



Black, Migrants and Ethnic Minority Women Scientists Position in Research and Academic Careers in Europe

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Migration"

“Excellence is the best antidote for racism”
Martin Luther King junior¹

I would like to thanks the six NEWS partners (see chapter 10) and Dr. Marina Blagojević for their contribution to the NEWS project and to the present report.

Thanks also to Pina Meloni for the final lay out of the present report

¹ Quoted by Anupama Pande, computer science engineer from software labs of IBM, International colloquium 2007, “Empowering women in Engineering and Technology”, Tunis 6-8 June 2007.

Executive Summary

1. This report is one of the products of the EU-funded Sixth Framework NEWS project (**Network on Ethnicity and Women Scientists**), which involved 7 university partners: Belgium (Université Libre de Bruxelles, the coordinator), Bulgaria (New Bulgarian University), Germany (University of Aachen), Italy (University of Bari), the Netherlands (University of Utrecht), Portugal (University of Minho) and the UK (University of Westminster).
2. Even though the terms **Black and Ethnic Minority** (BME) is not really satisfying and certainly criticized, it has been chosen in this report to try to take into account the greater possible number of categories of women scientists targeted in different countries. In the case of Bulgaria, “ethnic minorities” refers more to national minorities such as Turkish and Roma than to recent migrants and their descendants who have settled in the country.
3. This report **presents the main findings** of the seven national states of the art about the position of Black, migrant and ethnic minority (BME) women scientists in research and academic careers undertaken in the following EU countries: Belgium, Bulgaria, Germany, Italy, Netherlands, Portugal, United-Kingdom. Since the national contexts of migration history and colonialism are quite different, the reports cover some countries with long-established minorities and others with more recent minority labour market entrants.
4. This European report follows on the ETAN, HELSINKI and ENWISE reports, which analysed scientists’ position in R&D and HE sector from gender perspective. The NEWS report brings a new insight into women scientists’ situation in research and academic career by taking into account nationality or ethnicity as intertwined factors impacting on women’s scientific career.
5. The present **report aims to contributing** to a better understanding of the complexity of gender and ethnic diversity in science. Scientific community and all stakeholders involved in making research policy should acknowledge that this issue must be addressed in appropriate ways. The European report and the seven national states of the art on gender and ethnicity in science open up the discussion on the necessity of developing appropriate management tools of human resources in universities and research institutions.
6. The **recommendations** of the research may **encourage universities or research institutions** which have never developed policies on gender and ethnic diversity to do so, and those that already have them to improve their design, implementation and monitoring.
7. The European report wanted to raise several important **questions for ERA**: To what extent do foreign women scientists and those from ethnic minorities participate to the existing European research workforce and what potential do they represent for the full realisation of the European Research Area? Is gender and ethnic diversity considered as a crucial element for the increasing of the European research workforce and for the improvement of the quality of European science?
8. The research **hypothesis** of the NEWS project is that the invisibility of women scientists from ethnic minorities and/or the possible existence of gender and ethnic discrimination in science has negative effects on science development because of a loss of talents, of competence and of knowledge.

9. **Women scientists** are those who are working in all fields of sciences in the **public sector** where they are most present and which is most sensitive to its normative and legal environment. Private sector has not been taken into account in this report since the difficulties to get access to statistics.
10. There is a need firstly to **change the stereotyped image of BME women scientists**. These stereotypes play a negative role in the general perception of these groups and the scientific community doesn't escape these destructive perceptions thus undermining the scope for these women to fulfil their potential.
11. As a major actor in society, **universities should be more involved in a multicultural perspective** in terms of both multicultural studying and working contexts, and the production of knowledge concerning the relevant issues of gender and ethnicity. This supposes changing attitudes and organisational culture and accordingly institutions seeing racisms as a problem for the institutional development, not just for ethnic minority staff and students.
12. **There is a serious lack of statistics**. At national level, information on nationality is available in all seven countries but ethnic minorities are only clearly identified in the censuses of three countries: Bulgaria, the Netherlands and the United Kingdom. As a rule, access to this information is not very easy especially in the sector of high education and research.
13. Regarding the **level of education**, the research shows that it is increasing both in the foreign and native-born populations aged 25 to 64 in the countries under investigation. United Kingdom and Belgium have the highest percentage of tertiary level of education in these populations while Italy and Portugal have the lowest. The *new immigrants* who have been settled in EU countries since the 1990s are more highly educated than in the past. In the six countries women who are recent immigrants (<10 years) have relatively the highest proportion of tertiary qualifications. In Bulgaria, Jews and Armenians have a higher level of education than the country average. This is not the case for the two largest minorities, the *Turks* and even less for the *Roma*. The number of Roma intellectuals is not only extremely low, but it fell constantly during the post-communist regime. The education levels of the *second generation* are increasing but are remaining lower than the new migrants and the natives in UK, Belgium and Germany. Inside the second-generation group, the naturalized has a better level of education than the ones that remained foreigners.
14. Concerning the **employment rate** statistics shows that tertiary educated have the highest employment rate, particularly for native and foreign-born in the UK, Netherlands and Portugal. Nevertheless, the high educated employment rate remain higher for natives than for foreign born in all countries. Conversely, the **unemployment rate** of high educated foreign born is greater than for natives, particularly in Belgium and in Germany.
15. In the six OECD countries under investigation (Belgium, Germany, Italy, The Netherlands, Portugal, UK) immigrants are more **over-qualified** than natives. Over-qualification is more characteristic of newly arrived immigrants in certain economic sectors who are more likely to accept unskilled jobs than native born. Female recent migrants and those from outside the OECD are most likely to be over-qualified. Foreign-born women in Belgium, Germany and Italy are more over-qualified than foreign-born men. All foreign-born women are over-qualified compared to native women and men.
16. The proportion of women among **PhD graduates** in EU-25 was 43% in 2003, which corresponds to an improvement of 5 points compared with 1999 (38%).

The countries where women PhD graduates are in a majority are Portugal, Bulgaria and Italy. They are well represented in Education, Humanities and Arts, and Health and welfare. In Mathematics and computing they are in a majority in Portugal, Italy and Bulgaria. In Engineering and Construction, they are a minority in Germany, Belgium, Netherlands and UK. **In the UK, Ethnic minority students** are found in greater numbers at Masters level and seem to be choosing SET subjects and Medicine over other subjects. At the doctorate level the presence of ethnic minority students falls and White Britons are slightly over-represented. Relative to their population size, the only known minority groups well represented at the doctorate level are the Chinese and Black Africans. Bangladeshi, Pakistani and Caribbean students seem to be particularly under represented. **In Germany**, the percentage of **women PhD students** is slightly higher for *immigrants* (42%) than for women in the total population (41%). The proportion of PhD students within the *second generation* is comparable to their proportion in the total population but the percentage of women is considerably lower. In the **Netherlands** although the current accessibility of BME individuals to higher education in the Netherlands has somewhat improved, BME students and academics still remain disproportionately under-represented in higher education in comparison to majority population during the first decade of the twenty-first century.

17. Regarding **research and academic careers**, the national reports give an overview of the **under-representation** of “non Western” foreign, black and ethnic minority women scientists in research and academia in seven European union countries. In the **UK** a study shows that British minorities are more likely to be working in research and lecturer positions compared to White British staff. About three per cent of minority staff are professors and nearly three times as many White British staff work at this grade. In **Germany**, immigrants are not drastically under-represented among researchers, but they are mostly on temporary contracts. On the other hand, the second-generation migrant group is drastically under-represented among researchers. In the **Netherlands** a survey finding in 2002 showed that almost none of the universities academic staff included the Netherlands main migrant communities i.e. Turkish, Moroccan, Surinamese and Antillean. Individuals stemming from BME backgrounds constituted a mere 1.6 % of the entire university staff, while constituting 14.2% of the population in the city of Amsterdam. In comparison with “native” Dutch personnel, persons of Surinamese and Antillean/Aruban descent were often over-represented in technical and administrative positions, but under-represented on the academic level. In 2007, only nineteen women with BME backgrounds were employed as either lecturers, PhDs, Associate, Assistant or Full Professors by the Dutch academy. BME women account for less than 1% (0.027%) of the entire female Dutch academic staff.
18. **In the Netherlands**, in total, twelve individuals with a BME background were employed by Utrecht University. In terms of percentages, from the entire Utrecht academic staff (3,017), a mere 0.4% are of BME origin. The only areas where BME individuals are more often found are within the areas of lower-level employment. **In Belgium**, in 2005, the relative proportion of Europeans (3.6%) and non-Europeans (3.9%) of temporary administrative staff was almost twice as high for Belgians (2.3%) in the same category. When we compare the position of women by nationality, the trend was similar: European women (4.7%), non-Europeans (3.8%) and Belgians (2.6%). In **Italy**, 38.3% of foreign academic

staff in Italian universities came mainly from EU countries. The distribution in the hierarchy of Italian and foreign women in academia show the same percentage shares. The university system is therefore disadvantageous for women but not necessarily for foreigners. Foreign women academics are usually more present in Language departments.

19. As a rule, BME researchers and academics hold a more **unstable position** in all the countries investigated. Minorities are less likely to be on **fixed term** contracts and more often in **part-time** working arrangements.
20. **Related to staff recruitment practices** the seven countries have more or less transparent recruitment rules and there is significant scope for informal decisions in recruitment and appointment. The sense of public accountability in this area is relatively weak. In **Belgian** and **German** universities and research organisations, while formally correct, recruitment is not a transparent process and the mechanisms for investigations or complaints of unfair treatment are unmanageable. The various steps in recruitment are not necessarily monitored or regulated. In the **UK** the approach to discrimination is different from other countries since all public service managers have the duty to promote equality (notably gender and race). Accordingly, policies and measures must be implemented and the new Commission for Equality and Human Rights has a monitoring role. The Commission for Racial Equality produced a guide on the duty to promote race equality for Further and Higher Education institutions. Nevertheless, the efforts to tackle social inequality are inconsistent, and rarely monitored, across the Higher Education sector. In medicine for example, one study of medical school applicants has shown that having a European surname predicted acceptance better than ethnic origin itself. In **Bulgaria** competitions are public and open, nevertheless detraction from the legal rules takes two forms: the jury selects the candidate before opening selection procedure; the position is defined according to the scientific profile of a previously chosen candidate. In the **Netherlands**, it is common practice to nominate an internal candidate rather than candidates from elsewhere which benefits to White Dutch Born.
21. Regarding **measures** undertaken for **BME PhD students**, there is a specific programme in **the Netherlands** since 2004. The *Mozaiek* project has been promoted by the NWO (Netherlands Organization for Scientific Research) plans measures specifically designed to attract BME graduate students who demonstrate academic potential into research. However, the programme does not give priority only to potential doctoral female students. With this project, there is a specific prize, the *Mozaiek* Prize, which was conceived to stimulate and reward excellence in scientific research among researchers with BMR backgrounds. Until now, five young BME female researchers were awarded the *Mozaiek* Prize between 2004 and 2005 (Transplantation medicine, Neurology, Medical Informatics and Radiology, Public Health and Immunology). In addition, the *Echo Award* (which consists of a summer course at UCLA) is a yearly national incentive award given to talented BME students in higher education. In **Bulgaria** the government adopted the *Framework Program for Equal Integration of Roma* to integrate it into Bulgarian Society. The program envisages the following measures in the sphere of education: introduction of “teachers-assistants” to help Roma children adapt to a school environment; training of qualified teachers for teaching of the Roma language; organisation of courses to prepare Roma for university entrance exams. In **Belgium**, *Diversity*

plans implemented in Dutch-speaking universities (VUB and KUL) are also geared to attracting more ethnic minority students and to improve achievement in university studies.

22. **Regarding measures about BME staff recruitment.** If scientific institutions make effort to recruit women scientists, specific measure targeting BME women scientists are rare. In the Netherlands, the **ASPASIA** programme (1999) targets, encourages and enables female academics to become Professors, but the programme does not entail a special section for BME female academics. The Professorship appointments granted to BME have occurred due to the creation of special or **exterior chairs** for specific disciplines in order to study specific issues or problems. These positions are often part-time (one day per week) and have a somewhat lower status than structural chairs. In **the UK**, there are initiatives on Gender and Ethnic Minority Issues in Science and Technology for understanding and identifying the benefits; barriers and solutions related to greater participation ethnic minorities in Science, Technology, both public and private sectors. The Department of Trade and Industry proposed a national grant scheme for minority women in SET. In **Italy, Portugal, Bulgaria, Belgium and Germany**, there are no concrete policies relating to migrant and minority groups in employment, although there are some moves to develop such policies and procedures. In the **UK**, Guidelines on Equal Opportunities in Employment in Universities were issued in 1991. The guidelines included a suggestion that universities take positive action to increase the representation of members of ethnic minority groups among staff. In the late 1990s a Commission on University Career Opportunity expressed concern about the lack of active pursuit of these policies and asked their implementation, monitoring and evaluation.
23. **In terms of bad practices**, some have been pointed in the **Netherlands** about the lack of academic role models for BME students and the insufficient and incorrect scholastic guidance and advice to talented BME students. This tendency appears to be a contributing factor in lower educational achievement levels with BME students across the board. The prevalent Dutch self-image and self-representation are considered the “norm” in terms of high achievement and success. The individuals with BME backgrounds are seen as “token” oddities within the realm of academia, and that their positions have been granted on the bases of fulfilling ethnic or “racial” quotas, rather than intelligence and merit. In the **UK**, there are reports of disillusionment amongst BME academics as regards the mechanisms for reporting and addressing experiences of racism and harassment from colleagues, support staff and students. The Higher Education Race Equality policy survey indicated that while all Higher Education Institutions had equal opportunity policies, one third did not have a specific race equality policy and 25 per cent of ethnic minorities said that they had personally experienced racism in job applications.
24. **Networking:** In the seven investigated countries several networks of women scientists are well established, fewer scientist networks grounded on ethnicity have been founded and no ethnic minority women scientist network exists today. The most significant case is in the **UK** where considerable developments have taken place in women scientists and ethnic minority scientists networking organisation and activities. The *African and Caribbean network for Science and Technology* set up in 1995 and The *African Caribbean Women in Science and Engineering* (A-C Wise) which has the aim of supporting more young black

- people to enter the fields of science, maths and more African Caribbean women technology in SET careers. In higher education has been the setting up of *Equinet* started in 2004, a Black Staff network operating across several Higher education institutions. It was intended as a forum within which BME staff might consider and reflect upon experiences and be given a voice.
25. Regarding the results highlighted in the seven national reports there is a serious need for a better **integration of the gender and ethnic dimension** in higher education policies. It is recommended first the adoption and the implementation of the *European Charter for Researchers* and the *Code of Conduct for the Recruitment of Researchers* by each country, universities and institutions of research. In addition, they must be accompanied with adequate raising awareness campaign, monitoring and evaluation process.
 26. Substantial efforts should be made **to produce more information about BME women scientists**, which will enable us to assess their position in research and academic careers in terms of recruitment, retention, promotion and recognition. This information concerns the production and the access of statistics as well as the development of further research with a view to answering three questions which are asked for women in general: why so few are recruited? Why so slow in their career advancement? Why so low in academic and research high positions?
 27. **More information and transparency of selecting procedures** should be granted to **BME women graduated** in the process of pursuing PhD degree and later on research and academic careers. A better access to information must be guaranteed for BME women students and researchers submitting applications for scholarships or research funds. Such measures should improve career development opportunities for BME women scientists.
 28. **Creating a mentoring Program**: BME Professionals can also function as mentors for talented BME students and would stimulate and accompany BME students throughout their doctoral studies. This could be a springboard for their future recruitment into research and academic careers.
 29. **Establishing transparent recruitment and promotion** processes with an objective investigative and complaints procedure embedded in it.
 30. **More BME women scientists' representation in decision-making bodies** and PhD commission should be guaranteed.
 31. Developing and using a **gender and diversity plan** in each university and assessing the impact of equal opportunity policies for achieving equal treatment in science.
 32. **Creating similar programmes like ASPASIA** (The Netherlands) at the EU and national levels to enable the advancement of BME female academics in all the EU Member States.
 33. **Campaigning and training** to improve Higher Education staff's awareness of equality and diversity should be tailored to significantly raise awareness of equal opportunities policies. Equal opportunity training (diversity) and gender mainstreaming for selection commissions' members. Campaigning through professional networks to raise awareness of discrimination of BME of women scientists.
 34. **Providing financial support to networks** and increasing the value of research groups, which address gender, ethnic and immigration issues in order to make them more visible in universities and to the wider public.

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Preamble

This report² presents the findings drawn from the EU-funded Sixth Framework NEWS project, which was launched in January 2006. The seven partners in the *Network on Ethnicity and Women Scientists* project come from seven EU Member States, Interdisciplinary research group Gender and Migration, Université Libre de Bruxelles (Belgium), Institute for Psychology RWH, Aachen University (Germany), Centre of European Refugees, Migration and Ethnic Studies, New Bulgarian University (Bulgaria), Department of Work and Industrial Relations, University of Bari (Italy), Centre of Expertise on Gender, Ethnicity and Multiculturality, Utrecht University (The Netherlands), Institute of social sciences, University of Minho (Portugal) and Policy Studies Institute, University of Westminster (UK).

The **main objective** of the NEWS project was to boost gender equality in the field of science and technology in EU member states by stimulating the participation of foreign women scientists and women scientists of foreign origin (migrant and ethnic minorities) in the European research workforce. In practical terms, NEWS aimed to produce a **state of the art** on the position of Black, migrant and ethnic minority (BME) women scientists in research and academic careers in seven EU countries and to **set up a European network** of Black, migrant and ethnic minority women scientists³.

Not only the creation of such a specific European network will help to make the reality of these women scientists more visible but it will also encourage a better integration of Black, migrant and ethnic minority women scientists in all existing scientific networks, such as the newly established European Platform of Women Scientists. The NEWS network aims at collecting the experience of women scientists in order to know how they coped (at individual and collective levels) with their scientific career and how gender and ethnicity impacted on it.

The **state of the art** aimed at investigating the situation of BME women scientists pursuing scientific careers in the EU and at highlighting similarities and differences in their position in terms of equal opportunities. The concern was to look at the way that gender and ethnic diversity is taken into account in the scientific community. The women scientists targeted in the project are “non-Western” migrant and refugee women who obtained a legal status and a residence permit in the seven countries and women descendants of migrants who settled in the country. These categories have been specified in each country according to the historical migratory context and the migrants and ethnic minorities profiles. In the present synthesis report we will refer to them as Black, migrant and ethnic minorities (BME). The report did not take into account the question relating to European students’ mobility and European women scientists working in European universities.

Whilst the national contexts of migration history and colonialism are quite different, our research covers some country with long-established minorities and others with more recent minority labour market entrants. A core of the minority workforce in Bulgaria,

² I would like to thank Dr. Maria Hudson and Dr. Parminder Kaur Bakshi-Hamm for their reading and their comments of the report.

³ The network members can be consulted the bilingual NEWS website http://www.ulb.ac.be/socio/gem/Membres/en_membres.htm

Belgium, Germany, the Netherlands and the UK has been established for either a very long time (hundreds of years for Bulgaria), or for a long time (decades), and in most cases in Bulgaria, Belgium and the UK were national citizens. In contrast, in both Italy and Portugal the migratory flows started in the last twenty-five years.

To increase the knowledge base on women in science, the research partners undertook a state of the art on the participation and the position of Black, migrant and ethnic minority women scientists, which consisted in the collection of a range of data on different key issues following a detailed guideline. The main topics addressed in this guideline are: concepts and terminology, database and statistics, studies on Black, migrant and ethnic minority women scientist careers, formal and informal recruitment procedures in research and academia, good or bad practice in recruitment, promotion and recognition, and existing women scientist networks.

This comparative report follows on the ETAN, HELSINKI and ENWISE reports, which analysed scientists' position in R&D and HE sector from gender perspective. The NEWS report brings a new insight into women scientists' situation in research and academic career by taking into account nationality or ethnicity as intertwined factors impacting on women's scientific career.

1. Introduction

This comparative European report draws on the results of the seven national state of the art reports, which wanted to raise the following research questions:

- To what extent do foreign women scientists and those from ethnic minorities participate in the existing national research workforce and what potential do they represent for the future development of this workforce?
- Is gender and ethnic diversity considered a crucial element to increase the national research workforce and to improve the quality of European science?
- Are there specific policies or programmes designed and implemented to promote the participation in science of women scientists and those from ethnic minorities?

The reports do not pretend to answer such difficult questions thoroughly, which deserve in depth-research, but it does consist in a first attempt to collect information on the issue in seven countries in a view to bringing to attention the reality faced by Black, migrant and ethnic minority women scientists working in public sector research and university in seven countries: Belgium, Bulgaria, Germany, Italy, the Netherlands, Portugal, and United Kingdom.

The seven partners have commented on this comparative essay during the final workshop of the project in October 2007 but its authorship and interpretations are the sole responsibility of the project coordinator.

The comparative analysis is complemented by an overview of gender and ethnicity in science within EU research policy. It ends by recommendations to Governments and European Union policy makers.

This report constitutes an important contribution to knowledge by focussing on the specific issues raised by the gender and ethnic dimension with the double purpose of knowing more on how the combined effect of gender and ethnicity operates in various institutional and cultural backgrounds and what impact it has on women's careers.

1.1. Concepts and terminology

The first challenge that researchers have generally to cope with in a European project on migrants and ethnic minorities is the definition of the heterogeneous populations analysed. The NEWS project did not escape this problem.

The changes in sociological migration in Europe during the last four decades as well as the colonial history of different European countries have produced a large diversity of profiles and positions of migrants and ethnic minorities in the seven countries.

In the early 1970s, the post-war recruitment of workers organised within the framework of bilateral agreements came to an end and since the 1980s international migrations have become more feminized and more highly qualified. The settling of the old post-war immigrants led to the creation of ethnic minority groups and the birth of successive generations of migrants' descendants on European soil.

Unlike their parents, these 'second and third' generations entered the labour market when the European countries were facing major social and economic restructuring processes, particularly in the industrial sector. These economic transformations required

more and more qualifications to access the post-industrial sectors like business, computing, and information and communications technology (TIC).

The need for high levels of educated workers led many European countries to soften their attitude towards immigration and to open their borders again. The more recent and significant case is the German one: in August 2007 Prime Minister Angela Merkel stated her intention to recruit migrant workers in engineering and technology from Eastern EU countries as from the 1st November 2007 despite the government's plan to maintain the border closed until 2009. Their first attempt to recruit 20,000 Indians computing engineers in the last decade failed relatively since salaries and many restrictions on settlement in Germany limited applications to only 5,000.

Migration of highly skilled migrants must be seen as a phenomenon of the internationalisation of professions as described by Robyn Iredale (2001, 13), characterised by being relatively free from national controls and therefore of constraints to international movement where the competition for professional workers is particularly intense. The internationalisation of higher education has also been observed and the recruitment of students became a source of competition between universities (Essed, 1999, 218)

The seven countries investigated in this report are confronted to so-called shortages of highly qualified workers differently. Medical professions, nurses or engineers and technicians are highly sought after. The demand for Researchers is increasing in Europe as a result of European researchers leaving for North America (USA and Canada) where working conditions seem more attractive. Belgium for example has recently opened migration and work permit exemptions to researchers and experts on short assignments in the country (Ouali, 2007). These questions will be developed in chapters 2 and 3.

Concerning the issue of the terminology used to describe migrants settling in European countries, European sociologists on migration have addressed this question at great length. For example: in Wrench et al. (1999), after having described different terms used in EU countries (immigrants, migrants, ethnic minorities, Ausländer, allochtonen, foreign workers, second generation of migrants etc.), one author pointed out the common characteristics of these terms, i.e their potential to experience exclusion through ethnic and 'racial' discrimination: *"Each country uses its own appropriate terminology regarding the making of the state as an 'imagined community' to identify 'Other' and to designate 'outsiders'. Moreover, the construction of a 'European identity' inevitably involves a pattern of exclusion of the 'Other', whether they be 'blacks', 'immigrés' or 'Ausländer' (Miles, 1993)."*

"Race" is a social construction, which has been employed historically as a framework of ranked categories relegating human beings to superior and inferior positions and has followed the global expansion of European colonialism and imperialism. Ethnicity, a multi-dimensional concept and term used to indicate a social group's sense of a shared history, identity, religion or geographical and cultural roots (although its use is open to debate and causes much confusion).

Ethnicity and "race" are at times used interchangeably. According to the British Cultural Studies theorist Stuart Hall, ethnicity and "race" have often been treated as two separate entities when in fact they are two social categories etched into both sides of the same coin (Hall 2000:221-223). Use of the concept of ethnicity demonstrates an additional problematic, due to the fact that the concept is commonly ascribed and used to discuss individuals categorized (in this context) as non-white Europeans, thus

creating the illusion that persons socially constructed as white- European, have no ethnicity (Ellerbe-Dueck & Wekker, 2007).

European institutions⁴ increasingly try to impose the terms "ethnic minority" and "migrant". These terms are used by Anglo-Saxons to denote foreigners, nationals of foreign origin or former colonies. Within the diversity of historical contexts and social representations of migrants and their descendants, the forcing of such a terminology consequently trivializes the meaning of the terms and renders the underlying social realities even more opaque. The generalization of this European vocabulary forces and constrains one to a common representation of realities and singular social categories.

Even though the terms Black and ethnic minority (BME) is not really satisfying and certainly criticized, it will be used in this report to try to take into account the greater possible number of categories of women scientists targeted in different countries. In the case of Bulgaria, "ethnic minorities" refers more to national minorities such as Turkish and Roma than to recent migrants and their descendants who have settled in the country.

1.2. What are women scientists targeted?

The term "**scientist**" has a different meaning in Europe, embracing different sciences according to countries. The Oxford English dictionary defines a scientist as "*a person who is studying or has expert knowledge of one or more of the natural or physical sciences*" while for the French Dictionary Robert a scientist is a "*person who is studying (all) sciences*" without any distinction between sciences.

In this report we will use the general sense of scientist, that is to say including all sciences.

As mentioned, the women scientists targeted in the reports are "non-Western" migrant and refugee women who obtained legal status and a residence permit in the seven countries and women descendant of migrants who have been settled in the country for generations. The report excludes European female researchers and academic migrants who are employed by universities in the seven countries⁵.

The **Dutch** report focuses on Black, Migrant and Refugee (BMR) female academics stemming from the four largest migrant groups in the Netherlands, omitting from the analysis Dutch nationals stemming from Indonesian/Indo-Dutch heritage. The four largest "non-Western" migrant groups in the Netherlands according to population numbers are: Turks, Surinamese, Moroccans and Dutch Antilleans/Arubans.

