

## **Progress without Professionals?**

### **Fighting 'Brain Drain' in EU accession countries**



*17-26 April, 2004*

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## **Introduction:**

The 21st century is driven by brainpower. Industrialized countries have experienced a shift from dependence on natural resources and manufactured goods to a market based on knowledge. Recent demographic trends do not favor sustainable growth and prosperity due to lower birth rates, increase in life expectancy and late retirement plans. Therefore access to human capital for a knowledge-based economy in order to guarantee a sustainable supply of skills becomes imperative. Moreover, the labor market for skilled professional personnel is becoming increasingly globalized in terms of both supply and the demand. For the declining stock of human capital to replenish, attracting young, talented and educated professional from the developing countries has been a competitive measure taken by the developed nations to maintain sufficient flow of highly skilled labor. This has created a vacuum in the developing nations of the brightest who leave their home countries for the prospect of better living and working conditions and more generous salaries. The concept of 'Brain Drain' or brain waste is the sad reality of life for many nations confronting it in their battle to maintain their scientific capacity.

'Brain drain', also known as 'mobility' or 'runaway intelligence' is defined by the encyclopedia Britannica as the "departure of educated or professional people from one country, economic sector, or field for another usually for better pay or living conditions"<sup>1</sup>. On the movement of highly skilled people, there are two main concepts when discussing brain drain: brain exchange (gain) and brain waste. Brain exchange (gain) implies "a flow of expertise between a sending country and a receiving country... yet, where the net flow is heavily biased in one direction, the term 'brain drain' is used"<sup>2</sup>. Another term, 'brain waste', describes the waste of skills that occurs when highly skilled workers migrate into forms of employment not requiring the application of the skills and experience applied in the former job. In the Central and Eastern European (CEE) context, the 'brain drain' syndrome has been suffered since communism fell and with it the walls came tumbling down in the late eighties and early nineties. By examining the concept of 'brain drain' as a force within social and economic inclusion, this paper offers

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<sup>1</sup> Mahroum, Sami. "Europe and the Challenge of the Brain Drain", <http://www.jrc.es/pages/iptsreport/vol29/english/SAT1E296.htm>

<sup>2</sup> Ibid.

a historical background to the phenomenon, attempts to rationalize it and offers recommendations for the way by which it may be addressed.

### **'Brain Drain' in historical context:**

During the tumultuous years of World War II, the resulting 'brain drain' affected every facet of scientific and professional activity in Europe. In the immediate post-war period, highly competent, qualified scientists, engineers and other professionals, with a wealth of experience were lost to emigration or simple lack of productive employment opportunities. They were either leaving their countries, or were being forced to seek menial employment simply to provide food and shelter for themselves and their families. The bleak circumstances of the time coincided with a mass departure of talented scientists and young graduates from European Universities. Perhaps, once of the most renowned cases is the case of young Albert Einstein, who was a pre-eminent scientist in a century, dominated by science. The embodiment of pure intellect and a passionate Zionist, he was forced to leave his native Germany and take refuge in the United States when the Nazis came to power in an ever growing anti-Semitic Germany.

In post-war Europe, priming of the economies by the Marshall Plan, relieved budgetary restrictions and provided work for the scientists, making it unnecessary for them to seek employment outside their countries. In the post cold War era, political and socio-economic transformation coincided with large number of specialists engaged in highly qualified, intellectual or creative endeavors as well as potential specialists such as University graduates to leave their countries. In the current EU enlargement climax, the concept of 'brain drain' as a social phenomenon has reemerged given the sensitivity of employment related issues in Europe and the removal of trade and migration barriers.

In Central and Eastern Europe the present circumstances are grim, and, if the trend of migration of highly skilled workers continue, the future is even grimmer. In the transformation to a "social market economy" system and democracy in the region, state promotion of research has largely vanished. Scientists are therefore turning to research financing and better job prospects from the West. In today's globalized economy, a country that does not use its human resources to the fullest will suffer declines. For CEE countries, accession to the EU is within foreseeable future. This will lead, sooner or later,

to far greater mobility of workers and to removal or lowering of the barriers that put immigrant workers at a disadvantage. Thus the research community in the West needs to help save the region of intellectual drought in its own interest since supporting science in CEE countries have the potential to contribute towards greater stability and economic progress. How can the process of democratization and economic prosperity be complete without professional?

