunities for women to access the labour market.

Along the lines of the former results, several studies in North America and Europe, demonstrate that migrant women are doing worse than migrant men in the labour market, and are particularly affected by de-skilling processes, that increase the replaceability of labour (McCay 2003, Man 2004, Boyd and Pikkov 2005, Pukayastha 2005). Gendered structural barriers seem to play a central role in women’s ability to obtain a job. For example, women’s childrearing responsibilities, and gender discrimination by employers, constrain their access to full time

skilled positions (Salaff and Greve 2003, Liverage 2009). Immigration regulations also play a role, as many migrant women enter countries of destination with a family class visa under which they are not expected to find work and contribute to the economy of the new country (Iredale 2004, Riaño and Baghdadi 2007b). Unfortunately, the extent to which gender dynamics play a role in the marginal position that skilled migrant women occupy in the labour market remains insufficiently understood (Raghuram 2008).

At this point a further reflection needs to be made. We pointed at the beginning of this paper that the study participants are characterised by two main differences regarding their status entry to Switzerland: marriage migrants and refugees. Does their differentiated entry status actually play a role in their possibilities of participation in the labour market? This study shows that although gender factors, such as being a woman, a wife and a mother of young children, are a central factor commonly affecting the access of all study participants to the Swiss market, having entered the country as a marriage migrant or a refugee also plays a role. This is illustrated by the cases of Juana (Dominican Republic), who entered Switzerland as a (bi-national) marriage migrant, and Zehra (Turkey), who entered the country as a refugee. Initially, Juana’s chances to access the labour market seemed better than Zehra’s: she had a University training as a psychologist and was also married to a Swiss. Zehra in contrast had no tertiary education, no Swiss husband and became a single mother shortly after coming to Switzerland. As Juana’s foreign credentials were not recognised in Switzerland she was put in the same situation as Zehra’s -- that of having to start from scratch to carry out her tertiary education⁴. The financing of university studies and external child-care posed a main obstacle for both Zehra and Juana. Zehra, however, was able to obtain fellowships from the Cantonal government owing to her refugee status and low-income situation. Juana, in con-

⁴ Unlike countries like Canada, Switzerland does not yet have bridging programmes allowing the recognition of the foreign qualifications of skilled migrants from countries outside the European Union.

trast, had no access to government fellowships because of her marriage-migrant status and husband's good salary. Further, the policy of many daycares to give priority to women "who need to work" excludes married women with well-salaried husbands. Thus, being a single parent and having a low socio-economic status worked to Zehra's advantage in solving the problem of external child-care support. Zehra was eventually able to conclude her Anthropology studies at a Swiss University whereas Juana did not succeed in obtaining any Swiss qualifications. Currently, Zehra is in a stable labour market position that corresponds to her qualifications whereas Juana lives from periodic jobs and cannot longer count on her husband's financial support since they are now divorced. Although personal drive may have played a role in explaining the two different outcomes, the former two examples illustrate how policies towards refugees and marriage migrants make a significant difference in facilitating (or not) the access of skilled migrant women to the labour market.

Strategies of Migrant Women for Improving their Labour Market Participation

What are the responses of migrant women to the challenge of labour market participation? What

strategies do they adopt to realize their goals of reaching the upper segments of the labour market? For some women, the use of one strategy or another is not always a conscious choice. For others, there is a clear assessment of their situation, which leads to a systematic plan for rebuilding their social and cultural capital. Women's strategies also need to be viewed dynamically, as they often change over time, depending on lessons learned from past experiences. The strategies of our research partners can be grouped into five types, as set out in Table 6.

After intense study of the German language, the first step skilled migrant women usually take is to try to find paid employment. As most women at this stage cannot get a position according to their qualifications (and/or in their original fields of study), one of the most common strategies is to take any job available. These are usually jobs below their qualifications that lead nowhere. Other skilled migrant women become frustrated by the lack of value given to their foreign work experience and the difficulties of combining a career and a family, and thus prefer to withdraw from the labour market and concentrate on their domestic roles.

Although women become economically dependent on their husbands, the personal and

Strategies and responses	
1. Trying to access the labour market	Taking any job, often below qualifications
	Creating own employment
2. Doing unpaid work	Doing voluntary activities
	Assuming domestic role
3. (Re-)skilling	Improving German proficiency
	Redoing tertiary education
	Carrying out postgraduate studies
4. Building new networks	Building social networks
	Building professional networks
5. Finding a way out of the situation	Adopting a victim attitude
	Returning to the country of origin

Table 7. Migrant Women's Strategies and Responses to the Challenge of Labour Market Participation

social reward of motherhood becomes a substitute. After some years, however, some of the women interviewed become weary of both their domestic role and/or their failed access to the labour market. Some migrant women react by creating their own employment. An example of this strategy is a Turkish computer specialist who opened up a travel agency specializing in travel to Turkey. It is interesting to note that many of these women use their ethnic backgrounds as marketable attributes that allow them entry into the labour market, even though the economic rewards are not always very high.

Carrying out voluntary activities in migrant organizations, or doing other socially oriented activities, is an option chosen by several migrant women. In fact, 80% of our research partners from Latin America and 76% of those from the Middle East and Southeastern Europe are involved in voluntary social and political activities in migrant associations, parents' groups, home-country associations, intercultural schools, organizations for the rights of migrant women, music groups, and organizations for intercultural dialogue. Interestingly, the experiences they gain in these activities allow them to rebuild their social and cultural capital (networks and professional experience) and in some cases results in paid job opportunities. Other women actively work on re-building their professional networks by personally introducing themselves to potential employers.

Re-skilling is a strategy chosen by many women, especially after several years of home-making activities or of working in low-pay and/or unstable employment. As explained earlier, a very high level of German proficiency is required for skilled jobs in Switzerland. Thus, many women take advanced German classes, and others learn the Swiss German dialect to enhance their employment chances. Other women, approximately half of our interview partners, realize that they are never going to get a skilled job unless they study in Switzerland and thus decide to carry out tertiary studies, repeat their entire University studies, or carry out postgraduate work. These strategies are very successful and often lead to the desired professional integration.

Having a clear assessment of their professional opportunities in Switzerland, which often leads to a clear career plan, is a particularly important strategy that explains the success of some of the women who were able to reach the upper segments of the labour market. However, a decisive factor in these successful cases are three further strategies by migrant women: (a) postponing having children, limiting the number of children to one, or having no children at all; (b) sharing child-care responsibilities with their partners; and (c) divorcing from their husbands, giving them the freedom to follow professional paths as they had planned. The opposite to these success stories are the cases of women who escape the difficult situation of participating in the labour market by adopting a victim attitude or returning to their countries of origin.

Conclusions

This paper examined the labour market participation of 57 skilled migrant women from Latin America, the Middle East, and Southeastern Europe living in German-speaking Cantons of Switzerland. The results of this study show that most of the interviewed migrant women have a precarious situation in the labour market: half of all the interviewees do not use their skills in the Swiss labour market and half of those who work in positions suited to their skills face precarious situations because their employment is characterized by discontinuity and instability. The majority of skilled migrant women face problems of de-skilling, loss of confidence, and loss of autonomy. Thus, for most of them, the outcome of migration is not an improvement but rather a loss of their original social status. The presupposition by the human capital theory that educational attainment is rewarded with professional status does not apply to the case of migrant skilled women, especially when they originate from countries outside the EU. Our research supports the conclusions of other researchers in North America, Europe and Oceania, that skilled migrants encounter significant difficulties when they try to transfer their educational resources across international boundaries and often experience de-skilling. Under those circumstances

it seems an illusion to expect that a transfer of knowledge to the countries of origin might take place, a supposition that is confirmed by the interviewed women.

What is to be concluded from such results? First of all, it seems that some of the assumptions under which the brain gain approach has been based need to be questioned. The idea of brain gain emerged in the context of skilled migrants working in scientific institutions and transnational corporations in the fields of science (e.g. natural sciences) and technology (e.g. IT sector), several of which are in a favourable position to further develop their professional skills and establish networks of cooperation and knowledge transfer. But how many skilled migrants have access to such positions? The results here presented, as well as current research on the labour market integration of skilled migrants, suggest that large numbers of skilled personnel do not have access to such positions but is rather affected by the underutilisation of their qualifications and de-skilling (OECD 2006, OECD 2008, Huber et al 2010). Family migrants have particular difficulties accessing positions that are commensurate with their qualifications and immigrant women with young children are particularly disadvantaged. Further, the fact that skilled migrants are not able to realise their professional skills in the countries of destination suggests a situation of brain waste rather than brain gain. A brain waste for both: for the migrants themselves, who see their qualifications devalued once they cross borders, and for the countries of destination, who do not make adequate use of the resources that they gain via the immigration of skilled personnel. Research on brain gain thus needs to look beyond the confined group of skilled migrants, give attention to skilled migrants who migrate in the context of family reunification, consider the impact of having to raise a family, and address the issue of brain waste.

An examination of the reasons for the precarious situation of skilled migrant women has shown that social discourses on gender and ethnicity interact to shape the position of migrant women in the Swiss labour market. Ideas about ethnicity and gender, as imbedded in migration

policies and in the minds of institutional representatives and employers, are significant in shaping the access of migrant women to the labour market. For example, in the past decade, as a result of the need to develop closer links with the European Union, foreigners have been portrayed by immigration policies as having different qualities, and citizens of the European Union have been represented as “more likely to integrate.” The set of rules produced by such policies have acted to reserve skilled employment for Swiss and EU nationals, thus protecting their class interests while hindering the realization of institutional cultural capital by non-EU migrants. Switzerland is not alone in this practice, as most European states have adopted the policy of giving a better status to immigrants from the EU (Kofman 2002).

The realization of the institutional cultural capital of migrant women from countries outside the EU is further hindered by the lack of recognition of their educational qualifications. In fact, our case study has shown that having studied *in* Switzerland or *outside* Switzerland is decisive in the outcome of the labour market participation of skilled migrants. What counts most for successful labour market participation is not the amount of knowledge that an individual has, but the *place* where that individual earned her degree or professional experience. Indeed, it is the symbolic value attributed to a specific resource that makes it a socially valued resource.

In conclusion, due to their origin and gender, skilled migrant women from Latin America, the Middle East and Southeastern Europe face disadvantages and discrimination when searching for work, and trying to acquire new skills. Different obstacles restrict migrant women’s agency, combining to create a very unfavourable framework for the professional integration of skilled migrant women from countries outside the EU: policies that discriminate against immigrants from countries outside of the EU; prejudices about ethnic origin and religious membership; language discrimination; difficulty in reacquiring institutional cultural capital because of the high cost of educational training; lack of programs that support the transfer and recreation of skilled immigrants’

cultural capital; patriarchal ideas about gender roles; lack of child care facilities and masculine biased gender arrangements. Skilled migrant women are, however, not passive in relation to such unfavourable conditions. Women mobilize many personal resources, and their agency is essential in them getting access to the labour market. Researchers thus need to give more attention to the interplay of gender and ethnicity in shaping the access of skilled migrants to the labour market, and also examine the agency of migrant women to counteract the structural barriers imposed upon them by society.

Finally, the above results have important consequences in terms of policy-making. Whereas debates on brain drain usually discuss policies of return, and the need for the countries of origin to improve the pay and working conditions of their skilled personnel, there is hardly any discussion on how the countries of destination can actually improve the working conditions of their skilled migrants. The latter is urgently necessary in order to curb brain waste and also to promote situations of brain gain, which are ultimately beneficial not only for the countries of destination but also for the countries of origin. Such measures need to be supported by further empirical research that examines in detail the relationship between the situation of skilled migrants in the labour markets of North American and European countries, and the potential benefits or losses that may derive thereof for all the parties involved. Special attention needs to be given to the situation of skilled migrant women and the role of family in the processes of migration and labour market integration.

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Funnelling Talents Back to the Source: Can distance education help to mitigate the fallouts of brain drain in sub-Saharan Africa?

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Abstract

This paper offers a critical reflection on theories supporting the positive consequences of brain drain (BD) in sub-Saharan Africa (SSA). It sides with the sceptics of the power of remittances alone to offset the bleed of highly skilled professionals and foster the development of SSA. It is argued that given the intensification of BD's pull and push factors, stemming or reversing it will become even more difficult than it has been so far. Distance education (DE) is deemed to hold the potential to help tap into the BD pool of expertise and funnel it back home to contribute to the reconstruction of crumbling higher education (HE) systems in SSA. This brain circulation (BC) effort added to some benefits from remittances would help to alleviate the crippling effects of BD in SSA while, at the same time, allowing the majority of under-employed highly qualified migrants to stay current in their areas of expertise. Learning from DE past mistakes in SSA would foster the emergence of a more ecological DE approach that would foster more sustainable BC and thus mitigate the fallouts of BD.

Keywords: brain drain, brain waste, sub-Saharan Africa, remittances, distance education, higher education

I. Introduction: The African "Highballers"

Most of the people in developed countries remember what they were doing when they first heard about the suicide attacks in the USA on September 11, 2001. I was a member of a 12-member crew of labourers. It was our second week of a tree-planting, tree-spacing contract. On that early and foggy autumn morning, our van was cruising on a forest road in Whitecourt, a one-hour drive northeast of Edmonton (Alberta, Canada). The driver turned the radio on moments after the first twin tower in New York was hit. The frantic live radio reports brutally awakened most of the somnolent crewmembers. We pulled the van over and listened, in shock, to the unfolding events south of the Canadian border. We remained glued to our seats for the fol-

lowing hour; switching back and forth through the few radio stations we could tune into from the remote spot we were in, deep in the forest. Our anxiety reached its paroxysm when Canadian reporters announced that all the North American air space had been sealed off. For many of us, the unfolding tragic events south of the border triggered vivid memories of the wartime anguish we had experienced firsthand back in our home countries. We ignored our foreman's insistent calls asking us to carry on with our workday. We knew he could not afford to fire us. Our crew was the most productive of the small company. In silviculture jargon, we were "highballers". We drove back to the motel instead. We wanted to watch on TV the developments of one of the most significant moments in modern history.

The heated debate that followed the tragic events had a catalytic effect within the crew. It gave the opportunity to crewmembers to open up and talk about our educational and professional credentials. All of a sudden, we realized that this was not your usual labourers' crew. There were two Ph.D.s., two engineers, one former Member of Parliament, one lawyer, and one journalist among us. The engineers explained complex notions of impact and structure resistance. One of them accurately predicted the possible collapse of the twin towers. The journalist and the lawyer had different takes on the rationale and possible legal and diplomatic implications of the attacks. The rest of us contributed generally well-informed opinions about the situation. Since ten out of the twelve crewmembers were from SSA, we self-deprecatingly called ourselves the "African elite crew".

Even after this highly unusual icebreaker, a tacit rule limited high-level intellectual discussions to special occasions. Discretion, modesty, and a self-imposed low profile were the rule during workdays. Understandably, there was not much to brag about. Days off were suitable opportunities to engage in intellectual debates over a few beers in Edmonton or Calgary bars or in our own motel rooms. We would often celebrate our reunion with other highly skilled professionals-turned-labourers from all around Canadian western provinces. We remade Africa from as far from it as possible. We remade the world. Ironically, the only question that remained taboo throughout our summer season was: Why had this many highly trained professionals resorted to these backbreaking jobs while hoping for better job opportunities in Canada, instead of heading back home where their high skills are desperately needed? Despite the fact that the United Nations warned many decades ago that brain drain (BD) was a problem that "seriously hampers" the development of poor countries (UN, 1975), the International Organization for Migration (IOM) estimates that as many as 20,000 highly trained professionals have been leaving the sub-Saharan African (SSA) continent every year since the beginning of the 90s.

Much has been said and written about the complex and systemic push and pull factors of BD (Akpewho & Nzegwu, 2009; Van Dalen, Groenewold & Schoorl, 2004; Bloom & Sachs, 1998). However, on both sides of the controversial debate, the fact that only a small fraction of highly skilled immigrants living in developed countries manage to find employment commensurate with their training and experience is often overlooked. This makes brain waste (BW), BD's corollary, even more damaging not only for the sending countries' development prospects but also for the individual immigrants' careers and self-esteem. Unfortunately, with the notable exception of a minority of professionals such as health professionals nowadays or information technology specialists during the past decade who are needed over periods of high demand, the majority of highly skilled immigrants from SSA are underemployed, underpaid, or are forced to reorient their careers towards semi-skilled or even unskilled jobs. Yet, the level of education continues to be the single most important criterion for immigration policies in many developed countries.

This paper is a critical reflection on the BD/BW phenomenon and its consequences on SSA development prospects and on highly skilled immigrants' individual prospects. Based on contributions from a wide range of social scientists as well as my personal and professional experience, it questions the current trend in thinking that contends that BD is good for SSA. Given the fact that the combination of systemic pull and push factors that prevent highly skilled migrants from returning home are so entrenched in SSA, it will take time before reversing BD. It is suggested that a systematic approach to DE could make them invaluable assets to rebuilding their former higher education (HE) institutions.

II. The Brain Drain Controversy

The debate over the benefits and the fallouts of international migration of highly skilled professionals has grown increasingly complex and controversial on both sides of the divide between poor and developing countries (the sending countries) and rich and developed countries (the

destination). As a result, the original BD debate has mushroomed into a number of related phrases such as “brain gain”, “brain circulation”, “brain waste”, “brain overflow”, “brain strain”, etc., in both academia and within the international community (Patterson (ed), 2007; Lien & Wang, 2005; Lindsay, Findlay & Stewart, 2004).

As SSA grew increasingly marginalized, especially since the end of the Cold War era (Collier, 1994; Kappel, 1996), BD became the centre of an increasingly polarized debate. Many experts denounce, sometimes in the strongest terms, its devastating effects on the continent’s development prospects. For example, one United Nations Economic Commission for Africa (UNECA) senior official summed up the worries of many concerned observers: “Africa will be empty of brains in 25 years” (Tebeje, 2006, p.1). A few years earlier, Emegwali (2001) had gone even further by contending that the profuse bleeding of talents from SSA means nothing less than the “slow death of Africa” (p.1).

Given the scarcity of credible comparative data on the negative consequences of BD (Beine, Docquier & Rapoport, 2006; Docquier, 2006), especially with respect to SSA, these voices are prone to being easily dismissed as alarmist. They swim against a rising tide of econometric studies extolling the virtues of BD in fostering development in sending countries thanks to remittances.

Remittances: The Sledgehammer Argument for Brain Drain Proponents

Remittances are sums of money flowing into the developed world by emigrants to help support their families back home. The presumed positive effects of remittances on national economies in the emigrants’ sending countries have recently become something of a new buzzword in academia and international development circles. Over the last two decades, a growing number of economists, including affluent Africans and Africanists, have argued that BD is good for Africa’s development (Anyanwu & Erhijakpor, 2010; Easterly & Nyarko, 2008; Lucas, 2006). According to the latest estimates, African migrants worldwide have sent back home more than 20 billion USD, surpassing foreign aid inflows (World Bank, 2008).

Thus, emigration has become socially valued in most developing countries, mainly because of its substantial “return on human capital”. Anyanwu and Erhikijapor (2010) came up with figures showing the positive effect of remittances on poverty reduction. They contend that “a 10 percent increase in international official remittances as a percentage of GDP will lead, on average, to a 2.9 percent decline in the number of people living in poverty” (p.80). In the same vein, Gupta, Patillo and Wagh (2009) argue that remittances have a poverty-mitigating effect and promote financial development in sending countries. According to these IMF economists, “a rise in the remittances-to-GDP ratio is associated with a fall of a little more than 1% in the percentage of people living on less than \$ 1 a day and the poverty gap” (Gupta, Patillo and Wagh, 2007) (para Impact of remittances). Other economists (e.g., Vidal, 1997; Stark, Helmenstein & Prskawetz, 1998) contend that prospected benefits from migration may constitute an incentive for migrants’ sending countries to invest in educational programs that are in high demand in developed countries. In the absence of reliable comparative data regarding the benefits of remittances, the foregoing arguments might be “purely theoretical” as is the BD controversy in general (Beine, Docquier & Rapoport (2006). The case of Mali showcases the contradiction between econometrics theory and hard realities in the field.

When Econometrics and Field Realities Collide: The Case of Mali

As already stated, an abundant body of literature has been dedicated to extolling the virtues of remittances on poor and developing countries’ economies. Although SSA received only 4% of the overall worldwide remittance flows (Gupta, Patillo and Wagh, 2007), entire national economies in SSA are largely dependent on remittances. For example, they constitute more than 24% of Lesotho’s GDP, making the kingdom the leading beneficiary of remittances in SSA (Anyanwu & Erhijakpor, 2010). The region of Kayes in Western Mali is similarly famous for its very high level of emigration throughout Africa and to France, the Malian former colonial master.

Based on a research study conducted in Kayes, Gubert, Lassourd and Mesplé-Somps (2009) concluded that remittances reduce poverty rates by 5 to 11%. These remarkable numbers seem to corroborate conclusions from an extensive study on child poverty in Mali (Unicef, 2008). In this study, the first Malian administrative region of Kayes-Koulikoro is praised to have achieved a 15 to 20 points drop in poverty level between 2001 and 2006. This constitutes the best performance amongst the five Malian administrative regions. The study shows that, during the same period, child poverty stagnated in the southernmost region of Sikasso, the country's breadbasket, traditionally less prone to the drain of emigration. On a national level, landlocked, drought-prone Mali is one of the countries that count the highest number of emigrants in SSA. One third of the 14.5 million Malians¹ live abroad. Given the fact that (extended) family solidarity is one of the most important cornerstones of Malian culture, remittances play an important role in those households that are blessed with emigrant relatives. However, the substantial increase of inward remittances flows that Mali has consistently benefited from over the last two decades has not managed to uplift in any significant way the living standards of ordinary Malians, let alone their national economy.

In fact, the situation is quite the contrary. According to data from the Development Prospects Group (World Bank, 2006) the inward remittances flows from Malian migrants have more than doubled between 2000 and 2006 from 73 to 177 million USD. According to the UNDP's Human Development Index (HDI), during this timeframe, Mali regressed from² the 165th position out of 174 participating countries to the 175th position out of 177 participating countries. In 2009, Mali still ranked as one of the four poorest countries in the world (178th out of 182 participating countries). It is worth remembering that the HDI was devised in order to shift

¹ According to the 2009 general census.

² Based on officially recorded data. These figures are believed to be very conservative given the dense network of unrecorded formal and informal channels that funnel remittances.

the focus of development economics from pure national accounting data to the "impact of people-centred policies" (Haq, 1995).

III. Reminiscences of Structural Adjustment Programmes (SAPs)

The case of Mali is far from being unique. The contention that remittances foster development is further contradicted by hard realities in other major migrant sending countries in SSA. For example, a recent study about remittances from Ghanaian and Nigerian diaspora in the United States, United Kingdom and Germany, suggests that the main role of these financial inflows is to fulfil basic needs in the receiving families (Ecer and Tompkins, 2010). Following the same thread in Botswana, Campbell (2010) concluded that remittances do not even have a significant effect on the ability of households to fulfil basic needs and to maintain reasonable standards of living. In the same vein, based on data collected in Zimbabwe, Bracking (2003) had argued earlier that remittances constitute a parallel currency market that undermines the purchasing power of the majority of households without migrating members.

IV. The gap between remittances and their purported development benefits in immigrant sending countries is not limited to SSA. Writing about the situation in the Caribbean, Dawson (2008) had a glimpse on the recent history of immigration and remittances. She points out that Turkish and Armenian immigrants to Western Europe or Mexican *braceros* to the USA have been sending remittances back home for generations. She wonders why these countries have not achieved significant development as a result. She concludes that far from fostering development in sending countries, remittances "constitute, in fact, reverse subsidy to wealthier countries" (p.1).

V. Yet, as far as proponents of remittances are concerned, BD creates a win-win situation for both poor and developing countries. For example, in a book evocatively entitled, *Let their people come: breaking the gridlock on international labour mobility*, Pritchett (2006), with the

Washington-based Centre for Global Development, estimates that a 3% increase of import of highly selected manpower from poor countries would yield 305 billion dollars a year for sending countries. This represents twice the combined money inflow from trade liberalization, foreign aid and debt relief. Over the last decade, extolling the virtues of remittances for poor countries has become one of the favourite new mantras in development literature. Pritchett (quoted by Suri, 2006) reveals what lies beneath their active promotion. Reflecting the position of several developed countries he is quoted as saying: "You are not going to just throw access open to rich countries' labour markets.... You set the terms for which people you are going to allow into the country to provide which types of services... From an economist's point of view it makes no sense to force high wage European labour to be exclusively responsible for the care of older Europeans." (Suri, 2006, p.1)

VI. This kind of econometrics and promotional rhetoric is reminiscent of the sophisticated neo-liberal econometrics models and international promotional campaigns that paved the way to Structural Adjustment Programs (SAPs) initiated by International Financial Institutions (IFIs) during the 80s. These programs imposed draconian financial austerity measures through severe cuts in essential social services such as health and education. Whereas the imposed privatization allowed affluent multinationals to swiftly buy out public companies at discount prices, the accruing economic growth never came. Two decades later, faced with ravages from SAPs, the IFIs were forced to acknowledge that these programs were an "unmitigated failure" (The World Bank, 2008). This failure contributed to precipitate the decline of higher education in SSA and, thus, to feeding the BD crisis.