In **Germany**, the division into the three categories of migrants, refugees and ethnic minorities does not seem to be the best classification for tracing different typical patterns of the problems of minority women: refugees, as long as they have no approved resident status, will not normally have a chance to follow an academic career anyway, but once their status is approved, they will not easily be distinguishable from other

⁴ The EU guidelines on employment proposed each year to the Member States since 1999, refers to "ethnic minorities" and to "migrant workers".

⁵ The sociologist Marina Blagojevic (2007) address the complex issue of integration and minoritization processes taking place in contemporary transnational migrations of women scientists through Europe. She expands the notion of "minority women" through inclusion of women scientists who feel and identify themselves as "minority" due to their specific mobility patterns. The women scientists concerned are those stemming from countries at the "semi-periphery" (Blagojevic 2005) of EU15 such as former communist countries, which are in different degrees integrated into the EU.

migrants. As for the recognised national ethnic minorities (Sorbes, Frisians, Danes, Sinti, and Roma), it will not be viable to find enough cases either, nor is there any indication that the difficulties of women from these groups are markedly different from those of the German majority since there is no practical way of identifying members of these groups. Instead, two subgroups will be examined: the first generation migrant women from outside Europe or North-America and the second generation migrant women who do not hold German nationality.

In the **UK**, the targeted groups of women scientists for the UK report include migrant women, refugee women and women from ethnic minorities. Migrant women are defined as the first generation of women migrants, admitted within a bilateral workforce agreement, as workers or part of family reunification. Refugee women are those who have migrated under the Geneva Convention and obtained legal refugee status. Women from ethnic minorities are those who have been naturalised, migrants and refugees, and second and third generation women who are the descendants of migrants. They include national citizens from the old colonial countries.

In **Bulgaria**, the distinction between ‘immigrant’ and ‘ethnic’ minorities is valid at all levels. Social theory in Bulgaria conceptualises them as separate; ethnic politics deals with minorities, and this distinction is part of people’s everyday consciousness and understanding. Because of the very recent history of immigration in Bulgaria and because of its peculiarities (oriented towards business, not the intellectual spheres), there are no immigrant women scientists. There are foreign women teaching in Bulgarian universities, they all work within bilateral agreements and mainly teach languages (Chinese, Japanese, Farsi, etc...). Women scientists from minorities compose the second group. Yet, the case of Roma and Turks is quite different.

In **Portugal** and Italy women scientists targeted concerns only the first generation established in these countries. In Italy and Portugal citizens from the old colonies are very difficult to spot.

For **Belgium**, although official statistics display only data by nationalities, the women scientists targeted are migrant women, refugee women and women from ethnic minorities. *Migrant women* are foreign non-European women admitted within a bilateral workforce agreement as workers or part of family reunification, called “the first generation” of migrants. *Refugee women* are those who migrated within the Geneva Convention and obtained a legal status as refugee. *Women from ethnic minorities* are naturalized foreign women (migrants and refugees), foreign or naturalized descents of migrants (usually called “second and third” generations), and Black national citizens coming from the old Belgian colonies (Congo, Burundi, Rwanda).

1.3. Women scientists in the public sector

The reports examine the situation of women scientists in the public sector employed in research and universities institutions in the seven countries. The public sector is where women are most present (see Table 1) and most sensitive to its normative and legal environment. Studies have shown that political environment, public control and external legislation influence public sector organisations. One example given by Shenhave (1992, p. 891) is the Civil rights and their implementation through Equal Employment Opportunity Commission programs and affirmative action laws in USA, which became “*major issues on the public agenda during the last three decades, leading to the*

expectation that their imprints will be found more often in public organisations than in private firms”.

The OECD report indicates that most women researchers in OECD countries work in the public sector whilst men find work in industry. While 17.5 per cent of women researchers in the EU and 6 per cent in Japan work in the business sector, in the US it is nearly two-thirds (OECD, 2006).

As shown in the table 1, Germany has one of the lowest shares of women in research in all sectors. Portugal has the highest share of women researchers in the government and higher education sector. The report points out that the share of women in the public sector in the UK increased because men have shifted to the private sector.

Table 1: Women researchers, as a share of all researchers, by sector of employment - 2002

Country	Business enterprise	Government	Higher education
EU 25	17.5	34.8	34.9
Belgium	18.1	29.9	37.2
Bulgaria	-	-	-
Germany	11.7	23.7	22.4
Italy	19.0	38.4	29.8
Netherlands	9.3	-	27.3
Portugal	27.7	56.1	45.1
United kingdom	-	31.8	36.6

Source: Eurostat in Mario Cervantes, 2006, p. 33

In the national reports, the situation of Women scientists has been described at a national level and that of each partner's university as a case study.

2. National background

This chapter presents a general overview of the migration and colonial history of the seven countries, the main features of migrant and ethnic minority groups, with a focus on high-level education profiles and labour market positions.

Among the seven European countries examined in the NEWS reports, we have to distinguish two categories of states as far as migration and colonial history is concerned. On one hand, the *old immigration countries* (Belgium, Germany, Netherlands, UK and Bulgaria), which knew decades or age-old migratory flows (centuries for Roma and Turks settled in Bulgaria). These countries, except for Bulgaria and Germany, also have a long-standing colonial history with the countries of origin of their migrants. On the other hand, there are the *recent immigration countries* (Italy, Portugal), which in the past have been important emigration countries⁶.

Italy has relatively recently shifted from being a country of emigration to a country of immigration. After years in which nearly 20 million of Italian left the country in search for a better destiny mainly to the US, Canada, South America and Australia and other European countries, and internal migrations brought million of Southerners to northern Italy, official statistics register a positive migration balance for the first time in 1975. New migrants started to settle in the country, alongside the communities of Somalis and Filipinos in Italy's large cities, and that of North Africans in Sicily, which traditionally constituted the bulk of foreign presence in Italy.

Portugal still has a continuing process of emigration flow although it became an immigration country in the 70s with the exodus of "returnees" from its old colonies (Angola and Mozambique due to civil war) estimated at around 500.000 people (Rocha Trindade, 1995) and the migrations of Brazilians and Ukrainians more recently. More than 50% come from Portuguese-speaking countries.

Recently **Bulgaria** has registered important emigration flows of the Turkish minority, Bulgarian refugees in the nineties and highly educated and/or young Bulgarians to Western Europe, USA and Canada. 350,000 people of the Turkish minority who were repressed by the communist authorities left Bulgaria in 1989, the biggest wave of migration in Europe after WWII and before the wars in the former Yugoslavia, when new record figures were reached. An estimated 150,000 of them returned later. The emigration of Bulgarian Turks continued in much lower numbers and was due to economic rather than to political reasons⁷. If just before the transition they were expelled by the communist state as part of the violent names change policy, a few years later the economic crisis, unemployment (particularly high in areas populated by the Turkish minority), pushed many to join their families in Turkey or to try their luck in a more dynamic economic environment.

⁶ Except the UK, Germany, Belgium, Bulgaria, Italy, Netherlands and Portugal have been emigration countries. During the 19th century many Belgians migrated to France. During the 20th century, Italy and the Netherlands remained emigration countries until the 1960's and Bulgarians migrated to Western countries during the period of the communist regime. Portugal still knows emigration flows of its citizens even though it became an immigration country since 1988 not to mention the "returnees" from the old colonies in the 1970s.

⁷ The Turkish minority is well represented on the Bulgarian political scene. The Turkish party "The Movement for rights and freedoms" is an influential political actor.

2.1. Categories of migration

2.1.1. POST-COLONIAL IMMIGRANTS

Six out of seven of the countries investigated have a colonial past history. Only four of them have strong connections with the old colonies and a new post-colonial immigration stemming from them: Belgium, Netherlands, Portugal and UK. Only the Netherlands has identified the number of migrants from its old colonies in the statistics.

In the **UK**, the majority of the BME population originated in immigration from countries with which Britain has historical, colonial ties. These include a range of Caribbean, African and Asian countries including Jamaica, Barbados, Nigeria, Ghana, India, Pakistan and Bangladesh. The British Nationality Act of 1948 granted the status of British subject to all people born in or with a connection to Britain or to a British colony and were entitled to the rights of entry to Britain and citizenship. During the 1970's, the Immigration Act 1971 granted a privileged status to citizens of the Old Commonwealth (predominantly White), relative to the New Commonwealth (predominantly non White). It used the racialised category of 'patrial' to confer this privileged status. In 1981 the British Nationality Act replaced the term patrial with the term 'right of abode'. To acquire the right of abode in the UK you must be a British citizen. The creation of new categories of citizen has had the intended effect of limiting the rights of citizens of the former colonies (Sales, 2005). Over the years pre-entry visa controls have been extended to Commonwealth countries with historical and/or colonial ties to the UK; Sri Lanka, Bangladesh, India, Pakistan, Ghana and Nigeria being amongst the first covered (Flynn, 2005:467).

In the **Netherlands** post-colonial migrants who came to the Netherlands after World War II (1945), stem from Indonesia, Suriname and the Dutch Antilles. Indonesia gained independence in 1949 and Suriname in 1975. However, the six islands of the Dutch Antilles are currently still part of the Kingdom of the Netherlands. During the post-independence period approximately 25,000 *Indonesian* individuals migrated annually to the Netherlands throughout 1950s (Beers & Spranger 1993:11). According to the CBS (Netherlands Office of Statistics), approximately 399,000 persons of Indonesian-Dutch descent currently reside in the Netherlands. After independence in 1975 and up until 1980, *Surinamese* migrants had the right to claim Dutch citizenship. Recent statistical data indicates that by 2006 approximately 333,478 individuals of Surinamese descent resided permanently the Netherlands (CBS 2006). The *Dutch Antilles and Aruba* made up of the Islands of Curacao, Bonaire, St. Eustatius, Saba and St. Maarten form an autonomous part of the Kingdom of the Netherlands. The island of Aruba became a fully-fledged sovereign member state of the Dutch Kingdom on January 1, 1986. Individuals with a Dutch Antillean/Aruban background totalled 129,590.

In the 19th century, **Italy** occupied Massua in Eritrea and a part of Somalia (1885-1890). Later on Italy's colonial powers occupied Somalia between 1892 and 1925 and finally Ethiopia in 1936, for a shorter period under the Fascist regime. In 1911, "the second war of Africa" in the Libyan territory was launched. Italy wanted to confer Italian citizenship to Libyans through the establishment of the so-called Libyan 'rule' but this policy was not pursued concretely. The end of Italian colonial history coincided with the British occupation of its colonies in 1943. In Italy the law does not draw a difference in the status of migrants if they come from Italy's ex-colonies. However, the number of

naturalised coming to Italy, especially those from Ethiopia is considerable, indicating a wide presence of Italian citizens in that country.

During the 19th century **Portuguese** colonialism focused on expanding its outposts in Africa. Portuguese territories included the nations of Cape Verde, São Tomé and Príncipe, Guinea-Bissau, Angola, and Mozambique. After the Portuguese Colonial War (1961-1974), the democratic government negotiated Portuguese withdrawal from its African colonies. In both Mozambique and Angola a civil war promptly broke out and provoked waves of migration towards Portugal. East Timor's declaration of independence in late 1975 after being colonised since 1702 and the handover of Macau to China in 1999 under the terms of an agreement negotiated twelve years earlier marked the end of the Portuguese overseas empire.

Belgium had three colonies between 1901 and 1962. 98% of this colonial empire was just one colony, the Belgian Congo and the province of Ruanda-Urundi, which was invaded by Belgian and Congolese troops in 1916. The Belgian Congo became independent on 30 June 1960. Although they were granted citizenship, Belgian Congolese workers did not have the right to migrate to Belgium. Congolese migrants were rare except during the 1920-30's. Following the independence of these colonies, Belgium kept strong political and economical relationships with Zaire (now Democratic Republic of the Congo), Rwanda and Burundi. Unlike the French and British colonial empire, Belgium did not recruit colonial workers and did not encourage migration to the metropolis because of demographic, economical and political reasons (Ndamina-Maduka, 1994). In the last fifteen years, refugees from the three countries increased dramatically because of armed conflicts and particularly the Rwandan genocide in 1994.

Germany experienced a relatively short-lived colonial period during the years 1885 to 1917 in present day Namibia, Tanzania, Cameroon, Togo, and other countries that have had no statistically significant effect on the population in Germany. The absence of a colonial connection is striking and the migrant population in Germany is most predominantly European/Mediterranean.

2.1.2. LABOUR IMMIGRANTS

In **Italy** foreign workers became essential to filling production and service gaps. Prior to the 1980s, immigration was regulated by administrative decrees. Legal immigration was driven by the needs of individual employers who requested an authorisation from the Labour Minister to employ foreign citizens. Italy signed an agreement with Morocco, Egypt, Tunisia and Romania to regulate migrants' flow into the labour market. Specific bilateral agreements covering Scientific and Technological Cooperation are negotiated between the CNR and equivalent foreign research centres to provide funds for researchers' mobility. The research may be carried out either in private or public institutions, or by individual researchers. Foreign researchers may also apply but they need to have a formal contract with an Italian research centre. Funds are given for long or short stays in research institutions.

The **Netherlands** recruited labour migrants mainly from the circum-Mediterranean and Southern Europe. Guest workers from Turkey (1964) and Morocco (1969) were also among these groups, which were invited to live and work in the Netherlands because of the shortage of workers following the economic boom during the latter years of the 1960s.

In **Germany** the economic boom of the early 1950s encouraged the German government to take up the Italian government's offer to sign a recruitment agreement for migrant workers ("*Gastarbeiter*") in 1955 which became a model for similar agreements with Greece and Spain (1960), Turkey (1961), Morocco (1963), Portugal (1964), Tunisia (1965), and Yugoslavia (1968). In 1973 the number of migrant workers from these countries had risen to 2.6 million or 11.9 percent of all gainfully employed people in the Federal Republic of Germany. About 23 percent of the migrant workers came from Turkey, nearly 18 percent from Yugoslavia (Bundesministerium des Inneren, 2005). The economic recession and the 1973 oil crisis led to the cancellation of all recruitment agreements. While the stop on mass recruitment of foreigners is still in effect for most sectors of the labour market, the demographic situation and competition with other industrially advanced nations induced initiatives to attract highly qualified workers from abroad. Between 2000 and 2004, about 19,000 IT (Information Technology) specialists were permitted to work in Germany (Zentralstelle für Arbeitsvermittlung der Bundesagentur für Arbeit, 2005). Since 2005, all highly qualified migrants who receive job offers with yearly salaries above 85,000 € or as professors or researchers in leading positions, are allowed to settle in Germany.

In **Bulgaria**, the state strictly controlled the movements to and from the country. Preventing emigration was a top priority: there were many willing to emigrate and few inclined to immigrate. An exception to this dominating policy logic was accepting Vietnamese workers during the 1980's in response to the shortage of labour in certain economic sectors like construction. The Vietnamese were the only figure of "*gastarbeiter*". Even in this case the political considerations were crucial – the "international" solidarity with the brother country Vietnam. After the democratic transition new and visible groups such as the Chinese settled in Bulgaria for the first time, and their numbers are growing fast (from almost zero at the beginning of the changes to over 10,000 today). The Vietnamese group diminished drastically and has now started to increase again. New immigrants joined into the traditional communities in search of a more stable political and economic environment like the Armenians attracted by the small and very well integrated Armenian community in Bulgaria. Similar phenomena could be observed with the Macedonians, the Russians, etc.

The earliest migrants invited and encouraged to migrate in the **UK** within the context of labour shortages after of Second World War came from the Caribbean and India. Immigrants from Pakistan and Bangladesh arrived later, during the late 1960s and 1970s, followed by immigrants from Hong Kong and Africa in the 1980s. In more recent years, the number of economic migrants seeking work in the UK increased rapidly particularly from the EU accession countries. Home Office figures indicate that between May 2004 and June 2006 a total of 447,000 people from these EU countries applied to the Worker Registration Scheme set up to regulate their entry to the UK (Home Office, 2006). Today international migration is most common in the youngest working age groups, in the service sector and in London (Green et.al, 2005).

Between 1946 and 1970 **Belgium** signed eight bilateral labour migration agreements mainly with the Mediterranean and Southern European countries (Italy, Greece, Spain, Morocco, Turkey, Tunisia, Algeria and Yugoslavia). Labour migration was put to an end in 1974 except for sectors with labour shortages. Since 2006 the recruitment of highly skilled migrants has not been restricted nor limited anymore. In 2003, 5,489 work permits were delivered to highly skilled workers (representing 60% of all work permits). Around 50% of them were delivered to Indians, Canadians and Chinese.

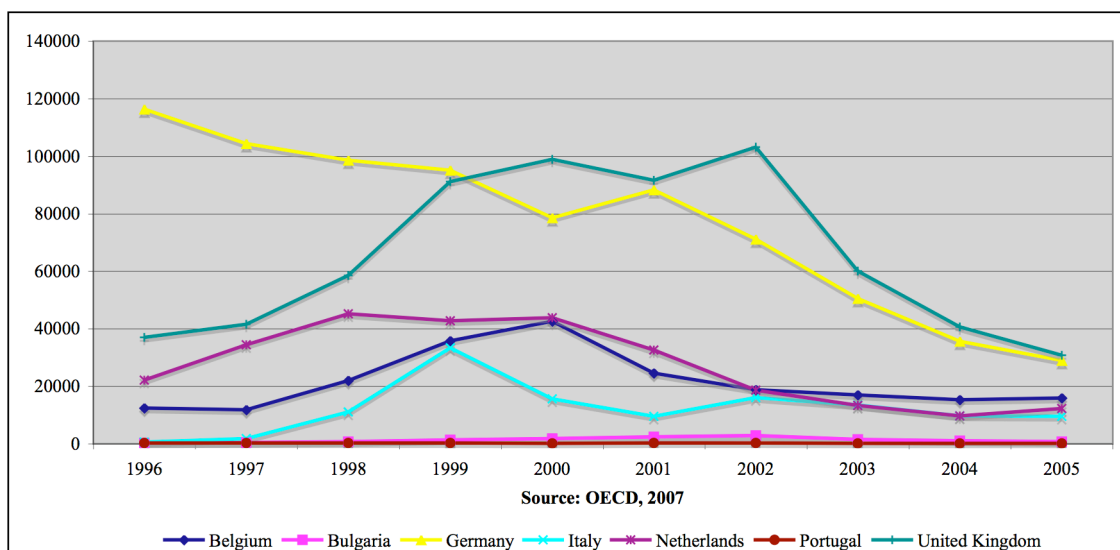
Portugal recently signed two bilateral agreements: one with Cape Verde for temporary labour migration (1997) and one with Bulgaria for the exchange of labour migrants (2003).

2.1.3. REFUGEES

Since 1995 the *Schengen Convention* has regulated the EU border controls and since 1997 the *Dublin Convention* defines both the criteria for a refugee to apply for asylum and the conditions to be recognised as applicant. The Dublin Convention also determines which State is responsible for examining asylum applications introduced in one of the Member States of the European Union. National and EU policies were implemented in order to curtail the flow of migrants.

Nevertheless, during the late 1990's the number of asylum seekers increased dramatically in almost all EU countries, in North America and in OECD countries. According to the OECD report there were 244,498 asylum seekers applicants in the EU25 plus Norway and Switzerland in 2005. This is half the number of applicants registered in 2001, which was the peak year for inflows with 470,998 asylum seekers.

Figure 1: Inflows of asylum seekers into OECD countries



In **Belgium**, in 2005, the number of male asylum seeker applicants was higher than female applicants (66% in 2004 and 70,5% in 1994) but more women are accepted as refugees than men. A third of asylum applicants were women mainly whose country of origin were the Democratic Republic of Congo, Russia, Serbia Montenegro, Slovakia, Rwanda and Armenia. The proportion of women refugees accepted by the Belgian authorities reached 45% in 2005. They were from Russia, Rwanda, Republic Democratic of Congo, Serbia Montenegro, Burundi, Iran, Iraq and Guinea. To obtain the status of refugee, women put forward risks of genital mutilations, forced marriage, sexual violence, crimes of honour, persecutions due to their sexual orientation, or political or ethnic reasons (CGRA, 2005). The number of Rwandan and Burundian asylum seekers increased dramatically after the 1994 genocide, up to eleven times higher.

In the **UK**, since 1980s, there has been considerable growth in the number of asylum seekers from many regions of the world blighted by political unrest, and mainly from the Middle East, Africa, the Balkans and some Asian countries such as Afghanistan and Sri Lanka. During the 1990s and 2000s the issues of migration and asylum have held a dominant position on the agenda of national governments (Lewis and Neal, 2005). A core element of government policy towards ethnic minorities has been the emphasis on ‘managed migration’, of which the Worker Registration Scheme is part. Managed migration attempts to distinguish between ‘real’ and ‘bogus’ migrants whilst trying to facilitate the economic benefits of controlled routes for economic migration (Lewis and Neal, 2005: 426). This approach is epitomised in the British government's White Paper on immigration “Secure Borders, Safe Haven, 2002” (Home Office, 2002) and has contributed to the marking out of the boundaries of inclusion, of who can ‘belong’ to the nation (Sales, 2005). There has been considerably less enthusiasm for asylum as a human right with a growth in restrictions to access to the UK for would-be refugees (Flynn, 2005:479).

In 2006 in **Germany** 21,029 applications were submitted. Political asylum was granted according to the German constitution to only 251 applicants, which is just about 1 percent of all decisions (while the long-term average lies at 8 percent). However, another 1,097 applicants were recognised as refugees in the sense of the UN Convention Relating to the Status of Refugees. After the break-up of the Soviet Union, Germany started facilitating the immigration of Jews who wanted to leave that country because of growing antisemitic discrimination and economic pressure. Quotas were allocated and between 1991 and 2004, about 220,000 Jews came to Germany (Haug & Schimany, 2005). In fact, today 90 percent of the active members in Jewish communities in Germany are immigrants from the former Soviet Union. Although Jewish immigrants are mostly highly qualified (an estimated 70 percent have a university degree), the rates of unemployment are over 50 percent.

In **Bulgaria**, the inflow of *refugees* has increased tenfold in ten years, even if numbers remain quite low (276 applications for refugee status in 1993, 2,888 in 2002). This relatively small group has received great public visibility – both because of the developed network of governmental and non-governmental organizations, and the media coverage which feeds the fear of waves of refugees with each new crisis – in Afghanistan, in Iraq, etc.

In **Italy**, refugees number about 20,000; around 12,000 requests are examined each year. During the 1990s asylum requests have increased substantially: the reason lies in the fact that this is often the only means to enter the country following the restrictive laws approved in this period. According to the latest available data (UNHCR, 2005), 14,439 refugees sought asylum in Italy in 2005, but only 8.1% of them were accepted. This also shows that only a small percentage of refugees comply with the requirements to obtain the status.

Portugal accepted the lowest number of refugees in European Union with 114 in 2005.

In 1980 in the **Netherlands** nearly 1000 individuals sought asylum and fourteen years later (1994) these numbers rose to more than 50,000. Prior to this emigrational pattern, the majority of refugees entering the Netherlands were primarily from neighbouring European countries (Garssen, Nicolaas & Spranger, 2006, 96-117). However, since the mid 1980s, an increasing number of refugees began arriving from countries, which had no previous migration history in the Netherlands, such as Iraq and Iran (*Ibid*). As a result thereof, stringent legislation by the Dutch government was implemented in order

to curtail the flow of migrants, who were now increasingly categorized as economic migrants rather than political refugees.

2.1.4. STUDENTS' IMMIGRATION

All European countries are affected by students' mobility as a result of both the European policy developed through different programmes (Marie Curie etc.) and higher education becoming internationalised. European policy has been encouraged particularly the European students mobility clearly observed in statistics in the six countries. National policies in post-industrialized countries and the attempt to meet their need of highly skilled workers lead to international competition to attract graduate students especially in the US, UK, Australia and Canada (Iredale, 2001).

In OECD countries, international students generally account for at least three quarters of foreign students. The number of foreign students has increased by more than 40% since 2000, over 50% in Southern Europe and Netherlands and more modestly around 10% in Belgium (OECD, 2007).

Table 2: International and/or foreign students in tertiary education, 2000 and 2004

	International students as a percentage of tertiary enrolment in 2004		Foreign students as a percentage of tertiary enrolment in 2004		Index of change in the number of foreign students, total tertiary (2000=100)	Number of foreign students 2004
	Total tertiary	Advanced research programmes	Total tertiary	Advanced research programmes		
Belgium ¹	6.0	20.0	9.6	31.3	114	44 300
Germany	na	Na	11.2	na	139	260 300
Italy	na	Na	2.0	3.6	163	40 600
Portugal	na	Na	4.1	7.8	145	16 200
Netherlands ²	4.8	Na	3.9	na	152	21 300
United Kingdom ¹	13.4	38.6	16.2	40.3	135	300 100
OECD	6.5	16.1	7.3	19.5	141	2 255 900

Notes: "na" means not available.

1. International students for these countries are students with a permanent residence in another country.

2. International students for these countries are students whose prior education was obtained in another country.

Source: Education at a glance, OECD, 2006. See Annex 3 at www.oecd.org/edu/eag2006.

German universities are increasingly interested in attracting international students. In 2004, about 186,000 students from abroad studied at German universities; among them 8.3% came from China, 6.9% from Poland, 6.2% from France, 4.8% from Spain, and 4.6% from the Russian Federation (Bundesamt für Migration und Flüchtlinge, 2006) (Kaur Bakshi-Hamm, 2007).

In **Bulgaria** students from Third World countries with the specific purpose of providing higher education to left intellectuals as a part of a long-term strategy for the preparation of a world revolution and activists with leftist ideological beliefs from neighbouring countries such as Turkey and Greece.

2.1.5. NATIONAL MINORITIES

Germany has the 'Late repatriates' i.e. people of German origin (their German roots sometimes dating back several centuries) from East and South-East European countries who have been allowed to resettle in Germany. The resettlers immediately receive German nationality. In numbers, nearly 4.5 million resettlers came to Germany between 1950 and 2005, thus forming 12 percent of all immigrants (Bundesverwaltungsamt, 2006). Most of the resettlers came from one of these three countries: Poland, the former Soviet Union, and Rumania. It is also remarkable that only one third of the resettlers came during the Cold War, but two thirds came later. The peak year for immigration of resettlers was 1990, the year marking the end of the Cold War, when nearly 400,000 people arrived. Today the number of resettlers is drastically declining and 2006 was the first year in which less than 10,000 resettlers entered the country.

In **Bulgaria**, according to the last census (2001) the population of the country was 7,973,673. Of these 6,660,682 are Bulgarians, 757,781 Bulgarian citizens of Turkish origin and 365,797 Bulgarian citizens of Roma origin (NIS 2002). The ethnic composition of Bulgaria can be characterised by two features: a stable majority (86%) of Bulgarians coupled with ethnic diversity. Ethnic minorities include groups such as Jews, Armenians, Russians, Gagaouz, Tatars, Karakachans, Valachs and others. The two most important groups considered as 'ethnic minorities' are the Turkish minority (9.5%) and the Roma (4.6%). The Turkish minority are predominantly Sunni. The Roma minority are characterised by a large confessional and linguistic diversity. There are both Muslims and Christians (Orthodox and Protestant) among them. The majority of Roma are bi- or trilingual – they speak Roma, Bulgarian, Turkish; some also speak Valach. Minorities often have strong cultural and historical links with neighbouring countries – e.g. countries from which their ancestors originated. Immigration, on the other hand, is viewed as coming from distant states or continents. The 'minorities', as a rule, are much more numerous than the new immigrant groups. The main distinction, however, remains in their relation to nation building. Minorities settled before or at the beginning of this process - immigrants arrived when this had already been accomplished.

2.2. *Socio-demographic profile*

The profile of migrants, refugees and ethnic minorities in the seven countries is very heterogeneous as shown in the table 3. Germany, Italy and the UK have the largest number of foreign population but Germany (8.8%) and Belgium (8.6%) have the highest proportion of foreigners in their population. The UK has the most feminised foreign population (52.9) while Portugal has the lowest (41.6).

Table 3: Total population, Foreigners, Foreign-Born, Asylum seekers and naturalisations and old colonies in the seven countries

	Total population (2006)	Foreign population (2006)	Of which Women	Foreign Born	Asylum seekers (2005)	Naturalisations	Old Colonies citizens
Belgium	10,511,382,000	900,473	441,403	1,268,900 (2005)	15,957	46,417	Congo (RDC) Rwanda Burundi
Bulgaria	7,718,750,000	-	-	-	822	-	-
Germany	82,437,995,000	7,287,980	3,407,4	10,620,800 (2003)	28,914	154,547	Namibia Tanzania Cameroon Togo
Italy	58,751,711,000	2,670,514	1,319,926	1,446,700 (2001)	9,548	10,645	Somalia Ethiopia Libya
Netherlands	16,334,210,000	691,357	348,7	1,734,700 (2005)	12,347	45,321	Surinam Indonesia Dutch Antilles
Portugal	10,569,592,000	432,000	179,6	661,000 (2005)	114	1,369	Angola Mozambique Cape Verde
United Kingdom	60,393,034,000	3,035,000	1,604,0	5,841,800 (2005)	30,840	120,145	India Pakistan Bangladesh, Jamaica, Barbados, Nigeria, Ghana

Source: Eurostat, OECD, NEWS national reports *% of total population

According to the NEWS national reports, the imbalance between men and women is more or less important. In the **Netherlands** the citizens of the old colonies migrated essentially with their families and the repartition is close to that of the Dutch population. On the other hand, labour migration after the Second World War was mainly masculine (NL, UK, Belgium, Germany) and family reunification in the aftermath feminized the population.

In **Italy** the foreign population residing legally in the country in 2006 amounted to 2,670,514 of which 1,319,926 were women (nearly 49% of the total). The proportion of foreigners in the Italian population was 4.3% and migrants are more concentrated in the north and centre of the country where foreigners numbered above 6% of the population, while in the South they were less than 2%. The largest national groups staying in Italy are Albanians (44% of women), Moroccans (39%) and Romanians (52%). As for women the data show that most feminized groups were Romanians, Ukrainians (82%) Poles (73%), Peruvians (62%), Ecuadorians (62%) and Filipinos. In these groups women represent more than 50% of the total. The data for Ukraine and Poland is striking, as immigration from these countries to Italy is almost exclusively feminine. In general terms, it is important to stress that immigration in Italy has changed substantially in the last decade. Before the 1990's, a typical migrant was a man of North African origin. At present the typical migrant person is a woman from a European country, with a large proportion of women coming from Eastern Europe.

Both men and women were in general younger than the Italian population. The data concerning the 26-40 age group was particularly striking: in this group, foreign population showed concentration (about double the number of Italians in percentage

points). This means that Italy attracts a younger workforce and that the percentage of older migrants is not as consistent as in other countries, i.e. countries of older migration. On the other hand, the 0-14 age group concentrated a large percentage of foreigners: the percentage was higher than the Italian equivalent. These figures can be explained in two ways: on the one hand, one can assume that foreign people (mostly in the 26-40 age group) come with their children. On the other hand, one can think that a process of stabilization of the foreign population has started even in Italy, with a young second generation.

In the **UK**, in a population of 52,041,916, the ethnic minority populations represent 8% (4,635,296 individuals): Asian and Asian British represent 4% Black and Black British represent 2%, mixed 1.2% and Chinese 0.4%. Females represent 51% of the whole population. All the ethnic groups are female in majority except the Pakistani group. The most feminized group are the Black Caribbeans (54%) followed by Black Africans and Chinese (both 52%). Compared to White Britons, most ethnic minority groups have younger populations. Among White men, 25 per cent of the population are under the age of 20. This contrasts with 31 per cent of Indian, 48 per cent of Bangladeshi men and 61 per cent of those from mixed ethnic backgrounds. Compared with 15 per cent of White men, only three per cent of Black Africans and 4 per cent of Bangladeshi men are aged 65 or over. The data on the age profile of women indicate a similar picture. Compared to 22 per cent of White women, 29 per cent of Indian, 44 per cent of Pakistani and 47 per cent of Bangladeshi women are under the age of 20. While 19 per cent of White women are aged 65 or over, only 2 per cent of Bangladeshi and Black Caribbean women and 4 per cent of Pakistani women are 65 or over. Based on this young profile it is estimated that the proportion of ethnic minorities in the working population will rapidly increase over the current decade accounting for half the growth in the working age population (Strategy Unit, 2003).

In the **Netherlands** the four largest “non-Western” migrant groups in the Netherlands according to population numbers are: Turks, Surinamese, Moroccans and Dutch Antilleans/Arubans. According to CBS figures (SCP report 2006), approximately 830,000 females of “non-Western” backgrounds reside in the Netherlands. Whereas immigrants from “Nederlands-Indie” (Netherlands Indies, the former Dutch-Indonesian colony) mainly involved families, migration from Turkey, Morocco and the circum-Mediterranean area during the 1960s and early 1970s attracted mainly but not exclusively male labour recruits to the Netherlands. Female migrants were wives and daughters of labour migrants, who under the 1963 family reunion legislation attained the right to be reunited with their male family members. The new migratory flows are more feminized particularly those stemming from the Philippines and Cape Verde.

Migrant populations in the Netherlands are relatively young and the vast majority are under the age of 30. Males of migrant backgrounds outnumber their female counterparts in the 0-50 age groups. Thereafter, a noticeable shift occurs between the ages of 60 and 70, where female migrants except for the Moroccan community, outnumber males.

In **Germany**, the number of foreigners in December 2006 was approximately 7.3 million or 9 percent of the population. The economic recession and the 1973 oil crisis led to the cancellation of all recruitment agreements. The subsequent immigration of family members accounts for new arrivals of 50,000 to 80,000 people per year, and every year up to 100,000 children are born to foreign parents in Germany (Bundesamt für Migration und Flüchtlinge, 2006b). The percentage of women is lower in the foreign population (48.3 percent) than in the total population (51.1 percent). This is mostly

because of the higher proportion of men among labour migrants. There are only two migrant groups where the female percentage is clearly higher than in the total population – among people from South-East Asia (55 percent) and South America (68.2 percent), and this can be explained with the significant numbers of women from the Philippines, Thailand, and Brazil who come to Germany due to marriage migration, that is marriage of foreign women to German men. Another remarkable fact about foreigners in Germany is their extremely inhomogeneous distribution within Germany.

The predominance of European foreigners in Germany is clearly visible, although a larger part of them comes from non-EU countries. The five most important former countries of origin are Turkey, former Yugoslavia, Italy, former Soviet Union and Poland. Turkish, former Yugoslavian, Italians were the most important in labour migration of the 1960's (and therefore have a relatively low female proportion), whereas the former Soviet Union and Poland became important after the end of the Cold War and are the main source of present immigration to Germany – with a relatively high proportion of women due to marriage migration (marriage of foreign women to German men). The average age of the foreign population at 36 years, is noticeable lower than the average age of the total population, which is 43.5 years. This is a clear sign that migration leads to a rejuvenation of the population in Germany.

The proportion of foreigners in the Western German states which formed the Federal Republic of Germany before 1990 is 10.1 percent, while it is only 2.4 percent in the Eastern German states of the former GDR. There is also a clear concentration in big cities like Berlin, Frankfurt, Hamburg, and Cologne. The percentage of foreigners is highest in the Rhein-Main area around Frankfurt, where the record percentage of 31.1 percent is found in the city of Offenbach (*Die Zeit*, 4 May 2006). Not surprisingly, second-generation migrants form a constantly growing fraction of the foreign population. The second generation of migrants represents on 31.12.2005 around 21% of the foreign population: EU are 19%, other Europe including Turkey represents 25% and Outside Europe 11% (Statistisches Bundesamt).

In **Belgium** on 1st January 2005, 870,862 foreigners were legally settled in Belgium, which represents 8.3% of the population and one of the highest proportions of foreigners in the population in the EU. Most (68%) are European citizens, mainly from EU15 States (66% are Italian, French or Dutch). Among migrants from the new EU member States, the largest group is that of Polish citizens. Among non-EU citizens, Moroccans, Turks and Congolese are the largest groups. The proportion of foreign women increased from 46% in 1989 to 48.8% in 2004 (as against 51.3% for Belgian women). The non-EU foreigners are younger than the native Belgian population and they have the lowest number of elders as it displays in the following table.

In **Bulgaria** a sociological survey conducted in 2006 (Georgiev 2006) gives an overall view of immigration in Bulgaria. The sample included 403 immigrants who lived in Bulgaria for a period of between one and 10 years, 59% of which were men, and 41% women. Almost half of them (47%) hold a permanent permit, one third (29%) a long-term permit, and 6% are refugees. Less than one tenth (7%) have acquired Bulgarian citizenship. 1% are illegal (this percentage is probably higher since 15% did not answer the question). 2% hold a short term but constantly renewed permit.

The most important group comes from the post-Soviet countries (43%), and two third of them come from Russia. This group is the most numerous and tends to grow. The second group (17%) – both in terms of figures and in growth – are foreigners from UE and USA. Similar in numbers (16%), but with a longer history of presence and projects

to establish in Bulgaria – are the immigrants from Middle East (Syria, Palestine, Iraq, Lebanon, Iran, Afghanistan, Turkey,). The survey creates another category – immigrants from South-eastern Europe (including Greece and Cyprus) – 13%. According to this data the immigrants from China and Africa represent each 2%. Immigrants in Bulgaria are quite young – three quarter are under 50, only 13% over 50. The demographic structure of the immigrant community is very different from that of the Bulgarian population, which is ageing (Bulgaria has a negative demographic growth).

2.3. Level of education

The comparison of the level of education of foreign and native-born populations aged 25 to 64 in the six OECD countries under investigation (Table 4) shows that in 2003-2004 the United Kingdom and Belgium have the highest percentage of tertiary level of education in these populations while Italy and Portugal have the lowest.

Table 4: Education level of foreign and native-born populations aged 25 to 64 in OECD countries, 2003-2004, percentages

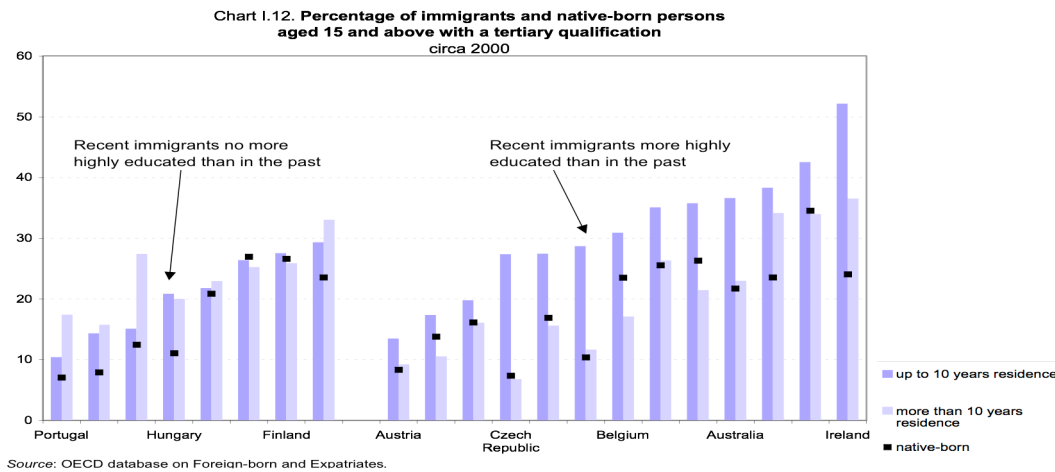
	Foreign-born			Native-born		
	Less than upper secondary (ISCED 0/1/2)	Upper secondary and post secondary non-tertiary (ISCED 3/4)	Tertiary (ISCED 5/6)	Less than upper secondary (ISCED 0/1/2)	Upper secondary and post secondary non-tertiary (ISCED 3/4)	Tertiary (ISCED 5/6)
Belgium	47,5	27,1	25,4	35,9	34,6	29,6
Bulgaria	-	-	-	-	-	-
Germany	37,4	43,7	18,9	12,3	62,2	25,5
Italy	48,7	40,0	11,3	52,2	36,7	11,1
Netherlands	43,5	32,3	24,2	30,6	44,4	25,0
Portugal	52,0	25,8	22,2	78,0	11,2	10,8
United Kingdom	22,1	43,6	34,3	15,9	54,8	29,4

Note: 2002 for the Netherlands

Sources: *International Migration Outlook*, OECD, SOPEMI 2007. *The ISCED variable specifies the level of education according to the International Standard Classification of Education.

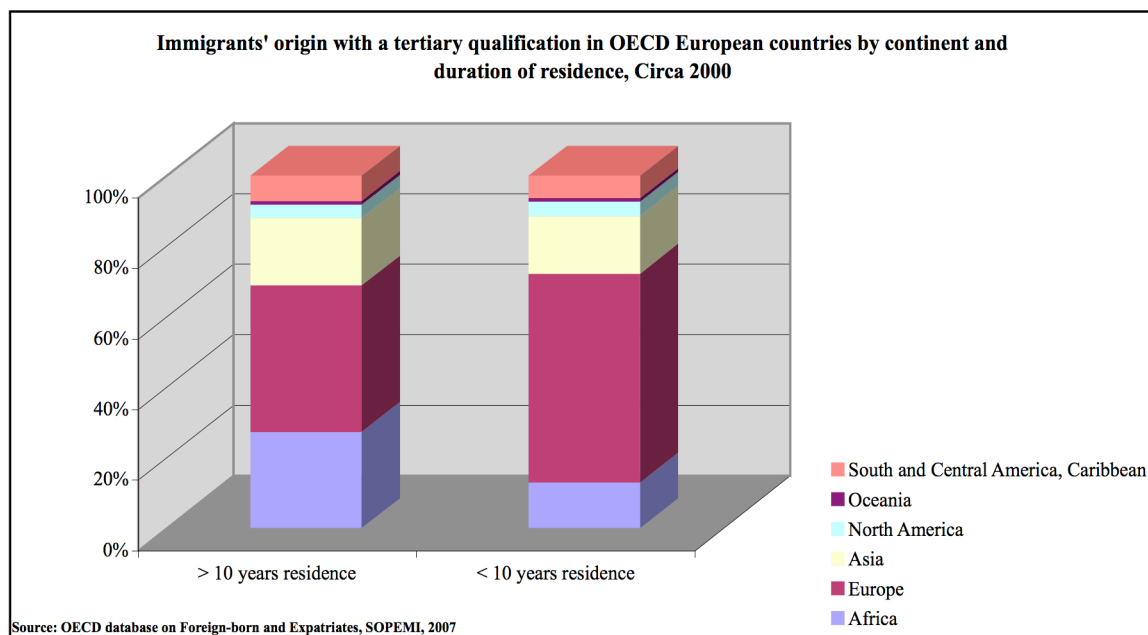
Regarding the level of education of the new immigrants arriving in EU countries during the 1990s two groups are distinguished: the one where recent immigrants are no more highly educated than in the past, in our case we have Portugal and Italy (with Hungary, Finland) and those where recent immigrants are more highly educated than in the past as Belgium, Germany, Netherlands and United Kingdom (with France, Luxembourg, Sweden notably).

⁸ International Standard Classification of Education (ISCED 1997) categories education programmes by level. Tertiary education involves two stages: ISCED 5 A and 5 B, the latter programmes leading to the award of an advanced research qualification (PhD, Doctorate). ISCED 6 corresponds to programmes devoted to advanced study and original research. (See Figures, 2006).



The figures below show the relative importance of Europe as a source of immigrants with tertiary qualifications, the increase resulting from central and Eastern Europe and the EU increasing higher qualification itself. In the Africans group, the tertiary qualified settled for long (more than 10 years) in Europe represent more than 60%, and are likely to originate from old migration waves particularly in Belgium, France, the Netherlands and the UK.

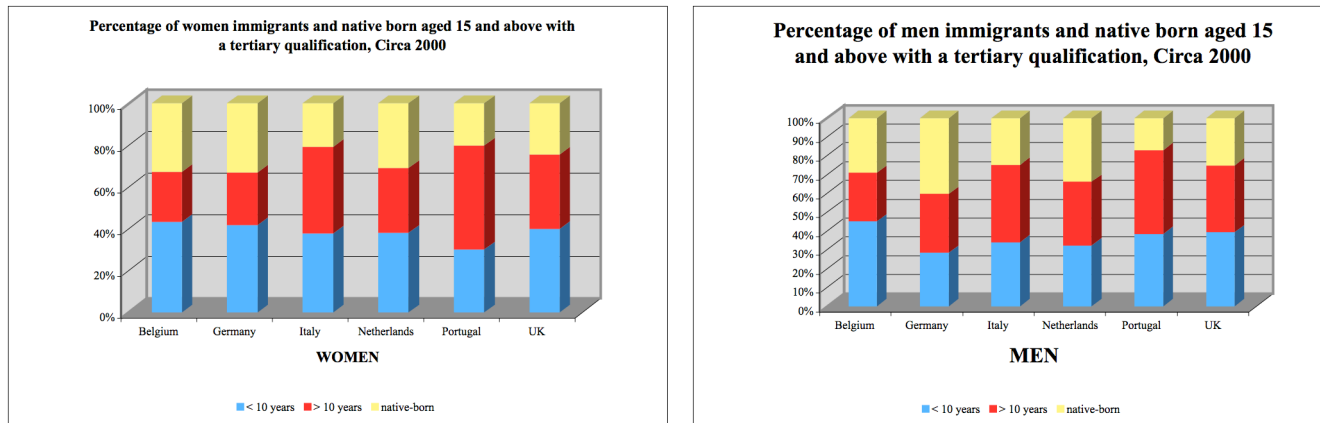
Figure 2: Immigrants' origin with a tertiary qualification in OECD European countries by continent and duration of residence, Circa 2000



If we analyse tertiary qualification according to the gender and the duration of stay in the host country (see figures below), we see that both men and women who have been settled for less than 10 years count proportionally more tertiary educated than native born and long-term migrants (>10 years apart from the UK). It is particularly striking for Belgium and the UK. In the six countries women who are recent immigrants (<10 years) have relatively the highest proportion of tertiary qualifications. For men in the

same group this is not the case in the Netherlands and Germany where there is a 7.4 point discrepancy with native born.

Figure 3: Level of education of the new immigrants and native born of more than 15 year old



Sources: International Migration Outlook, OECD, SOPEMI 2007

Data (2001) drawn on the **Belgian** national reports show that the 25-64 aged level of education of men (36%) and women (34.7%) stemming from North Europe, other Europe and USA have the largest proportion of high-educated people, higher than the men average in the whole population (27.2%). Conversely, the main Southern European, North African and Turkish populations have the lowest proportion of higher educated people: 12.1% for men and 12.5% for women in Italy, Spain, Portugal, Greece. The greatest difference is between North African men and women, respectively 11.5% and 5.1%.

In **Bulgaria** immigrants have a high level of education. As compared with 14% for Bulgarians, 24% have a university degree and 59% secondary education.

According to Krasteva (2007), the attitude to education varies largely from one community to another among ethnic minorities. Some of them enjoy a satisfactory level of education, in the case of Jews and Armenians even higher than the country average. This does not apply to the two largest minorities, the Turks and even less for the Roma. During the communist period the Roma had the lowest rate of university graduates – 1%. Another very important peculiarity is that the few who succeeded in gaining a university degree did not identify as Roma and preferred to declare themselves Bulgarians or Turkish. The number of Roma intellectuals is not only extremely low, but it fell constantly during the post-communist regime: 0.9% in 1992 compared to 20.2% of the Bulgarians and 2% of the Turks; 0.2% in 2001 compared to 16% of the Bulgarians and 2% of the Turks (Nounev 2006).

In **Germany** in 2005 the level of education of native Germans and those with a migration background taken from the microcensus data showed the differences between different groups, with the average in the total population at 12.1 percent. The education levels of the second generation are lower than the first and those of Germans with no migration background. The second generation German has a better level of education than the second-generation foreigner and they have no gender imbalance. Second generation women migrants are only half as likely to gain a university degree as second-

generation male migrants. This probably implies a case of amplified multiple discrimination against female foreign second generation migrants in Germany.

In the **UK** the last decade has seen rising levels of educational attainment for all groups and rapidly increasing participation of all minority groups in higher education who have all benefited from the expansion of higher education since the early 1990s. Ethnic minority groups are also more likely to continue to stay in on education after completing compulsory schooling. Some ethnic minority groups are still more likely than the White Britons to have no qualification; compared to the about 30 per cent of White Britons, 47 per cent of Bangladeshis and 41 per cent of Pakistanis have no qualifications. The Irish are the only other group with a higher than average proportion of individuals with no qualifications. The proportion with no qualifications is smaller than the average in all other ethnic minority groups. This confirms that since the early migrants, as the number of immigrants from all these groups decreased and the number of UK born and educated increased, the educational profile of ethnic minorities has become much less polarised.

Looking at the top end of the educational ladder, most ethnic minority populations are more highly educated than the White British. Looking across the ages of 16-74, 43 per cent of minorities of 'Other' and 'Other White' ethnic origins and 39 per cent of Africans are educated to degree level. To some extent this reflects the high levels of student immigration over the last two decades from these groups. 37 per cent of Chinese, 33 per cent of Other Asians' and 31 per cent of Indians are educated to this level. In contrast, 18 per cent of the White British are educated to degree level. Bangladeshis are the only group with a smaller than average proportion educated to degree level (under 14 per cent), but this is likely to change because, in the last decade the number of Bangladeshis (and Pakistanis) studying for a degree increased dramatically.

Considering gender and levels of education for Italians and foreigners in **Italy**, at foreigners it emerged that, compared to men, foreign women had higher levels of education while a high percentage of foreign men were confined to the lowest levels of education. It is evident therefore that women were more qualified than men. For example, more than 9% of foreign women held a degree; almost 4% had a post secondary non-tertiary education; for men, the same percentages were respectively 8.6% and 2.3%.

In **Portugal**, male and female migrants from Eastern countries have a high degree of education and work in services, as they didn't get the equivalence to their diplomas.

2.4. Labour market position

This section examines the position of foreigners and ethnic minorities on the labour market according to the level of education. If it is often difficult to get access in several countries to data on second generation migrants and ethnic minorities, the OECD reports provide very interesting information on these groups taking into account two or three categories of migrant backgrounds: foreigners, foreign born and natives.

The table 5 compares the employment rate of natives and foreign-born according to the level of education in six countries⁹. We can see that the employment rate increases with

⁹ Unfortunately OECD reports do not include data about Bulgaria.

the level of education: tertiary educated have the highest employment rate, particularly for native and foreign-born in the UK, Netherlands and Portugal. Nevertheless, the high educated employment rate remain higher for natives than for foreign born in all countries. Conversely, the unemployment rate of high educated foreign born is greater than for natives, particularly in Belgium (\neq 6.6%) and in Germany (\neq 8.1%). It is quite similar for natives and foreign born in Italy.

Table 5: Employment and unemployment rates of native- and foreign-born populations by level of education, 2003-2004, percentages

	Natives						Foreign born					
	Employment rate			Unemployment rate			Employment rate			Unemployment rate		
	Low (ISCED* 0/1/2)	Medium (ISCED 3/4)	High (ISCED 5/6)	Low (ISCED 0/1/2)	Medium (ISCED 3/4)	High (ISCED 5/6)	Low (ISCED 0/1/2)	Medium (ISCED 3/4)	High (ISCED 5/6)	Low (ISCED 0/1/2)	Medium (ISCED 3/4)	High (ISCED 5/6)
Belgium	41.9	66.3	83.9	10.0	6.8	3.0	33.9	53.5	73.7	22.6	16.1	9.6
Bulgaria	-	-	-	-	-	-	-	-	-	-	-	-
Germany	40.2	69.1	84.5	15.6	10.4	4.4	45.1	62.4	68.1	20.3	14.7	12.5
Italy	45.6	65.9	81.4	10.2	7.7	5.4	59.5	67.4	78.8	9.6	8.3	5.3
Netherlands	63.9	80.9	88.1	3.3	1.8	1.5	50.7	69.9	78.3	6.5	7.3	3.3
Portugal	66.5	62.3	87.6	6.7	6.4	4.6	67.5	70.0	83.6	11.2	7.5	7.5
U-Kingdom	52.5	77.5	88.1	8.8	4.7	2.3	39.3	66.9	81.8	12.2	7.9	4.2

Note: 2002 for the Netherlands

Sources: International Migration Outlook, OECD, SOPEMI 2007.

Table 6 displays the employment rates in **Germany** in 2005 of immigrants, second generation, and other natives aged 20-29, according to the level of education. In the high-educated groups the employment rates of women is lower than that of men, the highest gap between men and women is in the foreign-born group (21%). In the second-generation (native born both parents foreign born) and native-born (both parents native born) groups, the discrepancy between men and women is only 4%.