VII. Higher Education in Sub-Saharan Africa: Impressive Growth, Financial Strangulation and Brain Drain

A quick glance at the growth of enrolment rates over the last four decades shows a very flattering picture of higher education (HE) in SSA. Accord-

ing to the latest data, the enrolment rate has skyrocketed 20-fold from less than 200,000 students in 1970 to over four million in 2007 (UIS, 2009). According to the UNESCO Institute of Statistics, the 8.6% enrolment rate (as compared to 4.6% global average) made SSA a "world leader in terms of tertiary enrolment growth over the last four decades" (p.1). This impressive performance is due to the fact that the SSA enrolment rate was less than 1% in 1970. Thus, despite the sustained progress, the region still lags far behind. Only 6% of its overall HE age cohort was enrolled in 2007 as compared to a global enrolment rate of 26% (UIS, 2009).

While the sustained growth of HE enrolment rates is a commendable development, it was accompanied by an excruciating growth crisis due to the fact that, quite paradoxically, HE funding grew almost inversely proportional to the enrolment rates. For example, Bollag (2004) reports that, from 1985 to 1989, about 17% of the World Bank's loans to SSA were directed to higher education, as compared to 29% directed to primary education. From 1995 to 1999, the corresponding figures were sharply inverted to 7% for higher education and increased to 46% for primary education. These funding policies constitute one of the most dramatic illustrations of the harmful effect of SAPs introduced earlier. Consistent with these policies, bilateral and multilateral funding agencies imposed "aid conditionalities" that forced governments to devote the lion's share of all education funds to primary education to the detriment of HE. The stated rationale for this move was to achieve the "Education for All" (EFA) goals originally set for 2015.

Ironically, these funding policies contributed to hurt the very elementary schools they meant to help. The anaemic HE sector could no longer provide graduates in sufficient numbers to train elementary school teachers. As a result, untrained or inadequately trained teachers were in charge of primary education all over SSA. As documented by Lauglo (1996) and Harber (1998), the SAP doctrine was vigorously enforced even in a post-Apartheid South Africa despite its huge need of teachers trained in inclusive and democratic values. This financial strangulation

sounded like music to the ears of dictators who had overthrown the “fathers of independences” through military coups. They considered HE institutions as hotbeds of political contestations that spread throughout SSA, most notably after the end of the Cold War. (Zeilig, 1992)

Nowadays, most HE institutions in SSA display a disheartening spectacle: classes are overflowing, residences are ramshackle, libraries, labs, and curricula are antiquated when they are not totally lacking. Saint (2000), a seasoned expert of HE in SSA, describes the situation as a “political time-bomb” (cited in Macintosh, 1999). In any case, this dire situation undermines the confidence of most HE stakeholders. Working conditions are harsh for faculty and administrators, future employment prospects and professional development are bleak for graduates. This deplorable situation of HE constitutes one of the most powerful factors that pushes the best and the brightest to feed the BD stream. This push factor is compounded by rich countries’ immigration policies and other strategies such as the promotion of remittances discussed earlier or international student scholarships designed to attract the best and the brightest from poor countries. These policies and strategies that make the fight against BD an uphill battle are briefly presented in the following few paragraphs before discussing the potential of distance education (DE) to foster BC by tapping into the impressive BD pool to contribute to the reconstruction of HE institutions in SSA.

Poaching Highly Skilled Health Professionals

Attracting the most highly skilled professionals has become one of the most competitive sectors amongst developed countries. They have put into place immigration policies and strategies to recruit the best and the brightest in various strategic sectors of their economies. If there is one single field that epitomizes the negative consequences of many rich countries’ immigration policies in SSA, it is the exodus of SSA’s health professionals. Clemens and Patterson (2008) assert that 16 out of the 54 African countries surveyed have seen more than 50% of their physicians and professional nurses leave

their homeland to work in developed countries. They point out that according to available data, 75% of physicians trained in Mozambique and 81% of professional nurses trained in Liberia pursue their careers abroad (Clemens & Patterson, 2008). English-speaking former British colonies are particularly hit by this haemorrhage of health professionals towards the USA and rich Commonwealth country members such as the United Kingdom, Canada, Australia and New Zealand. All these rich countries are experiencing serious shortages of their workforce to take care of their rapidly aging population. As a result of this profuse bleeding of health professionals, five years ago, the entire SSA counted nothing more than 600,000 health professionals for an overall population of 682 million. By comparison, Canada counted 500,000 health professionals for a population of 31 million people (WHO, 2005).

After the UK National Health Service (NHS) declared in 2001 it had stopped its intensive recruitment campaign of health professionals from poor countries, the British Medical Association (BMA) saluted this “strong moral lead”. Yet, according to Pond and McPake (2006), 24% of foreign doctors who registered with the NHS between 2002 and 2003 were from SSA. During subsequent years, the medical community in the UK sounded resolute to promote policies to fight against poaching health professionals from poor countries. The BMA’s chairman declared bluntly: “the rape of the poorest countries must stop” (cited by Clemens and Patterson, 2007, p. 3). His illustration of “the obscene reversal of the flow of aid” is in line with Dawson’s (2008) contention of “reverse subsidy” alluded to earlier in this text. The Chairman of the BMA deplores the fact that the impoverished former West African British colony spent more than \$ US 16 million in medical education each year only to be sucked by “a voracious and insatiable market in the north” (Johnson, 2005, p.2). He deplores the fact that the USA, which employs half of all English speaking doctors in the world, “considers healthcare professionals as a commodity to be purchased in the market and is making little provision currently to increase the number of doctors and nurses it trains at home” (p.3). Accord-

ing to Hagopian, Thomson, Fordyce, Johnson and Hart (2004), 5,334 physicians trained in SSA work in the USA alone. This figure represents 6% of the overall number of physicians trained abroad working in the USA. Pond and McPake (2006) qualify what is happening in the health sector in SSA to be nothing less than a “health migration crisis” (p.2).

VIII. International Studentship and Scholarship: The Royal Path to Emigration

Just as the post WWII strategy of postdoctoral research fellowships attracted the best British and European minds to the USA, international higher education programs have become the royal path to the immigration of highly skilled professionals, mostly since the early 90s. Recent data from the UNESCO Institute of Statistics (UIS, 2009) show that in 2007, 49.8% of the overall 218,000 international students from SSA were enrolled in HE institutions in Western Europe and a further 17.4% studied in North America.

In addition to being one of the best ways to attract and retain the brightest minds from all over the world, international students are also a very profitable business for higher education institutions in host countries. For example, the number of international students registered in Canadian universities has more than doubled in a decade from 86,000 in 1998 to 178,000 in 2008. They have generated an astounding \$ 6.5 billion in revenues, surpassing some of the most lucrative Canadian traditional exports such as coniferous lumber (Kunin, 2009).

While these higher education programs and immigration policies may sound fair enough to serve developed countries’ national interest, they become problematic when only a small fraction of the thousands of recruited highly skilled immigrants or international students – who are unwilling or unable to return to their home countries after graduation for various reasons – can find employment in their fields of expertise.

IX. From a Royal Path to a “Dead-End Street”

According to the International Organisation for Migration (IOM) some 300,000 professionals from the African continent live and work in

Europe and North America (Cervantes & Guellec, 2002). But one important aspect most global estimates fail to elicit is the fact that, with the notable exception of migrants blessed with exceptionally good credentials in fields facing severe shortages of local qualified human resources such as information technology and the health sector during the last two decades, the majority of highly skilled immigrants looking for employment face entrenched professional barriers. They have to confront the devaluation of their academic credentials and professional experience acquired from their home countries. They have to overcome barriers pertaining to their proficiency of the host countries’ official languages, trade unions, and licensing agencies’ regulations, etc. As illustrated in my introduction to this paper, many highly skilled immigrants graduate through the system only to meet a professional “dead-end street” (Bourdieu & Passeron, 1970).

Even those who can manage to find employment often come to grips with “unrecognized learning” or the “under-utilization” of their skills. For example, Bloom and Grant (2001) estimate that 74% of Canadian workers affected by the \$4.1 to 5.9 billion in lost earnings due to “unrecognized learning” are immigrants. This is consistent with Reitz’s (2001) findings. He estimates lost earnings due to immigrants’ “skills under-utilisation” to be about \$2 billion annually. In addition, high percentages of “visible minorities” in general and Black people in particular, persistently report employment discrimination. According to Statistics Canada (2003), 35% of surveyed members of “visible minorities” reported personal experience of employment discrimination within the five previous years. For their part, Reitz and Barnajee (2007) reported that 61% of Black people, including second generation, experienced employment discrimination. More recently, a study by the Community Foundations of Canada (2010) concluded that, recent immigrants to Canada with a university education had an unemployment rate that was 4.1 times higher (13.9%) than that of Canadian-born workers with a comparable university degree (3.4%).

These circumstances give solid grounds to Reitz (2007) to decry the extent to which immi-

gration policies that give precedence to highly skilled immigrants are “out of touch with labour market reality”. He raises the question: “If immigrants with professional degrees end up driving taxis, delivering pizzas or working as security guards, should Canada reduce or even abandon its emphasis on skilled immigration?” (p.2). Unfortunately, this argument has been used as a mantra for various extremist groups in developed countries. Yet, in the present circumstances, this may be a legitimate question that is worth asking, at least as long as there remains a gap between immigration policy that favours the highly skilled and the lived experience of so many immigrants.

Last but certainly not least, the situation of unemployment or under-employment in which many of these proud and well-educated Africans find themselves is a devastating blow for their self-worth as my personal story testifies to. Since I had been a journalist and an award-winning documentary maker prior to fleeing the Rwandan genocide, family members and members of my African community at large were shocked when I talked about my summer job in silviculture. In most African cultures, this kind of hard earthwork is reserved for peasants and, in some countries, slaves. Understandably, most of my co-workers insisted that I never, ever, tell anyone that they were involved in any way in such labour. Since it is considered degrading for anyone who attended school, it would be impossible to fathom that the precious remittances highly trained individuals send back home are the fruit of such hard work as tree planting. When, every now and then, an emigrant can afford to travel back home for holidays, the tendency is sometimes to show off trendy outfits, bring numerous gifts for friends and family members, throw parties at bars and restaurants, and tell stories about famous places they have travelled to, places only seen on television by those who stayed behind. Sadly, this feeds into the idealization of life in developed countries and the push to emigrate or to follow suit at any cost through very dangerous illegal immigration routes (Alscher, 2005; Carretero, 2008; Carling, 2007).

Past Attempts to Mitigate Brain Drain

As a response to the argument that BD constitutes a loss of human capital for sending countries, a variety of policy options were envisaged in an effort to mitigate its effects (Meyer et al, 1997). They comprised restrictive policies such as compulsory national service, compensation policies such as the Bhagwati Tax (Bhagwati, 1976) on skilled migrants' income, incentive policies to encourage highly skilled graduates to stay home such as higher salaries and benefits. These policies were tried in some countries in SSA with meager results. For example, the vice-rector of the University of Bamako (Mali) recalls how, back in the sixties, government officials had to sign a ten-year contract to work for the public service before they could leave the country. They (or their extended family) had to pay back all the money the government had spent on their higher education if they wanted to leave earlier. Even their degrees were only delivered as long as the terms of the contract were honoured (Muhirwa, 2008). Like in Mali, restrictive and incentive policies did not make it beyond a few years after the independences. Given the lack of a dynamic private sector to absorb new graduates, waves of migration of the highly skilled started as soon as the public service was staffed.

The return of highly skilled professionals has also been tried throughout developing countries with limited results. In SSA, the IOM-sponsored Return of Qualified African Nationals (RQAN) had the mission to help highly qualified Africans living abroad to fill professional positions in their home countries. Available data indicate that the program helped the return and reintegration of 1,500 highly qualified professionals 10 years ago throughout the 10 countries it targeted (Africa News, 2000) before it was replaced by Migration for Development in Africa (MIDA). Given the hundreds of thousands of highly qualified migrants, this does not sound like an impressive record. As Meyer et al (1997) point out, the return option has enjoyed most significant success only in emergent economies such as China, India, South Korea, etc. that could afford high salaries and benefits, and infrastructures and research

facilities comparable to those in developed countries to offer to their highly skilled returning migrants.

At its beginning, the diaspora approach looked more promising for SSA. It is based on building expatriate knowledge networks between highly skilled professionals living abroad and their former colleagues back home in order to foster brain circulation (BC). The UNDP-initiated Transfer of Knowledge through Expatriate Nationals (TOKTEN) project is the most famous of its kind. Since 1977, it has supported many short-term consulting partnerships based on this concept in many developing countries, most notably in SSA. Despite positive results from these initiatives reported from many countries (see for example Mansaray, 2009 in Sudan and Wanigaratne, 2006 in Rwanda) they still look like a drop in the steady BD stream from SSA.

X. Tapping into Brain Drain: The Potential of Distance Education to Foster Brain Circulation

In light of the disappointing results of past initiatives to mitigate BD in SSA due to the resultant strength of BD's push and pull factors, one could argue that it will be hard to reverse the phenomenon any time soon using the same old approaches. Therefore, if the BD current is too strong to the available means and tools, it would be more productive to try new approaches in order to tap into its impressive pool of intellectual skills from wherever they are around the globe and funnel them back home in SSA instead of continuing the losing battle of trying to dam it up or reversing it. The impressive developments of information and communication technologies (ICTs) over the last two decades have scaled up the potential of distance education (DE) to foster brain circulation (BC) between highly skilled migrants from SSA and their home countries. For example, Brown (2000) counted 41 networks for South Africa alone at the beginning of the decade. Teferra (2000) added his voice to insistent international demands to find mechanisms to tap the fluidity and power of highly skilled professionals from SSA thanks to the unprecedented developments of ICTs.

International organizations were quick to oblige. Foreign aid-funded projects such as the African Virtual University (AVU), the Formations ouvertes et à distance (FOAD) and the Université numérique francophone mondiale (UNFM) were initiated under very optimistic premises. Among many other things, they promised to reverse Africa's BD thanks to cost-effective and cost-efficient DE programs delivered to HE institutions throughout the continent. As the story went, since international studentships are one of the most important sources of BD, as discussed earlier, instead of the continent's best minds deserting their ramshackle HE institutions in search of quality education in the developed world, quality educational programs from the most reputable HE institutions around the world were to come to Africa at a fraction of their real cost thanks to the power of ICTs. As the preceding discussion has highlighted, a decade later it does not look like these projects have lived up to their promise.

Yet, over its 150 year history, DE has come a long way. From the outmoded correspondence courses through 'snail mail', educational movies, radio and television, to nowadays synchronous ICT-based multimedia programs in real time, recent research suggests that DE has reached a level of sophistication that can make it a very efficient mode of teaching and learning (Sachar & Neumann, 2010; Tsai, 2009). Bagwandeem (1999) argues that DE has become a major form of learning and teaching both in developed and developing countries. With respect to SSA, to the notable exception of South Africa, a country whose National University pioneered the DE University concept in 1962 long before the most prestigious DE institutions of its kind such as the UK's Open University, the German Fern Universität or Spain's Universidad Nacional de Educación a Distancia, the remarkable potential of DE is still markedly under-exploited.

In addition, whereas there is an extensive body of literature stressing DE's potential to alleviate some of the most pressing problems facing education and training in SSA (Dhanarajan 1999; Mackintosh, 1999; Chale, 1992; Agunga, 1999), in-depth analyses of its actual performance are scarce at best. Kinyanjui (1998) points to orga-

nizational, institutional and operational factors that have undermined the performance of DE initiatives in SSA. They comprise the lack of policy coordination, lack of infrastructures, lack of financial and human resources, lack of know how in the design, development and delivery of DE programs, and poor understanding of local, political, socio-economical, cultural and technological contexts. The most important of these obstacles which have hampered the potential of DE in SSA over the last half-century are briefly discussed in turn in the following few pages with the intention to learn from past mistakes and take advantage of the potential of DE in order to foster BC.

Poor Technology Infrastructure and Little Cultural Cognizance

Given the over-reliance of SSA on foreign aid, unrealistic promises have often been made based on “massive assumptions” (Foster, 1968) about the benefits of technological trends in vogue within donors’ countries. For example, the multimillion online DE projects initiated throughout SSA during the heydays of the Internet bubble at the beginning of the decade made whooping promises despite the fact that the continent lacked the basic infrastructure and equipments necessary to take full advantage of this kind of DE. Internet connectivity was still in its infancy in SSA. Although Internet connections were hastily installed in participating HE institutions, the available bandwidth was not nearly enough to allow the smooth flow of data (images and sound) necessary for a productive use of online programmes. Steiner, Nyaska, Jensen, and Karanja (2004) summarized the situation of Internet connectivity back then to be: too little, too expensive and poorly managed. According to these authors, the bandwidth available at most HE institutions in SSA was equivalent to a broadband residential connection in developed countries and cost fifty times more than what it cost HE institutions in rich countries. This poor technological environment made Assié-Lumumba (2004) skeptic about the capacity of these DE programs to live up to their promises. Despite all the enthusiastic expectations from DE, she

questioned its conceptualization and planning to meet the needs of HE in SSA. In hindsight, this scepticism seems justified.

XI. Looking back in the 60s and the 70s, Sy (2004) recalls how the same causes have resulted in the failure of the first generation of technology-based DE projects in SSA. He argues that these projects have failed because of poor design or as a result of foreign experts’ lack of understanding of African cultures and their interplay with several other factors, including inadequate training, poor infrastructure, embryonic telecommunication equipment and the inadequacy of a programme entirely based on foreign languages.

By the same token, the era of independences coincided with the heydays of electronic media (radio, film and television). They were lauded to be “vital potential aid to education” (UNESCO, 1962 p. 11). It was predicted that radio and television educational programs would be transmitted via satellite, filmstrips screened in remote non-electrified areas using solar energy. Teaching machines were expected to allow children to learn by themselves. Unfortunately, very few, of these predictions materialized. Amongst these celebrated new technologies, radio presented the most promising potential of being an invaluable aid to education in a wide range of educational and training settings in SSA given its compatibility with most of African oral cultures (Head, 1974). He lamented the waste of the high educational potential of radio in SSA.

Instead we moved on to the next generation of technologies. Consistent with the “Moore effect” (1965) the possibility of “cramming” an increasing number of transistors integrated in electronic circuits has resulted into the rapid succession of increasingly smaller, lighter and more powerful electronic devices on the market over the last half century, the most conspicuous being information and communication devices. If these technological advances have revolutionized many aspects of modern life, the dependency of DE on these rapidly changing ICTs has proven to be a real challenge even for seasoned DE professionals. Reflecting on a 30-year experience in the field of DE, McKee (2010) confides:

The constant deluge of data and technologies, combined with the pace at which technologies, learning environments continue to change, have left me more than confused as a student, and almost terrified as a teacher in my concern to keep up! (p. 101)

This makes a strong case for stressing the fact that whereas DE needs to be supported by some form of technology, quality DE should not be dictated by technological trends. It should be informed by principles of pedagogy and communication theory with respect to local needs and capabilities. If this should be the case in developed countries, it should be the same many times over in SSA, a continent where access to newer technological trends is a privilege reserved to a tiny minority of the population. Heydenrych, Higgs and Van Niekerk (2004) aptly observe that DE projects destined to SSA “should take cognizance of African values and realities” (p. 130).

The Mismatch between Ideology and Means of Production

As discussed earlier, the last generation of DE initiatives in SSA promised to reverse BD by delivering cost-effective, cost-efficient quality DE to struggling HE institutions thus achieving the badly needed economies of scale. This rhetoric is reminiscent of a Fordist approach to education. Renner (1995) underscores the fact that in the era of globalization, education became like any other system of production “monitored, maintained, and controlled in the same way as a factory” (p.286). This mass production approach would have been a blessing in improving enrolment and alleviating some of the most pressing problems of HE in SSA described earlier. Unfortunately, it was not accompanied by the required means of production. Not only the infrastructure and requirements were lacking as discussed earlier, but there were no trained DE professionals to run the projects either. Findings from research conducted in Cameroon (Wamey, 2004), in Malawi (Perkins, 2003) and in Mali and Burkina Faso (Muhirwa, 2008) converge in pointing out the fact that poor training of instructors and tutors in basic methodology of technology integration in HE was one of the major contributors to the projects’ poor performance. From an

insider’s point of view, Bateman (2004) confirms these findings when he describes the curricula of one of the major DE projects in SSA as a “digital dumping ground”. He pointedly observed that:

There is an unfortunate and ultimately damaging perception that the process of developing DE courses simply requires that existing teaching materials (usually antiquated lecture notes) be digitized and put online. This will result in the development of extremely poor quality online teaching and learning and will contribute nothing to higher education in Africa (Footnote p. 5).

This was the trend even in many HE institutions in developed countries at the beginning of the last decade. Fortunately, a decade after the wave of cyber hype that accompanied the Internet explosion, the implacable market rule has wiped most of these “Digital diploma mills” (Nobel 2001) out of business. A new approach more in tune with pedagogy and instructional design principles that privilege local control, learner centeredness, quality instructors-to-students and students-to-students interaction has emerged as the hallmark of the most successful DE institutions (McCombs & Miller, 2009; Duffy & Kirkley, 2004, Beldarrain, 2006). These new global developments in the field of DE need to be customized to suit the particular political, economical, socio-cultural and technological environments of SSA if we want to take advantage of the full potential of DE to foster BC. This will take a clear DE policy informed by research-based evidence.

XII. The Need for Research-Based Evidence to Inform Policy

All of the hurdles to quality DE in SSA discussed in the preceding paragraphs could be attributed to the lack of a clear policy orientation informed by research-based evidence. For example, back during the heyday of electronic media evoked earlier, Head (1974) deplored the fact that important sums of moneys were invested in infrastructure and technical equipments while no funds to investigate the best use of radio in popular formal and non-formal education were available despite the fit of radio to African oral cultures.

A decade later, Quarmyne’s (1985) analysis of the performance of 23 educational radio pro-

jects throughout SSA over the preceding two decades reached the same conclusion. He found that only 5 of these projects were successful. He observed that one common feature to these successful projects was the use of education specialists who employed sound educational and communication research techniques for the design of the programs, and for the assessment of their effectiveness.

Research-based evidence constitutes an important hallmark policy makers can rely on to orient their vision, formulate goals, design institutional and organizational structures and plan for resources to support the envisioned project or program. As Shavelson and Towne point out, if no one could expect a disease to be wiped out without clinical research, “one cannot expect reform efforts in education to have significant effects without research-based evidence to guide them” (in Mayer, 2005, p. 68). If this is the case with ordinary education reform, research-based evidence to inform policy will be one of the cornerstones that will make the difference between past failed initiatives and successful DE efforts that will allow tapping into the BD pool and funnelling it back home in SSA to the benefit of HE institutions.

Toward an Evidence-Based Brain Circulation Initiative

As argued throughout this paper, available data suggest that there are hundreds of thousands of highly qualified African professionals scattered around the globe, mostly in Europe and in North America. The fact that they continue to send generous remittances suggests that they remain bonded to their homelands and interested in their development. In addition, most of them have access to ICTs and are part of networks linking them to their home countries. Remarkably, results from an extensive benchmarking study suggest that team members collaborating virtually can be even more productive than those working face-to-face (Majchrzak, Malhotra, Stamps and Lipnak 2004). These are important premises to hypothesize that, highly skilled migrants are willing to contribute their intellectual skills to the development of their home

countries and thus foster BC between SSA and its abundant diaspora around the world. Given the paramount importance of HE institutions in the development process (Gaillard & Gaillard, 2008), the potential of DE to foster BC should be exploited, first and foremost, by revitalizing HE institutions.

In order to avoid the same mistakes that lead to the failure of all previous generations of DE initiatives destined to SSA, a serious groundbreaking research effort is needed in order to test various hypotheses and assumptions. Findings would provide policymakers with evidence-based information allowing them to set up institutional, organizational and operational frameworks for a productive use of BC thanks to DE. Questions to investigate could be as simple quantitative questions such as how many highly skilled professionals live in which countries? What are their fields of expertise? How many hours would they be willing to dedicate to a DE programme destined to the continent? What are their conditions and constraints to participate in the project? What are the fields in which HE institutions in SSA have an urgent need for expertise? What are the technological infrastructures, equipments and resources available? Answers to these preliminary questions would lead the way to tackling more complex questions pertaining to the nature of the framework within which this BC initiative would operate and its overall feasibility.

Given the magnitude of this groundbreaking research effort and the limited capacity of many individual countries in SSA, it would be more productive to start small and conduct major surveys on a sample of countries selected in the four main regional organizations: the Economic Community of West African States (ECOWAS), the Economic Community of Central African States (ECCAS), the East African Community (EAC) or the Southern African Development Community (SADC). This process should provide answers to methodological, technical, pedagogical questions pertaining to course design, course development and delivery; quality control, copyrights, harmonization of DE courses offered through the BC initiative with the rest of the programmes offered by par-

ticipating HE institutions, etc. As usual, funding would be the sinew of war. Although finding a way to use the high skills of their migrant nationals is the responsibility of sending African countries, receiving countries that benefit from BD (Straubhaar, 2000) and international organizations should support these efforts.

Conclusion

According to the latest World Migration Report (IOM, 2010), international migrations will likely “transform in scale, reach and complexity” over the next few decades due to such factors as economic and demographic disparities and the effect of environmental change. The report forecasts a sharp increase of international demand of qualified workers to replace the growing number of retirees in developed countries whose population is increasingly aging. Given the fact that 60% of countries in SSA will boast a population under 30 years of age by 2025 (National Intelligence Council, 2008), emigration flows of young Africans in general and highly skilled ones in particular are likely to intensify. Especially because the two forces that drove European emigration in the late 19th century, namely demographic booms and wage gaps between sending and receiving countries, are at work in SSA (Hatton & Williamson, 2003).