Table 6: Employment rates for immigrants, second generation, and other natives, 20-29 and not in education, by gender, latest available year in Germany (2005)

Germany 2005	Employment rates							
	Low		Medium		High		Total	
	Men	Women	Men	Women	Men	Women	Men	Women
Foreign-born	62	27	76	54	82	61	71	43
Native-born, both parents foreign-born	52	43	76	69	78	74	68	60
Native-born, one parent foreign-born	69	70
Native-born, both parents native-born	57	42	81	73	90	86	79	72

Sources: International Migration Outlook, OECD, SOPEMI 2007.

In **Belgium** a recent study (Vertommen et al. 2006) showed that ethnic minorities and foreign men and women are over-represented in a few sectors and professions revealing through statistical analysis the segmentation and segregation of the labour market on the grounds of sex and ethnicity.

In 2004, the rate of economic activity for migrants (48%) was lower than for the Belgian population (69%) in 2004. The employment rate is also higher for Belgians (62%) than for foreigners (50%), while the unemployment rate is much higher for foreigners (25%) than for Belgians (12%). The activity and employment rates for non-Belgian women (36% and 37% respectively) are lower than for foreign men (59% and 62% respectively). They are also lower than that of Belgian men (61% and 70% respectively) and Belgian women (43% and 54% respectively). But their unemployment rate is the highest: twice the rate for Belgian women, three times that of Belgian men and 7% higher than foreign men.

In 2001, the education sector (including all levels of education) employed 6.1% of native Belgian men and 15.4% native Belgian women, 11% of native-born of parents' foreign-born Europeans (North and South) women. Foreign born or native-born of parents' foreign-born Turkish, Moroccans and Sub-Saharan African are quasi absent from this sector (Vertommen et al. 2006). As for unemployment, we observe quite similar distributions for native men, Southern Europeans and the new-Belgian men from Northern and Western European origin; the largest share of the unemployed is low educated. Compared to men, women generally have a larger share of higher educated unemployed. Although the population of foreign women shows similar large shares of unemployed in the remaining category, the Belgian women from non-European countries are concentrated to a greater extent in the primary and secondary levels of education.

In **the UK**, the labour market profile of ethnic minority groups has been well documented. Research has shown that over the last decades, the overall position of disadvantage has turned into one of differential achievements both between and within minority ethnic groups. There is not only an employment gap between all groups, but also differences in terms of participation in the labour market and unemployment rates.

Another useful indicator of labour market performance is the employment rate. Among men aged 25 and over, 63 per cent of Bangladeshis and 68 per cent of Pakistanis are in paid employment. This contrasts with a national average of 82 per cent and White

Britons' employment rate of 83 per cent. The employment rate for Indians (82 per cent) and Chinese (80 per cent) is comparable to that for White Britons. Among women of this age group Bangladeshi (16 per cent) and Pakistani (23 per cent) women are the least likely to be in paid employment. By contrast, Caribbean (70 per cent) and White British (71 per cent) women are the most likely to be in employment.

Looking at men aged 25 and over, Pakistanis, Caribbeans, Africans and Bangladeshis are two to three times more likely to be unemployed than White Britons. Compared to the national average of five per cent, the unemployment rate for these groups range between 12 to 16 per cent. A similar picture is observed among women with Bangladeshi, Pakistani and African women 4-5 times more likely to be unemployed than White British women. The situation is no better among the younger generation. Among males aged 16-24, Chinese have the lowest unemployment rate (6.4 per cent) and Caribbeans the highest (26 per cent). These compare with the national average of 11 per cent for this age group and 10 per cent for White Britons. The unemployment rate is not so high among young women, but differences between groups remain. While seven per cent of White British women in this age group are unemployed, 16 per cent of Bangladeshi women are unemployed. Like their male counterparts, young Chinese women are also the least likely to be unemployed (under five per cent).

In **Italy** in 2001, foreign men (77%) and women (41%) worked more than Italian men (54.8%) and women (32%). Among foreigners, men were more employed than women (77% against 41%). Around 50% of foreign women were in fact out of the labour market. Similarly, unemployment hits women more than men (9.3 and 6.8%). This partly signalled the difficulty women had finding jobs and this was despite their higher level of education. This trend occurred in the Italian labour market which is notoriously stingy of opportunities for women, regardless of their nationality. In contrast to Italian men, employed men of foreign origins were concentrated in the 25-39 age group. Related to unemployment 60% of foreign women and 50% of Italian women were concentrated in the age group 25-39 while foreign men are 50% and Italian men are 43%.

In **Bulgaria** the immigrants are in their huge majority active and in work, many of them self-employed; a lot of them also create jobs for Bulgarians. The ratio of entrepreneurs and managers increased – from 11% in 2003 to 17% in 2006; the proportion of professionals and free lance consultants in business – national and international – public authorities and non-governmental sector is high and stable – 44%.

The Georgiev (2006) survey shows that 44% of all immigrants have a full-time job, 11,5% a part-time job, 6% are students, 4% housewives and 9% retired. The interpretation of this is in some communities like the most numerous – from the Middle East – women take care of children and the family. The professional status is also very interesting: entrepreneurs (13%), managers (4%), white-collar workers (36%), free lance (8%) blue-collar workers (31%). Immigrants are more represented in the high qualified than the less qualified labour market.

The level of unemployment of immigrants (14%) is close to national figures. It is important to emphasize that the unemployed are, as a rule, refugees not immigrants.

In **Germany** in 2006, according to the data from the German Job Centre, 1,123,000 foreign men and 659,000 foreign women were employed and paying social insurance contributions (Bundesagentur für Arbeit, 2007). During the same period, 326,000 foreign men and 281,000 foreign women received unemployment benefit. This means that foreign men represent 7.8 percent of all male social insurance contributors and 12.9

percent of all unemployed men, and female foreigners 5.5 percent and 12.2 percent respectively. The only job sectors in which foreigners are over-represented are the hotel and catering industries, while they are especially under-represented in banking, public administration, and education.

In the **Netherlands** individuals with BMR backgrounds represent 7,5 % of the entire labour force. Of the four dominant BMR groups, Surinamese and their descendants represent the largest group of “non-Western” workers employed in the Dutch labour market. According to the CBS (Centraal Bureau voor Statistiek), unemployment for the year 2006 among “non-Western” BMR individuals was approximately 15,5%. The CBS also states that those with a “non-Western” migrant background in the Netherlands are three and a half times more likely to be unemployed. From 2002 to 2005 a slight decrease from (16,4%) in the unemployment rate among BMR persons has been observed. The “native” Dutch unemployment rate fell considerably lower from 5.2% in 2005 to 4.3% in 2006.

The 2007 OECD report noted that in all OECD countries, immigrants are more over-qualified than natives. Over-qualification has been measured by the correspondence between level of education and qualification for the job held. This is the case for Indians in UK for example. In Italy over-qualification of foreign born (23.5%) is almost four times higher than of native born (6.4%). It is twice as high in Germany and the Netherlands while it is quite similar in the UK. According to the OECD, over-qualification is more characteristic of newly arrived immigrants in certain economic sectors who are more likely to accept unskilled jobs than native born.

Female recent migrants and those from outside the OECD are most likely to be over-qualified. As shown in table 7, foreign-born women in Belgium, Germany and Italy are more over-qualified than foreign-born men. All foreign-born women are over-qualified compared to native women and men. The biggest gap is between women in Italy (20.3%) and Germany (13.7%).

Table 7: Over-qualification rate of native and foreign-born populations by gender in some OECD countries, 2003-2004

	Foreign-born		Natives	
	Women	Men	Women	Men
Belgium	24.6	19.4	17.7	13.8
Germany	23.6	17.9	9.9	12.8
Italy	27.4	19.9	7.1	5.9
Netherlands	16.6	16.9	9.9	8.7
Portugal	16.2	17.5	8.9	6.5
United Kingdom	17.0	18.4	14.9	15.7

Notes: 2005 for the Netherlands

Source: Eurostat in OECD, SOPEMI 2007

2.5. National anti-discrimination laws

All European countries have to implement anti-discrimination directives on the grounds of gender and race into their national legislation and have created specialised bodies, which are supposed to examine the law and support the victims. There are important tools for combating discrimination, in particular in the labour market.

Table 8: Anti-discrimination legislation on the ground of sex and origin* in Education and Employment and specialised body

Country	Constitutional provisions	Anti-discrimination legislation	Specialised body
Belgium	Arts 10 and 11 and 191 of the Constitution	-Law of 30 July 1980 criminalising racism and xenophobia (2003) -Law of 25 February 2003 on combating discrimination -Flemish Decree 8 May 2002 -French-speaking Community Decree 19 May 2004 -Walloon Region Decree 27 May 2004 -German-speaking Community Decree 17 May 2004 -Brussels Region Ordinance 26 June 2003	-Institute for the Equality of Women and Men -Centre for equal opportunity and opposition to racism
Bulgaria	Constitution	-Law on Protection against Discrimination (2003)	Consultative Committee on Equal Opportunities for Women and Men
Germany	Arts 3 and 33, 140, 136 German Basic Law	-Work Constitution Law 1972, (amended 2004) -Law on the Federal Employee representation 1974, (2005) -Federal civil servants 1999 (2005) -Framework Law on Civil Servants -Law 18 August 2006	Antidiskriminierungsstelle des Bundes
Italy		Decree n°255 of 19 July 2003 transposing 2000/43 Directives -Decree n°286 of 25 July 1998 -Decree N°216 of 9 July 2003 transposing 2000/78 Directive -Decree N°256 of 2 August 2004	National Office against racial discrimination (UNAR)
Netherlands	Art. 1 Constitution	-Equal Treatment Act of 1994 amended by EC implementation Act 2004 and by law of 15 September 2005 amending General Treatment Act	Equal Treatment Commission (ETC)
Portugal	Arts 1, 13, 15, 26-1, 59, 70, 71, 72 and 74 of the Constitution	-Law 18/2004 on Racial and Ethnic origin discrimination (Amended DL 86/2005) -Decree Law 251/2002 (DL 27/2005) -Labour Code Law 99/2003 and Law 35/2004	-High Commissariat for Immigration and Ethnic minorities (ACIME) -Commission for Equality and Against Racial Discrimination (CEARD)
United Kingdom	No written Constitution	Race Relations Act 1976 (amended by Race Regulation 2003) -Employment Equality (2003) -Equality Act 2006	Commission for Racial Equality and Human Rights

Source: Bell et al. (2006) and NEWS reports. *Including Racial and ethnic origin, nationality and religion according to the country.

In the **Netherlands**, the Constitution establishes the principle of Equal Treatment and non-discrimination on the grounds of religion, belief, political opinion, race or sex or any other grounds. The Criminal code definition is modelled on that of the UN CERD convention and uses the term “discrimination” rather than “racial discrimination” since it is designed to cover discriminations on grounds of gender, sexual orientation, religion and belief and social status. The **Equal Treatment Act (ETA)** was adopted in 1994 and amended to harmonise with the fields of application of the EU Directives. It establishes an Equal Treatment Commission under ETA, which is the designated body for the transposition of the racial equality directive. An independent NGO combating discrimination, the National Bureau Against Racial Discrimination (LBR), was created in the 1980s.

In **England**, the **Sex Discrimination Act 1975** prohibits discrimination at work, in education and services. Since then a growing body of research has been documenting the patterns and processes of under-representation. In the context of successive governments seeking to increase the number of qualified scientists, engineers and technologists (Glover and Fielding, 1999), the position of women in sciences has come under particular scrutiny. Racial discrimination in the labour market was first included in the 1968 Race Relations Act. **The Race Relations Amendment Act, 2000** puts public authorities under responsibility to eliminate racial discrimination and promote equal opportunities. All public bodies are required to monitor their employees and all applicants for jobs, promotion and training.

The *Commission for Equality and Human Rights* is an independent body whose purpose is to eliminate discrimination and enforce equality legislation on age, disability, gender, race, religion or belief, sexual orientation or transgender status, and encourage compliance with the Human Rights Act 1998. Its aim is to strengthen good relations between people and protects human rights (the **Equality Act 2006**). The CEHR brings together the work of three existing Commissions, the *Commission for Racial Equality (CRE)*, *Disability Rights Commission (DRC)* and *Equal Opportunities Commission (EOC)*.

In **Belgium**, the first **Criminal law against racism** was adopted in 1981 and reinforced several times (1994, 1995, 1999, 2003). A wider reform was the 2003 law against discrimination adopted to transpose the so-called “Race” and “Employment” EU directives. More recently new measures were adopted in April 2007 to implement some new EU directives in Belgian law and to harmonize the legal protection covering each ground of discrimination.

The main equal treatment bodies against discrimination are firstly, *the Centre for Equal Opportunities and Opposition to Racism* set up in February 1993 which promotes equal opportunities and opposes any forms of discrimination on the grounds of so-called “race”, colour, origin, background or nationality, sexual orientation, marital status, birth, fortune, age, religious belief or philosophy of life, current and future state of health, disability or physical particularity.

The *Institute for the Equality of Women and Men* created in December 2002 is a federal level state institution mandated to guaranty and to promote equal opportunities for women and men and to fight any form of discrimination and inequality based on gender.

In **Germany**, the **General Act on Equal Treatment** came into force on 18 August 2006 (Bundesgesetzblatt, 2006) – This law is a consequence of the European anti-discrimination initiative formulated in various EU directives and is meant to protect

(amongst other things) against racially or ethnically motivated discrimination at work and in part of everyday life.

The Labour Law provides norms to prevent discrimination in the workplace and an obligation for employers and Work Councils to ensure equal treatment for all employees and to prevent their discrimination, particularly on the grounds of nationality and origin. Other procedural rights are designed to foster the fight against racism and xenophobia in the workplace.

The equality bodies are firstly, the *Commissioners for foreigners on the federal and regional level* who monitor the principle of equal treatment and secondly, the *German Institute for Human Rights*, which focuses on discrimination on the grounds of race or ethnic origin.

In **Italy**, the bulk of the legislation that currently regulates issues of immigration and integration in Italy is the result of two conflicting laws. The **Single Act, no. 286**, was based on Law 40/1998 (the so-called Turco-Napolitano law) later amended in the stricter Law 189/2002 (Bossi-Fini law).

As far as civil rights are concerned, legal immigrants have the same rights as Italian citizens. The Single Act prohibits any form of discrimination against immigrant workers and provides a partial reversal of the burden of proof in case of discrimination by employers against workers. Likewise, legal immigrants enjoy the same social rights as Italian citizens with some limited exceptions (i.e. maternity allowances for single mothers, pensions in case of repatriation, etc.).

The *Office against Racial Discrimination* (UNAR) was set up by Legislative Decree no. 215 of 9 July 2003 and the Presidential Decree of the Council of Ministers (DPCM) of 11 December 2003, in order to enforce the EU Directive no. 2000/43/EC. The Office works for the promotion of equal treatment and the fight against discrimination on the grounds of race or ethnic origin. The Office's headquarters are part of the *Department for Equal Opportunities* (Comitato per le Pari Opportunità) of the Presidency of the Council of Ministers and it is not an autonomous body as in other European countries.

In **Portugal**, the principle of equality has its source in the Portuguese Constitution and the International Convention on the Elimination of All Forms of Racial Discrimination (CEAFRD). The **Law n° 134/99 of 26 August** introduced new legal instruments to combat racism and discrimination, defining discriminatory practices and administrative and economic sanctions. The law includes "nationality" as a valid criterion of racial discrimination. The **Law n° 18/2004 of 11 May** transposed the Directive 2000/43/EC of 29 June by implementing the principle of equal treatment between individuals irrespective of race and ethnic origin and aiming to set up the legal framework to fight discrimination on grounds of racial and ethnic origin.

The equality bodies are the *Commission for Equality and Against Racial Discrimination* (CEARD) and the *High Commissioner for Immigration and Ethnic Minorities* (HCIEM) who is the president of CEARD. They promote equal treatment and prevent discrimination on grounds of race, colour, nationality or ethnic origin. The High Commission for Immigration and Ethnic Minorities, directly under the Prime Minister, is an interdepartmental support and advisory structure of the Government in respect of immigration and ethnic minorities.

In **Bulgaria**, the **Law on Protection against Discrimination of 30 September 2003** establishes mechanisms for the practical implementation of the constitutional principle of discrimination and equality. It aims to guaranty equal opportunities for women in all

spheres of public life – employment, education and training, health care, housing, social protection. The law includes the concept of the minimum participation of 40% of the gender less represented in the management bodies, according to the standards of balanced participation of women and men in decision-making processes. In line with European employment strategy, a National Plan on Employment has been drawn annually and implemented since 2001. It includes programs reflecting the policy of equal opportunities for women and men. The concept of gender-mainstreaming has been introduced.

The Consultative *Committee on Equal Opportunities for Women and Men* under the Ministry of Labour and Social Policy created in 2003 and the *Equal Opportunities for Women and Men* established in the same ministry in early 2004 are in charge of equality and anti-discrimination policies. As regards *higher education*, the objective is to promote women's involvement and to facilitate the access of women, combining family responsibilities and training. The aim is to create conditions for facilitating university entry of successful applicants (with equal entry exam grades) from the following groups: category I & II disabled persons, disabled soldiers, two-parents orphans, mothers of three or more children.

3. Women in science

This section describes the general position of women scientists in the seven countries. First, we present female tertiary students and R&D expenditures and staff to give the general context of women scientists' position in the countries under investigation.

3.1. Women's access to university

Historically universities in European countries were male strongholds until the late nineteenth century. Access to university studies was open to female students in the USA in 1860, France in 1863, Switzerland in 1864, Spain in 1868, England and Sweden in 1870, Denmark and Netherlands in 1875, Italy in 1876, Australia in 1878, Belgium in 1880, Norway in 1884, Iceland in 1886, Greece in 1890, Turkey in 1894, Hungary in 1896, Austria in 1897, Germany in 1900 and Bulgaria¹⁰ in 1901 (Table 9).

Table 9: Date of university access and first women professor in European countries under investigation

Country	Women access	First Professor
Belgium	1880 (ULB)	
Bulgaria	1901 (Sofia)	
Germany	1900 (Baden)	1923
Italy	1876	
Netherlands	1875	
Portugal	--	
United kingdom	1870 (Cambridge)	

Source: Annette Vogt and NEWS reports

Among the first female university professors, two are immigrant women: in 1884 **Sofja V. Kovalefskaja** was the first professor of mathematics at the University of Stockholm and in 1906, **Marya Salomea Skłodowska** (Marie Curie) was the first professor of physics at the Sorbonne in Paris.

As we can see the path to equality in higher education has been very long and difficult (see the Belgian case below) and is not yet completely achieved. Marie Curie's biography shows the obstacles she had to cope with during her career mainly because she was a woman¹¹. Her Polish origin did not seem to be an obstacle in her scientific

¹⁰ I would like to thank the German historian Dr. Annette B. Vogt researcher at Max Planck Institute for the History of Science who provided the information about women in Europe. Annette Vogt is the author of a book on Lise Meitner. *Vom Hintereingang zum Hauptportal? Lise Meitner und ihre Kolleginnen an der Berliner Universität und in der Kaiser-Wilhelm-Gesellschaft*. Stuttgart: Steiner, 2007 (From the back door to the top? Lise Meitner and her colleagues at the Berlin university and the emperor William).

¹¹ B. Goldsmith, *Obsessive Genius: The inner world of Marie Curie*. W.W. Norton & Company, 2005. E. Curie, *Madame Curie*, Paris, Gallimard, 1938. F. Giroud, *Une femme honorable. Marie Curie, une vie*, Paris, Fayard, 1981.

career, even if she was stigmatized during “the Langevin case” in November 1911, when a violent press campaign accused “the Polish student” of destroying a French family. Following these attacks, the French Education Minister “wished that Marie Curie would return to Poland”. But her scientific career was affected as a woman in a male environment, and in an antifeminist and chauvinistic academic world.

Nevertheless, Marie Curie was the first woman in France to obtain a doctorate, the first female university professor, the first female Nobel Prize winner (Physics with her husband and Becquerel in 1903) and the first woman to win it twice (Chemistry in 1911). She was also the first woman to sit on the Academy of Science when she was accepted at the Academy of Medicine in 1922 (her application was rejected in 1910 initiating a large debate about women’s access to Academies among members of the Institute). Finally in 1995, she was the first woman to enter the Pantheon after her death in recognition of her scientific work and merits.

3.2. *Women tertiary students*

According to Eurostat data, in 2003 55% of tertiary students in the EU25 were women (news release 29/2006). Women accounted for more than half of tertiary students in all Member States except Germany, where numbers were equal. In science, mathematics and computing, 37% of tertiary students in the EU25 were women. Only Italy and Portugal had almost as many women as men studying science, mathematics and computing, while in the Netherlands less than a quarter of those studying these subjects were women. As shown in the table 10, in the six European Union countries (but the same is true in all Member States) more women than men studied humanities and arts compared to a EU25 average of 66%.

Table 10: Level of education of women in the seven countries

	Share of those aged 20 to 24 having at least completed upper secondary education, 2005*			Share of women among tertiary students, 2003**	
	Women	Men	Total	Science, maths. & computing	Humanities & art
Belgium	84.6	76.0	53.3	30.1	59.0
Bulgaria	-	-	-	-	-
Germany	74.2	71.5	49.5	33.4	64.9
Italy	78.1	67.8	56.2	49.0	74.3
Netherlands	78.9	70.6	51.0	23.4	56.4
Portugal	56.6	40.4	56.6	49.8	64.3
United kingdom	76.7	77.5	55.9	35.7	61.5

Source: Eurostat * Germany: 2004 Data exclude ISCED level 6. ** Belgium: Data exclude independent private institutions in Eurostat news release 29/2006 - 6 March 2006

Belgian women's access to school and university

In **Belgium**, universities enrolled the first women students in the late nineteenth century. The Free University of Brussels (ULB) first opened its doors to female students in 1880 followed by the University of Liège¹² in 1881 and University of Ghent in 1882. no women were admitted to the University of Louvain until 1920.

The first female university students were interested mainly in sciences, medicine and pharmacy. Yet it was not easy for young women to get a job after graduation. Advanced studies were considered mainly as a way of enhancing one's intellectual substance, and not to actually start working.

1864: **Isabelle Gatti de Gamond**, an Italian woman born in Paris, founded the first secondary school for girls in Brussels

1880: The “Université Libre de Bruxelles” opened its doors to women followed by the “Université de Liège” in 1881, the “Université de Gand” in 1882 and the “Université Catholique de Louvain” in 1920.

1884: **Isala Van Diest** opened a doctor's surgery. She was rejected in 1873 by the medical faculty of the University of Louvain, and in 1877 she obtained her degree in medicine in Switzerland. a specific Royal decree was promulgated To allow women to work as doctors in Belgium.

1888: the appeal Court rejected the demand of **Marie Popelin**, holder of a diploma in law, to register at the bar (lawyers association). The judge justified his decision by invoking the psychological “weakness” of woman and the importance of family and domestic burdens. She fought all her life to take the oath necessary to practice as a lawyer

1890: The 10 April Law explicitly gave the right to women to access all university degrees including medicine and pharmacy.

1892: **Isabelle Gatti de Gamond** created a pre-tertiary section in the girl school she had created 28 years ago.

1907: The first secondary school (Athénée) for girls was founded in Ghent. It provided an upper secondary education, which gave access to tertiary education.

1925: The Ministry of Arts and Sciences turned state intermediary schools for girls into *lycées* and imposed the same school programme as for boys' schools *Athénées*. From that moment on, girls would enter university without having to sit an exam before a jury.

1947: Women Law graduated can enter the profession.

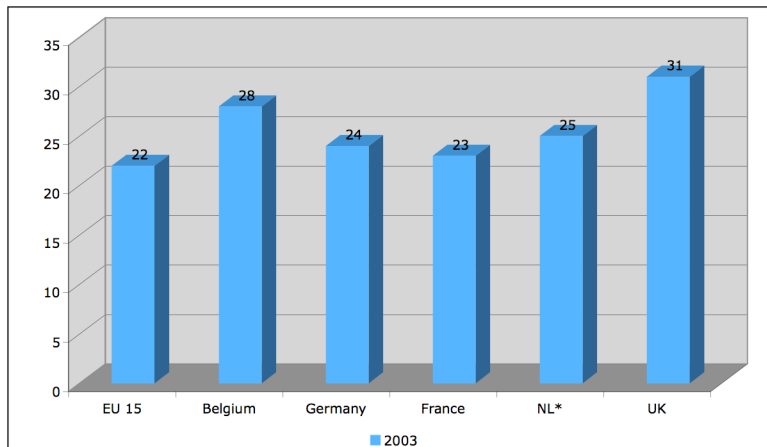
1960s: co-educational Schools first in primary and then in secondary education.

Source: Direction de l'égalité des chances du Ministère de la Communauté française (2004) *Manuel Pédagogique femmes/hommes dans le monde*.

¹² On 17th October 1892, the Rector of the University of Liège dedicated his opening speech for the new academic year to the tertiary education of women.

The share of population with tertiary education (master and PhD level) in the countries investigated (figure 4) show that UK (31%) and Belgium (28%) have a higher percentage than NL (25%), Germany (24%) and EU 15 (22%).

Figure 4: Population with tertiary education (% 25-64 age class ISCED 5-6) - 2003



Source: Eurostat, New Cronos (Labour force survey). *2002

Regarding the proportion of women among PhD graduates, in EU-25 in 2003 43% were women, which corresponds to an improvement of 5 points compared with 1999 (38%). The countries where women PhD graduates are in a majority are Portugal (56%), Bulgaria (51.6%) and Italy (51%). The shares of women according to fields of study (Table 11) show that they are well represented in Education, Humanities and Arts, and Health and welfare. In Mathematics and computing they are in a majority in Portugal, Italy and Bulgaria while they are 40% on average in EU25. In Engineering and Construction, they are a minority particularly in Germany, Belgium, Netherlands and UK, which are below the EU25 average (22%).

Table 11: PhD graduates: proportion of women among PhD graduates by broad field of study in 2003

Country	Education	Humanities & Arts	Social Sciences, Business & Law	Mathematics & Computing	Engineering, Manufacturing & Construction	Agricultural & Veterinary	Health & Welfare
EU-25	60,5	51,4	43,1	40,0	21,9	49,6	40,4
Belgium	43.8	42.2	36.1	33.1	14.3	30.6	45.4
Bulgaria	52.2	68.4	50.0	52.8	31.4	46.4	56.4
Germany	52.6	49.5	34.5	29.9	11.4	54.3	47.7
Italy	72.5	58.5	50.4	54.0	31.2	54.4	61.5
Netherlands	-	43.8	48.5	40.1	19.9	44.3	48.7
Portugal	65.4	66.8	53.9	58.1	34.1	64.6	63.3
United kingdom	53.6	45.9	42.2	41.9	19.6	45.2	52.4

Source: She Figures 2006

3.3. R&D in the seven countries

According to Docquier and Rapoport (2007) Europe faces a structural deficit of researchers notably due to the brain drain to North America and Australia. They observed that although EU15 produced more graduates and PhD students in Science and Technology than USA and Japan, and less researchers are recruited in R&D sectors than in these countries. In 2000, EU15 graduated 2.14 billion of students in SET while USA graduated 2.07 billion and Japan 1.1 billion. Looking at the recruitment, in 1999, the estimated number of researchers was 919,796 peoples in EU15 (5.36 for 1000 workers) while they were 1,219,407 in USA (8.665.36 for 1000 workers) and 658,910 people in Japan (9.72 for 1000 workers). According the authors, the main reasons of the European brain drain to the United States are the better perspectives of recruitment, of salaries, of scientific environment and of means granted to researchers. (Docquier and Rapoport, 2007, 104). Accordingly, the authors advocate for the increasing of R&D expenses and of employment rate of researcher in Europe rather than to resort to selective immigration of higher educated migrants.

In 2005, EU 27 spent more than 200 billion euros in R&D. The share of expenditure as a percentage of GDP remained the same as in 2004. Nevertheless, the share of EU expenditure (1.84%) is lower in comparison to the USA (2.68%) and Japan (3.18%).

The share of R&D expenditure as a proportion of GDP in the seven countries considered (Table 12) shows a big difference between countries, Bulgaria having the lowest expenditure (0.50%) and Germany the highest (2.51%). Between 2001 and 2005, Belgium decreased its share by 1.7% while Bulgaria¹³ increased its share by 6.8% of GDP.

Table 12: R&D expenditure as a percentage of GDP

Country	% of GDP	Increasing 2001-2005
Belgium	1.82	-1.7
Bulgaria	0.5	6.8
Germany	2.51	1.0
Italy	1.1	0.8
Netherlands	1.78	0.4
Portugal	0.81	0.4
United kingdom	1.73	0.7

Source: Eurostat News release 6/2007, 12th January 2007

Among R&D personnel, Portugal has the highest proportion of women researchers in the HES (46%) and GOV (58%) sector. Dutch and German women (Table 13) have the lowest share in two sectors. Not surprisingly women are generally better represented in technicians category and other sectors, which require technical knowledge and experience.

¹³ During the first decade of the democratic transition the science and technology policy was very restrictive: the state budget (as % of the GDP) was reduced from 2.6% in 1989 to 0.53% in 1999.

Table 13: R&D personnel: women in HES and GOV by occupation in 2003

<i>Country</i>	Researchers		Technicians		Other	
	<i>HES</i>	<i>GOV</i>	<i>HES</i>	<i>GOV</i>	<i>HES</i>	<i>GOV</i>
Belgium	35.6	29.8	53.3	39.8	69.5	36.0
Bulgaria	37.8	50.7	46.4	66.8	58.0	67.8
Germany	25.0	27.1	45.3	47.7	72.8	55.9
Italy	-	38.7	-	43.3	-	57.4
Netherlands	28.9	24.9	50.5	24.4	48.6	34.0
Portugal	45.9	57.9	61.4	55.3	71.2	59.4
United kingdom	-	32.2	-	32.4	-	50.8

Source: She Figures 2006

Women are more present in the sector of Government and Higher education (Table 14) than in business enterprise research: Portugal, Italy and UK have the highest proportions of women in HES and GOV sectors. Women constitute 35% of all researchers in the government sector in Europe (She Figures 2006). In Portugal more than one-quarter of Business enterprise researchers are women while in the Netherlands they are less than one in ten (9%).

Table 14: Women researchers as a share of all researchers by sector of employment

Country	Business enterprise	Government	Higher education
Belgium	18.1	29.9	37.2
Bulgaria	-	-	-
Germany	11.7	23.7	22.4
Italy	19.0	38.4	29.8
Netherlands	9.3	-	27.3
Portugal	27.7	56.1	45.1
United kingdom	-	31.8	36.6

Source: Eurostat, DG research, WIS database 2003 in Mario Cervantes, Women scientific careers, OECD, p. 33, 2007

The lack of data makes comparison possible only for three countries in the study. Table 15 shows that the lowest proportion of female researchers in EU25 is in Engineering and Technology in both HES (21.3%) and GOV (22.3%) sectors. Nevertheless, Bulgaria and Portugal have a higher proportion than the EU25 average in this field and in Natural sciences where they are well represented in two sectors contrary to Germany.

According to Krasteva the improved situation of female researchers in Bulgaria is a result of the politics of gender equality, which had visible and profound results in the educational and professional structure of women: the number of women with a university degree has increased twofold. If at the beginning of the regime they represented 23% of all university graduates, at the end they already represented 56% (Krasteva 2007).

Table 15: Researchers by discipline: proportion of women among researchers by disciplines in 2003

Country	Natural Sciences		Engineering & Technology		Medical Sciences		Agricultural Sciences		Social Sciences		Humanities	
	HES	GOV	HES	GOV	HES	GOV	HES	GOV	HES	GOV	HES	GOV
EU25	29.1	31.0	21.3	22.3	39.9	49.7	39.7	43.1	39.3	44.3	38.3	50.4
Belgium	-	-	-	-	-	-	-	-	-	-	-	-
Bulgaria	55.0	51.6	24.0	34.3	55.6	51.2	35.9	52.7	40.1	59.3	52.4	66.2
Germany	18.0	24.3	11.0	16.6	34.0	42.0	30.5	35.2	29.8	40.9	29.8	46.9
Italy	-	-	-	-	-	-	-	-	-	-	-	-
Netherlands	-	-	-	-	-	-	-	-	-	-	-	-
Portugal	49.0	61.6	29.0	36.9	24.4	59.2	24.4	56.6	49.7	67.2	49.6	65.4
United kingdom	-	-	-	-	-	-	-	-	-	-	-	-

Source: She Figures 2006

As regards the proportion of female staff according to the grade, the table 16 clearly shows the greater presence of women at the lowest grade where in the EU 25 they are in a minority whatever the grade. In grade A, i.e. the highest position, Bulgarian and Portuguese women are twice numerous than Belgian, German and Dutch women. In newly qualified grade B, Belgian, German and Dutch women are less represented than the EU 25 average and other countries.

Table 16: Academic staff: proportion of women by grade¹⁴ in 2004

Country	Grade A		Grade B		Grade C		Grade D	
	Women	Men	Women	Men	Women	Men	Women	Men
EU 25	15.3	84.7	32.2	67.8	42.0	58.0	43.3	56.7
Belgium	9.0	91.0	20.8	79.2	33.1	66.9	46.6	53.4
Bulgaria	18.0	82.0	34.9	65.1	-	-	52.4	47.6
Germany	9.2	90.8	16.1	83.9	25.9	74.1	35.6	64.4
Italy	16.4	83.6	31.4	68.6	43.8	56.2	-	-
Netherlands	9.4	90.6	14.2	85.8	26.9	73.1	39.4	60.6
Portugal	20.9	79.1	34.4	65.6	43.4	56.6	50.4	49.6
United kingdom	15.9	84.1	31.2	68.8	46.1	53.9	46.1	53.9

Source: She Figures 2006

There are important gender differences in choice of field where women are seriously under-represented in Engineering & Technology and Natural Sciences (Table 17). Women situation are worse off in Netherlands and Germany in Engineering & Technology. Women's share in Natural Sciences is five times greater in Portugal and three times greater in Italy than in Germany and the Netherlands.

DG research observed that despite the increase in percentages of women in these fields between 1999 and 2003, the gender gap persists to the point *“that they will not self-corrected in the foreseeable future. Policy intervention is thus essential.”* (She Figures 2006, 51)

¹⁴ Grade A= highest grade/post; Grade B= researchers as senior newly qualified; Grade C= first grade/post of newly PhD qualified; Grade D= post do not requiring PhD (researchers or post graduated students).

Table 17: Academic staff: proportion of senior academic women by field of sciences in 2004

Country	Agricultural Sciences	Engineering & Technology	Humanities	Medical Sciences	Natural Sciences	Social Sciences	Other
Belgium	3.6	4.2	13.0	8.3	7.7	11.5	11.8
Bulgaria	-	-	-	-	-	-	-
Germany	8.9	3.8	16.3	5.8	5.6	8.0	10.6
Italy	11.8	6.1	29.4	11.1	15.9	17.1	20.0
Netherlands	11.0	3.1	16.3	6.3	5.3	11.5	14.0
Portugal	27.0	5.0	-	26.2	27.5	20.4	-
United kingdom	14.7	4.9	17.1	22.0	8.2	21.2	20.5

Source: She Figures 2006

The table 18 showing the proportion of women among applicants and beneficiaries for research funding indicates women are in a minority both as applicants and beneficiaries except in Portugal. Women in Germany are seriously under-represented while Portugal and Belgium have the highest proportion of applicants and beneficiaries. One notes that the proportion of women beneficiaries in Belgium and the Netherlands is slightly higher than women applicants.

Table 18: Applicants and beneficiaries of research founding: proportion of women by in 2004

Country	Applicants		Beneficiaries	
	Women	Men	Women	Men
Belgium	43.3	56.7	44.6	55.4
Bulgaria	-	-	-	-
Germany	13.0	87.0	11.9	88.1
Italy	22.4	77.6	21.1	78.9
Netherlands	22.1	77.9	23.5	76.5
Portugal	52.6	47.4	51.4	48.6
United kingdom	31.3	68.7	23.7	76.3

Source: She Figures 2006

The presence of women scientists on scientific boards (Table 19) is drastically lower than that of men. Bulgaria and the United Kingdom have a greater proportion than Italy and Belgium.

Table 19: Proportion of women and men on scientific Board, 2004

Country	Women	Men
Belgium	14.4	85.6
Bulgaria	32.8	67.2
Germany	17.1	82.9
Italy	12.8	87.2
Netherlands	20.8	79.2
Portugal	-	-
United kingdom	31.4	68.6

Source: She Figures 2006

4. Foreign, Black and Ethnic minority women in science

Seven years ago, Eleonor Kofman pointed out the invisibility of female migrants in skilled migration in Europe. Apart from a few statistics on labour market position, she observed that it was impossible to find discussion of women or gender relations in studies of skilled international migration. The dominant figures in the literature on migrants and ethnic minorities women remain unskilled women working in sweatshops, in the home and in the informal service sector (Kofman, 2000, 54).

In the highly qualified sector she observes that the service and high technology sectors have been well studied, while “*the other categories of professional, scientific and research employment with their different gender balances, conditions of work, remuneration and regulation, have been sidelined.*” So Kofman advocated taking into account the gender dimension in the skilled international migration to make women migrants less compartmentalised and more integrated, recognising the breadth of human experience (2000, 56).

At the onset, the Kofman’s wish to see gender skilled migration studies figure on a European research agenda in the next decade has not as yet been achieved. Actually, **nobody is examining, in particular, the issue of foreign, black and ethnic minority women scientists**: neither women studies nor ethnic minority studies. As a rule, scientific publications dealing with this issue are very rare¹⁵.

This chapter discusses the lack, scarcity and weakness of statistics on BME women scientists, that make a comparison between the seven countries very difficult notably because of the diversity of migrant statuses and ethnic groups used. In addition, a dataset on foreign and ethnic minorities women students, researchers and academics in the seven European countries is presented and commented upon.

4.1. Women statistics in science

If the **European Commission**, and particularly the Women and Science Unit, have made a huge effort in recent years to produce and publish statistics on graduates, researchers and academics women in EU-25 (Gildof-Renier 2006), the *She Figures* booklet does not yet show data by nationality and/or ethnicity although this information is (partially) available in the Eurostat database. The OECD SOPEMI report (2007) on immigrants provides interesting information not only about highly skilled foreigners in Europe but also about different high-educated nationals with a foreign background (second generation, ethnic minorities). Most of the information is extracted from the Eurostat database (as seen in chapter 2).

At **national levels**, information on nationality is available in all seven countries but ethnic minorities are only clearly identified in the censuses of three countries: Bulgaria, the Netherlands and the United Kingdom. As a rule, access to this information is not very easy especially in the sector of high education and research. Philomena Essed (1999, 213) identifies different factors, which make access to ethnic information

¹⁵ Burton, J. & Joshi, H. (2002) Gender and Ethnic Balance of Academic Economics, A report for the Royal Economic Society.

difficult, and data on university participation scarce. The first is lack of a common understanding of the term “ethnic minority groups” (Wrench & al. 1999, 1-18). The second is the political sensitivity of racial and ethnic issues particularly in their relationship to nationality. The third factor is the absence of race and ethnicity monitoring, except in the UK.

Let us see what kind of statistics are actually available in the different countries under investigation.

In **Bulgaria** the National Institute for Statistics (NIS) provides the main statistics on gender dimensions on R&D. Since 1994, the NIS adopted the methodological guidelines of the Frascati Manual in order to provide data comparable with OECD countries.

The National Institute for Statistics’ publications are also a main source for the ethnic structure of the population. It offers data on ethnic groups and mother tongue at national and regional levels.

The main obstacle is the lack of statistics concerning women scientists from different ethnic backgrounds, neither is there any data concerning students from minority communities.

The second important gap concerns the data on immigrant communities in Bulgaria. The Governmental Agency for Refugees collects data about asylum seekers and refugees. The situation concerning immigrants is much more problematic. The Directorate “Migration” within the Home Ministry collects data on foreigners in Bulgaria but it is a very closed department and it does not provide data for scientific research purposes.

In the **Netherlands**, most of the data on female academics from BMR backgrounds is compiled from surveys. Many of the Dutch universities that were contacted do not categorize their academic personnel according to ethnic or “racial” backgrounds, thus making it almost impossible to ascertain exactly how many BMR female or male academics are employed by Dutch universities. Prior to 2002, only two studies were conducted which examined the situation and representation of BMR personnel employed by Dutch universities. The first study was conducted by Abell and Menara (1986) and looked at the position of ethnic minorities (BMR) (females and males) employed by the University of Amsterdam. The second study by Bosch, Hoving and Wekker (1999), sponsored by the AWT (Adviesraad voor Wetenschap en Technologie), specifically examined the situation of female academics and minority groups within Dutch universities. In this particular report, the question of gender was given priority over the question of ethnicity (Crul et al. 2002:6). Three years later the research report “*Kleurrijk Talent*” (Crul et al. 2002: 5) examined the situation of BMR P&O¹⁶ staff at five universities: Amsterdam (UvA), Utrecht, Twente, Tillburg and Rotterdam. It was based on electronic surveys, literature and conversations with P&O staff at these universities. In 2002 the Netherlands Organisation for Scientific Research (NWO) launched an investigation into the possible reasons for the under-representation of BMR academics employed by Dutch universities.

In the **United Kingdom**, senior managers are exhorted to monitor ethnic minority representation and ensure that the culture of the sector is one where the needs and

¹⁶ P&O Dutch abbreviation for personeel en organisatie (personnel and organisation).

interests of ethnic and religious minorities are properly addressed and accommodated. There are ongoing concerns about the lack of disaggregation of statistics to draw out the experience of ethnic minority women (see for example Jones, 2006), which means that their specific situations are concealed. Mirza notes: 'Gender...is still seen as a white women's issue while it is taken for granted that race is a black male issue. Black women fall into the cracks between the two' (Mirza, 2005 – cited in Jones, 2006: 152)

Statistics collected by governmental departments (i.e. Census of the population and other government sponsored surveys of the labour force) and other public bodies/institutions on the origins of their employees or their students (i.e. Higher Education Institutions) are based on a notion of ethnicity that combines country of origin and race. These statistics are the main source of information on the representation of women scientists of minority ethnic origin in higher education. No information is collected or made available on individuals' immigration or residential status. For this reason, the UK statistical overview refers to different ethnic groups, not to migrants or refugees. These ethnic minority groups are likely to contain individuals with different residential and immigration status, but divisions along these lines do not inform the widely used ethnicity classifications. The official ethnic classification distinguishes five groups: White; Mixed; Asian or Asian British; Black or Black British; Chinese or Other. In this classification, the notion of ethnicity is based on a combination of country of birth and race.

The ethnicity of *students* qualifying at Degree, Master and Doctorate levels is collected by the Higher Education Statistics Agency (HESA). HESA student statistics are published every year and based on information returned by individual institutions. Student data contains information on age, gender, ethnicity, domicile, mode (parttime/full-time) and level of study (undergraduate/postgraduate), degree subject, institution and degree classification for graduates. One issue with HESA Student Data is the extent of unreported/missing ethnicity. HESA data is based on returns by institutions who in turn rely on information provided by students and undeclared ethnicity can be an issue. In 2003-4, ethnicity information was not known for over six per cent of staff (AUT Research, 2005). In addition, HESA statistics are annual and focusing on sub-groups of students or staff in any one year (e.g. Caribbean women studying engineering at doctorate level) is likely to mean dealing with very small numbers and this may not allow extrapolation to the whole population.

Similarly, HESA also collects data on *staff* working in all higher education institutions in the UK, also published every year and based on information returned by individual institutions. HESA staff data contains information on age, gender, ethnicity, institution, mode of employment, primary employment function (teaching or research), terms of employment (permanent, fixed term, casual) and grade (professors, senior lecturers, lecturers, researchers and other grades).

The educational and employment profile of whole populations of ethnic minorities can be investigated using Census data or the Labour Force Survey (LFS). The Census collects data on qualifications held by citizens and specifies the level of qualification. The Census question on the level of qualification does not distinguish between levels of post-degree education (i.e. Masters and PhD levels) and does not ask the subject of qualification. If the focus is post-degree education, the Census would not be appropriate for investigating levels of post-degree qualification in a specific subject/subject field. As in the Census, Labour Force Survey participants were not asked the subject of their post-degree qualification.

The Labour Force Survey, similarly, includes questions on qualifications held and uses a detailed classification to indicate the level but use of the Labour Force Survey to investigate ethnic minority education or employment often is faced with the problem of small sample sizes. This may necessitate merging waves of Labour Force survey over a number of years to conduct meaningful analysis. Combining ethnic groups to look at broader divisions of ethnicity is another way of dealing with the issue of small sample size, but this means sacrificing detail and precision and may result in making generalisations about groups with significant differences.

In **Belgium**, statistics are compiled by nationality not by ethnicity. Due to the large number of naturalisations of migrants and their descendants for the past 20 years, the identification of Belgians with foreign background has become very difficult and harmful, particularly for evaluating anti-discrimination law and policies in school and in the labour market. After dropping the ten-yearly population census, the Belgian government created and developed the Crossroads Bank for Social Security (CBSS) that has become a very effective statistical tool. This virtually exhaustive database links up the databases of several administrations in charge of social security matters (National Office for Employment, National Office for Social Security, etc). By linking social security data with information from the National Register (individual identity data), the Crossroads Bank provides very reliable figures today on native Belgians, Belgians of foreign origin and foreigners. The data is subject to authorization from the Privacy Commission and high costs and a long waiting period to obtain the information (about six months). For women in science, the data published by the Belgian Science Policy and the FNRS regarding researchers is only broken down into gender although the nationality variable is included. An estimation was made of the number of researchers from foreign origin at the French Community level, on the basis of the researchers name list available on the FNRS website. Regarding academics, statistics exist at the university level but are not published. On the other hand, the student population is shown by gender and nationality.

Every year in **Germany** the Federal Statistics Office and its counterparts in the individual states gather detailed data regarding education and research from universities and other institutions. In all the statistical data collected from universities by the statistics offices, nationality is the only variable from which it is possible to infer the migration status of people. However, even nationality does not seem to be a variable collected consistently by the personnel offices as they show high numbers of “unknown nationality” in the statistics of university employees. Unfortunately, most of the employment data published does not specify nationality at all. This is quite different for student numbers as the educational situation of foreigners is by now a prevalent topic.

It is of course impossible to conclude from nationality alone whether a person is born abroad or second generation born, is part of late repatriates, has been naturalised or has parents who migrated to Germany. All this information, in principle, is now available through the results of the 2005 microcensus (Statistisches Bundesamt Deutschland, 2006). However, there is a serious limitation regarding the usefulness of the microcensus for the purpose of this study; since it only involves a 1 percent sample of the total population, it is by definition useless for statistically meaningful statements about population groups with less than 5000 members. Nevertheless, if one does not ask for very detailed specifications such as breakdowns by country, microcensus data will still give new insights into the situation of minority women in research.

Until 2005 official German statistics gathered by the Federal Statistical Office (Statistisches Bundesamt, Wiesbaden), did not use ethnicity or migration history as a parameter. In fact, there is hardly any available statistical data that compares different migration background groups within the population of Germany.

All the statistics published include gender relations in most of their results. The rarity of employment data specified by nationality *and* gender shows that the danger of combined effects of multiple discrimination in this area has not even been acknowledged yet.

It is very difficult to obtain local statistical data about the nationality of university employees directly from the personnel offices of universities because of data protection rules and reservation about unusual requests for statistical analyses.

In **Italy**, statistics on higher education and employment in university and research systems only display nationality and are mainly provided by ISTAT (Institute National of Statistics) and MIUR (Ministry of Higher Education and Research).

Portugal provides statistics on foreign women scientists in research and/or higher education by nationality. The Observatory of Science and Higher Education of the Ministry of Science, Technology and Higher Education draws on the data from the survey on the National Scientific and Technological Potential.

4.2. Foreign, Black and ethnic minorities students

As mentioned above, the diversity of nationalities, migrant generations and ethnic groups make the comparison between the seven countries very difficult. Therefore most relevant data on PhD students in some of the countries will be presented either at national or university level.

Philomena Essed (1999) analysed the situation of women and ethnic minorities in Dutch universities and tried to understand why they were under-represented (excluded) as students and as professionals in the academic world. One reason for this exclusion could be the tendency to problematise ethnic minority students as deficient, lacking in language skills and competence. She proposes to address the issue not through the deficiency approach but by emphasising overlapping structures of domination, interlocking identities and the linking of struggles across ethnic and national borders.

Figures in some investigated countries show that more and more foreigners and black and ethnic minorities students are achieving tertiary education.

In **the UK** the proportion of White students at Masters level is in fact slightly lower (85 per cent) than it is at the undergraduate level (nearly 87 per cent). Ethnic minority students are found in greater numbers at Masters level and seem to be choosing SET subjects and Medicine over other subjects. At the doctorate level the presence of ethnic minority students falls and White Britons are slightly over-represented (Table 20). Relative to their population size, the only known minority groups well represented at the doctorate level are the Chinese and Black Africans. Bangladeshi, Pakistani and Caribbean students seem to be particularly under represented. This is a significant point because a doctorate is the prerequisite for an academic career or for higher-level jobs in these fields.

Table 20: Ethnicity and subject choices of postgraduate students studying for a doctorate in 2001-2002 (UK domicile students)

Ethnic group	Percentage of student body				
	Student body	SET	Medicine	Other	% of population 18-25
White	90.00	90.50	85.57	91.00	88.31
Black Caribbean	0.50	0.26	0.37	0.80	1.07
Black African	1.14	0.87	1.35	1.35	1.14
Indian	1.98	1.97	3.79	1.32	2.46
Pakistani	0.84	0.94	1.58	0.48	2.13
Bangladeshi	0.20	0.23	0.37	0.13	0.82
Chinese	1.24	1.46	1.77	0.81	0.73
Other	4.11	3.76	5.21	4.10	3.34
Total	(39,205)	100.00	100.00	100.00	100.00

Source: Jones & Elias (2005), p.49. Analysis based on HESA 2001-02 Student Data.
LFS figures are from pooled 2002-03 data (in Hudson & Sahin-Dikmen, 2007).

In **Italy** women outnumber men at university level. In general terms, women perform better in university as nearly the same percentage of women that enrolled obtained a degree. The number of women (61%) was higher than that of men (39%) in postgraduate studies. This is a specific feature of the Italian education system. Men tend to leave the education system after their degree; women tend to carry on with their education.

Regarding departments in 2005 both Italian and foreign women and men's choices were quite polarised (Table 21). As could be expected, men chose scientific studies (Engineering and Economics) while women preferred Humanities (Arts and Philosophy). Medicine was the first choice for all foreigners (percentages were slightly higher for women), followed by Engineering for men and Economics and Arts and Philosophy for women.

Table 21: Graduate students by gender, nationalities and type of Faculties

	Italians		Foreigners		Total	
	Men	Women	Men	Women	Men	Women
Scientific Faculties*	64.9	42.2	71.9	57.3	64.8	42.4
Humanities**	26.2	44.4	20.4	31.4	26.2	44.4
Others	8.9	13.4	7.7	11.3	9.0	13.2
Total	100	100	100	100	100	100

Source: Miur, 2005 *Medicine, Pharmacy, Engineering, Architecture, Maths and sciences, Economics **Arts and Philosophy, Pedagogy, Law, Political Sciences, Foreign languages (in Corigliano & Greco, 2007)

In **Germany**, PhD students in German universities are considered as university employees. The data from the 2005 microcensus (Statistisches Bundesamt Deutschland, Wiesbaden, 2006e) gives the numbers of PhD students (different from the number of successful PhD exams), which shows that the proportion of PhD students within first generation migrants (0.19%) is higher than in the total population (0.09%). This can be explained by students who came to Germany, especially to do a PhD. Regarding the percentage of foreign women PhD graduates in **Germany**, the percentage of women in the total number of passed doctorate exams is 38.3 percent, which does not vary much from the 39.8 percent for German students. The percentage of women PhD students is

slightly higher for immigrants (42%) than for women in the total population (41%). On the other hand, the proportion of PhD students within the second generation (0.08%) is comparable to the proportion in the total population (0.09%). However, the percentage of women is considerably lower (36.7%).

In **Belgium** tertiary foreign students in the French Community represented 19.4% of the entire student population in 2005-2006. Almost 40% of them were enrolled at the ULB. In 2005-2006, the EU provided a majority of foreign students (53%). Africa accounts for 30% of the student enrolment. Among Europeans, the children and grandchildren of Italian, Spanish, Greek and Portuguese immigrants remain a minority.

In 2005, 580 PhDs were awarded at the French Community level. Among them 18% of PhD holders were non-EU foreigners, 12.6% were EU citizens and 69% were Belgians. Except among EU foreigners, men are overrepresented in the Belgian and the non-EU groups. In 2005, 145 PhDs were awarded at ULB. Among them 15.2% of PhD holders were non-EU foreigners (less than the French Community average 18%), 18% were EU citizens (higher than FCA 12.6%) and 67% were Belgians. Except among EU foreigners, men are overrepresented in the Belgian and the non-EU groups.