As I have argued throughout this article, the combination of powerful push and pull factors will make the old policies to stem BD or reverse it even more ineffective than they were in the past. In addition, although remittances are very useful for families that are blessed with migrant relatives, their overall benefits for migrant sending countries cannot offset the negative consequences of losing the best and brightest human capital, “the key pillars of long-term development” (Kapur & McHale, 2005). The sad fact that far too many talented Africans succumb to the many pressures to leave their homelands and very few are chosen to work in their areas of expertise compounds the magnitude of BW.

In order to prepare countries, regions and the international community to face the challenges of growing and complex migration fluxes, the

latest World Migration Report (IOM, 2010) advocates for building capacities to engage the diaspora in development of their countries of origin. This is consistent with the main argument developed throughout this article. Taking advantage of the potential of DE to foster BC would be a far more sustainable way of mitigating the fallouts of BD than remittances inflows, given their limited impact on overall economic development of migrants sending countries discussed earlier and their vulnerability to the caprices of the global economic climate (IOM 2010). The potential of DE to tap into the impressive pool of BW and funnel it back home has been highlighted. Given the lamentable situation of HE institutions in SSA, on the one hand, and the important role they should play in fostering innovation and economic development, on the other hand, they should be the first recipients of the precious expertise flowing from the Diasporas. In order to achieve this, we need to learn from mistakes that have plagued past generations of DE initiatives destined to SSA, namely following rapidly changing technological and ideological trends, the lack of trained professionals who understand the cultural and technological environments in SSA, and the lack of sound research to inform DE policies. Most of these ideas are consistent with Bronfenbrenner’s ecological model (1992). The main tenet of this holistic approach is the recognition that taking care of the complexity of the interactions between the different layers of social systems is one of the most determinant factors in the success of innovations such as technology integration in HE in SSA.

As I argue elsewhere (see Muhirwa, 2009), the bottom line is not to rush to the latest technology, but to adopt whatever technology works best in the particular cultural context in which it is to be integrated. This is also a warrant for sustainability. Given the magnitude of international migration challenges the world will face in the near future, taking advantage of the potential of DE to mitigate the fallout of BD and BW is a novel approach to foster BC that requires critical reflection and multidisciplinary research in order to substantiate it further and make it happen.

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Skills Circulation and the Advent of a New World Order

By Jean-Baptiste MEYER

Abstract

Is the knowledge world organized differently today with respect to yesterday?

At the world level, observers used to highlight the asymmetry between the North and the South, which would shape the unidirectional flows of competence from the former to the latter. The 'center' would attract the brains and human resources in science and technology. Today, by contrast, one tends to stress the greater complexity of flows' directions and the 'circulation' of brains rather than their 'drain'. Some see this trend as making migration contribute to development. Others, in a more skeptical way, argue that the core features of the world have not changed.

This article does not aim at identifying which position is right, but rather at discussing the core arguments in this debate, on the basis of empirical evidence and of the interpretations it can be associated with. The first part analyses the evolution of data over the last decade. The role of diasporas is the object of the part 2, which demonstrates the potential, but not automatic, link between migrants and their country of origin. The third part connects the major transformations of the scientific and technological world with current and future mobility trends; if flows are less unidirectional than before, the social and political conditions in which they take place remains uncertain. In conclusion, the paper argues that the 'circulation' approach to migration, that is now at least a decade old, is going through a new phase and must therefore be reassessed.

Circulation: Increasing Trend with Different Impacts

Considerable progress has been made over the last decade in the statistical measurement of migration, and especially as far as skilled migrants are concerned. But most of the data stems from the same source, namely the 2000 census as analysed by the OECD. By the middle of the 2000 decade, this source offered an exceptionally rich

overview and enabled for the first time general and precise analysis. This is no longer the case, as the 2010 census results are still unavailable and existing data therefore growingly outdated. Recent, but partial, sources of information are necessary to overcome this obstacle. 2000 data clearly indicated a growth of the migration of the highly skilled over the last decade of the 20th century:

	1990		2000		Growth 1990-2000 %
North America	716,742	5.90%	949 566	4.70%	32.5
Europe	4,869,745	39.80%	6 864 409	33.90%	41
Africa	723,907	5.90%	1 372 712	6.80%	89.6
Asia	3,781,331	30.90%	7 002 491	34.60%	85.2
Oceania	220,624	1.80%	379 067	1.90%	71.8
Latin America	1,924,622	15.70%	3 681 800	18.20%	91.3

Table 1. Skilled Migrants in OECD Countries, by Region of Origin 1990-2000

Source: Docquier and Lowell 2008

	2007	estimate	Growth 1990-2007 %
North America	1,112,543	4.30%	55.2
Europe	8,261,164	31.90%	69.7
Africa	1,826,875	7.10%	152.4
Asia	9,256,303	35.80%	144.8
Oceania	489,977	1.90%	122.1
Latin America	4,911,825	19%	155.2

Table 2. Skilled Migrants in OECD countries, by Region of Origin 1990-2007

Source: Lozano and Gandini 2009

A simple extrapolation of these trends until 2007 logically leads to the consolidation of the circular migration phenomenon identified during the previous decade.

Whereas migrants from Europe and North America represented almost half of skilled migrants in 1990, they were less than 40% in 2000 and estimated at only 35% in 2005. The growth in the number of skilled migrants from the South is between 122% and 155%, while it is around 70% and 55% for those from the North.

The estimates post-2000 must however be treated carefully, as this decade has been marked by major events with a strong impact on skilled migration dynamics:

- The Y2K and the crash of the 'dotcom' new economy, which lead to the return of IT workers on a temporary basis in the United States, before and around the turn of the millennium.
- 9/11, 2001 and the restrictions to the entry of foreign students and workers;
- Violent economic and financial crises in some countries (Argentina and Uruguay in 2002 for example) or whole regions (Southern Europe in 2008-2010), which affected labour market in both sending and receiving states.
- The emergence of the so-called 'BRIC' countries (Brazil, Russia, India and China), which are major exporters of skilled workers and students, where sustained growth during

the whole decade has modified migration dynamics.

However, despite these evolutions, available evidence shows that skilled migration remains at high levels.

The large number of foreign students in the US (a major source of migrant workers), for instance, has considerably increased during the 1980s. Despite a mild slowdown during the 1990s, the numbers have widened again throughout the 2000s (Table 3).

This trend is not exclusive to the United States. In Europe, Spain has also met an important growth of its skilled migrants' rates in the last decade. Revealed by a poll led by the Spanish 'National Survey of Immigration' (NSI), these figures are however quite outdated, since they correspond to a period preceding the outbreak of the 2008 crisis. More than a general increase (in absolute terms) of high-skilled migrants, these results also indicate the particular growth of the share of Latin American high-qualified migrants arriving to Spain (Pellegrino et al 2010).

In Asia, a traditional host of skilled migrants like Japan has kept its usually high rates of skilled migration after the turn of the millennium – and even increased it for certain professional categories (chart 1).

Partial but detailed data allow for a more refined analysis of the evolution of certain professional categories, bringing to light a range of new situations. In the case of high-skilled migra-

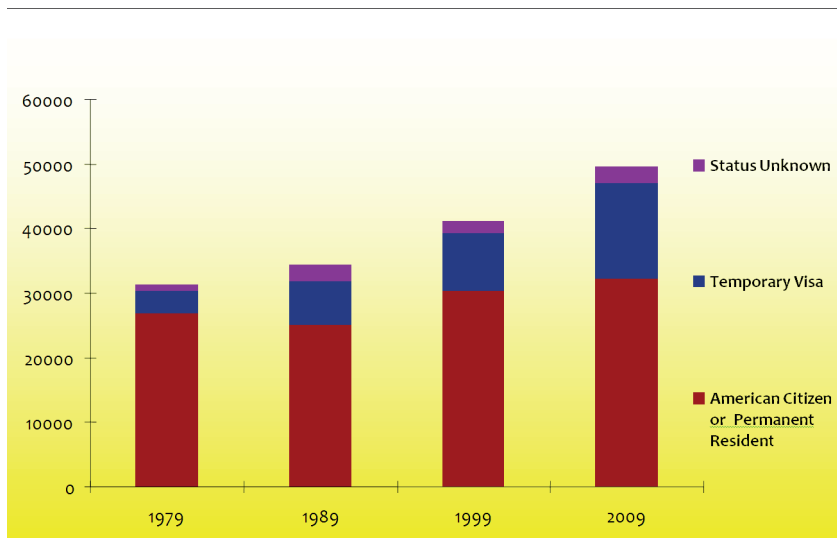


Figure 1: Students in the United States, residence status

Source: NSF/NIH/USED/USDA/NEH/NASA, 2009 Survey of Earned Doctorates, in Luchilo 2011.

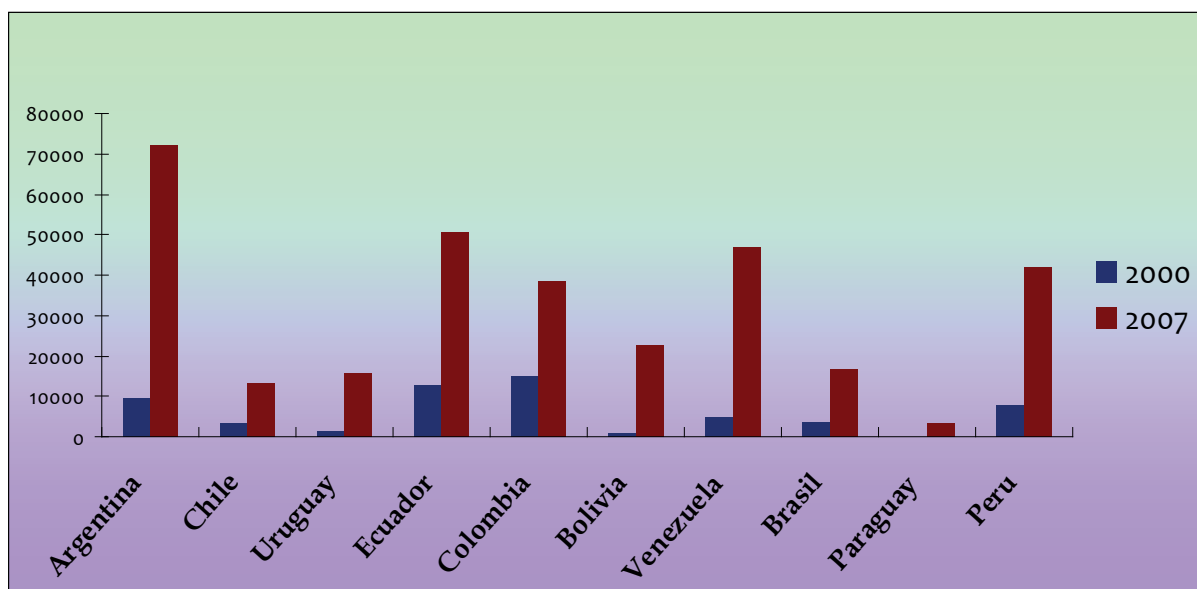


Figure 2: Evolution of South American migrant professionals from 2000 to 2007 in Spain

Source: World Bank survey ENI and 2007, treatment Pellegrino et al.

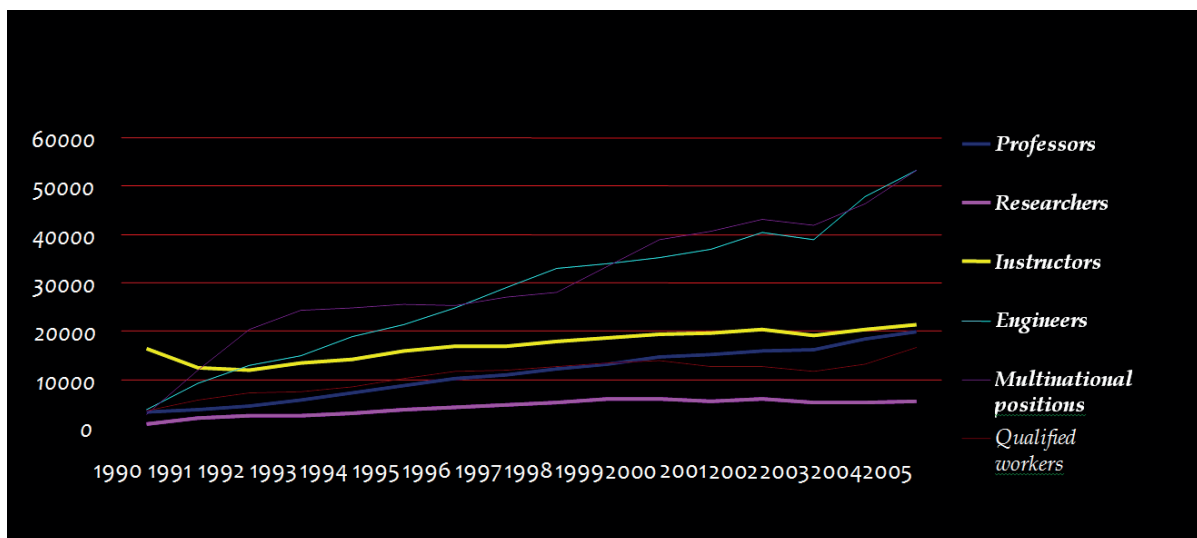


Figure 3: Evolution of entries and visas for foreign professionals in Japan from 1991 to 2005

Source: Statistics Bureau, Japanese Ministry for Internal Affairs and Communications, in NSF, S&E Indicators, 2010

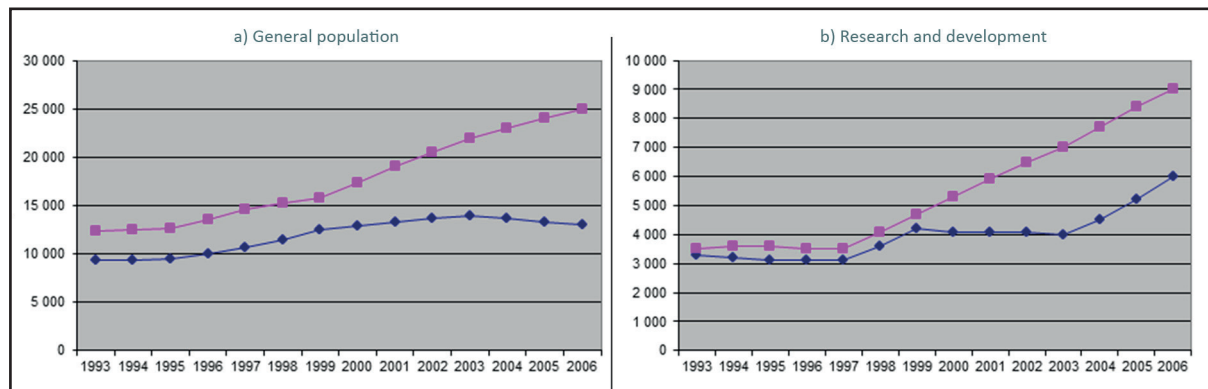


Figure 4: Evolution of high-skilled population from Argentina (blue curve) and Colombia (pink curve) in the United States, from 1993 to 2006

Source: NSF and author's calculation

tion from Argentina and Colombia to the United States, for instance, a careful analysis reveals a more diversified evolution than certain figures suggest at first sight. After a marked increase from the late 1990s until 2004, it is possible to identify a relative stagnation of skilled Argentinian migration after 2004, while skilled Colombians have continued coming to the US. Yet, when looking within the general migrant population, more precisely at the number of individuals engaged in knowledge-creation (i.e., research and development, a sub-category within the high-qualified migrant population), it is noticeable that increasing expatriation continues for both groups (Figure 4a, 4b).

This differentiation between categories of high-qualified individuals is hardly trivial. It indicates in fact that a number of situations should be more carefully interpreted. Revisionist approaches of the brain drain, which claim that the emigration of individuals holding a higher education diploma is a major incentive for human capital formation in developing countries, were in reality based a partial observation.¹ These claims rest on the finding that the expatriation rate of this population is generally low, around 10%. If one in ten individuals who has gone through the higher education system of a given developing country emigrates to another OECD country, the emigration rate is indeed quite modest. And there is little doubt that the

increase in higher education cohorts by age in developing countries has increased considerably – despite these individuals' expectation to emigrate. In this way, Western (developed) countries, which accounted for more than 2/3 of the global student population 40 years ago, accounted for no more than 1/3 in the late 2000s (GED UNESCO 2009). But when one refines the analysis, notably by disaggregating the quite broad population of higher education degree holders, the end result/finding varies considerably. In this way, in Latin America, according to the National Science Foundation (NSF) data, the expatriation rate of people involved in research activities (knowledge creation), compared to other OECD countries, may range from 12% to 48%, depending on analysis/approach used (Figure 3).

OECD databases – including the recent and comprehensive e-DIOC (Dumont, Spielvogel and Widmeier 2010) – do not detail the different ISCED 6 educational categories (graduate and postgraduate) for all home countries. The situation is quite similar for ISCO professions' subcategories. When data is partially available, the comparison with their corresponding populations in the country of origin cannot be consistent. The use of the NSF database for expatriates in the United States and the UNESCO-RICYT database for their fellow citizens back home allows for overcoming this technical limitation. It also allows for going beyond the rough picture offered by the inclusion of a too broad population (Meyer 2011a).

¹ For a review and analysis of this approach and its critics, see Meyer 2010 p 96-97.

Likewise, when one varies the criterion for inclusion in the high-qualified category, the interpretation between the local and expatriate population may also change. For the local population, having 1 in 10 – or even 1 in 5 – of its high-qualified abroad can be a stimulating factor. Yet, if half of them emigrate, it then becomes a quite serious challenge, since it is difficult to ensure a certain sustainable and non-dissipative accumulation in-house skills.

In summary, in recent decades, the mobility of high-skilled individuals has been growing worldwide. Its scale and impact vary widely across countries and categories. Country variations have been detailed in different analyses, which reveal two contrasting scenarios: while big, emerging countries enjoy a relatively modest (high-skilled) circulation, small, isolated and poor countries lose a significant portion of their (already deficient) human resources (Claemens, Docquier and Rapoport 2005, Dumont and Lemaitre 2005). One thing is sure: this mobility, combined with other factors and dynamics, has an impact on the development of countries of origin and destination.

Emergence of a Multipolar World and First Signs of New Movements

In the present debate on the relation between migration and development, the role played by the diasporas is often highlighted (Haas 2007). Their tangible contributions in terms of transfers or investments are sometimes emphasized today but in the past they were questioned due to their paradoxical effects (*Dutch disease*, consumption versus local production, ostentatious vs. creative investment etc.). These financial benefits apart, contributions made by highly qualified expatriates who are part of formal associations or informal networks, through their participation in joint intellectual projects with their home countries are often mentioned. These contributions, which are mainly cognitive and inter personal in nature, can be classified under the heading of “*social remittances*”. Though difficult to measure, their effect on development seems crucial and often neglected (Hujo and Piper 2010). The Indian IT industry and its rise in the world in which the diaspora played a decisive role has been carefully examined (Leclerc and Meyer 2007).

A retrospective analysis of the Indian case shows the intertwining of external as well as internal factors and the importance of trans-

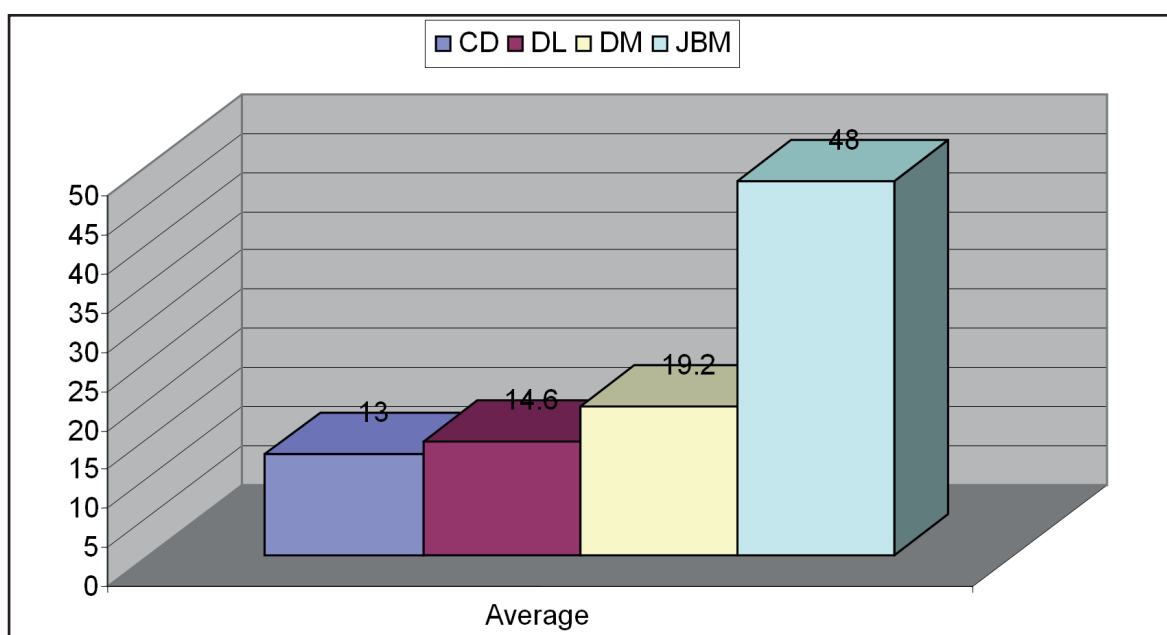


Chart 1: Expatriation rates of qualified personnel in Latin America (2000) in different studies (Carington and Detragiache 1999, Dumont and Lemaitre 2005, Docquier and Marfouk 2005, Meyer 2011a)

Source: OECD, SESTAT and RICYT

national players (diaspora networks, MNCs). It is a unique case, yet not necessarily a model that can be replicated (Pandey and al. 2006). Other emerging countries have adopted different strategies with varying degrees of success. China and its government sponsored programmes that were more voluntary initially, turned out to be less successful in the area of techno-economic innovations to begin with, but thanks to the diaspora, they laid the foundations for a promising academic growth (Meyer 2004, Xiang 2007). This rapid academic growth was soon followed by technological development whereas the Indian academic growth story was more subdued that today it needs government impetus (Mani 2010, Ronping 2010). After much thought, Mexico embarked on efforts to systematically bring together its large and qualified diaspora (Gonzalez Gutierrez 2006). The mobility of its citizens however seems to be totally dictated by the logic of its northern neighbour's labour market. Unlike India, Mexico ends up contributing to the development of its northern neighbour without improving prospects of its own development in a significant and endogenous way (Delgado Wise 2010). Brazil, for its part, feels that its old policy of retaining advanced level students – fearing brain drain – has crossed its limits. It has gravely isolated the country from the happenings in the world and has in some way slowed down present day development (Ramos and Velho 2011). This seems to be corroborated by the slow rate of growth of its technology sector in comparison to other countries or even to its own recent academic growth (de Brito Cruz et Chalmovich 2010).

Moving on from the case of the major emerging countries, the role of transnational networks and diaspora groups (comprising highly qualified expatriates) in development needs to be examined. Hundreds of cases have been recorded and some theoretical lessons seem to have been learned. They show the importance of an improved social environment, aided by mediators, to strengthen the ties between the country of origin and the expatriate communities (Meyer 2011b). In this perspective, incubators favourable to the development of these ties

are demarcated and nurtured². A fact however already stands out: maps featuring the mobility of skills are today being redrawn by the expansion of creative capacities and their multiple connections as well as by the emergence of poles of knowledge production in the south.

Until the end of the 90s, the world of science and technology was represented as a triad, comprising North America, Western Europe and Japan (UNESCO 1998). From the middle of the 2000s, the notion of a quadriad emerged, thanks to the rapid rise of China in the field of S & T (OST 2008). Today, the term most appropriate to describe the prevailing situation seems to be “multipolarity” (Khadria and Meyer 2011, UNESCO 2010, World Bank 2011) for, S & T activities have spread to areas other than those to which they had been confined until recently. In five years, money spent by developing countries on R & D has increased by almost 100% (Hollanders and Soete 2010). Academic production in certain countries is expanding at a fast pace (China, Brazil to a larger extent and India to a lesser extent) whereas in Europe, this rise is less pronounced and in the US it is almost at a stand-still. This is evident from the record of the respective publications of these countries in referenced journals (Cookson 2010, according to a study done by Thomson Reuters). This increase may not as yet be clearly reflected in the global patent numbers (a modest 3 point rise, Hollanders and Soete 2010), but certain indicators take us exactly there (Hepeng 2008, Sri Raman 2009, Le Monde 2010). With its sharp increase in the export of high tech products, Asia has even overtaken the US and many of the North American multinational companies have outsourced their R&D activities to emerging countries (Global Market Institute 2010).

At the same time, when the number of researchers in developed countries increased by 400,000, in the developing countries this number grew by one million. Globally, in five years, the share of the latter increased from less than 30% to close to 40% whereas the share of the con-

² Refer to the project *Création d'Incubateurs des diasporas du savoir pour l'Amérique Latine* : CIDESAL : www.observatoriodiasporas.com

ventional triad countries went down by the same extent. Today, the share of both the groups is likely to be 50:50. There has therefore been a shift in the centre of gravity, which has certainly had an effect on the mobility of people. In fact, some indicators already show that this multipolarity does not favour the moving human resources to concentrate in any one place. Countries where internationally mobile students choose to settle down are also getting diversified. Today, the US is getting only one out of every five foreign students, whereas 20 years ago, this figure stood at one out of three. Nevertheless, their total number has considerably increased. The share of France, Germany and the UK has remained static or has declined whereas that of Australia, South Korea, New Zealand, South Africa and China has witnessed a sharp increase (Khadria and Meyer 2011).

In the case of professionals, the emergence of new poles of attraction is similarly noticeable. In China, the 100 Talents programme which has already brought back to the country 2000 senior researchers concluded with a call made to 1500 foreign project heads (Zighuo 2009). The temporary mobility of scientists between China and the rest of the world declined in the last few years of the 2000s: more researchers go to China than Chinese who go abroad (Ronping 2010, p 296). Without cutting down on its own flow of professionals and students to other parts of the world, China seems to be the favourite destination of more and more knowledge carriers and such mobilities strengthen its relations with its neighbours and others (Su Yan 2010). This phenomenon is not restricted to China alone; it is also clearly visible in Brazil. Having been the magnet of attraction of Latino-American students and researchers for more than a decade now, Brazil has cast its net far and wide to draw a growing contingent from Europe (Nunes and Battista 2011, Khadria and Meyer 2011). At the same time, other Latino-American countries in the southern cone like Argentina, Chile and Uruguay witness a wave of students and researchers returning to their respective countries under the cover of the financial crisis in Europe and the economic recovery in this part of the world.

It is too early to work out a complete pattern for these new circulations. But the multifold increase in the availability of information leads us to imagine that the phenomenon is widespread and not restricted to the major emerging countries alone. Morocco for example, which has for a long time now been sending a large chunk of its internationally mobile students to France, is of late witnessing a decline in the number of its Ph.D. students going there (Campus France 2011), whereas new Asian destinations (China and even Korea, India and Malaysia) are emerging and Canada's share has been increasing considerably (Harakat 2011). At the same time, this country (Morocco) has been receiving students from Sub Saharan Africa (Berriane 2009), particularly for professional training in private institutions. Hundreds of these students get scholarships from the kingdom and many others come with their own means. Such a large number of students from many different countries go to Morocco that local observers are being told that no African country is left unrepresented in this melting pot of nationalities seen on Moroccan campuses.

How can these changes be interpreted? As changes that have taken place in the power relationship based on science and technology as much as in the resultant new mobility of people?

Some authors are of the opinion that international division of scientific labour is governed by a subordinate integration process (Kreimer and Zabala 2007, Losego and Arvanitis 2008). Scientific knowledge is concentrated in big laboratories in a few privileged places. These places garner human capital and substantial material in such a way that they become centres of accumulation and reproduction of cognitive resources. Mobilities make these star referral centres shine by disseminating scientific practices, experimental procedures and research topics far and wide, thereby keeping the interests of the main laboratories alive. Researchers who return to their countries of origin after being trained in these places are endowed with special knowledge bearing these interests and are the best agents who can make this scientific achievement touch a wider base. Laboratories that adopt them on

their return home become subsidiaries of the laboratories that trained them and they willingly become subcontracting agents of the latter.

This pattern was best suited to describe the situation that prevailed under the triad, when big public laboratories organized their work around a relatively homogenous and geographically well-defined scientific field. Will subordinate integration still hold if this field explodes institutionally and spatially, with new players coming from all over? It may even increase, claim some people who have a paroxysmal view of immaterial economics (Zacchary 2008). The US would delegate the end activities of production – scientific and technical innovations – to emerging countries so that it would be in a position to concentrate on delivering preliminary services (finance, management, marketing, trade). Outsourcing R&D work that is knowledge intensive and has high added value to areas that have qualified people will bring down costs...and will ease recourse to talents brought in from outside since the US will no longer need them.

This extreme view is not corroborated by empirical data. It obviously contradicts the trends that have been observed with regard to growth and sharp increase in mobility (refer to first part). The major developed regions receive an increasing number of skilled workers from outside even though their share in this international and intercontinental movement shows a rapid dip. Besides, the scientific and technical policies in these areas always favour investments in knowledge (UNESCO 2010).

In fact, in this multifold increase in places of innovation across the world, mobilities are perceived to be creators of networks. They propel their activities and indispensable exchanges and are encouraged so that constantly evolving sectors can be uplifted. This mobility paradigm therefore acts as a positive reference to explain for example the productive collaborations brought about by the student migrations between China and Australia (Turpin et al. 2010). Seen from a different point of view, it advocates an increased opening to Brazilian university agencies obsessed with brain drain and to laboratories criticized for retaining their students, so as to put an end to

mind numbing parochialism (Balbachevsky 2009, Ramos and Velho 2011).

We look at mobility today in a positive light because it is perceived to be a cosmopolitan science naturally sustained by the largest possible cross fertilization. At the same time, it definitely brings hope of a better globalization – with the help of a knowledge based society – which can serve as a universal base for development. However, some implications of this widespread movement of highly qualified people across the world are already visible and need to be examined carefully.

First of all, though widespread, this movement does not innervate all parts of the globe in the same way. It is strongest in the least developed countries but at the same time, accumulations that happen in other developing countries do not seem to take place here (see part 1 and Dickson 2009). Apart from this unequal international distribution of the fruits of dissemination brought about by mobility, its dynamics need to be questioned. These movements sustain a higher number of poles but always poles with high concentrations that are not located within the borders of high density *clusters* and its effects at the local level are not obvious (Meyer 2004, Kreimer and Meyer 2008). The danger that a group of interconnected hubs may prevail at the expense of a second rung of entities is always there. Terms like centres or poles of excellence, “*world class universities*”, preparation of categories and lists based on their ranking are not simply innocent acts of classification. They show a new, rather transnational polarization with scope for exclusions, which will shape the new migratory flows. A study of radial and transversal mobilities will offer a lot of scope for future research because studies till now have only focused on important cities in the world or science and technology parks (Saxenian 2006). This will bring to light the effects of redistribution or new mobilities as well as the conditions that favour this.

Besides, the widespread movement of skills and their overall increased availability make the conditions in which they happen more commonplace, at least in some aspects. The advantages and privileges that are normally associated with

the status of an expatriate are on the decline in companies that give employment. Since the beginning of the 2000s, international management consultant firms suggest reducing allowances, packages and other compensations usually linked to mobility. These are more modest now and the possibility of taking recourse to well qualified local personnel as substitutes (often thanks to their training abroad) is being examined by MNCs to cut costs linked to salaries (Joerres 2011).

The qualifications of a migrant do not seem to count any more when it comes to employment or job position. Many detailed studies carried out for Latino-Americans in the North American and Spanish labour market show that persons who hold degrees in higher education are not shielded from unemployment, under employment or disqualification and inadequate incomes (Lozano and Gandini 2010; Koolhaas, Fiori and Pellegrino 2011). The social condition of mobile professionals should no longer be considered a natural advantage and the very notion of elite – often used in an acritical manner – should be questioned. Some recent studies have tried to break down this all-encompassing population and classify them under different categories (Luchilo 2011, pp. 10-11) : executives and heads who are frequent travellers; technicians and engineers, “economy class travellers”; scientists and academicians of different standing depending on their reputation and that of their institutions; entrepreneurs/explorers and students, temporary and sometimes short-term visitors. Knowledge workers belonging to different professions are hardly immune to the levelling down of their living conditions and mobility. Today it is important to document these new categories and stay away from elitist presuppositions related to a migrating population, for the very rough statistical categories had kept us in the dark about the numerous divisions.

In a general way, when it comes to analysing the movements of qualified persons, questions about social sustainable development have to be raised. Is the present movement of knowledge and of people credited with this knowledge headed towards a global cross fertilization with

multiple, shared, distributed, accumulative and reproducible spin-offs? Or is it happening in a segmented space, controlled by rival, unstable and dissipative appropriations?

The innovation processes that show an upward climb are certainly worrying observers who feel that the fast pace of the market is potentially harmful, particularly taking into account the long time over which this research has been done (Hollanders and Soete 2010). Intense and widespread movement of knowledge workers is not exempt from similar risks either. Socialisation of skills is indispensable as this is what enables them to contribute to the economies and to the environments in which they are trying to integrate. The logic of a qualified international labour market can interfere with that of the constitution and the implanting of a knowledge community in a social space. It is one of the fundamental stakes of mode IV of the agreement on trade and services (Panizzon 2010), still being discussed by the WTO members, which will control – through the economy – the global management of the mobility of professionals, as an immediate and automatic response to signs from the market.

Conclusion

Everything leads us to believe that the mobility of skills is escalating and gaining pace today. We have entered the second phase of widespread circulation. The first was the convergence phase. Less developed countries have managed to embark on a process of catching up with knowledge intensive economies, thanks particularly to the dissemination of knowledge creation capacities via their diasporas.

These developments – that have resulted from migrations, among other things have changed the conditions of dual planetary asymmetry that used to shape mobilities. This differential of conditions and capacities is no longer the sole trigger for global mobility. Though it is partially true for many countries, it has become much more complex. New attractive poles are emerging and exchanges on the basis of complementarity and parity are increasing. This is a new phase, characterised by multipolar interdependence. It holds crucial stakes for sustainable develop-

ment. The first one relates to individual players whose movement should not just be a unilateral submission to professional pressures in unfavourable conditions. The second one relates to all kinds of groups, which try to construct endogenous development capacities over a period of time and whose efforts can be sustained or arrested depending on the forms these movements take. Migratory, educational, social, economic, scientific and technical policies should all respond to these stakes in a well-coordinated way after evaluating them. Mobility has not radically changed the latter; it has on the contrary modified their context and response conditions, calling for more cooperation and less belief in a universal plan.

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Winners and Losers in the Mobility of Teachers in the Pacific Region: Issues and Policy Debates

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Abstract

The focus of much high skilled migration research has tended to be on health and IT professionals. This chapter addresses the mobility of school teachers in a geographic region that has received little attention, the Pacific. Unlike the Caribbean Islands and South Africa, the Pacific has not been the focus of much research into the demographic, economic and geographic factors impacting mobility, nor into the social, economic and demographic consequences of mobility.

Given the teacher shortages that are occurring in many industrialised countries on the Pacific Rim, (including Australia, New Zealand, Canada and the US) and the tailoring of immigration and long term visitor policies to attract highly skilled workers in areas of shortage, the Pacific could be affected. The article demonstrates that of three countries studied as part of a comparative project, only Fiji has been losing teachers to an extent that has been harmful to the country's education system. Most mobility has been related to political events but, nevertheless, the negative consequences are a matter for concern. Australia has benefited from the immigration of highly skilled Fijian teachers and its aid policies could be used as one way of addressing the loss of skilled human resources from Fiji. This could alleviate some of the tension and go some way towards meeting the demands for compensation. Many of the debates surrounding skilled migration and brain drain are investigated in relation to Fiji where political instability makes this an even more interesting case to examine.

On the other hand, the Cook Islands and Vanuatu experience low levels of international teacher emigration and this situation will remain as long as many of their teachers continue to be trained to levels that are not acceptable in the labour markets of industrialised countries. This has mainly been a matter of a shortage of resources rather than a deliberate policy of 'under-training'. If an upgrading of training does occur, however, the situation could change. This introduces a dilemma for these countries as they strive to upgrade qualifications and skills, as per the Millennium Development Goals, but seek to retain their own teachers.

Key words: Australia and teacher mobility, Pacific Islands teacher mobility, brain drain and development.

I. Introduction

There is a long history of migration in the Pacific region. This has continued to the present day in many places as people relocate, both internally and internationally, for a variety of economic, social, political and environmental reasons. On the Pacific Rim, both Australia and New Zealand have been tailoring their immigration policies

in recent years to attract even more high skilled migrants than before. School teachers have been in relative shortage in both Australia and New Zealand for many years and the aim is to investigate whether the Pacific has been a source of supply. Unlike medicine and nursing, the teaching profession has received little attention.

The use of immigration as a tool for filling labour market shortages has been widespread for a long time. More recently, the focus has shifted to more highly skilled migration for the following policy reasons: (1) as a means of filling cyclical or ongoing gaps, and (2) to improve the stock of human capital and/or obtain new/better expertise. The OECD lists a third policy objective for OECD countries, which is (3) to encourage the circulation of the knowledge embodied in highly skilled workers and promote innovation (OECD, 2002: 9) but the latter probably applies less in relation to teaching than it does to science and technology, medicine, IT and other professional areas.

The definition and measurement of shortages is extremely problematic and is itself the subject of much debate. It is sufficient to say here, however, that general teacher shortages have existed in Australia but have now largely been confined to specific subject areas and/or to particular geographic locations. Over time there have been both overt and covert attempts to recruit or encourage teachers to come to Australia. This paper examines the levels of recruitment and migration of teachers, especially from the Pacific. Australian immigration and census data were examined and, in 2005, and a sample of 33 Fijian teachers located in Sydney were interviewed.

Three countries were chosen for this study in the Pacific¹: the Cook Islands, the Fiji Islands and Vanuatu. They were chosen for specific reasons to do with their level of out-migration and their historical and cultural links to metropolitan countries. Two of these three Pacific Island Countries (PICs) have experienced considerable rates of emigration. Cook Islanders are New Zealand citizens, with full work and residence rights in New Zealand and this has resulted in a situation where more Cook Islanders live in New Zealand than in their island home. Fiji has also experienced high rates of out-migration. Chandra (2003: 5) estimated that the total number of emigrants from Fiji since Independence in 1970 might be as high as 180,000 persons, which was almost 20% of

Fiji's 2007 population of some 850,000. Approximately 90% of migrants are Indo-Fijians, leaving Fiji for reasons of political instability, the unresolved land issue and economic measures as a result of which they felt discriminated against. Most have resettled in the developed Pacific Rim countries. However, recent years have witnessed an increasing number of Indigenous Fijian emigrants as well (Voigt-Graf, 2006). Many have migrated to Australia and New Zealand under the skill and family reunion migration streams. Vanuatu has experienced much less out-migration. After Independence in 1980, colonial links with the United Kingdom and France did not lead to major movements to either of these countries but there has been some movement to Fiji, Australia, New Zealand and the US.

(1) Background

Skilled migration represents a rapidly growing and increasingly substantial component of global migration but there has, overall, been very little research into skilled migration in the region, with the exception of research on health worker migration (Connell, 2004, 2008). The absence of reliable statistical data on emigration and immigration by skill level, age, sex, etc, has hampered demographic analyses.

Interest in migration and development throughout the Pacific has usually focused on less skilled migration flows. Scholars (Brown, 1997; Connell and Brown, 2005), often from Pacific Rim countries, have analysed the development and other impacts of remittances in countries such as Samoa, Tonga, Kiribati, etc. and this information has been fed through to governments. Some have seen temporary migration programs, and the remittances sent, as a solution to problems of lack of employment, declining agricultural outputs, poverty and worsening environmental conditions. In fact, the MIRAB (Migration, Remittances, Aid and Bureaucracy) model that was first developed in the 1980s to 'explain economic processes in New Zealand's sphere of influence in the Pacific islands' argued that development patterns in the Pacific, based on migration generating remittances and aid financing local bureaucracies, were durable and sustainable

¹ This study was funded by the Australian Research Council from 2004 to 2007.

(Bertram and Waters, 1985). In contrast to PICs in New Zealand's sphere of influence, few migration opportunities existed for low skilled workers from other parts of the Pacific and virtually none for Melanesians.

New Zealand responded to this with the introduction of a pilot scheme for the seasonal employment of workers in the horticulture and viticulture industries from some PICs in April 2007. The "Recognized Seasonal Employer" (RSE) scheme initially allowed up to 5,000 seasonal workers to come to New Zealand per annum for a maximum of seven months per 11 month period to work in the horticulture and viticulture industries. The cap was raised to 8,000 workers in October 2008. Preference is given to workers from Pacific Island Forum countries (with the exception of Fiji), with Kiribati, Samoa, Tonga, Tuvalu, and Vanuatu selected for special "kick-start" status which entailed deliberate efforts to launch the scheme and recruit in these countries. Australia followed suit and announced the Pacific Seasonal Worker Pilot Scheme (PSWPS) which commenced in November 2008 and will run for three years. The Australian Government has already signed memoranda of understanding (MOUs) with the Governments of Vanuatu, Tonga and Kiribati. The Australian pilot is structured into two main phases. Under phase one, up to 100 visas were made available for workers from Tonga, Vanuatu and Kiribati. For phase two, which began in July 2009 and finishes in June 2012, up to 2,400 visas have been made available. The scheme has not yet been reviewed for its success in aiding development at home and providing workers to Australian farms. However, only very few seasonal workers have so far arrived in Australia under the PSWPS.

In PICs, skilled migrants seem to have comprised a relatively small proportion of migration outflows. In Fiji, the country with the greatest level of emigration of skilled human resources, 8,700 of the officially recorded 75,800 emigrants (11.5%) between 1987 and 2001 were categorised as professionals (Fiji Bureau of Statistics, various years). Official data may have underestimated the full extent of highly skilled migration, but it is generally thought that the proportion

of highly skilled migrants has been low in the Pacific compared to other regions, such as the Caribbean (e.g. Thomas-Hope, 2002). Data of the occupation or skill level of migrants are no longer available for Fiji and have never been available for the Cook Islands or Vanuatu.

Notwithstanding these low levels of skilled emigration, the literature on skilled migration often points to the seriousness of the loss of human resources for some source countries (Wickramasekara, 2003:1). In these instances, source countries are 'robbed' of a proportion of their most highly qualified and innovative people. This frequently leads to a reduced quality of services, including essential services of health and education. Moreover, most Governments subsidise at least part of their citizens' education, resulting in a financial loss to the source country if skilled people migrate overseas and do not return permanently, temporarily or virtually (through collaboration, etc.).

In this context, the impact of Australia's migration policies on the three selected PICs will be examined. The aim is to understand the attitudes and processes at work in order to see if there are winners and losers in the region in relation to teacher mobility.

Australian teacher mobility

B. (a) 1945 to 1992-93

From the end of World War II to 1970, 42,050 teachers (at all levels) came to settle in Australia as part of the post-war recruitment campaigns, firstly from the UK with the USA and Canada later becoming important source countries. The end of the White Australia Policy in 1966 saw the arrival of around 350 'well-qualified, non-European' teachers between 1966 and 1970. At the same time, however, many Australian teachers left to work overseas. By the mid-1970s a situation of oversupply had developed and the large-scale recruitment of teachers ceased, though some temporary recruitment continued from Japan, UK, USA and France. From the mid-1980s, however, there was a renewed influx of teachers as part of the regular permanent migration program, in spite of a general situation of oversupply. More teachers began arriving from non-English

speaking countries and by 1992-93 Non-English Speaking Background (NESB) teachers comprised 87% of teacher arrivals (Inglis and Philps, 1995: 13). Teachers increasingly came from the Asia Pacific region — Hong Kong, Malaysia, India, China and Fiji — reflecting the overall change in the immigration intake pattern. Teacher arrivals from New Zealand, on the other hand, declined during the late 1980s, which probably reflected improved opportunities for them at home.

Some teachers benefited from the selection points system that was at work in Australia by then — as they possessed tertiary qualifications and had good English skills. Points were awarded for education, qualifications, English language ability, age, etc. and only people who reached a defined score were accepted. Others entered under other migration categories, especially family reunion and humanitarian, while some ‘newly important source countries ... have education systems closely modelled on the British patterns followed in Australia and make extensive use of English, others, such as Egypt and Yugosla-

via, do not’ (Inglis and Philps, 1995: 13-14). Consequently, many teachers were unable to return to work as teachers in Australia.

(b) mid-1990s to 2005

The Australian selection points system was continually refined throughout the 1990s to attract teachers. Teachers also continued to arrive under other migration categories. After 2000, the pre-migration recognition of qualifications became mandatory, in order to gain points for a tertiary teaching qualification. Australia also experienced a significant outflow of teachers. Figure 1 shows teacher settler arrivals, the net flow of employed resident teachers from Australia and the net movement of teachers under the long-term temporary residents program.

The loss of residents employed as teachers is very dramatic and from 1998-99 to 2004-05 averaged 2,459 per year. Hugo *et al.* (2003: 35) found that Australian-born departures and long-term departures of Australian residents to the United Arab Emirates both show a female dominance

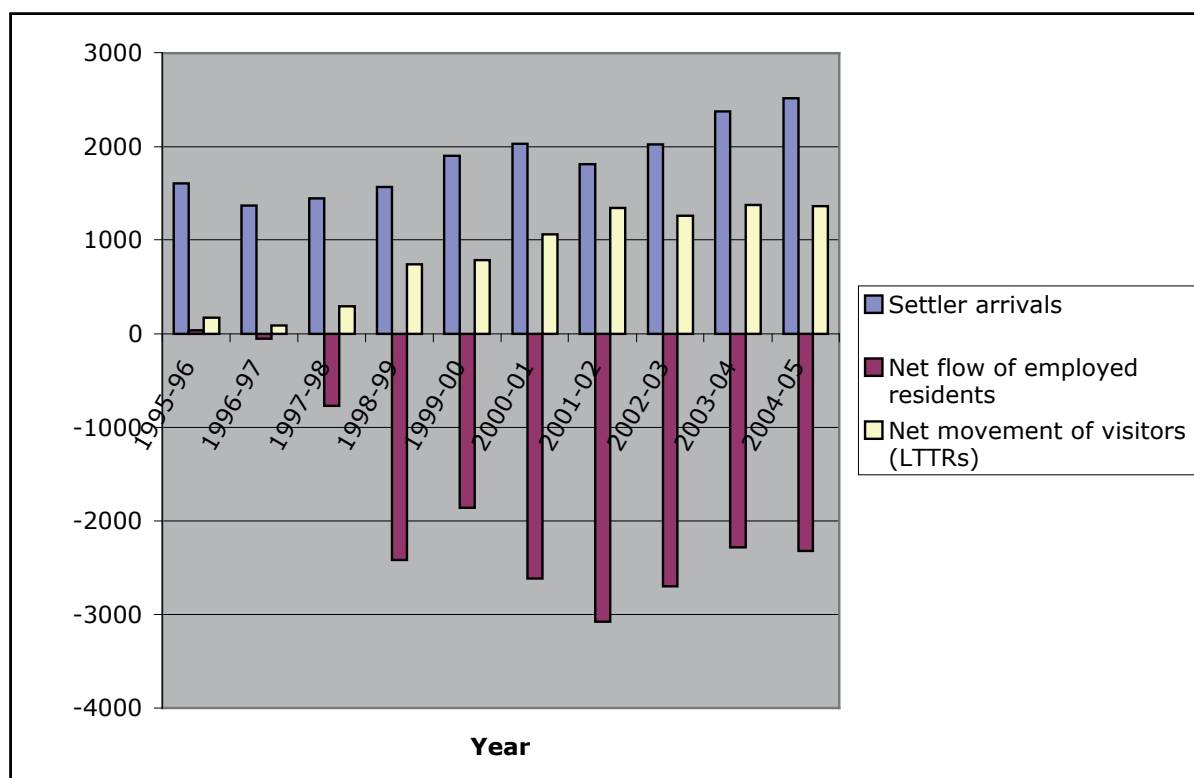


Figure 1. Teachers — settler arrivals, net flow of employed residents to and from Australia and net long-term visitor movements, 1995-96 to 2004-05

Source: Data from Birrell *et al.*, 2006, 20.

because of the flow of Australian nurses and teachers.

Coinciding with the loss of residents was an increase in the number of people issued with 457-visas under the four-year, long-term temporary resident program. Consequently, the net annual intake of teachers, including some working holiday-makers, averaged 1,281 in 2000-01. These people were sponsored by employers and did not go through the same formal pre-migration recognition processes as settler arrivals. At the end of their time in Australia, 457-visa holders could apply to convert to permanent residence, obtain another 457-visa or depart.

Clearly in 1995-96, the flows were mostly in favour of Australia but from 1997-98 Australian teachers demonstrated a net offshore flow. This reached a maximum in 2001-02 but remained over 2000 per year after 1998-99. Over the 10 years from 1995-96, there was a total net gain of 9,065 teachers to Australia from migration, i.e. 907 per year on average. In a total workforce of

305,000, this is a relatively small average net gain (0.3% of the total workforce). Vacancies continue to exist in specific areas, mostly secondary teachers in science, math, technology and social sciences.

There was a major decline in the net inflow into Australia from 1995-96 to a small net loss in 1998-99. There was some recovery in 1999-00 and 2000-01 but almost zero inflow of teachers in 2001-02. Since then, there has been a steady rise in the net inflow to 1,555 in 2004-05. Figure 2 shows the total net flow of teachers to Australia from all these components.