Among Masters graduate students, the Rector of the ULB awards a university medal to brilliant students in recognition of their degree course. The four criteria for obtaining this medal are: obtaining a summa cum laude (the highest distinction) in the last year of their degree, getting at least a cum laude every year during the course of the degree, pass exams at the first session and being no older than thirty. The university publishes a list of the best students who obtained a medal, a summa cum laude, a cum laude and all who have graduated from the university during the academic year. The figures show that the number of foreign students who graduated with a summa cum laude in 2005-2006 at ULB is 11.4%. Going by their names, they come from European countries. Among students who have received a medal, 3.3% of them came from European countries: they are Italian, Spanish, Portuguese and Eastern Europeans.

4.3. Foreign, Black and ethnic minorities researchers and academics

It was noted earlier in this report that BME women scientists groups are under-represented in research and academic careers. In 1999, Essed observed that *“There are ample studies to show that, although access to university has widened to include previously excluded groups, the university environment is less supportive for women and ethnic minorities than for white men (Rowe, 1977; Blakemore et al. 1997). (White) women are more likely to occupy temporary or part time positions and they are clustered in the lowest faculty ranks. The representation of ethnic minorities among faculty is close to zero, but statistics revealing exact numbers are scanty. This holds true not only for the Netherlands but for Europe in general.”* (1999, 213). The information collected in the NEWS reports seems to confirm this statement although it would require in-depth research to explore and validate these trends. The results are mainly drawn from studies conducted a few years ago in the UK and NL.

In **the UK** research on Ethnicity and Employment in Higher Education (Carter et al. 1999) provides information on women scientist position in research and academia. This study shows that both among whites and minorities, about one third of staff are female (Table 22) and that women academics are more likely to be in teaching only or research only positions; compared to over eight per cent of men, 13 per cent of women hold

teaching only posts and as opposed to 27 per cent of men, over 34 per cent of women hold research only positions.

Table 22: Academic staff by gender and ethnicity (1996/97)

	Number	%
Male and white	61,402	63.0
Female and white	30,796	31.6
Male and non-white	3,765	3.9
Female and non-white	1,570	1.6
Total	97,533	100.0

Source: Carter et al (1999), p.13 (in Hudson & Sahin-Dikmen, 2007)

One significant point Carter and colleagues raise is the difference between British and non-British minorities. A quarter of non-British staff are not White and there are more non-British minorities than British minorities working in UK universities. Non-British minorities are more likely to be employed in research only jobs and placed in pre-1992 universities. Research posts, especially in established science and engineering departments and particularly fixed term research only posts are filled by non-British men and women. These temporary posts often act as a stepping-stone onto an international research career, which may or may not be in academia and these positions are not necessarily ones of disadvantage. Carter and colleagues also find that British minority male and female staff are more likely to be in post-92 universities and are found in disproportionate numbers in medical schools. British minorities form two per cent of staff in old universities, three per cent in new universities and over six per cent in medical schools.

British minorities are more likely to be working in research and lecturer positions compared to White British staff. There are fewer British ethnic minority staff that are Senior Lecturers and Professors. About three per cent of minority staff are professors and nearly three times as many White British staff work at this grade (Table 23). British minorities are also more likely to be in 'research only' posts; compared to 23 per cent of White Britons, nearly 37 per cent of British ethnic minority staff work in research only positions (Carter et al, 1999; p.17)

Table 23: Academic grade structure by ethnicity (1996/97)

	% at each academic grade				
	<i>Research</i>	<i>Lecturer</i>	<i>Senior Lecturer</i>	<i>Professor</i>	<i>Other grades</i>
Non-British minority	52.0	32.5	6.8	1.5	7.2
Non-British white	39.8	34.7	9.9	4.8	10.8
British minority	30.4	41.7	13.2	3.1	11.6
British white	20.2	42.1	19.4	8.6	11.6
All	26.2	39.5	16.7	7.5	9.7

Source: Carter et al (1999), p.15. Based on HESA Staff Data 1996/97 (in Hudson & Sahin-Dikmen, 2007)

In terms of part-time working, the real difference is between men and women. Looking at all staff, British minorities are slightly less likely to be working part-time than the White British, but the difference is small (8.1 per cent compared to 10.9 per cent). The gender difference is present in all groups; women are more than twice as likely as men to work part-time (Table 24).

Table 24: Gender, ethnicity and part-time employment (1996/97)

	All Staff	Male	Women
Non-British minority	5.0	4.1	8.2
Non-British White	10.1	7.1	14.5
British minority	8.1	4.8	13.8
British White	10.9	7.5	18.0
Total	10.5	7.2	17.1

Source: Carter et al (1999), p.20. Based on HESA Staff Data 1996/9 (in Hudson & Sahin-Dikmen, 2007)

A more recent study by Burton & Joshi investigates the gender and ethnic balance of academic economics, based on 2002 data. They find that nine out of ten academic economists are White and the proportion of Whites increase at the higher levels. At the entry level of fixed-term staff, eight in ten academics and at the highest level, nearly 94 per cent of professors are White. Among ethnic minority groups, Indians are over represented and Black groups are under represented in academic economics. This study does not consider gender divisions within ethnic minority groups (Burton & Joshi, 2002).

Table 25 shows that in Britain, minorities are more likely to be on fixed term contracts; 44 per cent of male minority staff and 29 per cent of male White staff are employed on temporary contracts. A similar difference exists between female staff, with 55 per cent of minorities and nearly 43 per cent of Whites working on fixed term contracts.

Table 25: Gender, ethnicity and terms of employment (1996/97)

	% with permanent contract	% with temporary contract
All male academic staff	61.2 (42,368)	36.9 (21,847)
Non-British Minority	32.4	67.1
Non-British White	40.4	59.0
British Minority	55.3	43.9
British White	69.0	29.4
All female academic staff	47.9 (16,711)	48.9 (14,900)
Non-British Minority	30.3	69.4
Non-British White	33.9	64.2
British Minority	42.9	55.4
British White	54.9	42.6

Source: Adapted from Carter et al (1999), p.19. Based on HESA Staff Data 1996/97 (in Hudson & Sahin-Dikmen, 2007)

In **Germany**, the same situation has been observed as shown in the table 26¹⁷: immigrants are not drastically under-represented among researchers (that is related to the increasing importance of foreign students and highly qualified immigrants), but they are mostly on temporary contracts. On the other hand, the second-generation migrant group is drastically under-represented among researchers.

¹⁷ It should be mentioned that the statistical errors in the second-generation data could be relatively high because of the small size of the sample.

Table 26: Proportions of researchers according to the microcensus 2005

	Total population		1st generation migrants		2nd generation migrants	
	% within group	female %	% within group	female %	% within group	female %
Researchers	0.67%	41.50%	0.57%	42.24%	0.21%	35.98%
Temporary contract	0.17%	42.42%	0.27%	37.75%	0.06%	45.92%

Source: Extracted from the data provided by the Statistisches Bundesamt Deutschland on Microcensus 2005. (in Kaur Bakshi-Hamm, 2007)

Prior to 2002 in the **Netherlands** only two studies had been conducted which examined the situation and representation of BMR personnel employed by Dutch universities. The first study was conducted by Abell and Menara (1986) and looked at the position of ethnic minorities (BMR) (females and males) employed by the University of Amsterdam. Based on the analysis of 5,500 personnel dossiers, the researchers concluded that individuals stemming from BMR backgrounds constituted a mere 1,6 % of the entire university staff, while constituting 14,2% of the population in the city of Amsterdam (Abell & Menara 1986). In comparison with “native” Dutch personnel, persons of Surinamese and Antillean/Aruban descent were often over-represented in technical and administrative positions, but under-represented on the academic level. Abel & Menara concluded that the under-representation of BMR individuals attaining high positions in academia was not solely attributable to low academic attainment, but also to the low influx of BMR students at university level.

The second study by Bosch, Hoving and Wekker (1999), sponsored by the AWT (Adviesraad voor Wetenschap en Technologie) specifically examined the situation of female academics and minority groups within Dutch universities. The author concluded that there was not only a low influx of BMR students, but also a low influx of BMR female PhDs into the higher levels of the academic echelon. (Bosch et al. 1999:25). According to the study by Bosch and colleagues, the core of the problem regarding BMR students is to be found with scientific research and education in the Netherlands.

Three years later the research report “*Kleurrijk Talent*” (Crul et al. 2002: 5) examined the situation of BMR P&O (Dutch abbreviation for personeel en organisatie - personnel and organisation) staff in five universities: Amsterdam (UvA), Utrecht, Twente, Tilburg and Rotterdam. Based on electronic surveys, literature and conversations with P&O staff at these universities, Crul and colleagues were able to conclude the following: the highest academic positions (Full, Associate and Assistant Professor) were primarily held by “native” Dutch individuals. The numbers of AIO (Dutch acronym for Assistant in Opleiding), OIO (Dutch acronym for Onderzoeker in Opleiding - PhD students) and Post-Docs with BMR backgrounds are just beginning to increase. “Native” Dutch academic personnel more often hold permanent positions than their BMR counterparts. “Native” Dutch academics mostly work part-time. The authors of *Kleurrijk Talent* do not indicate why many “native Dutch academics hold part-time positions.

In 2002 the Netherlands Organisation for Scientific Research (NWO) launched an investigation into the possible reasons for the under-representation of BMR academics employed by Dutch universities. The survey’s findings showed that almost none of the universities academic staff included the Netherlands main migrant communities i.e.

Turkish, Moroccan, Surinamese and Antillean. Although the current accessibility of BMR individuals to higher education in the Netherlands has somewhat improved, BMR students and academics still remain disproportionately under-represented in higher education during the first decade of the twenty-first century (Wekker 2006; ECHO report 2003; HOOP 2000 Higher education and research plan).

In examining the presence of BMR academics in Dutch universities for the Dutch NEWS report, Ellerbe-Dueck and Wekker discovered a total of nineteen (19) women with BMR backgrounds employed as either lecturers, PhDs, Associate, Assistant or Full Professors by the Dutch academy. They looked at the overall presence of BMR women in academia in comparison to their white “native” Dutch female colleagues in the Netherlands and found an alarming disparity. The Dutch female staff totalled 6,973. This means that BMR women (according to our sources) account for less than 1% (0.027246%) of the entire female Dutch academic staff. The representation of BMR in academia in The Netherlands is indeed sparse. The Professorship appointments granted to BMR have occurred due to the creation of special or exterior chairs for specific disciplines. Special chairs have been created in order to study specific issues or problems. It is often the case that these positions are part-time (one day per week) and have a somewhat lower status (luckily this appears to be changing) than structural chairs (Essed & Nimako 2006: 295).

To date, the study *Miskend Talent* (Disregarded/Unrecognised Talent) has been the sole study to closely examine the under-representation of BMR staff members at a Dutch university. Under the guidance of Prof. Frank Bovenkerk, two Anthropology students Droogh and van Liemt (2003) gathered and analysed empirical data regarding the situation of BMR academic staff and administrative personnel at Utrecht University. The researchers were able to partially identify the BMR university staff members via data, which was provided by the university. However, much of the data provided by Utrecht University for this study proved to be incomplete. Therefore, the researchers were obliged to compile a research method entailing three possibilities:

1. informants known via personal contact
2. computerized survey
3. combination of both methods 1 and 2

The results of the *Miskend Talent* pointed to an indisputable under-representation of BMR individuals holding high positions at Utrecht University. The results rendered the following: of the 339 Full Professors (*Hoogleraren*), only one (1) is of BMR origin (Ibid). Among the 400 Associate Professors (UHD) at Utrecht University, none are of BMR origin. Of the 1016 lecturers (*universitaire docenten*) only six (6) stemmed from BMR backgrounds. The numbers of academic assistants (AIO: *assistant in opleiding*) painted an even more dismal picture. Of the 708 AIOs, only three (3) were of BMR origin. Under the ranks of the remaining 554 academic personnel, two (2) persons had a BMR personal history. In total, twelve (12) individuals with a BMR background were employed by Utrecht University. In terms of percentages, from the entire Utrecht academic staff (3,017), a mere 0,4% are of BMR origin. The only areas where BMR individuals are more often found are within the areas of lower-level employment.

In **Italy**, as shown in table 27, the distribution in the hierarchy of Italian and foreign women in academia show the same percentage shares. The university system is therefore disadvantageous for women but not necessarily for foreigners.

Table 27: Academics and scientific staff by nationalities and gender

	Italians		Foreigners		Total		Total
	Men	Women	Men	Women	Men	Women	Men & Women
Lecturers	30.4	51.5	31.4	50.9	30.4	51.5	37.2
Associated professor	31.0	31.3	28.4	32.3	30.9	31.3	31.0
Full professor	38.7	17.2	40.2	16.8	38.7	17.2	31.7
Total	100.0	100.0	100.0	100	100	100	100

Source: Cineca, 2005 Centre of calculation in Italy (in Corigliano & Greco, 2007)

38.3% of foreign academic staff in Italian universities came mainly from EU countries. This proportion was higher for women (44%). The explanation may lie in the fact that women academics are usually more present in Language departments and in Italian universities continental languages are more widespread. There was a significant presence of academic staff born in Africa where there were a few Italian colonies (Table 28).

Table 28: Proportion of Foreign women academic staff by country of origin

Women	EU-15	New member states	Central and eastern EU	Africa	Asia	America	Oceania	Other EU countries	Total
		Lecturers	45.4	5.9	7.0	8.1	0.8	22.4	1.6
Associated professors	43.2	7.3	6.8	9.8	4.3	19.2	1.3	8.1	100.0
Full professors	41.5	10.6	9.8	11.4	2.4	18.7	0.0	5.7	100.0
Total	44.0	7.2	7.4	9.2	2.2	20.8	1.2	8.0	100.0

Source: Cineca, 2005 (in Corigliano & Greco, 2007)

At the University of Bari academic staff according to nationality and gender show only slight signs of internationalisation as it attracts few foreign academics (Table 29). Overall there were 93 academics and they represented 4.6% of the total number: among them the number of foreign women was higher than that of men: 58 against 35, but foreign women in Bari were confined almost exclusively to the role of language assistants. Foreign full professors were almost exclusively men, while a more even distribution existed among lecturers. Italian full professors men (36.2) were twice higher than the proportion of Italian full professors women (16.7). It can be argued therefore that the system at the University of Bari penalises also Italian women especially when they start climbing the career ladder.

Table 29: Distribution of Academic and scientific staff by gender and nationality according to the grade, University Bari

	Italians		Foreigners		Total		Total
	Men	Women	Men	Women	Men	Women	
Language assistants	0.1	0.6	34.3	69.0	1.0	5.7	2.7
Lecturers	32.7	56.7	17.1	17.2	32.2	53.7	40.0
Associated professors	28.5	25.1	17.1	10.3	28.2	24.0	26.7
Full professors	36.2	16.7	20.0	1.7	35.8	15.6	28.5
Others	2.5	1.0	11.4	1.7	2.8	1.0	2.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: University of Bari, 2006 (in Corigliano & Greco, 2007)

Table 30 shows that most foreigners at Bari University were women. In general their numbers were very low in absolute terms and therefore percentages were not really significant. However, women outnumbered men especially when they came from EU-15 countries as they taught foreign languages (mainly EU languages).

Table 30: Foreign academic and scientific staff by gender and areas of origin, Bari University

	Full professors		Associated professors		Lecturers		Language experts		Other spec. contracts		Total		Gross total
	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	
Italians	6.2	22.9	9.2	18.0	20.9	20.6	0.2	0.1	0.4	1.6	36.9	63.1	100.0
EU-15	1.9	1.9	7.4	5.6	7.4	7.4	42.6	20.4	1.9	3.7	61.1	38.9	100.0
Other EU	0.0	23.5	5.9	5.9	17.6	5.9	29.4	0.0	0.0	11.8	52.9	47.1	100.0
America	0.0	5.9	0.0	11.8	11.8	5.9	58.8	5.9	0.0	0.0	70.6	29.4	100.0
Africa	0.0	0.0	50.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	100.0	0.0	100.0
Others	0.0	33.3	0.0	0.0	33.3	0.0	33.3	0.0	0.0	0.0	66.7	33.3	100.0
Foreigners	1.1	7.5	6.5	6.5	10.8	6.5	43.0	12.9	1.1	4.3	62.4	37.6	100.0

Source: University of Bari, 2006 (in Corigliano & Greco, 2007)

In **Portugal** information available about women scientists referred to age and nationality. From a total of 385 women foreign scientists in R&D staff in Portugal, 92% work in Universities, while the remaining 8% are present in Polytechnic Institutes and Cooperatives. The data confirms the presence of foreign women scientists in the public sector. Among the sixteen universities and twelve Polytechnic Institutes most women scientists are found in the main universities: New University of Lisbon (15%), Technique University of Lisbon (13%), University of Aveiro (12%), University of Oporto (10%), University of Coimbra (9%) and University of Minho (8%).

A third of foreign women scientists (29.5%) originate from Portuguese-speaking countries such as Brazil, Angola and Mozambique but also from France (8.3%) and China (5.2%). These women are relatively young: 43% are in the 25-34 age group and 31% in the 35-44 age group. The majority come from European countries (51.7%) (Table 31), of which 26% come from southern European countries, and 22.3% originate from South America.

Table 31: Foreign Women Scientists in R&D activities in the Portuguese Higher Education sector by Region of origin (2003)

Continent nationality	Number	%
North Europe	52	13.5
South Europe	100	26.0
East Europe	43	11.2
North America	12	3.1
South America	86	22.3
Asia	30	7.8
North Africa	36	9.4
South Africa	22	5.7
Oceania	1	0.3
Other	3	0.8
Total	385	100.0

Source: Observatory of Science and Higher Education/ Ministry of Science, Technology and Higher Education, Survey to National Scientific and Technological Potential – 2003 (in Leandro & *al.*, 2007)

In 2003, among the 385 foreign women scientists in R&D working in the higher education sector 42.3% held a PhD, 28.3% a Masters degree and 29.4% were graduates with a first degree. At the University of Minho 30 foreign women scientists were employed in 2005: 63% were in the Arts and Humanities faculty, of which 56% in the Arts and Human sciences Institute.

In **Belgium**, the figures drawn from the Université Libre de Bruxelles data show the same trends already observed in UK and in Germany (Table 32). At ULB, there are three categories of personnel: administrative and technical, scientific and teachers who are distinguished according to their temporary or permanent contract. In 2005, the relative proportion of Europeans (3.6%) and non-Europeans (3.9%) of temporary administrative staff was almost twice as high for Belgians (2.3%) in the same category. When we compare the position of women by nationality, the trend was similar: European women (4.7%), non-Europeans (3.8%) and Belgians (2.6%).

For temporary scientific staff, the discrepancy between Belgian men and women (0.9%) was weak than that of European (6.3%) and non-European (28.2%) men and women. For permanent teacher staff, the discrepancy between men and women is higher for Belgians (15.3%) and non-Europeans (15.2%) than for Europeans (11.5%).

Table 32: Academic, research and administrative staff by sex and nationality for ULB, Belgium and the EU (FTE)

ULB 2005	Belgian			EU			Non EU			Total
	Men	Women	Total	Men	Women	Total	Men	Women	Total	
Temporary administrative	2.0	2.6	2.3	2.8	4.7	3.6	4.0	3.8	3.9	2.5
Temporary scientific	20.6	19.5	20.1	35.1	28.8	32.3	50.0	78.2	60.7	22.6
Temporary teachers	3.2	0.9	2.1	5.4	2.2	4.0	6.3	0.4	4.1	2.3
Permanent administrative	40.4	61.1	50.1	27.2	52.8	38.4	17.4	8.6	14.1	47.8
Permanent scientific	10.2	8.2	9.2	14.8	10.5	12.9	7.0	8.6	7.6	9.5
Permanent teachers	25.6	10.3	18.4	17.5	5.8	12.3	19.3	4.1	13.6	17.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: ULB, October 2006 (in Ouali 2007)

4.3.1. RECRUITMENT

Public sector universities and research institutions investigated in the seven countries have relatively transparent recruitment rules. Most researchers and faculties have to fill out prerequisite conditions (nationality, diploma, age, language) and are evaluated by their peers. Some countries (Italy, Bulgaria, Portugal) hold a public competition or deal more with the application in selection committees (Belgium, Netherlands, Germany, UK). Nevertheless, a public and open procedure of selection does not protect against bias or detraction from the legal rules.

A doctorate is necessary but not sufficient for promotion. It is generally granted through peer review by assessing the candidate according to several criteria: number of publications (and their fame), participation in renowned conferences, teaching charges, teaching qualities, team management ability, academic responsibilities, academic seniority, stays abroad, formal and informal contact networks, etc.

Several studies in Europe have shown that age and gender are also criteria of selection - although illegal - which discriminate against candidates for recruitment into academic careers. We can legitimately suppose that nationality (legally), skin colour and ethnic origin combined with gender could discriminate against BME candidate.

In the UK the approach to discrimination is different from other countries since all public service managers have the duty to promote equality (notably gender and race). Accordingly, policies and measures must be implemented and the new Commission for Equality and Human Rights has a monitoring role.

In terms of the profile of staff and faculty, a survey conducted in 1997 in Dutch universities (Choenni) showed that diversity is a wish of ethnic minorities students, which has not been fulfilled by any Dutch universities. According to Essed (1999) diversity is not only a question of justice but should be also a good business practice in higher education. Much evidence shows that *“a strong commitment from the leadership and management of an organisation is essential for diversity efforts, and that the identification of the market value of diversity increases the chance for diversity interventions to be successful.”* Essed strongly argues that hiring women and ethnic minorities is one of the most effective ways of changing the culture of an institution, particularly at middle management level and above. It is a way of creating positive ‘models’ for young students.

4.3.1.1. Legal rules

In the **Netherlands** vacancies at Dutch faculties are filled via a selection process conducted by a selection committee. Qualified candidates seeking a position (commonly announced in scholarly and important Dutch periodicals) as Professor are asked to submit their curricula vitae to a selection committee, which is responsible for selecting candidates.

After several interview sessions, the selection committee (consisting of Professors from the faculty, some staff members, one student and at least one Professor from another Dutch faculty) usually makes a list with one to three names. The first name on the list is in most cases the preferred candidate. The list makes its way to the board or faculty and is then submitted to the faculty's council (*Faculteitsraad*). In the case of a positive response by the various faculties and the board of the university, the candidate is then appointed as a Professor.

In **Belgium**, labour law limits access to public sector jobs to Belgian and EU citizens. This rule also applies to the sectors of research and higher education. Nevertheless some exceptions can be made in cases of shortages, (leading to?) very short-term contracts (3-6 month) and open-ended contracts. In 2006, work permit exemptions were given to specific categories such as researchers on short assignments in Belgium. The promotion system in the French Community is based on peer review. Academics from the same discipline examine the promotion applications and CV. De Henau & Meulders survey (2003) of Full Professors who evaluate their peers showed the impact of different criteria on the academic career such as gender.

In **Italy**, access to university is possible only through public competitions. These are organised at national level and include written and oral examinations. To this day, access to public jobs for foreigners in Italy is subject to strict limitations. In fact public administration posts are opened to Italian and EU citizens (the latter ceased to be treated as foreigners in Italy after the adoption of Law 165 in 2001). The law established that this recognition is exceptional and cannot be extended to other migrants. This is because jobs in public administration are supposed to preserve general collective interests that hinge upon the principle of citizenship. This limitation therefore applies to access to universities and careers in public research. Only language assistants can be hired regardless of their citizenship but only with open-ended contracts. By contrast, the law allows employers in the private sector to hire specific categories of workers (i.e. nurses) with fixed term contracts. The same applies in the case of refugees.

In **Bulgaria**, recruitment is regulated by the law for scientific titles and degrees, voted in 1972, applied in 1973, last amended in 2000. It defines three levels of scientific degrees with different nominations for universities and research institutes. The legal rules apply to the all R&D and HE institutions. Scientific staffs are selected on the base of competitive principle and the competitions are open to everyone with the required skills and titles. Selection is declared to be on merit. The legal rules are not gender sensitive.

In **Germany**, public employers, universities and the research centres have been following formal equality rules concerning gender for over a decade, as is required by respective state laws. Equal opportunity measures for the disabled date back even further. Gender equality is institutionalised in all universities through an equal opportunities officer or commissioner (*Gleichstellungsbeauftragte*). It is obligatory to

advertise posts in a gender neutral way and to include a paragraph encouraging women to apply. In reality, it is often the case that for junior and intermediate positions like those given to PhD students and junior postdoctoral researchers such formal recruitment procedures are not taken very seriously as the professors concerned often formulate the job requirements very specifically for a candidate whom they have already picked out among their students or by recommendation of colleagues. Where this happens, the equality procedures can easily be negated.

Some university administrations have already advised their staff to avoid all formulations that could be regarded as a disadvantage to non-German applicants in job advertisements – such as language requirements which are not absolutely necessary because the German language is in fact one of the greatest hindrance for migrants in Germany. This makes the situation here quite different from countries like France or the UK, where large groups of migrants are native speakers of the local language, though language barriers are present.

Recruitment in German universities and research organisations, while formally correct, is not a transparent process and the mechanisms for investigations or complaints of unfair treatment are unwieldy. The various steps in recruitment – job description, advertisement, selection procedures, interviews and appointment - are not necessarily monitored or regulated. As a consequence, there is significant scope for informal decisions in recruitment and appointment and the sense of public accountability in this area is relatively weak.

The university system is clearly patriarchal, even in its everyday discourse where PhD supervisors are officially referred to as “PhD fathers”. Professors and chairs of institutes still have it in their individual discretion to give small jobs and temporary research posts, and hold the power to make or break careers.

Then there are many jobs, particularly to do with the *Beamte* status (civil servant) such as teachers and professors, where there is an explicit or implicit age limit. Age discrimination clearly affects women more harshly than men in that it does not provide for career breaks, and in the case of migrant or minority women, does not take account of time lost in mobility.

In **the UK**, the Race Relations (Amendment) Act 2000 places a general statutory duty on public authorities to consider in all that they do the need to eliminate unlawful racial discrimination and to promote equality of opportunity. The Act also places a duty to promote good race relations between people of different racial groups. Four main types of unlawful discrimination are defined under British law: direct discrimination; indirect discrimination; victimisation; harassment.