For the two years 2003-04 and 2004-05, Figure 3 shows the net gain of teachers from various regions of the world. Clearly S and SE Asia have become major contributors, followed by the UK, Ireland and South Africa. Figure 3 shows that the Pacific region contributed very few teachers and in fact gained teachers from Australia during this period, with the exception of Fiji. These are migration data and do not mean that these people were necessarily employed as teachers in

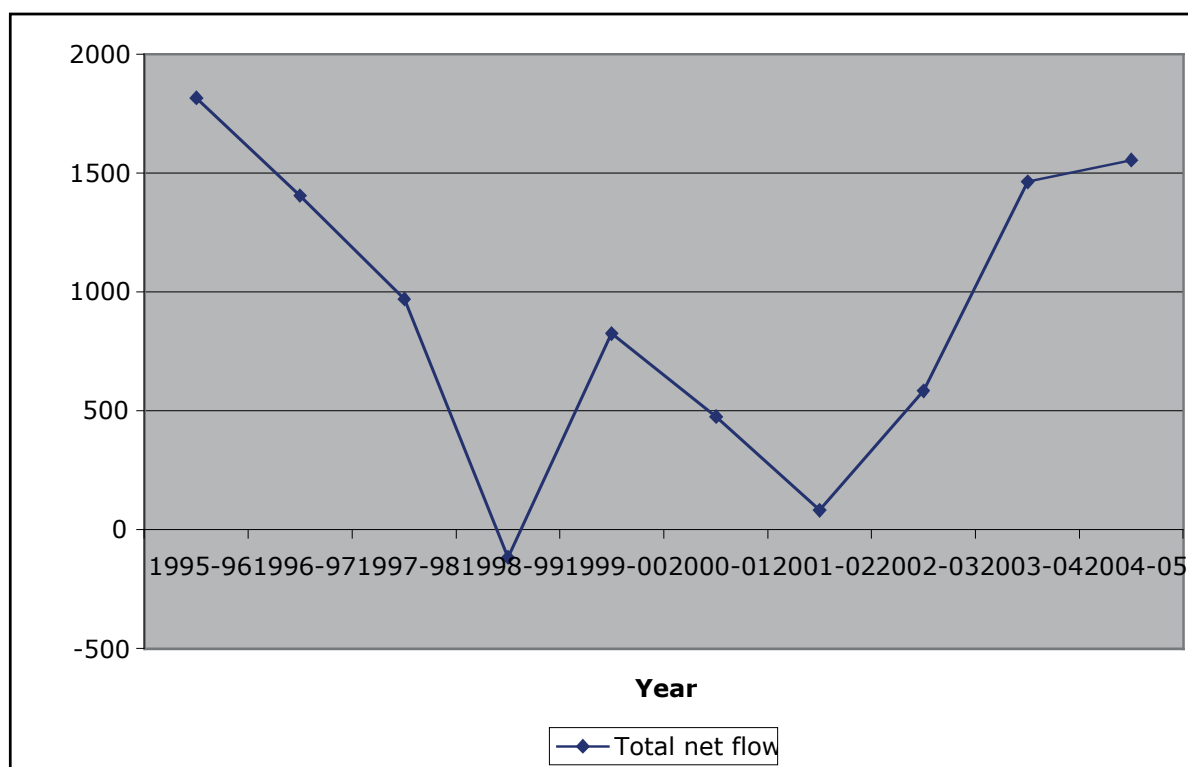


Figure 2. Net flow of all school teachers to Australia, 1995-96 to 2004-05

Source: Data from Birrell *et al.*, 2006, 20.

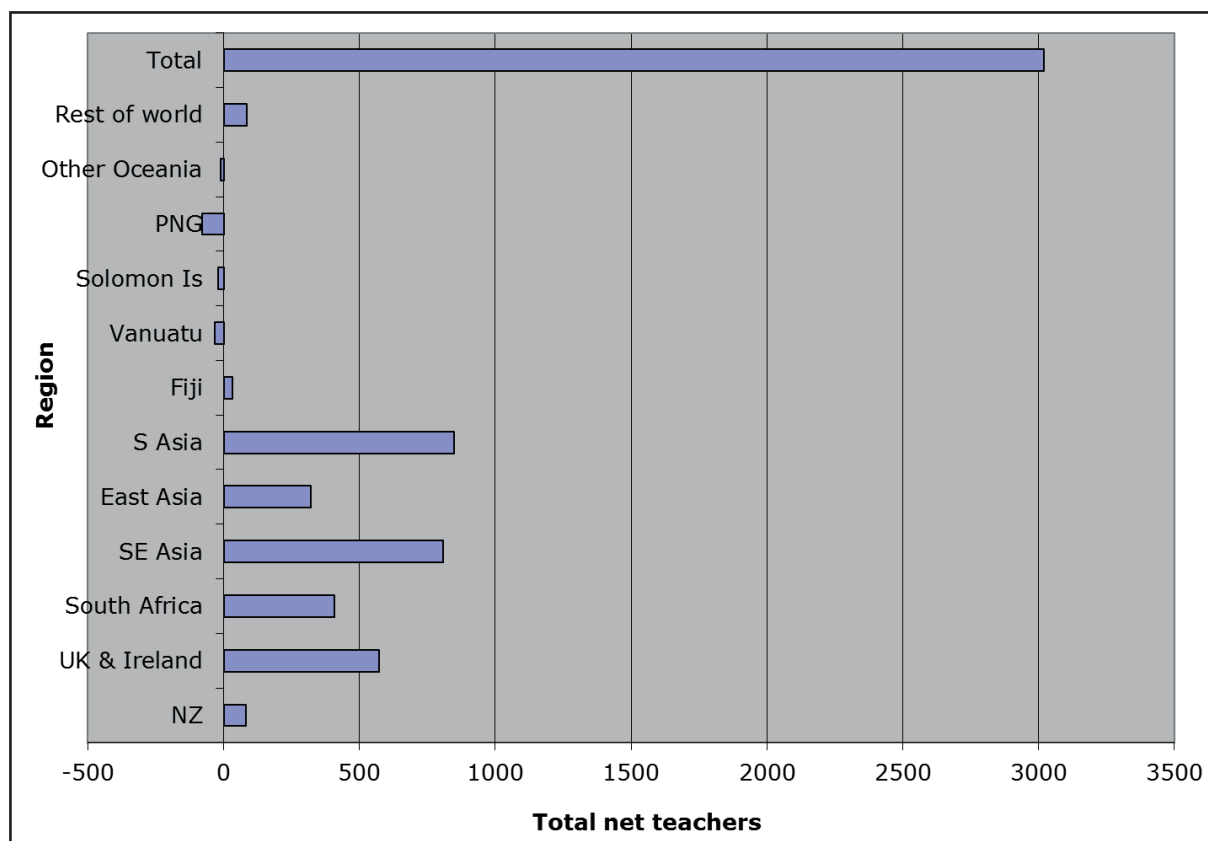


Figure 3. Net gain to Australia of all teachers by source region, 2003-05

Source: Data from Birrell *et al.*, 2004 and 2006.

Australia — they merely stated this as their occupation on the arrival card.

There is a history of Fijian teacher migration to Australia. Prior to 1971, 85 teachers were recorded as having arrived in Australia from Fiji (Inglis and Philps, 1995: 21). Numbers continued to be low in the early 1980s but there was a sharp increase from 1985 to 1988-89, over the period of Fiji's first military coup in 1987. By 1997-98, settler arrivals were only part of the intake, as Australian residents also returned and visitors arrived in Australia.

Figure 4 shows that in 1997-2000 permanent settler arrivals from Fiji were the major part of the intake of Fijian teacher arrivals in Australia. Returning Australian residents and visitor arrivals were much smaller in number. In 2000-03, the number of settler arrivals from Fiji was reduced slightly while visitor arrivals reduced dramatically. The numbers continued to drop in 2003-05, except for visitor arrivals, which increased slightly. Teachers from other parts of the world

are an important component of Australia's temporary skilled migration visa, the 457-visa, but this is not the case for Fiji.²

Figure 4 shows that resident and visitor departures both dropped markedly in 2000-03 but increased again in 2003-05. Once the departure of residents and visitors is taken into account, the net inflow from Fiji amounted to 384: 171 for the period 1997-2000, 182 in 2000-03 and 31 in 2003-05. The volatility is more a reflection of the political situation in Fiji than Australian hiring policies.

Some of the reasons for the low level of teacher migration from PICs to Australia in the past need to be explored. Inglis and Philps (1995: 22-3) found that only half (53.2%) of the 233 Fijian teachers who arrived between 1986 and 1991 were employed as teachers at the time of

² The inflow of 457-visa holders has increased so that the net annual intake of teachers, including some working holiday-makers, averaged 1,281 from 2000-01.

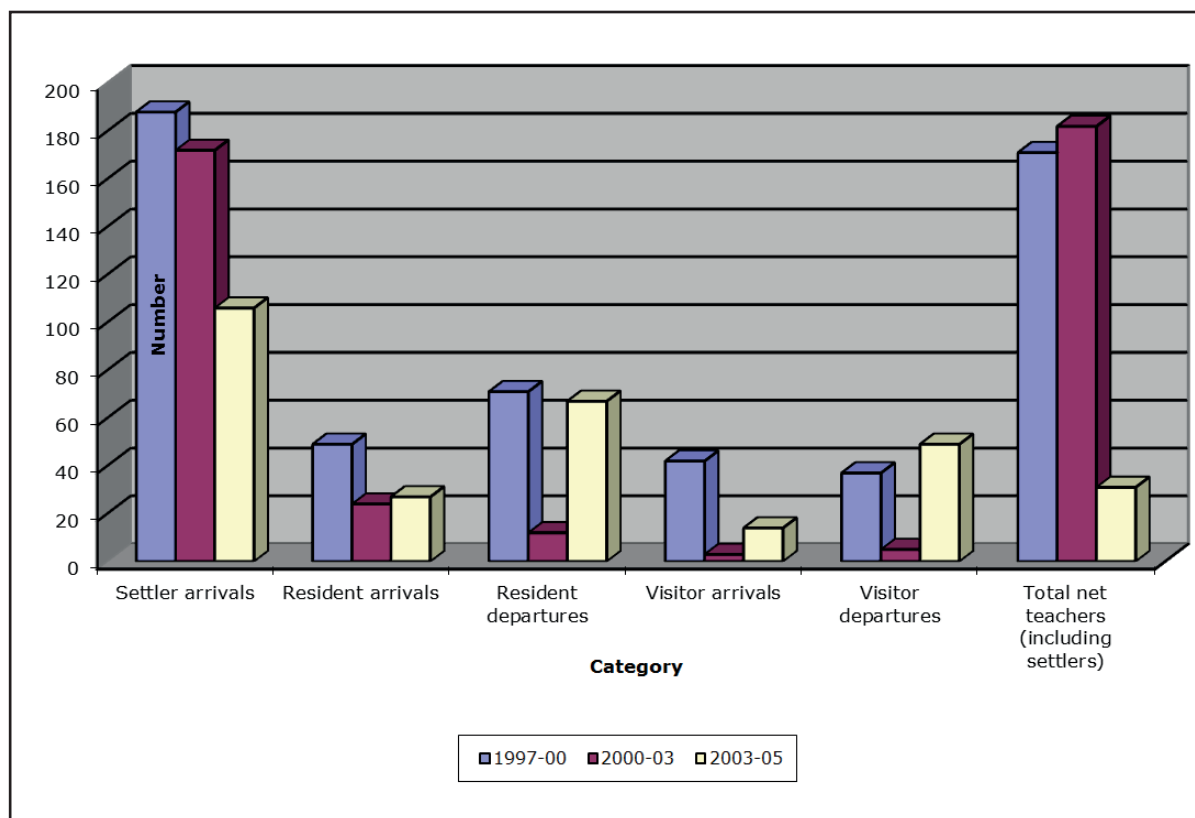


Figure 4. All Fiji teacher arrivals and departures, Australia, 1997-05

Source: Birrell et al., 2001, 2004, 2006.

the 1991 census. This rate is lower than the rate of 100% for the main English speaking (MES) countries but higher than for comparable countries where English is also widely spoken but which are defined as non-English speaking background (NESB) countries: India (34.8%), Malaysia (38.7%), Oceania (32.1%) and the Philippines (46.1%). Total NESB countries had an employment success rate of 45.9%.

According to one government key informant:

Pacific Islander teachers face several challenges when migrating to Australia and very few of them end up in the teaching profession. Those without a University of the South Pacific qualification who only went to a teaching training college do not get their qualifications recognised. Language is another hurdle. Moreover, most migrants have to quickly find employment and start earning money to pay their bills. Hence, many take manual jobs which are easy and quick to find and get stuck there, never getting around to joining the teaching force again. (NSW Department of Education and Training, Personal Interview, 2004)

Australian Bureau of Statistics census data for 2001 were used to calculate 'rates of return to the occupation of teaching' for people born in Fiji, who arrived in Australia between 1996 and 2001 (ABS, 2005). These data show a return to teaching rate of 80%, which indicates a marked improvement over the 1991 figure. This is perhaps a reflection of the improvement in training at USP and the recent widespread acceptance of USP teaching degrees in Australia. It means that Fijians or others with USP qualifications can qualify to teach in Australia.

In order to explore the integration of teachers from Fiji in Australia further, a sample survey of 33 teachers was conducted in Sydney in 2006. All 33 were employed as secondary teachers: three Indigenous Fijian teachers were in the social sciences and all were permanent employees. Thirty Indo-Fijians were spread across English, history, science, math, social sciences, technology and applied studies, with 26 permanently and four casually employed. Most people had sought

information about jobs before they came to Australia and only four had not. The most important sources of information were friends and relatives and 12 people had made earlier trips to Australia before they migrated. Only two Indo-Fijians had been offered a job before they came—they were employer nominations (under 457-visas) and had had their fares paid. In terms of finding teaching employment once in Australia, most found their first job in Australia without the assistance of anyone else, friends and relatives helped some, 17 used newspapers to look for jobs and four approached employers directly. Only seven had had non-teaching jobs since they arrived in Australia, which indicates reasonably quick integration into the teaching workforce.

Most Fijian teachers interviewed were happy with the availability of resources and facilities; good intra-staff relationships and less hierarchy than in Fiji; good working conditions, including hours of work and pay. The overwhelming majority indicated that the availability of resources and student-based learning, the scope for professional development and greater freedom in teaching made teaching better in Australia than where they had been before. None of them intended to move to a third country but two Indo-Fijians were uncertain about whether they would return to Fiji in the future. The remaining 31 people said they would not return. When asked about the changes that would need to occur to lead them to change their minds, some said 'nothing would change their mind' whereas for most 'an improvement in the political circumstances and in racial harmony' could influence them. In response to a question about why they wanted to remain in Australia, the strongest reasons given were 'have a good job and satisfactory income', 'good health care', 'schools are good/education availability' and 'children settled here'. In short, individual Fijian teachers and their families have been clear beneficiaries of migration to Australia and would return home only when the social and political situations improved markedly.

In order to understand this Fijian migration flow better, and why Cook Islander and Ni-Vanuatu teachers have not followed the same path, fieldwork was conducted in these three PICs.

Two of the three countries currently experience low levels of international teacher mobility and the reasons for this will be explored. Fiji's recent and possible future teacher mobility trends, and skilled migration trends more generally, will be examined.

International teacher mobility in three Pacific Island Countries

For the research study on which this paper is based, the method consisted of selecting 12 schools in the Cook Islands, 28 in Fiji and 21 in Vanuatu with the assistance of Ministries of Education. Questionnaires were distributed to all teachers and completed anonymous questionnaires were dropped into a box or collected by the principals. In-depth interviews were conducted with all principals/head teachers in the selected schools, with other key informants and with recent graduates and teacher trainees. Table 1 provides a summary of the number of schools and teachers included in the three samples. Clearly the findings are only indicative, as the samples do not purport to be scientifically representative, but in the absence of any previous research the findings provide a starting point for future work.

Cook Islands

The total resident population in the Cook Islands was 18,000 in 2001 and 13,000 in 2009 (AUSAID, 2009). The Cook Islands are spread over 1400 kilometres and comprise 15 islands with a total land area of 237 square kilometres. The Southern Group of these islands comprises Rarotonga (where the capital, Avarua, is located), Aitutaki, Atiu, Mangaia Ma'uke, Mitiaro, Palmerston and Takutea, most of which are high volcanic formations. The Northern Group comprises Manihiki, Nassau, Penrhyn, Pukapuka and Rakahanga; all except Nassau are low-lying coral atolls.

There were 137 primary and 122 secondary teachers in 2005. The teaching profession was heavily female (75%). In terms of ethnicity, 84% were Cook Islanders and the remainder were NZ Maori and non-Maori, other Pacific Islander and Anglo-Saxon. In government schools, 19% of teachers held university degrees compared

Country	No. of schools		No. of Teachers			
	Total	Surveyed	Total	No. of completed questionnaires	Teacher response rate in survey (%)	Sample as % of total teacher workforce
Cook Islands	33 (2005)	12	282 (2005)	94	69	36
Fiji Islands	889 (2007)	28	9960 (2007)	416	63	4.2
Vanuatu	493 (2003)	21	2288 (2003)	145	67	6.3

Table 1. Composition of samples, by number of schools and teachers

with 27% in non-government schools. Government schools had 98% certified as teachers (with a Teachers' College Certificate or Diploma) compared with 65% in non-government schools (Cook Islands Ministry of Education, 2005: 12-13). Historically, the main training ground for primary teachers in the Cook Islands has been the Cook Islands Teachers' Training College (CITTC) located in Rarotonga. Small numbers have also been trained in New Zealand and Australia. CITTC trainees typically undertook a two-year government-funded training course. In the past, the Cook Islands lost teachers to New Zealand where their teaching qualifications were often upgraded.

Almost half of the sample of 94 teachers had a two-year diploma from CITTC and university level qualifications were held by 41.5% of teachers. At the other end of the spectrum, five teachers had attained only primary or secondary schooling. A high 94.7% of the sample held teacher-training qualifications and the majority of training had been undertaken in the Cook Islands and New Zealand, though the importance of USP was also evident.

The lack of specialist-trained teachers in several areas, especially science, commerce and mathematics, has often meant that schools relied on expatriates to fill vacancies. This is a result of inadequate training numbers and people leaving for other occupations, rather than emigration. The Cook Islands Ministry of Education attempted to fill specific persistent vacancies in secondary schools by relying on overseas recruitment. Overseas recruitment was a long

process and vacancies often existed for many months. Once there was a vacancy in a school there was a three-tiered hiring system of advertising locally, then in the New Zealand Gazette for a Cook Islander and then open advertising in New Zealand for anyone. This was a 'pro-Cook Islander' policy as it required a labour market test in the first stage, even when it was known that there was no suitable teacher available. The policy underwent some changes in 2007 and according to a spokesperson for the Cook Islands Ministry of Education:

We are somehow recruiting globally unintentionally by taking advantage of the technology we have. With easy access to Internet in the outer islands, advertisements for teaching positions are placed on our education website immediately targeting mainly our teachers and others in the outer islands who do not receive the local paper where we advertise teaching vacancies. And, of course, by doing this anyone around the globe who has Internet can access this information. However, we still have the idea of considering our local resource as preference unless of course we do not have anybody suitable then consideration for others is made. (CI MoE, Personal communication, 2010)

This has had both positive and negative effects. Expatriate teachers brought valuable new skills and knowledge but their experiences were often fraught with difficulties and they were reluctant to stay for very long. Some Cook Islander teachers living offshore expressed a desire to return home to work but the wages and general conditions had not provided adequate incentive. Mechanisms for topping up returning Cook

Islanders' salaries or temporary placements of non-resident Cook Islanders at home could be negotiated between the Cook Islands administration and sending countries, according to interviewees.

The emphasis now is on upgrading and improving the conditions of teachers in the Cook Islands, hopefully so that they will remain at home. The CITTC has made its training available by distance education so that it can become more attractive to students on outer islands. In 2005, the College also began offering a secondary graduate teaching diploma, as the supply of secondary teachers was problematic. The University of the South Pacific (USP) is also important for the upgrading of diploma level primary and secondary teachers to degree level teachers and 92 were enrolled at USP in 2005.

These are important policy initiatives that fall into line with international themes. For example, the *Commonwealth Teacher Recruitment Protocol* (Commonwealth Secretariat, 2004) calls on source countries to improve the attractiveness of the teaching profession [Para 4.1]. It stresses that countries should provide their teachers with better opportunities and try to improve working conditions and remuneration but this is not easy in the context of limited resources and low budgets for education.

Migration attitudes and intentions

The intention to migrate was generally low among the 49 ethnic Cook Islanders³ in the sample: only 12.5% of the Cook Islander teachers responded that they 'intended to live in another country permanently' (see Table 2) and 75% said that they did not intend to move to another country permanently. The remaining 12.5% were not sure. Those with middle incomes had a higher desire to migrate than those with low and high incomes. The desire for better secondary education opportunities for their own children

ranked as the number one reason for wanting to migrate. Another important reason was the desire to access better health care elsewhere. Neither of these factors is associated with conditions in the teaching profession but rather with the availability of educational and other services. Smoother overseas study arrangements may encourage parents to stay and teach while their children go away to study. Overall, the level of teacher mobility in the Cook Islands is low and inhibited by the low levels of training.

Vanuatu

Vanuatu's population was 186,700 in 1999 and increased to 245,000 by 2009 (AusAID, 2009). Vanuatu is a nation of 83 islands, with a total land area of 12,190 square kilometres and a population density of 18 per square kilometre in 2006 (SPC, 2006). Most people live in rural villages and more than 75 per cent of the population is involved in agriculture. The vast majority of Vanuatu's population is made up of Ni-Vanuatu. The population growth rate was 2.6% and the median age was 19.7 in 2006 (SPC, 2006). Vanuatu thus has an extremely youthful population, which has important implications for its education system.

The overall number of teachers in Vanuatu was 2,288 in 2003: 1,621 primary teachers and 667 secondary teachers. The number of male and female teachers was almost the same with female teachers out-numbering males at primary level and the reverse at the secondary level. In 2001-02, 100% of primary teachers and 85% of secondary teachers had teacher training qualifications according to UNESCO (2006). However, the sample of 145 teachers surveyed showed that 11.5% of primary and 25.6% of secondary teachers did not have teaching qualifications. A Ministry of Education official agreed that many untrained teachers remained in the system at all levels of education, adversely affecting the quality of teaching. The sample showed that: 69.2% of primary teachers and 37.5% of secondary teachers received their highest qualification from a teacher training college, mainly in Vanuatu, and university level qualifications were held by only 9.6% of primary teachers and 42% of

³ The sample of 94 teachers in the Cook Islands included 49 ethnic Cook Islanders (Maori). Most others were expatriate teachers. Since the experiences and aspirations of Cook Islanders differ from the others, the following analyses are limited to ethnic Cook Islanders.

	Cook Islanders (%)	Fiji (%)	Vanuatu (%)
a) Age			
Under 30	22.2	43.2	22.6
30-40	0.0	46.7	23.3
40-50	15.4	30.0	9.9
50+	9.1	25.6	16.7
b) Sex			
Female	9.1	43.3	13.8
Male	28.6	36.6	30.2
c) Highest qualification			
Prim/sec school	25.0	46.7	11.8
Teacher training college	6.4	34.3	21.1
University degree	25.0	46.3	25.0
Postgraduate degree/diploma	20.0	37.5	36.4
d) Type of school			
Primary	9.1	40.8	26.8
Secondary	21.1	40.0	17.6
e) Location of school			
Capital city	22.7	43.0	20.7
Major island easily accessible	0.0	38.6	0.0
Rural areas / Outer islands	4.2	24.0	19.1
f) Overseas connections			
Relatives living overseas	13.0	45.4	32.7
Ever travelled abroad	13.3	46.4	19.8
Ever lived abroad	22.2	42.9	23.4
Total	12.5	40.2	17.9

Table 2. Responses of samples who *intend* to live in another country permanently, by demographic factors and school characteristics (%)

Source: Sample surveys, 2005-06.

secondary teachers. The sample also contained 10 primary and 10 secondary teachers who had attained only primary or secondary schooling.

The main training ground for primary and junior secondary teachers is the Vanuatu Institute for Teacher Education (VITE) in Port Vila. VITE offers two-year certificates for primary teachers and two-year English and French diplomas for junior secondary teachers. Entry requirements for VITE

include academic achievement as well as ensuring a geographical spread of teacher trainees to ensure staffing of outer island schools. 'Community' teachers (primary and high school graduates with teaching experience) may be recommended to undertake a VITE course, after three years of dedicated teaching. Anglophone VITE graduates can upgrade their qualifications to a USP degree, as they receive credit for courses taken at VITE.

Senior secondary teachers are either trained at the USP, the Solomon Islands College of Higher Education, the Goroka Teachers' College and the Pacific Adventist University in PNG, Fulton College in Fiji and, in the case of Francophone students, in New Caledonia. All these qualifications are recognised throughout the region but only the USP ones are recognised in Australia. Ni-Vanuatu teachers trained in Fiji, Australia or New Zealand on scholarships are required to return home or pay their bond. Thus there is no opportunity for migration immediately after the completion of studies as few can afford to repay their bond.

Since Independence, there has been a localisation of the teaching force and the number of expatriate teachers has decreased substantially. The current immigration of teachers is largely a response to shortages, especially of secondary teachers. There were only 30 expatriate teachers in 2006. Most of them were Australians and New Zealanders on local salaries, Peace Corps Volunteers, Japanese volunteers, Australian Youth Ambassadors and GAP students. No active government overseas recruitment occurs although some private schools do recruit abroad through their networks.

There is a policy of returning people to their home islands to work, to save on housing and relocation costs. It is assumed that free housing will be readily available in villages and that once there, teachers will not want to relocate—thus saving on future relocation costs. Also, newly trained teachers who cannot find a paid position often return to their home villages and do unpaid teaching work. One positive effect of the above pattern is that the staffing of schools in outer islands is generally less problematic in Vanuatu than in other PICs. One negative effect is that it may lead to stagnancy and affect the quality of teaching. Another is that given that fewer people from outer islands are trained as teachers, some outer island primary schools have inadequate numbers of teachers.

Migration attitudes and intentions

Overall, Vanuatu has a very low level of out-migration, including of teachers. This is rein-

forced by our sample survey, which showed that 26 (17.9%) intended to move to another country permanently, 34 (23.4%) were not sure and 66 (45.5%) did not intend to migrate (see Table 2). For the 60 in the first two categories, 'better opportunities for children elsewhere' was the most often indicated reason, followed by 'poor job, low pay, poor working conditions', 'poor promotion opportunities' and the 'high cost of living' in Vanuatu and 'better health care (elsewhere)'. For those wanting to stay, it was largely because of their personal connections in Vanuatu. By far the most important reason, given by 91.2% of respondents, was that they had close relatives and friends in Vanuatu. Other important reasons were that their children were settled in Vanuatu and the low level of crime.

Without university degrees and teacher training qualifications, Ni-Vanuatu teachers are constrained from moving elsewhere to work as teachers. Most teachers have two-year teaching certificates or diplomas and these are not accepted as adequate for teaching in Pacific Rim countries, including Australia. Those who have come to Australia do not appear to be working as teachers, according to the census and anecdotal evidence. Even in times when there has been a surplus of trained teachers relative to available paid positions in Vanuatu, there was no out-movement on either a temporary or permanent basis.

The relatively low level of teacher training has the effect of reducing the overseas professional employment options for teachers. This is the result of historical patterns and a shortage of resources, not a deliberate policy as has been proposed in South Africa.⁴ Another reason for the low level of emigration is that many Ni-Vanuatu qualified teachers do not have adequate information on overseas employment opportunities. Many newly trained teachers from VITE are unable to find a paid position due to a shortage

⁴ A policy of providing 'less than international standards training' or 'country-specific training' is one mechanism that South Africa has considered as a means of keeping skilled workers at home, in the face of the high rates of emigration of their skilled health workers (Dumont and Meyer, 2003: 133).

of government resources but neither they, nor the government, have investigated going elsewhere to work on a contract basis. This is rather surprising as some PICs are short of teachers and could utilise Ni-Vanuatu teachers who are unemployed. Vanuatu MoE officials suggested that the Pacific Islands Forum Secretariat (PIFS) organise of a scheme of teacher rotation within the PIC region. Such a rotation scheme could target teachers, school administrators and managers and could take the form of two-year attachments in another PIC. To date, no such scheme has been established.

While international migration is not creating supply or demand issues, the absence of international teacher mobility may reduce the inflow of new knowledge, ideas and methods unless other avenues are found. The advantages of localisation are clear in that workforce planning can operate in a closed system but the negative side is a tendency to inwardness and lack of innovation. The balance between these two aspects is one that could be considered in Vanuatu and other countries in similar situations.

Fiji Islands

At the time of Fiji's most recent census in September 2007, the country's population was 827,900 (Fiji Islands Bureau of Statistics, 2007). The population is largely made up of two ethnic groups, Indigenous Fijians and Indo-Fijians. The Indo-Fijian population has decreased recently in size relative to the Indigenous Fijian population and in 2007 the population comprised 473,983 Indigenous Fijians (57%), 311,591 Indo-Fijians (38%) and 42,326 'Others' (5%) (Fiji Islands Bureau of Statistics, 2007). The population growth rate between 2006 and 2010 was estimated at 0.7% and the median age at 23.6 (Secretariat of the Pacific Community, 2006). Fiji has a youthful population but the population growth is low in comparison with many other Pacific Island countries, as a result of considerable emigration.

There were 5,131 primary teachers, 2,344 (46%) male and 2,787 (54%) female, and 4,327 secondary teachers, evenly split between male and female, in 2007 (Fiji Ministry of Education, 2008). Each of Fiji's major ethnic groups was

almost equally represented with 4,700 indigenous Fijian and 4,594 Indo-Fijian teachers (Fiji Ministry of Education, 2005: 57-8).

The vast majority of primary teachers in Fiji are trained within the country at the three primary teaching colleges: the government Lautoka Teachers College; the Catholic Corpus Christi College, and the Seventh Day Adventist Fulton College. The USP also offers Bachelor of Education (primary) degrees. Secondary teachers are trained at the Fiji College of Advanced Education offering diplomas in education, at USP offering Bachelors of Education (secondary) and post-graduate certificates in education, and at the Fiji Institute of Technology offering secondary teaching certificates. According to UNESCO (2006), the proportion of trained teachers was 97% at primary level and 82% at secondary level in 2002-03. Only USP-degree holding teachers will have their qualifications accepted as adequate for teaching in the Pacific Rim countries.

Teaching is an attractive profession in Fiji and the number of people applying for places in training colleges far outweighs the number of places available. In recent years, the number of teaching vacancies advertised by the Ministry of Education has fallen far short of the expected number of new graduates from the four teaching colleges. While students from the two government teacher training colleges have guaranteed employment upon graduation, students from the private colleges and USP have had considerable difficulties finding employment. Consequently, many recent graduates have remained unemployed for considerable periods of time. The situation for new graduates has been exacerbated since 2000 with an increase in retirement age in the public service from 55 to 60. To an extent this has been normalised since 2006, as some teachers have reached the retirement age of 60.⁵ The Fiji Government has been involved in discussing a potential scheme whereby Fijian teachers would temporarily fill vacancies in other PICs, including Tonga, Samoa and the Cook Islands, but nothing has come of this so far.

⁵ The retirement age in the public service has been reduced again to 55 in 2009, opening up additional vacancies for new teachers.

There is a shortage, however, of qualified, experienced teachers and some subject areas (mathematics, sciences, IT, business and accounting) face considerable staff shortages at the secondary school level. Teacher shortages in these areas have been an issue since the late 1980s due to the increased migration of skilled people from Fiji. Frustration stemming from poor promotion opportunities, poor administration of schools and lack of teaching resources is very evident in Fiji. The emigration of teachers (mostly Indo-Fijian) has been much higher from Fiji than from either the Cook Islands or Vanuatu. Nearly 50% of all teacher migrants from Fiji were women (Chandra, 2003: 10) and most moved to Australia, New Zealand and the United States. Small numbers went temporarily to other PICs, e.g. Marshall Islands and Kiribati, where they were offered higher salaries in hard currencies.

Political, economic and other reasons come into migration decisions and when people are well qualified, they can look to moving elsewhere. On the other side of the coin, as already pointed out, the visa policies in the main destination countries of Australia and New Zealand emphasise skills, qualifications and work experience and only the more highly qualified and experienced teachers will be successful in their migration applications to these countries if they apply under the skilled migration, rather than the family reunion, category. Data show that between 1987-99 and 2000-04, 6,869 and 3,826 professionals, technical and related workers emigrated from Fiji, respectively. This represented over half of Fiji's stock of middle to high level workers and teachers were the most dominant professional group (Mohanty, 2005: 5).⁶ Therefore some of the shortage of highly experienced secondary teachers and of those in particular subject areas has been compounded by emigration to Australia and New Zealand. The current level of international mobility of teachers is difficult to ascertain, as emigration data collected in Fiji in the form of departure cards are no longer publicly available.

⁶ This is not altogether surprising given that they are also the largest group of professionals in the country.

There are few expatriate teachers working in Fiji, mostly in church-run schools, and the country does not benefit from donor assistance to supply expatriate teachers. Few Fijian teachers have returned to teach in Fiji after having lived and worked overseas. The serious detriment experienced by teachers who may consider returning, i.e. starting again at the bottom of the teaching scale, is unlikely to encourage return migration. As a result, Fiji's teaching force has had very little outside exposure. This could be one reason for the general lack of innovation in teaching methods that was commented on by teachers and principals.

Migration attitudes and intentions

In the sample, 40% stated that they 'intended to move to another country permanently', 36% did 'not intend to migrate' and the rest were 'not sure'. The intention to migrate was thus much higher than for the two other countries (Table 2). Indo-Fijians were more likely to want to migrate than Indigenous Fijians.⁷ The percentage intending to emigrate was almost the same for primary and secondary teachers but those on outer islands were less likely to want to emigrate. Those on lower salaries were more likely to want to emigrate than teachers on higher salaries.⁸ Australia and New Zealand were by far the most popular destinations.

Table 3 shows that the most common reason stated by the 251 (64%) interviewees who 'intended to migrate' or 'were not sure' was 'better opportunities for children' elsewhere. This was followed by 'better health care' overseas. Thus, the two main reasons given by teachers for wanting to emigrate were not associated with the teaching profession but rather with the availability of good education and health services. The third most important factor for both ethnic groups was 'poor job, low pay, poor working conditions' followed by 'poor promotion opportunities'. These elements are within the scope

⁷ This association was statistically significant at the 99% level.

⁸ The Chi-Square test shows that the association between teacher salary and intention to emigrate was statistically significant.

Reason	Indigenous Fijians %	Indo-Fijians %	Total %
Better opportunities for children elsewhere	76.8	81.2	84.0
Poor job, low pay, poor working conditions in Fiji	47.8	45.5	47.8
Poor promotion opportunities in Fiji	43.5	41.6	44.2
High cost of living in Fiji	23.2	31.7	29.5
Better health care elsewhere	44.9	58.4	53.4
Poor schools in Fiji	8.7	8.9	8.8
Political persecution, fear of political persecution	6.5	39.6	20.7
Religious persecution, fear of religious persecution	1.4	8.9	4.8
Family problems in Fiji	5.8	5.0	5.2
Spouse wants to move abroad	15.9	23.8	19.5
Lack of close relatives/friends in Fiji	3.6	17.8	10.0
Don't like climate in Fiji	2.2	5.9	3.6
Discrimination in Fiji	10.9	32.7	20.7
Don't get along with boss or co-workers	0.7	2.0	1.2
Poor physical environment in Fiji	2.9	19.8	10.8
High crime rate in Fiji	5.8	27.7	15.9
Other	9.4	4.0	7.2
Total number of people	138.0	101.0	100.0

Table 3. Reasons for wanting to emigrate, Fiji Islands (%)

Source: Sample survey conducted in Fiji, 2005.

of government and non-government education suppliers to address, if they have the resources. Here, we return to the issue of teaching conditions in source countries being a factor that contributes to skilled emigration when people have a choice. For Indo-Fijians, political persecution or the fear of it, discrimination, and the high crime rate were also important reasons.⁹

The 16 secondary schools included in the sample had lost a total of 76 teachers in the previous year and 20 of these teachers had left their

school in order to migrate overseas. The 11 primary schools had lost a total of 24 teachers in the previous year but none went overseas. These figures show that internal transfers are a more important reason for primary and secondary teacher mobility than international migration.

The main issue of concern in Fiji appears to be the emigration of qualified and experienced secondary teachers. It is serious if children in Fiji do not have access to these teachers and the quality of their education suffers. One predominantly Indo-Fijian secondary school in Suva which had a total of 66 teachers, including 55 Indo-Fijians and 11 Indigenous Fijians, had been very adversely

⁹ People could state up to three reasons and hence the total number of reasons exceeds 251.

affected by overseas migration. In 2005, four teachers migrated to Australia and one to the United Kingdom. According to the principal, the negative effects for his school depended on a number of factors:

It is not only the fact that teachers leave for overseas. The five teachers who have left this year, have all left in the middle of the year. The only replacements I can get in the middle of the year are unemployed graduates or teachers who were kicked out of other schools ... Most teachers are very secretive about their intentions. ... Most teachers from this school have gone to Australia and as far as I know they have all found teaching jobs. In my view, Australia makes a lot of money by attracting skilled workers to the country. (Personal interview, 2006)

Discussion on Fiji-Australia teacher migration stream

As pointed out earlier, the structure of the Australian migration points system favours those with tertiary qualifications, experience, English language ability and an occupation that is deemed to be in shortage. It is most probable, therefore, that the more highly qualified (USP-trained, usually sponsored) and more experienced teachers will have been successful in their settler migration applications, through either family reunion, economic or humanitarian streams. Those who have been trained in government two or three-year diploma programs are unlikely to be able to migrate and gain employment in Australia as teachers (without significant upgrading). Therefore some of the shortage of highly experienced secondary teachers in Fiji has been compounded by emigration. It is not direct recruitment but indirect means of acquiring skills that are in short supply are used. The exception is through the 457 temporary visa program, which admits sponsored applicants for four years—renewable and convertible to permanent settlement.

A unique attempt has been made to quantify the economic cost to Fiji of emigration, based on all persons emigrating (5,510 per year on average) between 1987-2001 (Reddy *et al.*, 2002). While a more refined analysis of only skilled emigrants would have been preferable for the purposes of skilled migration debates, it is, nevertheless, a good starting point for further analy-

sis. The study calculated the costs of human capital in terms of a) public education and training expenses for all migrants¹⁰, b) financial capital that left with all migrants¹¹, c) recruitment of expatriate professionals with high wages and all other cumulative direct and indirect costs, and d) income foregone through migration.¹² The total loss to Fiji in the short term due to migration was estimated to be F\$44.5m every year or equivalent to 4.7 per cent of the government's total revenue. The loss in output was estimated at F\$60.3m per year. The authors claim that the consequences of skilled emigration on civil society, the private sector and the public sector are also estimated to be major. In particular, they argue that the quality of health care has deteriorated as patient/health worker ratios increase; and the migration of teachers, nurses and engineers has severely affected educational standards, health services and public utilities. While many of the figures and statements in this paper are difficult to substantiate, the paper represents a serious attempt to quantify the 'loss', as perceived by academic researchers. The perception of 'loss' is promulgated by some governments, including Fiji and the Philippines, and calls for compensation are heard from time to time.

Who construes the debate on 'brain drain' is an important issue. Industrialised countries have tended to downplay the concept of 'brain drain' and have instead focussed on 'circulation' and the positive gains that they perceive all countries accrue if skilled personnel become mobile. This may be the case for many skilled flows but there are particular instances where 'brain drain' which is costly and brings few positive returns is still at work. In particular, much of Africa, parts of

¹⁰ Calculated from a) annual average national per capita expenditure (\$388.33) on health and education and b) an assumption that scholarships were awarded to half (264) of the 528 professionals on average who left each year.

¹¹ Particularly the capital and productive assets lost through business migration, an average of F\$40m from 1994-2001 (figures obtained from the Reserve Bank of Fiji, quoted in Reddy *et al.*, 2002, p. 56).

¹² Calculated from the discounted value of the output foregone over the period in which the worker is not replaced.

the Caribbean, Bangladesh and Fiji fall into this category.

It is impossible for receiving countries such as Australia to discriminate against people from specific countries in their permanent settlement selection. It has been suggested, however, that temporary recruitment could be different. Some receiving countries say they will not draw service providers from countries in great need or where there is a shortage but it is difficult to implement such a policy. Various ethical recruitment policies and guidelines have been put in place and the UK is the most fervent supporter.¹³ For example, ethical recruitment guidelines state that nurses and doctors in South Africa are not to be recruited by the UK. But such policies are hard to implement, as they cannot be policed in relation to the private sector, and '[d]espite a code of ethics restricting the recruitment of nurses from certain countries, one of every four overseas nurses who were qualified in the UK in 2002-2003 were from countries on the Department of Health's proscribed list' (Redfoot and Houser, 2005: 13).

Such ethical policy guidelines are commendable but run up against arguments about individual rights. In the case of permanent migration it is difficult to define losses that are 'permanent' and that do not generate any benefits for the source country. But so much skilled migration is now temporary, but often converting later to permanent, and here the arguments become even less straight-forward. If temporary migrants return home and bring back money and ideas, this may be to the advantage of the source country. But temporary skilled workers who are recruited by one country to fill their shortages may also leave the source country in shortage. This situation is to be avoided, according to ethical recruitment policies such as the Commonwealth Teachers' Protocol which promotes organized and ethical recruitment.

The *Commonwealth Teacher Recruitment Protocol* was adopted by Commonwealth member

states in 2004. Its purpose is: 'to balance the rights of teachers to migrate internationally, on a temporary or permanent basis, against the need to protect the integrity of national education systems, and to prevent the exploitation of the scarce human resources of poor countries. The Protocol also seeks to safeguard the rights of recruited teachers and the conditions relating to their service in the recruiting country' (Commonwealth Secretariat, 2004: 7, [Para 3.1]). While it is 'not enforced in international law, the document holds moral authority on the matters it addresses' (Degazon-Johnson, 2007: 97). It stands as a beacon and can be aspired to by countries, even non-signatories. The *Protocol* emanated from a request for assistance to the Commonwealth Secretariat in 2002, by the Jamaican Minister of Education, as a result of the heavy loss of teachers due to recruitment by overseas countries. This was followed by meetings of all Caribbean Ministers of Education and then of all Commonwealth Education Ministers. The *Protocol* covers the rights and responsibilities of three groups: recruiting countries, source countries and recruited teachers. The foremost responsibility of recruiting countries is to 'manage domestic teacher supply and demand in a manner that limits the need to resort to organised recruitment in order to meet the normal demand for teachers' (Commonwealth Secretariat, 2004: 9 [Para 3.1]). Second, the *Protocol* calls on source countries to improve the attractiveness of the teaching profession [Para 4.1]. Third, the *Protocol* covers the satisfactory integration of immigrant teachers into the teaching workforces of receiving countries.

Australia is not a signatory to the Protocol and is not recruiting teachers directly anywhere at the present time, except through the 457-visa temporary entry program where sponsors search for and apply to bring in a specified worker. The question of whether Fiji should or could be bypassed in the 457-visa program has not arisen but the political context makes it unlikely that this could happen. This is substantiated by the fact that the level of Fiji asylum applications has spiked recently in Australia, as people who are already onshore file applications for discrimi-

¹³ See Box III.2. *Code of conduct for the recruitment of international health workers* in OECD (2007: 180), for a discussion of the UK's policies and of unsuccessful international moves to encourage ethical recruitment.

nation by the military government led by Frank Bainimarama (Mottram and Hill, 2010).

In the face of the difficulties of implementing ethical recruitment policies, Australia and other countries could ensure adequate aid to compensate for skilled immigrants who come from developing countries. The issue of compensation has been raised in much of the skilled migration literature, dating from the early 'brain drain' literature of the 1970s. While it is not mentioned in the Commonwealth Teachers' Protocol it does feature in the *Code of Conduct for the International Recruitment of Health Workers* (Commonwealth Secretariat, 2003) where the following clauses on compensation are contained in Para 21:

- programmes to reciprocate for the recruitment of a country's health workers through the transfer of technology, skills and technical and financial assistance to the country concerned;
- training programmes to enable those who return to do so with enriched value;
- arrangements to facilitate the return of recruits (subject to application of the non-discrimination principle and to the rights of the workers concerned in accordance with immigration and other laws).

It is generally agreed that any direct compensation mechanism would be complex and difficult to manage and, as a consequence, most policy analysts who support this idea suggest some more general form of compensation when skilled human resources are gained from a country, such as giving international aid. The aid is not labeled compensation nor is it necessarily earmarked for the sectors from which skilled human resources have come. This position is reflected in the two Commonwealth codes mentioned above.

More direct systems of compensation also exist where, for example, direct payment is made by UK hospitals to pay for the training of some nurses in the Philippines. This could simply be a way of guaranteeing a steady supply of nurses but it does at least pay for their tertiary training, though with no compensation to the government for the education and health services provided till age 18. Some school principals in Fiji suggested a less direct but similar scheme in

that Australia provide more scholarship money for teacher training as a form of compensation.

When looking at teacher migration according to the 'brain drain' and the 'migration-development nexus' views, Fiji experiences both negative and positive impacts. In Fiji, where most emigration has been permanent, especially among Indo-Fijians, the negative or 'brain drain' effects associated with skilled emigration are considerable. Fiji loses valuable human resources while benefiting little from an exchange of ideas or personnel — which the literature on the migration-development nexus has identified as a potentially beneficial impact of migration. However, remittances have increased in Fiji in recent years and the migration of teachers has opened up opportunities for a considerable number of unemployed new graduates.

The main issue in Fiji, therefore, is how to retain qualified and experienced teachers, in an environment of political instability. This introduces another dimension and one that takes skilled emigration out of the realm of an economically and socially driven context to one where political factors become overwhelming.

Conclusion

On the whole, teachers in the Pacific do not just appear to be moving to fill more highly paid vacancies in Australia, even though Australia has established selection policies to facilitate filling such vacancies. There is no strong desire by teachers to be internationally mobile in the Cook Islands and Vanuatu and, even if there were, the lower level of training provided for teachers precludes their entry into more industrialised labour markets. Thus, we do not see the same trend occurring in the teaching profession as is happening in the health areas where, in the three PICs studied, local workers have been replaced by Bulgarians, Filipinos and Burmese, and most recently by Cubans and Taiwanese (Connell, 2008: 24). Connell describes this as 'as part of the cascading global care chain' that has emerged around the world as highly-qualified, English-speaking health professionals have moved to work outside of the Pacific and have been replaced by arrivals from a wide range of

sources, mostly on contract. The reasons why teachers have not followed the same trend as health workers is not clear.

The complexity of skilled teacher emigration from Fiji makes it quite unique in the Pacific. Highly qualified teachers have been moving from Fiji for a wide range of reasons, especially social and political. The winners are clearly the individuals and their families who qualify to enter Australia, or elsewhere, and where they are able to return to the practice of their profession. They often find this profession more rewarding abroad than they did at home and the personal benefits they gain are considerable. The professional growth and collegiality that they experience are significant. Thus while socially and politically motivated, the freedom to move has resulted in access to a much better professional environment. Individual agency has enabled them to respond to the policies designed in Australia to encourage them to migrate abroad.

The other major winners are government education departments or private schools in Australia that are able to utilise a supply of well-trained, experienced teachers. They come at no cost to these governments (except for some bridging courses) and often fill vacancies in difficult-to-fill areas, such as math, science and computer training, and in difficult schools, such as in areas with a high proportion of pupils of non-English speaking background. Western Sydney has significant numbers of PIC teachers, especially Fijians. This, of course, has the added advantage of providing teachers who are better able to relate to the Pacific Island students in these schools.

The loser is Fiji that appears to accrue little financial or social benefit from the loss of teachers. While the benefits of skilled emigration are often touted, especially via the actual and virtual return of more experienced and networked professionals and remittances sent home, this does not appear to be the case for Fiji. The political environment in Fiji is not conducive to Indo-Fijians, and increasingly Indigenous Fijians, returning and they are disinclined to put their new knowledge or skills back into Fiji. Nevertheless, remittances do return and are used for family purposes.

The cost to the Fijian Government of professional teacher emigration is estimated to be high. The earlier figures showed that a net total of 384 Fijian teachers came to Australia from 1997 to 2005. According to the Fiji Teachers' Association, Fiji 'can no longer afford to train teachers for the Australian and New Zealand labour markets' (Anonymous, 2005). Both the Fiji Teachers' Union and academic researchers have mounted an argument that compensation should be paid by receiving countries. The reality is that many non-USP trained teachers would not have their teaching qualifications recognised in Australia and so their training would be largely squandered. This is just one of the issues that make discussions about compensation difficult.

Discussions about compensation are not popular with receiving countries but the question remains as to whether it is ethical to use the skilled human resources of struggling nations without somehow paying them back, even if the exodus has been partly politically motivated. More circuitous routes are usually used. For example, Australia has donated aid money for regional scholarships for prospective teachers to study in Australia or at USP. Further scholarships aimed at filling shortages in specific secondary subject areas may alleviate some of the tensions in the region, especially in Fiji.

The other losers are the schools and children that do not have the qualified teacher they need or who must cope with the disruption of a teacher leaving mid-year. These are domestic issues that Ministries of Education in all countries must face. They could be partially alleviated by the elimination of the 'secrecy' that often surrounds migration decisions. This is particularly the case in Fiji where people feel disadvantaged or persecuted and quietly plan how to make their departure. But it applies to other PICs as well and makes it difficult for planners and principals to provide ongoing, quality services.

In more open contexts, where migration is seen as a normal part of an increasingly globalised world, the vagaries of people coming and going become an inherent part of government planning. This is the case in Australia where the in and outflow of teachers is quite substantial but

where school systems require adequate notice of a teacher's intention to leave. Even here, though, we still hear the occasional cry of 'brain drain' as the number of skilled professionals leaving for overseas attracts attention. In Australia's case, however, it is quickly dampened by government provision of the numbers who are also arriving. It is when an outflow is not matched by a corresponding inflow, that the cry of 'brain drain' and its negative implications gain prominence.

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Brain drain/brain gain from the perspective of a semi-peripheral state: Portugal

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Abstract

This paper analyses the recent Portuguese governmental answers to deal with its semi-peripheral position in the science and technology market in general, and in the international market of brain circulation in particular. The management of brain circulation is understood thus as only a small part of a wider public policy regarding the management of scientific and technological production and dissemination, as well as the management of access to education and training resources.

This paper's analysis of the public policy built to manage the country's position in the international market of scientific and technological knowledge suggests that the country's semi-peripheral condition in regard to various markets (economic, as well as cultural, scientific and academic) has been the dominant pillar of its policy's structuring. It is thus through the lenses of its semi-peripheral condition that much of the country's governmental answers become intelligible. A second dominant pillar is the European context and the consequent need to comply with the expectations raised by the Agenda of Lisbon. But, as the paper suggests, Lisbon's Agenda has worked over the last years mostly as a political binder that has enabled the implementation of measures otherwise financially too heavy, while very much needed to bring the Portuguese scientific system closer to an increasingly competitive international market of science and technology¹.

Key-words: Portugal; brain circulation; semi-periphery; policy-making

Introduction

This paper analyses the recent Portuguese governmental answers to deal with its semi-peripheral position in the scientific and technological market, and specifically in the international market of brain circulation². To enter such analysis presupposes three initial steps.

¹ This paper was first written in early 2010 and it analyses data collected during that period of time.