The race equality duty requires educational institutions to:

- Prepare a written statement of their policy for promoting race equality
- Maintain a copy of the statement
- Assess the impact of their policies, including their race equality policy, on students and staff of different racial groups including, in particular, the impact on attainment levels of such pupils
- Monitor, by reference to those racial groups, the admission and progress of students and the recruitment and career progress of staff

- Have in place arrangements for fulfilling, as soon as is reasonably practicable, their duties.
- Include in their written statement an indication of their arrangements for publishing that statement and the results of their assessment and monitoring
- Take such steps as are reasonably practicable to publish annually the results of their monitoring under this article (see http://www.cre.gov.uk/duty/pa_specific_fehe.html)

The Commission for Racial Equality produced a guide on the duty to promote race equality for Further and Higher Education institutions (CRE, 2002). In addition, in 2002 the Equality Challenge Unit (www.ecu.aqc.uk), was set up by and for the UK Higher Education sector to update and advise on new and emerging legislation and its implications (Leadership Foundation for Higher Education, 2006; Hill and Kusemamuriwo, 2005). Only after nearly forty years after the first Race Relations Act are Higher Education institutions beginning to develop race equality strategies, under the pressure of legal statutory duties (Law et.al, 2005). The Race Relations Amendment Act is seen by some as a catalyst for change with appeals for radical thinking on how policy is conceived and put into practice (Hill and Kusemamuriwo, 2005: 123).

The Higher Education Sector is increasingly adopting the discourse of diversity management, which includes an emphasis on the business case for diversity. This includes:

- The scope for increasing competitiveness through the recruitment and retention of staff who understand clients needs and understands their differences
- The potential for improved performance through the development of a working environment where all employees are encouraged to fulfil their potential.
- The benefits of greater market share through the attraction of a diverse range of clients and forging of international links
- Improvements in people management, for example through monitoring and impact assessment
- Improvements to organisational ethics and values (Leadership Foundation for Higher Education, 2006: 13)

The main trade union for higher education staff in the UK is the University and College Union (UCU). The UCU campaigns on equalities issues and also undertakes research to contribute to the evidence base on the position of disadvantaged groups. A current campaign is 'All for Race Equality' one of the objectives of which is to provide members with the tools to set up Black Member Networks.

4.3.1.2. Informal rules

In **Belgium** research concerning women scientists showed the absence of gender neutrality in recruitment and promotion in academia rather than a will to discriminate on the basis of sex. One can therefore suppose that if gender impacts on women's careers, gender and ethnicity could also influence BME women scientists' careers. Informal criteria have been identified in the assessment procedure for promotion in academic careers, and Professors' testimonies confirm the fact by stating that "*The political affiliation – at least the affinities – and philosophical opinion play a role to a certain extent in the academic promotion of our universities. On the other hand what is harder*

for an applicant is to hide his/her sex and his/her national origin, which generally shows in his/her surname.” (de Henau and Meulders, 2003, 141).

In the **UK** efforts to tackle social inequality are inconsistent, and rarely monitored, across the Higher Education sector (Deem et al., 2006; cited in Jones, 2006: 150). There are concerns that the take-up of the business case for diversity by the Higher Education sector is detracting from recognition of structural inequalities (Jones, 2006) and informal practices. Recruitment is a particular area of concern. In medicine for example, one study of medical school applicants has shown that having a European surname predicted acceptance better than ethnic origin itself (McManus et al., 1995).

Carter and colleagues, in their study of ethnicity and employment in Higher Education, ran focus groups to explore the experiences of ethnic minority staff. The discussions elicited a range of common experiences of institutional racism:

- *‘The perception that blacks have to be better qualified than whites in order to get the job but likely to be told by colleagues, “You only got this job because you are black”*
- *Blacks are perceived as troublemakers if they complain of racism and told that this was a personal problem that they had to cope with personally and without making a fuss;*
- *Black people are likely to be seen, regardless of their specialisms or personal interests, as especially suitable for ‘Equality roles’, and then expected to do these without proper support, status or remuneration;*
- *Some discussants thought that black people particularly suffered at interviews: on the one hand they were not informed of ‘the rules of the game’ and on the other hand, whatever their behaviour, it could be used against them (eg, afterwards it would be said that they smiled too much or not enough);*
- *Vice-Chancellors were said not to understand the issues and not to care about them’ (Carter et.al,1999:56)*

Career development opportunities, for example contributing to edited books, depends to a large extent on reputation, networking and patronage (Heward et.al, 1997; Puwar, 2004). Puwar (2004:52) writes of academic systems characterised by racialised patronage, networking and social cloning. Patronage, she argues, is implicit in how academic careers are made:

‘The avenues to visibility and recognition within academia, like other professions, are underlined by networks, mentoring and small recommendations. Academia is not sustained by a neutral mechanical machinery of measurement. Rather networks, chains and cliques of human beings sustain the machinations. And while there are competing elements seeking to re-define the academic field, these struggles are conducted via networks and connections. Opportunities are made or broken within this context’ (Puwar, 2005: 56).

In **Italy**, women perform better than men in university. These positive performances are likely due to the fact that at the recruitment stage, evaluation criteria are universal and transparent: therefore women happen to suffer less discrimination. Once they enter university and research careers, they become more invisible. It is not simply that these environments are more competitive; evaluation criteria appear to be less transparent here and much more tailored to male characteristics (tokenism). To escape marginalisation, women turn towards feminine fields of research, leaving harder and

technical fields to men's monopoly. An informal mechanism of recruitment, which it is important to highlight especially in the field of research, concerns the composition of evaluation committees. Here cooptation is the key mechanism for access to the profession but especially to make progress on the career ladder. Promotion is often subordinated to the internalisation of dominant values. The "old boys' network" therefore has a significant role in determining who gets higher positions and status. Women's presence in these committees is limited; this affects their evaluation and the chance of new entries and progression.

In **Bulgaria** competitions are public and open; nevertheless selection is often biased. Detraction from the legal rules takes two forms: the jury selects the candidate who was the favourite before opening selection procedure; the position is defined according to the scientific profile of a previously chosen candidate. There are no pronounced gender biased choices. Nevertheless young men are sometimes favoured against young mothers or mothers-to-be.

In the **Netherlands Dutch born** candidates educated at other faculties in the Netherlands and non-Dutch born candidates from foreign universities have an equal chance of being selected as a candidate, theoretically speaking. However, it is common practice to nominate an internal candidate rather than candidates from elsewhere. Looking at the situation of BMR women in the realm of Dutch academy, this practice would most likely not be very conducive to the promotion of BMR candidates to these positions, because BMR women are greatly under-represented in faculties at Dutch universities.

4.3.2. PROMOTION

In the private sector a longitudinal research analysis in the USA conducted by Shenhav, the researcher compared the entrance of Blacks and women into managerial position in scientific and engineering occupations. Comparing black women, white women and black men, he noticed that black women in Science and Engineering have been through an arduous selection process and observed that the gender advantage for women in the private sector occurred for white rather than black women. Therefore he suggested implementing affirmative action for black women. (1992: 898)

In **Belgium**, in the French Community, the chances for women scientists of being promoted full professor have been calculated for the whole population; again ethnicity was not included in the calculation (de Henau & Meulders 2003). In medicine, men are four times (4.23) more likely to be promoted to the top of the academic hierarchy than women; in sciences, it is twice more likely (2.1) and 1.6 times in social sciences. Even if the conditions for promotion change according to sector (it is more difficult in health sector than elsewhere), this does not explain the gender discrepancies.

In the **UK**, there is longstanding evidence of the persistent exclusion of women from senior positions in the academic profession since the early twentieth century (Heward et.al, 1997; Blackstone & Fulton, 1975). Glover and Fielding's analysis of both cross-sectional labour force data and longitudinal census-based data suggests that women scientists are often over-qualified and less likely to use their scientific qualifications in professional scientific occupation than men (Glover, 2001; Glover and Fielding, 1999: 71). Women scientists are more likely to be employed on a temporary basis and twice as likely as men to leave scientific employment in the first two years of employment

(Glover, 2001: 72). Glover posits that retention and advancement are the key issues requiring change.

Heward and colleagues (1997) provide one of the few qualitative investigations of gender, race and career success in the academic profession in the UK. Their research, taking a life history approach, compared the careers of successful white men, women and members of minority ethnic groups in two subject areas: the law and biology. The research design focused on professors, exploring their routes to power and the range of factors that they perceived to be critical to their success. Their findings suggest that it is in the early stages of careers that the foundations of success and social mobility are constructed. At this early critical juncture it is important to acquire self-confidence, which can become a positive dynamic in career trajectories. In addition to positive self-evaluation and informal networks, the positive judgements of capabilities by senior members of the profession and related patronage were found to be important enablers of the ability to achieve senior positions. Heward and colleagues also note that the relationship between positive self-evaluations of academic ability and the judgements of those in more senior positions who are 'gatekeepers' to the profession is problematic. They argue that the significance of racial and gender stereotypes in these processes needs further investigation. This is a valid argument but there it is also important to look at the interaction between racial and gender stereotypes.

5. Policies and specific programmes

Competition in building excellent research conditions and to increase the number of academic and research professionals is a central issue and challenge to European science policy. This can only be achieved if equal opportunities in scientific careers for highly trained women scientists are ensured, including foreign and Black and ethnic minority women scientists.

Since the adoption of the Women and Science Action¹⁸ plan by the European Commission in February 1999, policies to promote women in science, to enrich European research by integrating the gender dimension, and to close the existing gender gap have become a high priority and integral part of European research policies. In the light of this policy development and on the basis of the improved knowledge-base acquired¹⁹, it is possible to draw on the following conclusion. Despite major progress towards gender equality in science, there is still a need, as pointed out in the Science and Society Action Plan, both for “*specific research to improve the understanding of gender and science issues in Europe*” and for “*the empowerment of women scientists*”.

Actually, EU initiatives through both women and science and anti-discrimination directives and action plans have contributed to raising awareness of under-representation of women and, to a lesser extent, black and ethnic minority scientists in research and academic careers. This awareness is mirrored in some very recent measures and programmes implemented in universities and research institutions to improve women and ethnic minority student access to university as well as to enhance their research and academic position.

The European Commission produced, in March 2005, the *European Charter for Researchers* and the *Code of Conduct for the Recruitment of Researchers*, which established the general principles and requirements applicable to researchers, employers and funders: “*The aim of the Charter is to ensure that the nature of the relationship between researchers and employers or funders is conducive to successful performance in generating, transferring, sharing and disseminating knowledge and technological development, and to the career development of researchers.*” (European Commission 2005).

Among the principles and requirements applicable to employers and funders, the European Commission put forward **the non-discrimination** principle mentioned as following: “*Employers and/or Funders of researchers will not discriminate against researchers in any way on the basis of gender, age, ethnic, national or social origin, religion or belief, sexual orientation, language, disability, political opinion, social or economic condition*”. In addition, the Charter draws also to their attention the **Gender Balance**, which should be achieved on the basis of an equal opportunity policy at recruitment and the subsequent career stages. The Gender Balance has to be complete also in selection and evaluation committees.

¹⁸ European Commission, Communication of “Women and Science: mobilising women to enrich European research” (February 1999).

¹⁹ Among others, through the collection and analysis of sex-disaggregated statistics and the building of gender-sensitive indicators on the European research workforce.

In code of conduct the authors highlight on transparency in information before the selection, in recruitment procedure, and in selection committees, which should have a gender balance, and including members notably from different other countries.

The first recommendation we would suggest is the adoption and the implementation by the Ministry of higher education and by each university and institution of research of the *European Charter for Researchers* and the *Code of Conduct for the Recruitment of Researchers* in each country. In addition, the Charter and the Code of Conduct must be accompanied with a raising awareness campaign and a monitoring and an evaluation process.

5.1. Access to higher education

In Netherlands *Mozaiek* programme from the NWO (Netherlands Organization for Scientific Research) target specifically BMR students, who demonstrate academic potential. However, the programme is geared towards both female and male students and does not give priority only to potential doctoral female students.

The *Mozaiek* (Mosaic) Project has made an effort to promote diversity within the realm of academia in the Netherlands. In 2002 the organisation commissioned an investigation concerning the possible causes of the under-representation of BMR researchers employed by Dutch universities. The survey indicated that almost none of the universities' academic staff came from the four largest minority groups in the Netherlands. These findings are in stark opposition to the increase in BMR student enrolment at Dutch universities and their completion of tertiary degrees. The main question the NWO investigation sought to investigate was why BMR university students were not advancing to doctoral research. The findings revealed a multi-layered problem: Dutch academic institutions have proved deficient in identifying potential among talented BMR students and are unable to persuade BMR students to pursue Doctorate degrees. In August 2003, the NWO announced its intention to implement a programme with measures specifically designed to attract BMR graduate students into research. Launched in 2004 by the NWO, the *Mozaiek* project almost two hundred applicants during its first year. Of the forty applicants that made it through the initial evaluation process that year, twenty-one AIO (*Assistent in Opleiding* doctoral research) positions were awarded. Along with the two million Euros subsidy provided by the NWO, the Ministry of Education, Culture and Science (OCW) matched the funds provided by the NWO with an additional two million Euros. Due to the success of the programme, a decision was made to conduct a selection process again in 2005. Information provided by the NWO website indicates that during the first selection round in January 2005, the *Mozaiek* programme received 142 applicants. Many of the hopeful future researchers were of "Western" and "non-Western" descent: Turkish (20%), Moroccan (13%), Surinamese (11%), Iraqi/Iranian (10%), Indonesian (6%) and Chinese (6%). Female applicants were in the majority, constituting 61% of the entire potential grant recipients (*Kleurrijk Talent in de Wetenschap*). The disciplinary areas most popular among the applicants were social and behavioural sciences (44%), bio-medical (32%), technical (10%) and the Humanities (14%).

Despite sharpened stipulations, which were implemented in 2005, the NWO reported receiving 121 applicants for the *Mozaiek* programme selection rounds in 2006. While interested applicants of Turkish (15%) and Moroccan (14%) origin remained in the majority, data compiled by NWO points to an increase in applicants of Iraqi and Iranian

descent from 10% in 2005 to 13% in 2006. Female applicants were again in majority with a 1% increase from 2005 (61%) to 62% in 2006. Since the selection process is still underway (at the time of writing), no detailed information is yet available regarding the ethnic composition of the applicant pool. However, according to the NWO website, the Ministry of Education, Culture and Science (OCW) and the NWO have both allotted two million Euros in order to fund an additional twenty-one doctoral research positions for the 2007 academic year.

The programme offers multiple day workshops designed to assist forty selected BMR students draft detailed research proposals. A letter of recommendation from a Professor (prospective PhD supervisor) and mentor²⁰ must accompany each applicant's file. Both Professor and mentor must be affiliated with one of the thirteen Dutch universities involved in research. After undergoing competitive assessment procedures, (proposals are assessed by external advisors) twenty-one authors of the best applications will receive a research position at the university of their choice. The guidelines of the research grants stipulate that the applicants must have completed her/his education in the Netherlands, or obtained a Masters Degree from a Dutch university. In addition, the recipient must have resided legally in the Netherlands for a minimum of five years and minimally one parent must have been born in one of the countries specified by the *Wet Samen (Wet Stimulerend Arbeidsdeelname Minderheden*²¹).

In **Bulgaria** the government adopted the Framework Program for Equal Integration of Roma to integrate it into Bulgarian Society. The program envisages the following measures in the sphere of education: introduction of "teachers-assistants" to help Roma children adapt to a school environment; training of qualified teachers for teaching of the Roma language; organisation of courses to prepare Roma for university entrance exams (Nounev 2006). The first program was launched in the South-eastern University in Blagoevgrad. The second characteristic concerns student profiles with regard to ethnic background and level of education. At the outset of the programme, special efforts were made to attract students from the minorities and most of all, from the Turkish and Roma minorities. The apparent positive results of these efforts are that graduates of the programme are among the most prominent representatives of NGOs defending the rights of minorities. Other graduates work as specialists on minority issues in various ministries and some have been invited to work abroad. A very interesting characteristic of the first class of graduates has been the atypical profile of the students. Most of them were already established specialists who aspired to enrich their intercultural skills – they included an expert on Bulgarian communities abroad, a UNHCR representative, representatives of the burgeoning NGO sector, a translator specializing in ethnic and minority issues and an established poet.

In addition, a project for **intercultural education** has been organised by the Minerva Foundation with European Union financing. Its objective was twofold: to train secondary school teachers in the substance and methods of intercultural education and to introduce these topic and methods in the respective school curricula. The project had four stages; the most relevant here are the first two. The first stage of the project included four workshops where university professors and school teachers had intensive discussion about intercultural education. The second was a 'spring school', which took place in a city with a school for Roma students.

²⁰ The prospective PhD Supervisor may also be the applicant's mentor.

²¹ The Wet Samen (repealed in 2003) was introduced in the Netherlands in 1998 as anti-discrimination regulations to eliminate discrimination based on "race" or ethnic origin in the Dutch employment market.

The first MA programme clearly devoted to ethnic issues was entitled Intercultural Dialogue. It was introduced at the Department of Philosophy of Sofia University in 1995. The following special features should be underlined. The teaching team is multidisciplinary – philosophers, sociologists, political scientists, historians and anthropologists. The team of professors is also cross institutional.

A similar “Intercultural education” MA program was set up at the Faculty of pedagogy at Shoumen Pedagogical Institute. Its role can be better understood by the fact that one quarter of the students are from minorities, mainly Turkish. A faculty of Turkish language and literature was also created (Nounev 2006). Another Faculty of Turkish language and literature was opened in Kurdjali, the other city with a concentration of Turkish population, which hosts the Pedagogical faculty of Plovdiv University. The Pedagogical College for the Pre-school and Primary School Pedagogy in Pazardzhik introduced courses on culture, history and folklore of ethnic groups (Nounev 2006: 256).

Every major university offers courses on the subject – Sofia University, the New Bulgarian University, the University of Plovdiv and the University of Blagoevgrad. The University of Shumen, where many students from minorities (mainly from the Turkish community) are educated, calls itself a ‘University of Tolerance’. There are a growing number of bachelor’s, master’s and doctoral theses on ethnic issues. This teaching has attracted a young generation of scholars, educated after the democratic transition and often holding degrees and diplomas from universities abroad.

In **Belgium**, in the Dutch-speaking Community, an official report on education showed that a low number of young second generation migrants access and succeed in non-tertiary higher education. Hardly 1% of enrolments for the year 2000-2001 were students of Turkish and Moroccan background, of which nearly two thirds were women. The success rate is approximately 50% lower than for students of Belgian origin. The objective of the Flemish ministry of Education was particularly to encourage young Turkish and Moroccan people to become youth workers, social workers or secondary school teachers. It also aimed to increase the number of ethnic minorities students completing successfully higher school (hautes écoles) courses. Diversity plans implemented in Dutch-speaking universities (VUB and KUL) are also geared to attracting more ethnic minority students and to improve achievement in university studies.

5.2. Recruitment and promotion

In the **UK** in recent years, a range of measures has been introduced to support the encouragement of women scientists. One now well established initiative is The Women in Science and Technology campaign launched in 1984 by the then Engineering Council and the Equal Opportunities Commission. The campaign seeks to encourage more girls and women to consider careers in SET. A second initiative has been the setting up of a coalition of about 50 UK organisations, which arose from a conference held by the Department of Trade and Industry in February 1998.

The UK Resource Centre for Women in Science, Engineering and Technology (UKRC) was set up in 2004 to deliver UK Government’s Strategy for Women in Science, Engineering and Technology (SET) and contracted to work to 2008. Its objective is to increase and improve the participation of women in SET, by supporting new entrants to

SET carriers, women who are returning after a break and those progressing in a SET career. It also maintains and disseminates statistics on women in SET careers.

The Portia website acts as a gateway to all UK organisations with an interest in increasing female participation in. There are also independent organisations and initiatives that seek to support women in science careers and work across subjects. One example is the Athena Project, which was established in 1999. Its aims are the advancement and promotion of the careers of women in SET in higher education and research to achieve a significant increase in the number of women recruited to top posts. In achieving its aims Athena has worked in partnership with universities, research councils and SET professional and learned societies.

The Daphne Jackson Memorial Trust offers advice and support to women returning to work after a career break by helping with research proposal writing, childcare and job hunting. The trust funds a two-year fellowship scheme for men and women returning to work after a career break and involves a supervised research project and retraining programme. To date, the trust has awarded 139 fellowships, 136 of which were taken up by women. The Trust, in collaboration with UKRC organised a series of seminars in 2005/06 to debate the issues for women who return to a career in SET. The seminars attracted speakers from academic institutions, companies and the industry and were well attended by returnees whose views were integrated in the recommendations drawn at the end of the series.

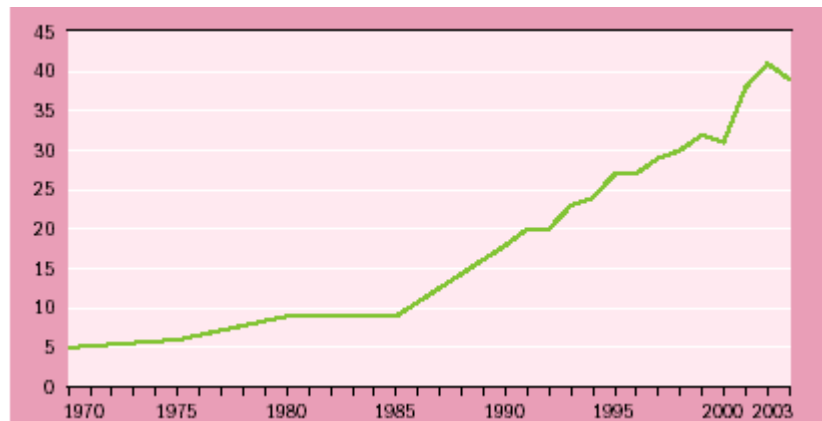
Over the past two years, the issue of the position of scientists from ethnic minority backgrounds has risen on the policy and research agendas. In 2005, DTI (Department of Trade and Industry) announced 2.8 million to boost the UKRC, a part of which is to be used on a national grant scheme for minority women in SET. A conference on Gender and Ethnic Minority Issues in Science and Technology (GEM-SET) was held in November 2006. The conference was held at the University of Newcastle and brought together representatives from academia and industry. This conference aimed at bringing together Science Society researchers, project members, other academics, practitioners, policy makers and actors discuss, understanding and identifying the benefits, barriers and solutions related to greater participation ethnic minorities in Science, Technology, both public and private sectors, as well as discussing and emerging themes. Networks of ethnic minority scientists and ethnic minority women scientists are beginning to emerge as explored further in chapter 7 of this report.

In 1999 the **Netherlands** launched, the ASPASIA programme (named after the ancient foreigner female philosopher living in Greece) targets, encourages and enables female academics to become Professors, but the programme does not entail a special section exclusively for female academics stemming from BMR backgrounds. It aims at creating and implementing the means to solve the “critical” situation of female academics in the Netherlands. The Ministry of Education, the Association of Universities in the Netherlands (VSNU) and the Netherlands Organization for Scientific Research (NWO) joined together to take a pro-active stance in order to modify the pyramidal career structure of the male-dominated upper echelons of academia. The program’s main objective entails assisting female academics to advance up the ladder of the academy by providing research grants for female scholars and researchers enabling them to advance from the position of senior lecturer, Assistant Professor (UD) to associate professor (UHD), and from Associate Professor to the rank of Full Professor.

According to Ellerbe-Dueck and Wekker (2007) the ASPASIA programme was successful. Since 1999, the number of women academics promoted to the position of

Senior Lecturer or Professor has doubled in the Netherlands. Moreover, the statistics indicate not only an increase in women academics (scientists), but also within the disciplines where female academics are most concentrated. Although the programme has made strides in lessening the gender disparity, budgetary constraints have somewhat limited the program's ability to assist all qualified applicants. Moreover, several female beneficiaries of and participants in the program mentioned that they often encountered anger and disapproval from their male colleagues, who felt that this form of "affirmative action" was unfair and even unlawful (Rohn 2003).

Figure 5: Percentages of women in academia in the Netherlands 1970-2003



Source: CBS education statistics in Ellerbe-Dueck & Wekker, 2007

In **Italy**, in universities and research institutions, penalisation or even discrimination appears to be primarily gender based. In other words, (the few) foreign women working in Italy encounter the same obstacles and problems that Italian women face every day. In the European panorama, together with other Southern European countries, Italy faces challenges that are different from the ones that are typical in the countries of old migration. It follows that the political agenda is deeply influenced by this situation. Political responses to migration problems almost exclusively concern the acknowledgement of basic rights in the destination society. Therefore, discrimination against foreigners in research careers does not seem topical as a theme of research in Italy.

On the contrary, the debate in Italy revolves around Italian researchers who leave the country to go to work in better Universities and research centres abroad, namely to the USA and to the UK. The number of qualified personnel leaving Italy is growing every year and it is higher than the number of foreigners entering the country. This implies that the country is losing a qualified workforce without acquiring new highly skilled personnel, with a significant loss for the national innovation system.

In **Germany**, there are no concrete policies relating to migrant and minority groups in employment, although there are some moves to develop such policies and procedures following the introduction of the General Act on Equal Treatment in August 2006. The one area in which Germany has, to some extent, well developed policies and measures is with regard to gender equality. Although the measures for gender equality are not flawless and have not necessarily achieved the desired results, there may be sense in linking gender equality with equality for migrant and minority groups. The most persuasive argument for doing this would be to use the structures that already exist in the service of all under-represented groups – women and minority groups. Secondly, the

effort to overcome racial and ethnic discrimination is likely to give a fresh impetus and added strength to initiatives for women's equality. Finally, and most compellingly, combining various forms of discrimination makes for ways of better understanding the relation between various factors of discrimination rather than seeing gender or race or ethnicity in isolation from one another. This is clearly required as in the case of scientific women with migrant or minority backgrounds.

5.3. Award

In the Netherlands there is a specific prize, the Mozaiek Prize (Mosaic Prize), which was conceived to stimulate and reward excellence in scientific research among researchers with BMR backgrounds. According to the NWO (Dutch organisation for scientific research) website for the Mozaiek Programme, both female and male promising researchers in science and technology with BMR backgrounds have been awarded grants. However, as indicated by the website, recipients of the Mozaiek Prize have only been females. Until now, five young BMR female researchers were awarded the Mozaiek Prize between 2004 and 2005 in the following disciplines at Erasmus University in Rotterdam: Tha-In, Thanyalak (born in Thailand)- Transplantation medicine, El Hachoui, Hanane (Moroccan descent born in Rotterdam)- Neurology, Alic, Lejla (born in Bosnia) Medical Informatics and Radiology, Silva, Lindsay- (Cape Verdian descent, born in Rotterdam) Public Health, Ta, Van (Vietnamese descent, born in Spijkenisse) Immunology.

The Echo Award is a yearly national incentive award given to talented BMR students in higher education. The ECHO award constitutes a part of the measures undertaken by the ECHO foundation to promote educational advancement and recruitment among talented BMR students. Two recipients are selected from the HBO (higher secondary education) and WO (university level) streams within the Dutch education system. The ECHO award consists of a summer course at UCLA University of California at Los Angeles in the United States.