² Between 2010 and 2012, profound changes have been occurring in Portuguese society as a consequence of the economic crisis it faces. For that reason, and although nothing has changed from a legal-political stand in regard to the governmental approach to brain gain strategies, attracting high skilled laborers has become politically less relevant than the debate around the emergence of new waves of Portuguese emigration. The governmental policy here presented,

First, it is important to clarify how we read the concepts of brain gain/brain drain in light

has not been altered since we first wrote this paper (initially as a briefed report), but Portugal is becoming far less attractive both to its Diaspora and to foreigners. The present Secretary of State for the Portuguese Communities, José Cesário, underlined in a recent interview (December 2011) that around one hundred thousand to one hundred and twenty thousand Portuguese have left the country in 2011 (TSF, 2011). While most emigrants back in the 1960's – the period of highest Portuguese emigration in the 20th century – were mostly composed of non-skilled or low skilled people, today's emigration is composed of high-skilled people who happen to be also the youngest. Ironically, thus, the country has been investing on advanced training of its human resources that now menace to leave.

of the existent literature, as well as the positions of states in regard to brain gain/brain drain phenomena. Instead of brain gain/brain drain, we prefer the term *brain circulation* as one that better translates the very nature of science as human activity, and the position of states, which are neither full losers nor full gainers in the entire process of scientific and technological creation.

Second, it is important to stress that a governmental policy for brain circulation plays only a part in the wider context of public policies regarding the education of human resources and the production/dissemination of scientific and technological knowledge. This step implies thus locating the Portuguese policy of brain circulation in the context of a more complex public policy meant to manage the country's relation with science, technology and education. In parallel, any policy of brain circulation must take into account other relevant domestic public policies such as policies of citizenship and nationality, and policies of integration and immigration. A policy of brain circulation, composed of its various measures, impact indicators and milestones, is therefore the result of a complex set of variables determined by other public policies in the first instance.

Third, the paper contextualises the specific case of Portugal as a semi-peripheral country in regard to the scientific and technological markets. This step presupposes a short encounter with Wallerstein's classic World-System Theory (1996), and with its basic concepts of centre, periphery and particularly of semi-periphery. In light of this theoretical frame, it becomes much evident the identification of Portugal as a semi-peripheral country as far as its scientific system is concerned.

The reasons that have set the semi-peripheral condition of the country are far too complex and quite out of this paper's purposes, for which reasons we will not go into their analysis (Santos, 1994; Gonçalves, 1996; Gonçalves 2000; Pereira 2001). We analyse though what this semi-peripheral condition has meant in regard to the country's long term relationship with science and technology. We will proceed with the analysis and balance of some of the most recent

strategies that Portuguese governments have been implementing to change the course of that relationship, and bring the country closer to the standards of central countries as far as the production and dissemination of science and technology are concerned.

Questioning the conceptual pertinence of brain gain/brain drain

Circulation is always a condition necessary to brain's vitality (Teferra, 2003), being international mobility a *sine qua non* condition for any scientific activity (Ackers et al, 2001, Delicado, 2008b). This said, the brain drain/brain gain discussion becomes rather misplaced. It is misplaced from the point of view of the individual, of her need to circulate as a highly skilled person and of her interests as a competitive professional. But it is also misplaced from the point of view of states (Teferra, 2003) as it places the phenomenon of mobility in terms of definitive and unchangeable outcomes.

In parallel, brain gain/brain drain debates are traditionally State-centred, with skilled human capital seen rather as a relevant commodity for the State's continuous effort to maintain its political and economic sovereignty, than as a construction whose quality and vitality are very much dependent on circulation and communication. When the circulation of highly skilled individuals is put in terms of State losses and winnings, it signifies that much of the meaning about *circulation* as a space of multilateral and interchangeable political, economic and social outcomes is being ignored. Thus, although it would be misleading to assume that *brain circulation* is spared from controversy (Teferra, 2003), we consider that this concept enables a discourse more focused on the individual and on his/her fundamental right to mobility, and subsequently on the potential gains that may be brought from it to various systems (political, economic, cultural, social).³

³ Brain circulation is very important not only from the perspective of the individual and of her life options, but also from the perspective of the State's competitiveness. Ideally, states have much more to gain from acting not as deposits but as platforms of

The market of knowledge, as any other, is inherently imbalanced, with a dynamic and sophisticated game of 'winners and losers'. Dynamic, because positions may and often change over time; sophisticated, because no place in that specific market is ever a sole winner or a sole loser. In other words, if by place we mean a state's territory, this means that in the international market of scientific production no state is ever simply a winner or a loser in a completely unidirectional way. The game is sophisticated also because the term *boundary* is rather complex and ambivalent when it comes to delineate the territory of scientific production, and more specifically when the credits for such 'delineation' are claimed by national discourses on the production of knowledge.

The language of brain drain/brain gain is deeply embedded in the national paradigm, while science, at least in its post-modern interpretation (Santos, 1997) is hardly a national product. Science requires exchange of ideas. The continuous

continuous attractiveness for brain circulation. But it may be argued also that brain circulation is much less interesting for countries which do not have the capacity for such positioning in the international market of knowledge. For them, keeping as many national brains as possible is still a priority since implementing other pull strategies would demand massive economic resources as well as, in some cases, social, cultural and even political revolutions. To understand how serious brain drain still is for many developing states, we recall here the UNCTAD's 2007 report. The 'Least Developed Countries Report 2007: Knowledge, Technological Learning and Innovation for Development' called attention to the fact that five developing countries (Haiti, Cape Verde, Samoa, Gambia and Somalia) had lost over the last years more than half of their qualified resources with higher degrees as a consequence of their escape to more attractive countries. This is of course a more poignant reality and it explains why the brain circulation argument is also often accused of being a western argument. Indeed, it is easier to be pro-brain circulation when we do not have to suffer so deeply the impacts of massive drain. By the same token, and from the individual point of view, brain circulation is only good if indeed taken as a life option and not as fate. In other words, for many skilled migrants coming from developing countries that still face various social, political and economic challenges, and also for many skilled people of younger generations, circulation often stands for precariousness of labor conditions and necessity to migrate.

flow of ideas, as well as of counter-ideas and the narratives of validation/rejection of ideas are hardly compatible with a closed circuit, a circuit limited to 'national' spheres of interest. Besides, the very notion of 'national scientific communities' is questionable, considering that scientific Diasporas are not totally detached from national communities, while foreign scientists working on behalf of projects substantially financed by their receiving states may also be considered as making part of the national effort for the scientific and technological improvement of such states.

Portugal, a semi-peripheral state in the brain circulation circuit

The debate on the utility of brain circulation in opposition to brain gain/brain language sounds a reasonable one, and yet, it seems not strong enough to transcend the reality of facts, facts being that states do have to deal with the mobility of highly skilled individuals.

In practical terms, how then do states try to obviate the impacts of brain drain and how do they try to enter the brain gain circuit on a steady basis? There is a multiplicity of answers to the double questions, all dependent on a myriad of variables, the position of the State in the World-System as a periphery, a semi-periphery or a centre, being a most relevant. The introduction of these concepts presupposes revisiting, although very schematically, Wallerstein's classic World-System Theory (1996).

Taking Wallerstein's macro-sociological perspective upon the dynamics of the capitalist world economy since the 15th century as a sociologically and politically valid proposal, we may portray the World as one shaped by uneven relations, not just at the economic, political and social levels, but also at the scientific levels (2006). The World-System's complexity is deeply embedded in the dynamics between (social, economic, political, scientific) centres and peripheries, as well as in the relational condition existent in both concepts. This systemic reading tells us that a locus is only a centre in regard to another locus, while it can be simultaneously a periphery in regard to any other locus. The centre-periphery relation is thus one of permanent tension

and evolution not only outside but also inside these very concepts.

But a peculiar position seems to be that of the semi-peripheries which Wallerstein has initially defined as corresponding to places trying to improve their position in the world economic system, or places which became declining cores after periods of a relatively dominant position. The latter was clearly the case of countries such as Portugal and Spain which had been dominant centres at the beginning of Modernity (15th and 16th centuries) and then became peripheries to the central areas of the globe, namely Europe and North America, while simultaneously being economic exploiters of their own colonial empires. The tension released from the accumulation of these double roles, has affected not only the essence of each role – that is, the specificities of a country such as Portugal as on the one hand a centre, and as on the other hand a periphery – as it has also given a particular essence to its *semi-peripheral condition*.

Portugal has been portrayed as a semi-peripheral country by reference to its economic and social behaviours, political bargaining capacities and cultural attitudes (Santos, 1993; Carvalhais, 2004), but as Santos suggests, a semi-peripheral condition does not stand simply for an intermediate position between periphery and centre. Instead, the semi-periphery has a substance of its own, being ‘a quality’ of its own ‘and not just a quantity’. As a quality, the semi-peripheral condition translates thus ‘a territorialized dimension of the global interactions where a given country is integrated’ (1993: 24).

Following this interpretation, Nunes and Gonçalves (2001:13-31) consider that the Portuguese scientific performance reveals a semi-peripheral condition which is determinant in any understanding of the country’s education, scientific and technological policies in general, as well as of the country’s specific policy towards brain circulation.

Along with the semi-peripheral condition, there is a second pillar that is essential in understanding the country’s relation with the scientific world, that pillar being the specificity of its historical and sociological relationships between

science, technology, society and culture (Nunes & Gonçalves, 2001: 21). These relationships integrate a map of discourses and images corresponding to a specific culture, one that Santos (1994: 132-136) has named *cultura de fronteira* (culture of frontier).

The notion of culture of frontier is relevant because it is intimately related to the definition of the semi-peripheral position of the country from a cultural perspective. Before looking at how the country’s semi-peripheral condition shapes the present policy-making regarding brain circulation, it is thus useful to understand what that culture is about, as it contains the essence of the country’s semi-periphery in regard to culture in general and science in particular.

According to Santos, the Portuguese State has never performed the double role that other states were playing in cultural terms: on the one hand, it has never been capable of promoting externally a process of cultural differentiation, and on the other hand, it has never been capable of promoting internally a process of cultural homogenisation. As a result, the Portuguese culture has never developed nationally confined contents, (unlike most modern national cultures that flourished from the 18th-19th centuries on), but instead contents that may be interpreted as being placed ‘in-between’, hence the notion of culture of frontier, or culture of border.⁴

The following text of Santos is quite elucidative:

“The local and transnational spaces of Portuguese culture have always been very rich; only the middle space, the national, was and still is deficient (...) The paradigmatic manifestation of this semi peripheral matrix of the Portuguese culture is in the fact that the Portuguese were after the 17th Century (...) the only European people who simultaneously (...) considered the people of their colonies as primitive and savages, and was (...) considered by travellers and intellectuals of central countries of Northern

⁴ Unlike the English language, Portuguese uses *fronteira* to translate both the concept of frontier and that of border. We consider that both concepts may though be included in the original interpretation that Santos gives to his notion of *cultura de fronteira*.

Europe as primitive and savage. By the same token, whilst the Puritans colonised North America, the Portuguese were not only colonisers but emigrants in their own colonies. The Portuguese labour in the Brazilian Northeast in the 18th Century was cheaper than slave labour. Contrary to other European people, Portugal had to see itself in two mirrors, in the mirror of Prosperous and in the mirror of Caliban, aware that its real face had to be somewhere in between. In symbolic terms, Portugal was too close to its colonies to be fully a European and [in] the eyes of these it was too distant from Europe to be considered a serious coloniser. As a European culture, the Portuguese culture was peripheral and as such it did not succeed in playing well the role of centre in the non-European peripheries." (1994: 133) (Author's own translation).

Resulting from a complex set of political and sociological reasons, this culture of frontier has been transversal to various spheres of Portuguese society, shaping consequently the profile of its scientific system, which became one of persistent paradoxes as the following text suggests:

"Portugal had oscillated over the last 500 years between a fundamental contribution for the origins of modern science namely through the Discoveries, and a marginalisation and backwardness in regard to the protagonists of the scientific revolution of the 17th century and, afterwards, of the various episodes that have marked the development of sciences between the 18th and the 19th century. From precursors of the scientific modernity, Portuguese would have thus turned into "Galileo's stepchildren", [that is] into more or less despised or marginalised descendants of one of the crucial moments of World History..." (Nunes and Gonçalves, 2001: 21) (Author's own translation)

The political, economic and social reasons that explain how Portuguese have turned from core into periphery of scientific production is not subject to analysis in this text. It is though relevant to note that such reasons are also underneath the progressive formation of a strong academic culture, this being a quite evident sign of the Portuguese scientific system as a semi-peripheral one (Pereira, 2001).

The formation of a strong academic culture was (and is) the result of accumulated difficulties felt by scientists over the centuries to establish systematic relations that would involve science with the social, economic and political spheres

(Pereira, 2001: 151). As academies became the refuge of science from an external hostile world (although not totally protected from state control on various historic moments, among which Salazar's dictatorship between 1926 and 1974), they became also quite resistant elements to many attempts of conciliation with society, economics and politics. The relevance of this reality lays in the fact that despite the deep changes that the scientific system met (especially after the Portuguese adhesion to the EU in 1986), the academic culture still persists as a major feature of the semi-peripheral essence of the Portuguese scientific system.

Presently, the Portuguese semi-peripheral condition becomes evident through the country's capacity to create some technological value and to generate some significant scientific gains, while being those efforts insufficient to annul structural difficulties within the scientific system and in its relationship with other spheres such as the economic. Having this semi-peripheral condition as a starting point, the question to be made is what strategies has Portugal been implementing to overcome such condition, in particular, how does it try to stop intellectual drain and to mobilise skilled resources located abroad, whether Portuguese (intellectual Diaspora) or foreigner?

Portuguese policy of brain circulation: the essentials

The policy's sustaining pillars

The Portuguese policy-making process for brain circulation is deeply connected to its semi-peripheral condition, but it cannot be reduced to the idea that its specificities derive solely from this. The Lisbon Strategy has also been, in recent years, a crucial pillar.

The Lisbon Strategy stands basically for a compromise that the European member states agreed upon in 2000, during the Portuguese presidency of the Council of Ministers of the European Union (and already revised in 2005) to make a cooperative effort to develop the best measures to accomplish highly ambitious economic and social goals. Economic goals included increasing the EU's competitiveness in the global

market; while social goals included improving the European social model. Such ambitious goals were sustained on specific policy intents such as: to facilitate the creation and implementation of innovative ideas; to improve the dissemination and effective usage of new information and communication technologies towards a more inclusive information society; to implement employment policies towards a full employment scenario; to improve quality and productivity in the labour market; to broaden and increase the investment in human resources, especially by investing in an integrated approach to education and training on a life-long learning basis. To understand the importance of this compromise, it is worth noting that the Lisbon Strategy forced to change the communitarian budget's structure, through the inclusion of a new item titled *Sustainable Development*, initially proposed by the European Commission, and confirmed by the European Council of Ministers of 15-16 December 2005. The strategy's ambitions were meant to increase the EU's economic competitiveness in regard to the major economic challengers of the moment and quite likely of the future: the US, Japan and the BRIC countries (Brazil, Russia, India and China). Economic competitiveness was conceived as possible by massive investment in knowledge seen as the best way to search for positive differentiation⁵.

⁵ Investing in knowledge implies a series of intertwined measures involving articulation of national education and training systems, as well as continuous development of strategies to attract highly skilled human resources. In other words, the battle for economic supremacy implies entering the battle for technological and scientific supremacy, a battle that cannot be won without highly prepared (and highly motivated) human resources. Of course, many are sceptical about the capacity of the EU to win such battles and consider them as already lost for countries such as Canada, the US or most recently Brazil. Difficulties are even bigger for Europe if we consider that the United States policy to attract highly skilled individuals is previous to the events of 9/11. This means that despite the negative impacts of 9/11 on most immigrant policies in western countries, the US was already much better positioned (along with Canada, Switzerland and Australia) when the European Union came along with the Strategy of Lisbon in 2000. The success of the American policy seems to be based mostly on its

The Portuguese compromise with the Lisbon Strategy unveils yet another meaning, as the commitment to this agenda helps the country to fulfil internal needs of its semi-peripheral scientific system that would be otherwise too costly to deal with. Therefore, the adhesion to the Lisbon Strategy has been also a way to concretise a much needed national priority, while counting on financial support from the communitarian budget to do so.

'green card system' that simplifies the administrative procedures involving the entrance of highly skilled migrants, speeding up their access to the American labour market. Over the years, other countries such as Canada, Australia and Switzerland have been developing policies of selectiveness sustained on a 'points-based system'. In Canada, for instance, where the system was first implemented in 1967, the skilled migrant must gather at least 67 points out of 96 in order to become established in the country. To get the points, a series of factors is considered, including: education (up to 25 points); work experience (up to 21 points); language skills (up to 20 points); arranged employment (up to 10 points); age (up to 10 points, with benefit for younger ages). Some authors argue that a similar system should be implemented in Europe, by the implementation of a blue card system (Weizsäcker, 2006a; 2006b) that would attract highly skilled migrants and foster their mobility around Europe, with gains for both receiving and sending societies. Indeed, according to this reasoning there are substantial gains to be considered for sending societies, which include not only financial remittances, but also a well-trained Diaspora that may always return to their home countries and contribute locally for the state's development, or stay at least in touch with home-based human resources in mutually beneficial projects. Other social gains include the quality of social integration of immigrant communities and possible positive effects on the education rates in sending countries. According to Weizsäcker (2006b) stories about successful highly skilled migrants may awaken other fellow citizens to the relevance of education as a path for success, as well as contribute to combat negative images on migrant communities that citizens may have in receiving countries. It is a fact that countries which have implemented systems with a strong bias towards highly-skilled individuals, have several social and economic gains, and possibly as achieve better social integration of migrant communities. But the validity of these arguments has to be questioned. Are non-skilled or less skilled labourers doing that well in 'points based system' countries? Clifton puts precisely this question when analysing the impacts of the Canadian system on the integration of less-trained and low-skilled Portuguese, with results being negative (Clifton, 2008).

The semi-peripheral condition and the European Union priorities have been thus the two main references of present Portuguese policy for brain circulation, with special emphasis on the benefits that the semi-peripheral condition may take from the back-up of the European context.

How the policy works

The Portuguese policy of brain circulation is based on three basic challenges:

- a. to re-captivate highly skilled Portuguese citizens that left the country in pursuit of better working conditions after or during studies;
- b. to attract foreign highly skilled professionals that may bring extra-value to technological and scientific areas in particular;
- c. to prevent the loss of highly skilled Portuguese/foreigners now integrated in the domestic markets of science, technology and academy, or who are still studying in the country.

Only recently though has this policy emerged as a systematic and integrated one, designed to reach out each one of these challenges. Since at least the mid 1990s, Portugal has been trying to implement a policy of advanced training of human resources, while also supporting scholarships to foreigners willing to proceed with post-doctoral research in the country (Hansen et al., 2004). Though very important, these were rather random efforts that did not meet the standards of a highly integrated policy for the three identified challenges and the European demands. The best expression of a new policy-making approach appeared, in the mean term, with the launching in 2005 of the national technological plan (*Plano Nacional Tecnológico*).

Assessing the governmental strategies through the national technological plan

In December 2005, the Socialist Government lead by José Sócrates approved the national technological plan (NTP), a document meant to assure the country's compromise with the Lisbon Agenda, as well as with its urgent domestic need to stimulate scientific and technological development, and to increase its citizens' levels of training, education and willingness to

innovate.⁶ The high level of political articulation became quite evident as most governmental measures presupposed integrated efforts inside the organic structure of the socialist Executive (namely between the ministry of science, technology and higher education, and the ministries of finances, economy, internal affairs, foreign affairs, among others).

Three axes of action composed the NTP's structure: knowledge, technology, and innovation.

- a. Under the axe of knowledge, the country is called to improve the levels of knowledge of its population, especially by broadening and diversifying the paths to education and training on a lifelong-learning basis; and by stimulating the access to new technologies of information and communication;
- b. Under the axe of technology, the country is called to overcome its technological and scientific deficits, notably by reducing the gap between the entrepreneurial world and research activities;
- c. Under the axe of innovation, the country is called to bring new impulse to innovation by making the entrepreneurial world more sensitive to the creation, usage and dissemination of new services, new products, new organizational forms and new managerial practices.

The main targets of these axes are citizens, companies, public administration, but also research and higher education activities.

For each axe there are specific goals and several specific measures designed to help the country meet such objectives. The next section takes a closer look at some of those measures, designed mostly for the axes of technology and knowledge.⁷

⁶ Such goals were already inscribed in the National Programme of Action for Growth and Employment (PNACE 2005/2008).

⁷ Another relevant axe is the axe of innovation. This axe is quite symptomatic of the huge effort that Portugal still has to make to increase its percentage of high technology products in the total of exportations. Indicators such as the percentage of new companies created in the high tech and medium-high tech areas, are still quite modest and below the expected values for 2010 (3.30 percent in 2008, against 3.38 percent in 2002, thus far from the expected value of 4.7 percent in 2010 and quite far from the EU aver-

Technology and Knowledge

- XIV. The investment on the Axe of Technology aims at two main strategic goals: to reinforce the scientific and technological competences of the population and to mobilize the entrepreneurial sectors for research and development (“R&D”).
- XV. Although not intuitive, the impact indicators on technology are in fact intimately related to the country’s effort to ameliorate its position in the brain gain circuit. The amount of researchers per one thousand inhabitants and the total personnel in R&D per one thousand active inhabitants have all met strong developments and seem to have been positively influenced by the capacity to attract highly skilled labour forces outside the country.⁸ Over the last years a series of initiatives has been launched aiming precisely at capturing highly skilled resources. In 2006, a governmental plan called *Compromise with Science for the future of Portugal*, integrated several goals, among which the hiring until 2009 of at least one thousand doctorate professionals, regardless of nationality, to integrate various R&D units located in public and private sectors, namely universities, associated labs and companies.⁹ This milestone seems to have

age of 6.69 percent already in 2007. It seems though to follow a communitarian trend since the EU zone of the 27 members, as its percentage decreased from 7.23 percent in 2002. Nevertheless, it would be unfair not to stress that the country’s Balance of Payments in regard to technology has been positive in three consecutive years since 2007. According to the Bank of Portugal, the BP in regard to technology remained positive in 2009 despite the international crisis (Plano Tecnológico Newsletter, 2010).

⁸ The average annual growth of researchers per one thousand active population increased 9.7 percent between 2004 to 2007, against 1.9 percent in the EU27 zone.

⁹ The *Compromise with Science for the Future of Portugal* revealed both the governmental attempts to overcome the country’s deficit in scientific and technological development, as well as the country’s compromise with the European scientific and economic agenda. In fact, the compromise followed both the Lisbon Agenda (2000) that set out the European concerns and goals about its scientific position in the international market, as well as the European Summit

been fully reached, with the celebration of 1113 labour contracts (Tribunal de Contas, 2009: 48), updated to 1192 contracts according to the Portuguese Foundation for Science and Technology (FCT, 2010)¹⁰.

- XVI. Following what seems to have been the success of previous initiatives, a new programme was launched in 2010, called Welcome II. This programme, co-funded by Marie Curie Action COFUND, and under the European Commission’s 7th Research Framework Programme, aimed at attracting European researchers with doctoral degree who had worked in non-EU member-states for at least three years, to join institutions located in Portugal. According to the FCT (2010) 42 percent of the hired researchers under the *Compromise with Science* initiative were foreigners, although no data has been provided in parallel about the hired nationals living abroad.
- XVII. Still under the axe of technology, it is also worth highlighting the remarkable growth on scientific production per one million inhabitants, which almost doubled between 2004 (373 outputs) and 2008 (626 outputs), not only overcoming the expectations set for 2010 (609) but also diminishing dramatically the gap between Portugal and the EU (estimated in 623 outputs in 2003, although more updated data on the EU would be needed).

Another major axe of this national plan of action is the axe of knowledge. This is composed of several strategic aims, among which to increase the educational levels of the population.¹¹

(2002) which had set as a major goal to increase the overall spending on R&D and innovation in the entire EU area, planning to reach 3% of the GDP by 2010.

¹⁰ More recently, in 2012, the Foundation for Science and Technology (FCT) has launched an international call for the recruitment of eighty researchers during 2012 to be integrated in FCT funded R&D units and associated Labs across the country.

¹¹ The levels of education are often presented by public authorities as being closely related to governmental efforts to attract academics placed out of the country, who will subsequently contribute to the country’s battle to increase the number of graduates. We do question however the reasonableness of this

One way to assess the governmental performance on achieving strategic aims set for the axe of knowledge is to look at the impact indicators established for each strategic aim, as well as at the percentages set for each impact indicator as milestones for 2010 and at the percentages so far actually achieved.

The progress on achieving the strategic aim of increasing the educational levels of the citizens has been quite positive. For instance, in 2003 only 10.5 percent of the population aged between 25 and 69 years old had higher education diplomas, increasing to 13.7 percent in 2007, with a milestone set for 2010 of 15 percent. It is still very distant from the EU average percentage which was already of 23.5 in 2007. Another impact indicator is the percentage of people holding diplomas in science and technology per one thousand inhabitants. In this case too the evolution was significant: from 8.2 percent in 2003, to 18.1 percent in 2007, overcoming the milestone of 12 percent expected for 2010. A third impact indicator relevant to the assessment of this strategic aim is the percentage of population aged between 20 and 24, with high school education. From 49.6 percent in 2004, it rose to 54.3 percent in 2008, although the milestone for 2010 had been set at 65 percent and the European average in 2008 was already of 78.5 percent. Again, the evolution is remarkable but still not good enough to put an end to the major gap that separates the country from most EU member states.