5.4. Antidiscrimination HE policy

In the UK, higher education institutions began to adopt equal opportunity (EO) policies in the late 1980s. In 1991, Guidelines on Equal Opportunities in Employment in Universities were issued. The guidelines included a suggestion that universities take positive action to increase the representation of members of ethnic minority groups among staff (Heward et al, 1997; CVCP, 1991). By 1996 nearly all universities had EO policies, roughly 80 per cent had recruitment and selection procedures and policies for responding to harassment and a named individual at a senior level with responsibility for equal opportunities (Carter et al, 1999 citing CUCO 1997). In the late 1990s a Commission on University Career Opportunity expressed concern about the lack of active pursuit of these policies. The Commission called for greater action to be taken to ensure that policies were accompanied by practical change in terms of their implementation, monitoring and evaluation (Carter et al, 1999 citing CUCO 1997).

The HE Race Equality policy survey carried out by Carter and colleagues shortly after the Commission's call indicated that while all Higher Education Institutions had equal opportunity policies, one third did not have a specific race equality policy and 25 per cent of ethnic minorities said that they had personally experienced racism in job

applications. Moreover, those ethnic minorities with nine or more years service were half as likely to be professors as their white peers (Carter et al, 1999). Minority and white non-British staff were concentrated in research posts and on fixed term contracts of employment (Carter et al, 1999: 15) and a significantly higher proportion of women than men were concentrated on fixed term contracts (Carter et al, 1999: 24). Black and female staffs are concentrated in lower status universities and are more likely to be on lower pay and hold short-term contracts. Black and minority ethnic staff makes up 2.5% of those working in HE and only 1.6% of these are female. 92% of them occupy low-grade less senior posts (Carter et al, 1999).

Amidst evidence that higher education equality strategies have been under-resourced (Deem and Morley, 2006; Morley, 1999), the University and College Union (UCU) that represents staff working in higher education has highlighted the persistence of disadvantage for ethnic minorities in this sector today. In 2000 the Race Relations Amendment Act was introduced in the UK, placing a positive duty on public sector organisations to promote race equality, including race equality impact assessments. The UCU notes that universities are still grappling with the issue of race equality impact assessments. While the assessments should be undertaken before a policy or procedural change, they tend to be completed after the change has taken place. Other indicators of persistent disadvantage compiled by UCU indicate that black staff are usually concentrated in the lower levels of the staffing structure and appear to lack access to traditional progression routes. There is only one black university pro-vice chancellor (see <http://www.ucu.org.uk>). Black women remain invisible at higher and senior levels of the academy. There are only nine black women female professors in whole of the UK, five of whom are concentrated in nursing (Mirza, 2006; Bunting, 2004)

Under successive Labour governments, and since Tony Blair came to power in 1997, there has been a shift in ideas in public policy related to equality away from redistribution as a way of tackling structural inequalities towards greater recognition of different social and cultural groups. However, this shift, couched in the language of ‘diversity’ does not appear to have been accompanied by an underlying notion of social justice or strategies for dealing with economic disadvantage that is part of the lived experiences of these groups (for a discussion see Deem and Morley, 2006: 187). It remains to be seen whether the recent forming of a Commission on Equality and Human Rights, merging the three commissions dealing with race, gender and disability, will help change this picture and lead to a greater focus on multiple discrimination.

In **Belgium**, since 2004 diversity plans have been set up for various public sector institutions, such as the civil service and state television. In Flanders, the Flemish Community’s ministry of Higher Education encourages and funds diversity plans in universities in order to sensitise the education community to diversity, including gender, ethnicity and disability. These plans have been implemented in different ways in two important Dutch-speaking universities: Vrije Universiteit Brussel and Katholieke Universiteit Leuven.

Since 2004, the Dutch-speaking Vrije Universiteit Brussel-VUB runs a diversity plan for women, ethnic minorities and people with disabilities. In 2004, the VUB counted 1,198 women and 1,469 men in its staff. Among them, there were 262 people with foreign backgrounds and 10 people with disabilities. In four years, the number of female university staff increased by 8%.

The Katholieke Universiteit Leuven expects to implement a diversity plan concerning the “conventional” categories of the policies of diversity: women, ethnic minorities,

people with disabilities and people at risk of being victims of discrimination and unequal treatment because of their religion, their trade-union membership or political conviction, or sexual preference.

The Université Libre de Bruxelles-ULB has no diversity plan on the agenda akin to those implemented in the Dutch universities. Yet, a committee named “HoFe” (abbreviation of men and women in French) was created in 2003 immediately after the publication of two studies highlighting the “Glass ceiling” phenomena and discrimination against women academics in their careers. In 2007, the group suggested the integration of gender issues into the strategic plan of the university, the publication of student and staff statistics by gender, the creation of a standing structure and the appointment of a Rector advisor and President advisor on equal opportunity issues between women and men.

In the **Netherlands**, the ASPASIA programme targets, encourages and enables female academics to become Professors, but the programme does not entail a special section exclusively for female academics stemming from **BMR** backgrounds.

In **Italy**, the first Minister for equal opportunities was appointed in 1996, with responsibilities for mainstreaming functions. In March 1997, a directive was passed which aimed at empowering women, at raising awareness on gender diversity and, finally, at suggesting policies for the promotion and development of occupations.

In 2000 the Italian Women and Science steering committee was officially established at the Ministry of University and Scientific Research as a working group to advise and make proposals on all issues pertaining to women and science. During the same year, the first research report on women’s careers in public research centres was presented. For the first time, on the basis of official statistical data, there was evidence of women’s segregation in these activities (Palomba, 2000).

Contrary to other countries (France for instance) up until the early 1990s, Italy lacked any national framework on gender policies in research. It was only in the last decade that a national plan focusing on equal opportunities was launched. A number of laws (law 29/1993, law 196/2000, law 165/2001) were consequently passed.

The plan obliged the creation of equal opportunities committees (CPO) in all Universities, public institutions and research centres. These have to approve a three-year programme to enhance equal opportunities. CPOs’ members are both men and women and they work toward the following goals: to propose mechanisms to favour equality between men and women, women’s empowerment, and to advise public offices on the management of human resources.

Specifically, public administrations’ offices are obliged to reserve women a third of places into committees that select public jobs, unless this is impossible to obtain; to pursue training programmes that are compatible with the needs of the female workforce. As might be expected, a series of studies showed that women’s careers in research are more difficult than men’s and that competence is less important than gender belonging. In fact, those who select candidates for posts and are in high positions are mainly men: assessment is made on the basis of their own features and therefore masculine traits and values become the primary values.

5.5. *Bad practices*

In the **Netherlands**, in looking at practices which would discriminate against or restrict the increase of BMR students and academics, we have briefly pointed to the socio-economic backgrounds and positioning of BMR groups in the Netherlands. In terms of “bad practices”, we can point to the lack of academic role models for BMR students and to the incidences where talented BMR students have received insufficient and incorrect scholastic guidance and advice. According to the sources used, this “mis-guidance” did not occur with only one specific BMR group, instead this tendency appears to be a contributing factor in lower educational achievement levels with BMR students across the board.

More in depth research is required in order to ascertain individual experiences – good and bad practices – by BMR academic personnel in the Netherlands.

There is an additional issue with the prevalent Dutch self-image and self-representation, which are projected and considered the “norm” in terms of high achievement and success. It has often been the case that individuals with BMR backgrounds are seen as “token” oddities within the realm of academia, and that their positions have been granted on the bases of fulfilling ethnic or “racial” quotas, rather than intelligence and merit. Here, academics stemming from BMR descent are faced with the long-standing “scientific” view of white European towards individuals of colour. By this we mean Modernity’s biological racist view, which associated blackness or non-whiteness with inferior intelligence. The dominant Dutch image of a Professor intersects implicitly and explicitly with the construction of whiteness and heterosexual male-ness (Wekker 2002: 10-11).

In the **UK**, there are reports of disillusionment amongst BME academics as regards the mechanisms for reporting and addressing experiences of racism and harassment from colleagues, support staff and students. This is said to be deterring BME staff from reporting experiences and receiving redress for their grievances (Jones, 2006: 149). Jones argues that:

‘The pervasive reluctance of academics to discuss the lived realities of race and racism (which, unlike gender, still retain a nasty undertone) also serves to exert pressure on black academics to remain silent about institutional racism and discrimination’ (Jones, 2006: 149).

Jones (2006) and Puwar (2004) write of black colleagues in the Higher Education sector who have described:

- Being overlooked for promotion;
- Unfairly receiving poor appraisals;
- Unfairly overloaded with administrative responsibilities;
- Having their presence in certain spaces challenged;
- Receiving lower pay for doing the same work as white colleagues;
- White students choosing white tutors in preference to black colleagues;
- Having their knowledge and ability being called into question (Jones, 2006: 153)
- Feelings of marginalisation
- Ethnic pigeon-holing
- Infantilisation and hyper-surveillance of black academics (Puwar, 2004)

Jones (2006: 153) also writes of black female colleagues who have described:

- Rife sexual harassment by male colleagues and students;
- Being asked to defend religious and cultural practices;

- Assumptions made about their ‘dysfunctional’ family lives.

6. Existing networks

As regularly stated by the Women and Science Unit of the European Commission, networking is an essential tool for empowering women scientists to participate in the policy debate and to enhance their professional and career advancement.

More precisely the Action Plan on Science and Society of December 2001 stated "*There is a need for a framework under which to exchange experience and good practise while facilitating cooperation and consultation across sciences. This would create the mechanism for involving women scientists more actively in the policy process, by disseminating information and supporting lobbying and advocacy work. It would empower women scientists in their careers, with training actions and networking activities, a database of role models and mentors, campaigns and awareness raising initiatives.*"

Accordingly, in October 2006, the European Platform of Women Scientists was created to build a structural link between women scientists and research policy makers and to introduce a new key strategic actor into the research policy debate by making the voice of women scientists heard.

In the seven investigated countries several networks of women scientists are well established, fewer scientist networks grounded on ethnicity have been founded and no ethnic minority women scientist network exists today.

The most significant case is in the **United Kingdom** where considerable developments have taken place in women scientists and ethnic minority scientists networking organisation and activities. *The Women’s Engineering Society* (WES), which was first formed in 1919, seeks to promote participation of women in engineering education and practice. One particular project started by WES in 2002 is MentorSET, a mentoring scheme for women in science, engineering and technology (SET), created to support women engineers to maintain a career in SET occupations. The project has been instrumental in setting up about 280 mentoring pairs, spread across various careers. In addition, the *Women in Physics group* is a forum within the Institute of Physics and has a Diversity Committee that is seeking to develop projects focusing on issues of ethnicity (and disability). The Royal Society of Chemistry has a Women Members Network with 10 regional networks in the UK.

As greater attention has been given to the position of BME communities in science, a range of BME Science networks have emerged in the UK. One dimension of their activity has been to develop activities that will attract young people from ethnic minorities into sciences and technology, and facilitate their access. BME Science networks are also concerned with the extent and quality of Higher Education achievement. A further dimension of activity has been to address the position of ethnic minorities in sciences once they have embarked on research and teaching careers.

The *African and Caribbean network for Science and Technology* was set up in 1995 as an educational support charity for young black people. It aims to inspire more of them to enter the fields of science, maths and technology. This network works with schools and Local Education Authorities, colleges and universities, government

departments and the voluntary sector. The network emphasises the contribution that can be made by positive role models, linking students with African Caribbean professionals from the various fields of Science, Engineering and Technology. A further dimension of its work is the provision of an educational information service and careers advice for adults and youth in the Black community.

One notable development in higher education has been the setting up of *Equinet*, a Black Staff network operating across several Higher education institutions. Equinet started two years ago in 2004. It began from an identifiable informal network of Black academics and support staff at South Bank University in London but it was soon felt that the network should be extended to other institutions. Equinet was intended as a forum within which BME staff might consider and reflect upon experiences and be given a voice.

The core values of Equinet are: leadership, shared values (being clear as a group), a manageable portfolio of tasks/realistic objectives, a need for people to deliver and be accountable, a need to articulate what's in it for all who participate, and to keep going.

The UK is also seeing the emergence of networks for ethnic minority women. As part of the WES MentorSet project, Peer2Peer Group was set up to provide a multi-cultural forum for ethnic minority women in SET to share experiences and discuss issues of common concern. As well as running an e-mentoring forum, Peer2Peer organises events and workshops to support personal development and facilitate networking among women scientists. Examples include the workshop on tackling discrimination in the workplace that took place in London in October 2006. The African and Caribbean network for Science and Technology has a sister organisation, The African Caribbean Women in Science and Engineering (A-C Wise) which has the aim of supporting more African Caribbean women in SET careers.

In Bulgaria regarding gender issues, three different groups of NGO's have been identified (Nely Videva). The first group of NGOs aims to reduce gender inequality through social, political and legal means. Their main activities are lobbying and participating in the drafting of legal documents, as well as offering training courses with politicians and journalists. The main representatives of this group of NGOs are: Centre for Women Studies and Policies, Gender Project for Bulgaria and the Bulgarian Gender Research Foundation.

The second group is specialized in the very sensitive spheres of domestic violence, trafficking and prostitution, drug addiction, and sexual education for all women. The main representatives of this group of NGOs are: Nadya centre, Animus and the IOM office in Sofia.

The third group of NGOs is particularly concerned with minority women and especially the most vulnerable – the Roma: Centre for Multiethnic Dialogue and Tolerance with a branch in Veliko Tirnovo; Association of Roma women and children “Nadhezda” in Vidin, Women Foundation for Charity – Roma and the Roma Independent Women's Organization “Latshi Romi”.

The issue of women scientists is dealt with by the Bulgarian Association of University Women (BAUW).

In Germany no migrant or minority women's professional networks were identified. Only two women with migrant backgrounds in professorial positions were located – Prof Aylâ Neusel, a first generation migrant who has retired as professor from the University of Kassel; and Prof. Anita Bose-Pfaff, Professor at the University of

Augsburg, and close to retirement age. Prof. Neusel is a Professor of Architecture, a first generation migrant from Turkey who studied in Germany. She went through the German system smoothly and successfully, which she attributes to her good command of the German language and her relationship to her German husband. Prof. Bose-Pfaff, a Professor of Economics, is the daughter of an Indian freedom fighter and an Austrian mother. She is a second-generation migrant.

In **the Netherlands** only E-quality appears to have placed the issue of BMR women at the forefront of its activities. The websites reviewed showed photos mostly of white female academics. This, we believe, underlines the prevalent image of academia. Until recently, the dominant image of a female Dutch Professor has been of a white female. Most listed networks of women scientists, gender studies or ethnic minorities do not cater specifically to, nor do they address the situation of BMR female academics or engage their experiences in Dutch academia.

In **Belgium** there are very few women scientist networks and women's organisations and gender studies have been developed recently (since the early 1990's and the beginning of 2000 in Flanders). None of them have addressed the issue of minority women scientists, yet some of them have dealt with the general problems of women migrants.

7. Recommendations

That the scientific environment should be free of gender and ethnic stereotypes is a statement that would most likely be agreed upon by the vast majority of men and women involved in science. Nonetheless, translating this statement into a strategy that really leads to a scientific environment free of gender and ethnic bias, one that is not gender and ethnic discriminatory and that is capable of containing and valuing all men and women's abilities equally, has proved more problematic.

The present report wishes to contribute to a better understanding of the complexity of the gender and ethnic diversity issue at stake and enable the scientific community and all stakeholders involved in making research policy to acknowledge that the problem exists and that it must be addressed in appropriate ways. The seven national state of the art on gender and ethnicity in science open up the discussion on the necessity of appropriate management tools of human resources in universities and research institutes.

These reports give an overview of the position of foreign, black and ethnic minority women scientists in research and academia. The results of the project may convince universities or research institutions who have never developed policies on gender and ethnic diversity to do so, and those that already have them to improve their design, implementation and monitoring.

Although it doesn't mention ethnicity in its definition of diversity, the European University Association states in its 2007 report that diversity is a necessary condition for creativity in higher education, both in research and teaching.

Diversity in terms of e.g. talents, interests, previous qualifications, experience and social backgrounds was identified as a crucial factor for fostering creativity among students and staff. Both research and teaching teams may profit from a diversity of disciplinary foci among its members.

More diversity in universities allows “*constructive controversy to stimulate innovative thinking, which leaves students much more open-minded and knowledgeable about the subject of instruction. It is not a goal in itself, but a means, a strategy to improve the quality of teaching, of research and of the university as social institution*” (Essed, 1999: 220).

The introduction of policies does not automatically translate the intended changes into practice. Critiques of the diversity discourse and its focus on the business case for diversity suggest that this debate needs to incorporate discussion of its relative silence on issues of social justice (Hudson and Sahin-Dikmen, 2007): “*Managing diversity cannot simply be about business appeal. It must also entail a commitment to challenging the structural power relations that result in inequalities. It must also be a tool for social justice. Few would disagree with the proposition that our working environment should be a place in which the strengths and abilities of all individuals are valued, but it is all too easy to lose sight of the structural barriers that constrain the entry of particular social groups into particular occupations*” (Jones, 2006: 151).

Regarding the results highlighted in the seven national reports there is a serious need for a better integration of the gender and ethnic dimension in higher education policies. The measures concerned are in the field of statistics, research, educational and employment policies, and networking.

Firstly there is a need to change the stereotyped image of BME women scientists and Roma. These stereotypes play a negative role in the general perception of these groups and the scientific community doesn't escape these destructive perceptions thus undermining the scope for these women to fulfil their potential. Secondly, as a major actor in society, it is necessary to involve universities in a multicultural perspective in terms both of multicultural studying and working contexts and the production of knowledge concerning the relevant issues of gender and ethnicity: "*these issues are inextricably interwoven into Western society and how these axes of social signification influence and mould the personal trajectories and positioning of all its members.*" (Ellerbe-Dueck, Wekker 2007). This supposes changing attitudes and organisational culture and accordingly institutions seeing racism as a problem for the institution, not just for ethnic minority staff and students (Carter et al. 1999).

Regarding anti-discrimination law in the EU countries, one can note that it is legal to introduce positive actions in Belgium, Italy, the Netherlands, Portugal and the United-Kingdom. In Italy, they are in line with the Constitution but the Decrees transposing the Directives include measures only on grounds of gender and disability. In the UK, national legislation includes detailed obligations for public authorities to promote equality on grounds of gender, race and disability.

Having regard to the *European Charter for Researchers* and the *Code of Conduct for the Recruitment of Researchers* the first recommendation we would is the adoption and the real implementation by the Ministry of Higher Education, universities and institutions of research of the Charter and the Code of Conduct in each country. In addition, we suggest that the Charter and the Code of Conduct must be accompanied with a raising awareness campaign and a monitoring and an evaluation process.

7.1. Statistics

Looking at statistics, more effort must be made to produce more information about BME women scientists, which will enable us to assess their position in research and academic careers in terms of recruitment, retention, promotion and recognition.

The European commission publication, *She figures*, could integrate the variables "nationality" and "ethnicity" to refine and complete the overview on tertiary education students and R&D staff. These variables are available in the Eurostat databank, which has been used for the publication.

At national level, efforts must also be made to gather statistics and information on students and women's presence in sciences, and on horizontal and vertical segregation. This does not consist only in the refinement of statistical tools (i.e. gendered data). A further added value could be the attainment of a deeper understanding of women's issues.

7.2. Research

Qualitative information must be produced on BME women scientists. The poor scientific production on this group requires the development of further research with a view to answering three questions which are asked of women in general: why so few? Why so slow? Why so low? (Toren, 2000).

Why so few will address the issue of entry barriers to scientific and academic careers. Why so slow will take in account the obstacles and barriers during the careers. Why so low will deal with the glass ceiling in the top academic and research institutions.

There is a need for in-depth qualitative research, capturing heterogeneity (Carter et.al, 1999: 69), with the following objectives:

- To examine the migration history, career aspirations and trajectories of BME women in teaching and research and how these have been evolving across the generations. Attention needs to be given to the channels, mainstream and alternative, by which racial and ethnic minority and migrant communities find their way into careers in the Higher Education sector.
- To explore the influence of the home and household on trajectories, looking at gender roles, family climate and support, social capital and also the impact of role models within families, schools and the workplace.
- To outline and assess the range of influences on career aspirations and entry points, development and sustainability of scientific careers.
- To increase understanding of the under representation and under valuation of BMEs in teaching and research.
- To identify and explore positive aspects of workplace practice and culture which can enhance progression, and discern the nature, operation and impact of supportive and enabling workplace practice and cultures.
- To describe and assess the linkages between ethnic minority and migrant women's experience in the labour market, their identity and belonging and broader patterns of multiculturalism and social cohesion. To increase understanding of the relationship between economic and social integration.
- To explore how to raise awareness of possible discrimination in scientific careers.
- To help universities identify the problems and to develop equal opportunity policies.
- To contribute to a better understanding of successful national models of economic integration as well as exclusionary institutional arrangements and to enhance the understanding of the relationship between social and economic integration of migrants (Second Annual Report on Migration and Integration, Brussels, SEC(2006) 892).

On the other hand, it is crucial to make research carried out by BME women scientists more visible, so they can serve as role models for BME students. A positive valuation of research groups, which address gender, ethnic and immigration issues and the visibility of their presence and contribution in universities and in the wider public would provide an external legitimacy that strengthens their internal position.

A better access to information for BME women researchers submitting applications for scholarships and research funds must be guaranteed. This in part requires more transparency from institutions granting scholarships and research funds. Such measures should improve career development opportunities for BME women scientists.

In addition, it is very important to improve BME women scientists' representation in decision-making bodies and to encourage the accountability of governing research bodies.

7.3. Educational policy

- Improving information to BME women students for submitting applications for PhD grants and requiring more transparency from institutions granting grants.
- Providing more information about research and academic careers, recruitment, promotion, and prize award applications to BME students at the end of their university careers. Many BME students are simply misinformed about the numerous possibilities that would enable them to pursue careers in academia. The experience of Utrecht University in organising information caravans, which visits middle schools and give BME students the latest information concerning careers in academia, could be organised at EU and national level.
- Developing better cooperation between the State and the Roma minority's NGOs to face the challenges of higher education of this underprivileged minority.
- Universities should also open their doors to new immigrants whose number is likely to increase following Bulgaria's accession to the EU.
- Creating a mentoring Program: BME Professionals can also function as mentors for talented BME students and would stimulate and accompany BME students throughout their doctoral studies. This could be a springboard for their future recruitment into research and academic careers.
- Encouraging the building of networks in the early stages of studies, coming into contact with good study methods and learning how to give presentations.
- Integrating BME professionals in all selection committees (doctoral commission, selection etc.).
- Recognising degrees and qualifications obtained abroad in the educational system and in the labour market.

7.4. Employment policy

- Campaigning and training to improve Higher Education staff's awareness of equality and diversity. Training tailored to significantly raise awareness of equal opportunities policies. Equal opportunity training (diversity) and gender mainstreaming for selection commissions' members.
- Commitment from all universities and research institutes to comply with a strong equality policy.
- Development and widespread use of a diversity plan in each university and assessing the impact of equal opportunity policies for achieving equal treatment in science.
- Including nationality and ethnicity criteria in policy recruitment, retention, and promotion for a period of time.
- Combating the waste of potentially highly educated job seekers in anticipation of the future deficiency, which will occur in the areas of research notably linked with the numbers of aging staff holding permanent positions and to the not so attractive image of universities in the labour market (Ellerbe Dueck & Wekker 2007).
- Establishing transparent recruitment and promotion processes with an objective investigative and complaints procedure embedded in it.

- Giving responsibility to equality commissioners not only for gender but also for race and ethnic equality.
- Provision of necessary resources and powers for the equality commissioners to make them effective in their work.
- Provision of relevant training and awareness raising measures for the equality commissioners and for senior staff in universities.
- Changes in working practices at universities so as to make them more sensitive to the lives and priorities of women.
- Programmes similar to ASPASIA at the EU and national levels could be created and instituted specifically to enable the advancement of BME female academics in all the EU Member States.
- Widening the “inner circle” of decision makers to women and BME women in higher authorities and decisional committees.
- Supporting a healthy work-family balance.

7.5. Networking

- Including migrant and BME women in the women’s professional networks that already exist so giving them access to the support provided by them.
- Providing financial support and increasing the value of research groups which addresses gender, ethnic and immigration issues in order to make them more visible in universities and to the wider public.
- Campaigning through professional networks to raise awareness of women scientists on BME discrimination of women scientists.
- To resource the development of a Network on Ethnicity and Women Scientists aiming to improve the position of Black, migrant, refugee and minority women scientists in teaching and research in the European Union 27 and EFTA countries.

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9. Glossary

AIO	Assistant in Opleiding (Assistant)
AWT Technology)	Adviesraad voor Wetenschap en Technologie (Council for Science and
BAUW	Bulgarian Association of University Women
BME	Black and Ethnic Minority
BMR	Black, Migrants and Refugees
CBS	Centraal Bureau voor Statistiek
CBSS	Crossroads Bank for Social Security
CGRA	Commissariat Général aux Réfugiés et aux Apatrides
CINECA	Consorzio Interuniversitario per il calcolo automatico
CNR	Consiglio nazionale delle ricerche
CPO	Equal opportunities committees
CRE	Commission for Racial Equality
CUCO	Commission on University Career Opportunity
DTI	Department of Trade and Industry
EO	Equal opportunity (EO)
FNRS	Fonds national de la recherche scientifique
HE	Higher Education
HESA	Higher Education Statistics Agency
HoFe	Commission hommes-femmes
ISTAT	Istituto nazionale di statistica
KUL	Katholieke Universiteit Leuven
LBS	Labour Force Survey
MIUR	Ministero dell'Università e della Ricerca
NIS	National Institute of Statistics

NWO	Nederlandse Organisatie voor Wetenschappelijk Onderzoek (Netherlands Organisation for Scientific Research)
OCW	Dutch Ministry of Education, Culture and Science
OECD	Organisation for Economic Co-operation and Development
OIO	Dutch acronym for Onderzoeker in Opleiding - PhD students
P&O	Personeel en organisatie (personnel and organisation)
R&D	Research and Development
SET	Science, Engineering and Technology
UCU	University and College Union
UD	Assistant Professor (UD)
UHD	Associate professor
UKRC	Centre for Women in Science, Engineering and Technology
ULB	Université Libre de Bruxelles
UN-CERD	Committee on the Elimination of Racial Discrimination - United Nation
VSNU	Association of Universities in the Netherlands
VUB	Vrije Universiteit Brussels

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More information about the partners can be obtained on the NEWS website:
http://newscientist.ulb.ac.be/index_en.htm

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