A second strategic aim of the Axe of Knowledge is fostering lifelong learning, which met though a rather modest evolution: 5.3 percent in 2008, against a decrease in 2003 to 4.3 percent, while the milestone for 2010 is 12.5 percent and the EU's average in 2008 was already 9.5 percent.

Finally, a third strategic aim is to prepare citizens for a society of information and knowledge, following the idea that new technologies of communication and information are strategically fundamental means of post-industrial literacy that

connection, as the logic behind it presupposes that the country is lacking in quality academic staff to fulfil such a goal. So far we have found no data or preliminary study either corroborating the suggested connection, or contradicting its terms.

will empower the citizen at various levels in a highly competitive global world.

All impact indicators of this strategic aim confirm that this has been a major governmental interest. For instance, the percentage of families with broadband internet connection has increased from 12 percent in 2004 to 46 percent in 2008, quite near the 50 percent set for 2010 and not far from the European average of 56 percent. The percentage of available online public services has increased also, from 40 percent in 2004 to 100 percent in 2008.

But what measures are enabling these various performances?

And most importantly, what is the relation of such measures to the country's policy of brain circulation? That is what the next section envisages to explore.

The Law of Immigration and the public management of brain circulation

Attracting qualified human resources and the legal device DR 84/2007

The axe of knowledge includes thirty-two projects of action, among which a measure called '*Attracting qualified human resources for Innovation/Adaptation of the legislation related to immigration and of the mechanisms for admission of immigrants of a high technical and scientific level*' (CNELPL, 2008). This is a measure meant to attract highly qualified resources. It is a measure intimately connected to the present Law of Immigration, as we will show ahead, although it does not exclusively target foreigners but the Portuguese Diaspora as well.

This measure has political implications. Increasing the levels of training and education, along with increasing the communication skills of the population, implies opening the doors to highly skilled human resources placed outside the country. What it does not say however, is whether the internal human resources are failing to accomplish such goals, and whether these are failing due to quantitative or qualitative reasons.

Having made sense of the political implications, we verified that the Portuguese strategy to attract highly skilled people placed outside the

country has been intimately tied to the creation of a simplified legal regime to ease the entrance and permanence of non-nationals as legal residents.

The *Decreto Regulamentar 84/2007* sets out in more detail the regime's functioning. It defines for instance the automatic terms that may be used to classify and verify the existence of highly skilled activities. It sets the possibility of articulating information between Portuguese services at home and placed abroad (consulates) while the applications of high-skilled non-nationals are under evaluation, thus speeding up their entrance and concession of legal residence.

The relevance conferred by the present Law of Immigration to the entrance of high-skilled capital in the country was also made evident in the creation of a ministerial *troika* (until 2011 formed by the Minister of Foreign Affairs, the Minister of Internal Affairs and the Minister of Science, Technology and Higher Education) meant to supervise the celerity and efficiency of all applications submitted under this regime of entrance.

The legal frame previous to this regime was often considered as costly, complex and time-consuming. This was particularly true for foreigners seeking longer periods of residence, instead of shorter ones which could be easily solved with tourist visas most of the time. In contrast, the new regime is seen as a very positive step in the battle for brain gain, though obviously not spared to criticism.

An initial criticism made to the regime signalled the absence of students, especially at their post-graduation levels, in contrast to what happens in countries such as the US where many post-graduate students are non-Americans (ACIDI, 2006). This criticism has been partially answered by the new Plan for the Integration of Immigrants (Resolution of the Council of Ministers 63-A/2007). The plan clearly states the importance of easing the entrance in the Portuguese higher education system of students who may have been integrated in foreign education systems; as well as the importance of simplifying the recognition of foreign higher education degrees, along with the creation of a welcome service specific to this end. The plan sees these

as fundamental measures to improve society's competitiveness in the labour sphere.

Other opinions suggest that the present simplified regime for highly skilled migrants should go further. As an example, the first coordinator of the technological plan, José Tavares, argued for the legal establishment of a fiscal frame favourable to high-skilled immigrants as a way to increase the country's attractiveness in the international market. Of course, one of the counter-arguments to this idea underlines the negative discrimination that this measure would imply to Portuguese brains and a series of potential side effects such as the runaway of Portuguese brains to countries where fiscal systems would not penalise them on grounds of national belonging.

According to the Report of July 2009 on the progress of the NTP, there is a set of relevant measures that has now been concluded. Specifically with regard to '*Attracting qualified human resources for Innovation/ Adaptation of the legislation related to immigration and of the mechanisms for admission of immigrants of a high technical and scientific level*', the list of accomplished activities include:

- a. the approval of Immigration Law 23/2007;
- b. the publishing of the *Decreto Regulamentar 84/2007* that regulates Law 23/2007;
- c. the creation of a taskforce between three ministries called *Grupo de Contacto* (literally contact group).

As a result of these measures, the report indicates that 'Portugal has attracted in 2008 more than the double of highly-skilled foreign citizens in relation to 2007.' (GCNELPT, 2009: 63). The report stresses as a sign of success the fact that on average the concession of visas is now eleven days against the twenty days registered in 2007. Also according to the same report:

"The data from the Contact Group created for the accomplishment of this process reveal that among these immigrants of over 40 countries, there were 88 researchers, 132 academic staff members and 313 company boards, medical and paramedical professionals, information systems professionals, electro-technical engineers, chemists, juridical professionals and liberal professionals. The measure is concluded." (2009: 63)

Can a semi-peripheral state win position in the brain circulation game?

Previous sections have looked at the recent Portuguese governmental measures to gain the best position possible in the brain circulation game. One may thus be tempted to think that these efforts are typical of a semi-peripheral state, or even that they are exclusive to the country under analysis. However these efforts equal those implemented by other European countries such as Ireland, Hungary, and some quite central states such as the UK, France or Germany. Indeed, international trends reveal that governmental efforts usually include legislation designed to facilitate the entry of skilled foreigners, as well as less bureaucratic administrative measures to facilitate the transfers of human resources in the entrepreneurial sphere (Hansen et al., 2004: 21-22).

But regardless of how close policy designs may be, the challenges of the brain circulation game are felt more poignantly by a semi-peripheral country such as Portugal. Any country has to focus simultaneously on the brain gain *and* brain drain, but for semi-peripheral countries the equation is of a much more difficult resolution.

Studies conducted earlier have revealed that the difficulties in stopping the brain drain follow a European trend. Findings (Hansen et al., 2004: 17-18) suggest that for instance:

- a. studying abroad increases the risk of EU-born remaining abroad;
- b. there is no significant difference in the income of the EU-born and the US-born high-skilled that work abroad, but there are large differences among the incomes of those working at home, with US-born earning significantly more than EU-born;
- c. one in three EU-born at home were planning to move abroad;
- d. only one in ten EU-born human resources may plan to ever return home (13 percent against 52 percent of US-born human resources willing to return home);
- e. having children does not seem to increase the desire of the EU-born to stay home or to return home (59 percent of the studied human resources with children and working abroad

had no plans to come back and 36 percent had plans to go abroad).

These are all very good reasons to suspect why so many feel sceptical about the success of the Lisbon Agenda. But these difficulties are even bigger for semi-peripheral countries such as Portugal (Peixoto, 2004: 13) as their pull capacity tends to be inversely proportional to their various structural constraints.

Internal structural challenges to the Portuguese scientific system

Weizsäcker, well-known for arguing in favour of the creation of a European blue card as a means to improve the European attractiveness to international high-skilled labour, has signalled Portugal as among those with the highest potential to attract high-skilled capital (2006a; 2006b). How is that possible?

In a group of fourteen countries, Portugal showed the lowest performance in higher education, with only 7.7 percent of its native population holding a higher education degree. In parallel, this explains precisely why the country is well-positioned in the pull race for brain gains, as it is in demand for highly qualified people especially in comparison with its supplying capacity. In theory at least, there are thus very good reasons for the Portuguese state to keep betting on public measures to attract foreign and Diaspora experts, and to keep them for as long as possible.

There is however a series of challenges that persist and whose continuity may very well disturb the country's efforts. By challenges we mean what literature has been calling *push factors* and which in the Portuguese case find echo in much of what the international literature has identified as such (Todisco, Brandi and Tattolo, 2003: 126; Favell, Feldblum and Smith, 2006: 9; De la Vega and Vessuri, 2008: 72; Rizvi, 2005: 176; Hansen et al., 2004; Kurka, Trippl and Maier, 2008).

Challenges in a positive approach, or push factors in a less positive one, may in any case cause serious damage to the State's efforts, hence demanding a strong, long-term commitment to contradict their impacts. The following part of the text identifies what we assess as major challenges to the Portuguese scientific system as it

stands, and whose persistence may contradict the governmental efforts to set a successful policy of brain attraction.

Challenges embedded in the country's economy
According to the *Observatório das Desigualdades* (Observatory on Inequalities) the percentage of the Portuguese GDP allocated to R&D has been growing. In 1998 it was 0.65 percent while in 2008 it was 1.5 percent of the GDP (more than its neighbour, Spain which went from 0.87 percent in 1998 to 1.35 percent in 2008). Of course these percentages are not comparable to those of Finland (3.7 in 2008) or Sweden (3.8 in 2008). The comparison is even less possible when looking at absolute numbers: 1,058.20 Euros in R&D per capita in Sweden, 1,013.70 Euros in Finland, against 233.20 Euros in Portugal, in 2008. Portugal is also below the EU average (1.9 percent in 2008 for the EU27) corresponding to 399.80 Euros per inhabitant. So, despite the undeniable efforts to increase the investment rates in R&D, there is still a long way to go.

The mentality of a substantial part of entrepreneurs about the need to invest more on R&D is certainly not strange to this. Studies conducted earlier show that, for instance, the connections between scientists in the Diaspora and the Portuguese entrepreneurial world represent only 5 percent of the total, in contrast with the connections of the former to higher education institutions, with universities gathering almost 80 percent of that total (Delicado, 2008 b). This goes along with what this text has already signalled as the persistence of a strong academic culture in the country (see section 3).

This is a major problem, one big enough to contradict Weizsäcker's analysis on the brain gain potential of the country in result of its low rates of education among the native population. Indeed, previous research on Portuguese reality show a major paradox: that although ideally the country's deficit in training and higher education would mean it could be highly attractive for qualified immigrants (as a result of both redundancy in home countries and of Portugal's imbalance between its human resources demands and its capacity to answer them), the persisting

low levels of income challenge such predictions (Peixoto, 2004: 2). In other words, it will be difficult to attract highly skilled individuals, whether national or non-national, residents or in the Diaspora, as long as the business sectors in civil society:

- a. resist to investing more in R&D;
- b. resist to increasing the number of companies specialised in the production of innovative products and services, based on high/medium-high technology;
- c. resist to raising the wages of highly skilled employees.

Despite a significant evolution of the average wages earned by graduates in Portugal (Alves et al., 2010), companies in general are not the most attractive realm for scientists, who end up seeing the academic institutions as a better workplace to be. But even that may be about to change as the present domestic economic crisis is most likely to affect also the attractiveness of the academic world. The already mentioned academic culture is translated into a strong concentration of high-skilled capital in universities and associated labs, both strongly dependent on public funding.

In parallel, severe financial cuts in strategic sectors (such as education and health), along with wage cuts in the public sector (up to 10 percent), recruitments and career progression frozen or cancelled (with very few exceptions), VAT reaching the maximum of 23 percent over most consumption goods and services, unemployment rates reaching 14.8 percent in 2012 (35 percent among the youngest) are all presently threatening to hurt the attractiveness of the country's R&D activities.

Challenges embedded in the academic environment

Another challenge the country faces has to do with the brain waste inside its academic culture. Generally speaking, Portugal shares the academic culture of the West (Teferra, 2003). One aspect that has been characterising this culture is the absence of a system of motivation for younger scientists and younger academic staff.

Young academic staff, for instance, is frequently overwhelmed by excess administrative work and teaching hours per week, while also facing the increment of short-term labour contracts and increasing demands in terms of scientific production.¹²

Most European academics of younger generations face similar fears, frustrations and distress, but this is something to be taken very seriously by a semi-peripheral country as it cannot afford to lose more qualified individuals. The absence of a culture of merit and motivation especially for younger high-skilled professionals is definitely a strong push factor that may lead ultimately to brain drain, or at least quite certainly to brain waste, that is, to the rapid degradation of intellectual power never fully explored.

Challenges of Diaspora and native residents' mutual perceptions

Another academic factor in Teferra's designation (2003), include the Diaspora's perceptions about their fellows in Portugal, against the native perceptions about the Diaspora. Although not subject to generalisation, native intellectuals tend to feel the Diaspora as arrogant and excessively harsh in judging the country's (lack of) opportunities, as well as its mentality and cultural habits. On the other hand, Diaspora intellectuals tend to complain about what they understand as the persisting power of academic feuds. In the eyes of the Diaspora, the academic feuds reveal a resistance to the entrance of new forms of doing things, of thinking and organising scientific and technological activities. In parallel, they also express forms of national resentment (by inflicting a sort of punishment to those who had left the country and who now have to face difficulties in the recognition of higher education diplo-

¹² Although this is not an exclusive scenario to Portugal, one often finds academic staff in public universities with annual part-time (50 percent) contracts that correspond to eight hours of teaching per week, though in practical terms it may ascend to ten to twelve hours per week. Unnecessary to stress that academic staff under these conditions are almost excluded from research activities simply due to lack of time.

mas¹³), jealousy (by impeding the entrance in the academic structure of fellows who had proved to be successful abroad) and fear (by preventing the entrance of highly competitive fellows that might expose the existence of internal mediocrity).

Other factors contributing to a less effective relationship between natives and the Diaspora relate to the existence of different embedded administrative cultures (more bureaucratic in Portugal), different accesses to infra-structures, material resources, financial funding, and different capacities in human resources recruitment (which may also be connected to the need of following more or less bureaucratic and time-consuming recruitment processes). But, again, much of the relevance of these factors depends on the way individuals understand them as valid reasons to justify their mutual perceptions.

Challenges embedded in the attractiveness of other systems

Push factors often have to do with the political and economic conditions of the sending country (Jalowiecki and Gorzelak, 2004; Thorn and Holm-Nielsen, 2006), as well as with the professional and scientific milieus of the sending country (Casey et al., 2001; Teferra, 2003; Todisco, Brandi

¹³ The adherence to the Bologna process, which was felt more intensively after 2006, has since greatly improved the recognition of diplomas earned abroad. Diplomas from higher education institutions within the European Union are almost automatically recognised. However, there is a distinction between the recognition of an academic degree (*reconhecimento de grau*) and the attribution of equivalence (*equivalência do grau*). Though a diploma might be almost automatically recognised, this is not the same as being equivalent to the diploma granted for a specific area in a specific academic institution. The equivalence in this case requires a separate procedure that will imply the official constitution of a jury. This jury will then evaluate the scientific contents of the academic programme and the contents of the dissertation/thesis that the applicant has developed, and will decide whether or not the existent diploma is equivalent to the one conferred by the institution to which the applicant submits his/her request. So, although higher education institutions cannot escape the demands of the Bologna process for recognition of diplomas, they may remain attached to some old feudalistic habits by complicating the access of foreigners or Diaspora intellectuals to the regime of equivalences.

and Tattolo, 2003). In the Portuguese case, and according to Delicado (2008a) Portuguese scientists seem to be attracted in general terms by central systems with more human resources; more employment opportunities; more investments on science and technology according to the percentage of GDP allocated to R&D; higher productivity rates (percentage of scientific outputs); and more internationalized higher education systems with stronger capacity to attract foreign students and foreign academics. As a result, Delicado notes that despite the relevant growth of the Portuguese academic and R&D performances, Portuguese high-skilled professionals in the Diaspora still perceive the provided conditions as bellow those found in central systems (2008a: 126). But is this simply a mismatch of perceptions between what the country actually has and what its Diaspora is willing to see? In other words, is the Diaspora still attached to old perceptions on the country's conditions, which no longer find echo in present reality?

We may find the answer by looking into another study, on the presence of foreign high-skilled professionals in Portugal. Marques and Góis stress that the presence of high-skilled foreigners in Portuguese R&D activities has increased significantly (Marques and Góis, 2008). But this growth, however relevant, has not been translated into a substantial increase in the country's scientific and technological outputs. Why? As these authors underline, the presence of foreign high-skilled professionals is rather heterogeneous, with groups or at least with a significant number of individuals within specific groups (for instance, high-skilled labourers from Eastern European countries) experiencing great difficulties in accessing the labour markets that match with their expertise. This is a clear case of brain waste that corroborates the perceptions that the Diaspora still has on the capacities of the Portuguese society to absorb their potential in the best ways possible.

If we define brain waste as the inability of a country to allocate high-skilled capital to activities compatible with its expertise, then brain waste can affect nationals as well as and non-nationals, with civil society and governments sharing the

responsibility. Portuguese civil society is responsible for much of its brain waste, because part of its entrepreneurial structure still tends to privilege education and training less than low wages. This puts a tremendous pressure on graduates, especially more vulnerable groups such as immigrants. As a consequence, instead of a 'top-levelled' labour market, there is a tradition of a 'bottom-levelled' labour market where employers often do not recognise the recruitment of highly qualified human resources as relevant. In this 'bottom-levelled' labour market, entrepreneurs follow the old fallacious assumption that international competitiveness can be met by reducing costs in human resources. Brain waste in Portugal may be considered an even bigger problem, if we take into account that the country has been making a major effort to increase its levels of education (UNESCO, 2010). If this effort on the side of education ends up wasted in low-waged and low-skilled activities, one has to question how much the effort is actually worth.

Though governments are not exempted from responsibilities in fostering brain waste, it would be a mistake to ignore the Portuguese public efforts to change the entrepreneurial environment. The national Technological Plan provides a series of measures specifically designed to help companies increase their levels of innovation, technological competitiveness and participation in R&D activities. According to a recent report of the Foundation for Information Technology and Innovation, this is a successful approach, with Portugal ranking third in a total of 21 countries for showing the best competitive systems in support of R&D activities. This satisfactory performance seems to be in part thanks to an attractive system of fiscal incentives to business sectors dealing with R&D, whether as producers or as intensive users of R&D outputs.¹⁴ However, this does not erase the fact that companies in Portugal are still spending much less in R&D (from 0.24 percent in 2003, to 0.76 percent of the GDP in 2008) than companies in the EU area in general (1.21 percent of the GDP in 2008).

¹⁴ On the fiscal system see Law 20/2005 and Law 10/2009 that sets the Programme of Initiative for Investment and Employment.

Governmental efficiency: how improvement is being pursued

Solving the brain gain/brain drain equation from the state's perspective is no easy ride. Regardless of the position that states hold in the World-System, responding to the brain gain/brain drain challenge implies respecting fundamental human rights such as the citizen's right to mobility (unless the states are under non-democratic regimes); investing more in the continuous renewal of pull strategies that may attract both nationals and non-nationals; and investing in continual support for the communication circuit between its Diaspora and home-based high-skilled capital. But the more distant the state is from the centre of the economic World-System, the more it experiences difficulties in dealing with that complex equation.

Experts have been arguing over the last years on the benefits of virtual networking as a means to partially respond to this challenge. The benefits of new information and communication technologies (ICT) for the production and circulation of science have been deeply explored by various authors (Gibbons et al, 1997; Ackers et al, 2001; Connel, Wood and Crawford, 2005; De la Vega and Vessuri, 2008; Dickson, 2003), while its impact on the making and strengthening of the Diaspora networking has also been widely studied (Meyer and Brown, 1999; Meyer and Wattiaux, 2006; Mahroum, Eldrige and Daar, 2006; Thorn and Holm-Nielsen, 2006). Unfortunately though, most public strategies on brain attraction still disregard the relevance of fostering systematic relations between domestic communities and Diasporas (Teferra, 2004) through the support of new ICT. It is therefore crucial that states realise the relevance of developing measures that may facilitate the passage from sporadic, spontaneous and well-intended contacts between Diasporas and home-based high-skilled professionals, to well-organised networking structures whose projects may also be in line with the state's R&D priorities.

Portugal is a paradigmatic case of absence of public support to this kind of networking. As recent studies reveal, most contacts between home-based scientists and Diaspora scientists

are informal, corresponding to 84.8 percent of the total inquired in Delicado's study (2008a:123). In parallel, activities that denounce 'an effective collaboration [of the Diaspora] with the Portuguese scientific system' are by far less representative (30.3 percent in co-production of papers or other scientific outputs, and 26.9 percent in joint research projects (2008a: 122)).

This text began by arguing that brain circulation seems much more adjusted both to the demands of scientific reality (for the sake of its own validation as a space of knowledge) and to the characteristics of present global reality. But even *circulation* as a concept has to be detached from the burden of physical geography and contemplate other new 'geographies' such as those of cyberspace. In the Portuguese case under scrutiny, virtual brain circulation already exists, but not as part of a governmental strategy to help both the Diaspora and the home-based scientific communities to reinforce their ties.

Concluding remarks

This paper analysed how Portugal has been trying to contradict the characteristics of its semi-peripheral scientific system. More specifically, it analysed how the country tries to increase its attractiveness in the international brain circuit, and tries to fight its general semi-peripheral condition in Science and Technology, through the implementation of governmental measures.

The paper suggests that a successful public policy in regard to the semi-peripheral condition of the Portuguese scientific and technological markets has to be built on at least three major pillars:

- a. to increase the attractiveness to foreign qualified migration;
- b. to increase attractiveness to its own qualified Diaspora;
- c. to prevent the loss of high-skilled residents, whether national or non-national.

According to some recent reports, Portugal's semi-peripheral condition actually has potential for attracting foreign skilled human resources (and of its own Diaspora we may assume). In parallel, looking at the numbers presented by governmental agencies, the country reveals a

serious commitment with science and technology, having decreased significantly its gap from the EU area. But, as the text denounces, there are various structural challenges which the country still has to deal with. A successful approach to such challenges implies at least three major recognitions:

- a. that the Diaspora (whether bigger or smaller in number) will always exist;
- b. that brain drain/brain gain is a continuous process of simultaneous benefits and losses for the State;
- c. that attracting foreign and Diaspora brain power cannot be successfully equated outside the valorisation of home-based brain power.

There are, at least theoretically, good reasons to say that high-skilled migrants are likely to be the new winners of migration flows. Even if the most populated countries out of the western sphere (China, India, Russia, Indonesia, Brazil, Pakistan) continue to bet on the high-skilled training of their human resources (HR), along with countries such as Japan and the United States, excess in the supply of qualified HR is quite unlikely to happen, because the Western demand for high-skilled labour will also tend to grow as globalization forces go further in scientific competitiveness. This means that strategies to attract high-skilled migrants will also become more and more aggressive among states. For semi-peripheral countries such as Portugal this will imply working even harder on their pull capacities to attract high-skilled migrants and Diasporas, otherwise the gap between them and the states in the centre of the scientific, technological, academic, and economic markets, is likely to increase.

This text suggests that brain drain effects can be minimized thanks to networking (Teferra, 2004). New ICTs have been fundamental in fostering scientific and academic relations between home-based professionals and Diasporas, as well as in enabling their continuity, renewal and expansion with reduced costs. However, there must be a continuous and oriented effort, or in most cases it will be all about singular, well-intended and spontaneous initiatives with no long-term impact in the country's scientific development, and, more relevant, with no con-

nection to the R&D priorities of the country. In other words, governmental support is crucial in order to explore as much as possible the benefits of networking between Diaspora and home-based national/non-national high-skilled professionals.¹⁵

Simultaneously, when equating the attraction of the Diaspora, this must not be thought strictly in terms of attracting scientists to return and stay in the country, but also, and most importantly in terms of how the Diaspora can play a relevant role in helping the country meet its goals still when remaining abroad (Favell et al., 2006; Meyer and Brown, 1999).¹⁶

If properly stimulated by the right policies, the benefits of networking may be quite big for the Portuguese scientific system. Indeed, studies reveal that most Portuguese scientists abroad keep very regular contacts with fellows in Portugal¹⁷ which is already a good basis to start with.

Moreover, there is also the importance of the language factor. There are over 200 million Portuguese speaking people in the world. Higher levels of education and training within all Portuguese speaking countries, and most particularly in Angola and Brazil, will be decisive in providing increasing numbers of high-skilled transmigrants that will be contributing regardless of nationality to the scientific, technological and economic development of this multicultural space, Portugal included.¹⁸

¹⁵ Of course, ICTs can also contribute to brain drain because it makes it easier to search for opportunities outside the country. And indeed, brain circulation fed by virtual intellectual Diaspora works beyond national control and this brings challenges to any State, and most sharply for those facing economic and/or social-political fragility.

¹⁶ Moreover, as literature signals, Diaspora can contribute to the creation of better returning conditions, as it helps researchers to be updated about the best opportunities in the national market (Ackers, 2001).

¹⁷ In a study conducted to the Portuguese Diaspora's behaviours, Delicado notes that a significant number of inquired individuals is bounded to associations of a scientific or scientific-professional nature located in Portugal (2008b: 7).

¹⁸ We take here *transmigrants* in Schiller's accession (Schiller et al., 1995:48), as migrants whose lives are structured on mobility and interconnections that surmount and relate to various national frames, while

Networking and virtual spaces are no panaceas for brain drain, but they may bring significant gains both for states and individuals. Its gains, however, tend to be diluted if they escape to the state's participation. This is certainly a challenge inherent to virtual communication, and which the state must tackle gently. However, the benefits from coordinating the state's R&D priorities with the richness resulting from virtual networking between Diaspora and home-based brain power will justify any effort to implement specific measures to enhance this reciprocity.

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