### **'Brain Drain' in EU accession countries:**

A study, based on polls done in 2002, highlights the risk that EU accession countries may lose young well-educated people<sup>3</sup>. The European Commission study conducted by the EU Foundation for the Improvement of Living and Working Conditions, relied on data collected two years ago, when it was still unclear how many EU governments would impose labor restrictions on the new member states. The study reveals that only 1% of the working population of the 10 countries set to join the European Union would be likely to migrate to existing EU states, even if they enjoyed full freedom of movement<sup>4</sup>. The implications of the study are astonishing. Some 220,000 migrants are likely to immigrate to the 15 member states every year for the first five years after expansion. Although all current EU members, except Ireland, have imposed some form of labor restrictions fearing a huge inflow of migrants who would allegedly be a drain on welfare systems, the analysis reveals that immigration will concern skilled rather than lower-skilled migrants. The study found that those who declared a firm intention to migrate are only around 1% of the working-age population of all 10 acceding states and the three candidate countries<sup>5</sup>. That would mean that over one million people are likely to immigrate to Western Europe within the next five years. That figure could increase dramatically if all those who revealed some intention of migrating did so accordingly, although the study's conductors believe that prospect is unlikely.

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<sup>3</sup> for details and methodology of the study see: *European Foundation for the Improvement of Living and Working Conditions*, Press Release, 26 February 2004. "Migration likely to be about 1 percent, survey says", also available at:

[http://www.eurofound.eu.int/newsroom/archive\\_pressrelease/pressrel\\_040226.htm](http://www.eurofound.eu.int/newsroom/archive_pressrelease/pressrel_040226.htm)

<sup>4</sup> Lungescu, Oana. "EU newcomers 'risk brain drain'", BBC News online, published 27 Feb. 2004 see: <http://news.bbc.co.uk/2/hi/europe/3492668.stm>

<sup>5</sup> Ibid.

Another important conclusion of the study is the potential migration of young and of well-educated people from the new member states. The problem of brain drain and youth drain is a far more realistic concept that is alarming the European Community. The migration of highly skilled and qualified people of accession countries “will have a detrimental effect on the economic development of the region on the regional ability to reach similar levels of GDP as the other 15 members of the community”<sup>6</sup>.

Already the prospects of better living and working conditions and more generous salaries have attracted many highly skilled people to other parts of the world including Western Europe, United States and Canada. Fear is growing in many EU accession countries that Researchers, Information Technology (IT) specialists, Scientists and Engineers (S&T), Doctors & nurses, scholars, university graduates, etc. are leaving their home countries. The study shows that the typical migrant from central Europe is a young, single graduate or student, often a woman while the new member states risk losing up to 5% of their young and graduate population, and up to 10% of their students.<sup>7</sup>

### **The Problem:**

How extensive is the problem of brain drain? And which countries are especially affected? Unfortunately, attempts to answer these important questions have been halted since “there is no uniform system of statistics on the number and characteristics of international migrants. Also, source countries typically do not keep track of emigrants’ characteristics, and, although some receiving countries do, their definitions of immigration differ. Thus, it is difficult to measure precisely the flow and levels of education of immigrants”<sup>8</sup>. In spite of this lack of systematic data regarding international migration of the highly skilled and talented and specifically in the Central and Eastern European region, a certain level of understanding can be constructed using a number of studies, survey and data.

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<sup>6</sup> Supra note 4

<sup>7</sup> Ibid

<sup>8</sup> Carrington, William J. and Enrica Detragiache. “ How Extensive is the Brain Drain?”, *Finance & Development: a quarterly magazine of the IMF*, International Monetary Fund published June 1999, vol. 36, No. 2 also available at:

<http://www.imf.org/external/pubs/ft/fandd/1999/06/carringt.htm>

Following the rapid and unexpected collapse of state-socialist systems throughout Central and Eastern Europe, many believed that democracy and self-regulating markets would develop bringing prosperity to the region. The state of euphoria however was soon replaced by bitter reality of hardship of transition from the system of redistribution to a market system. Dramatic reduction of GDP, increasing social inequality, rising unemployment, growing rate of poverty, and a diminishing social dimension of women's role resulted in public shock which then forced the newly elected governments to take extra measures in order to top social discontent. As the result of this process of change, government sponsored projects of research were cancelled and financing of research was suspended. For example financing joint research projects that are directed towards testing a particular scientific hypothesis, partnership between research bodies designed to remove structural weaknesses or financing the participation of East European researchers in international forum were largely vanished. The norm has continued and in spite of high level of rhetoric few countries in the region are tackling the fundamental, structural and philosophical flaws in their systems, which have forced and continue to drive the highly skilled out of their countries.

In spite of minor differences, most of CEE countries face similar Problems such as lack of resources, pressing need for national legislative reform etc. Unfortunately no, or very little, priority is given to the knowledge and competence acquired by researchers or scholars in their home institutions. Since education and research are becoming an increasingly important factor for economic growth, democracy and social development, brain drain threatens CEE countries' development process. A minimum level of human capital is indispensable to a country's economic development. A loss of skilled human resources will ultimately have a grave impact on the economy and jeopardize development programs.

The unpleasant truth about brain drain is the fact that Western European countries not only encourage the migration of young, talented and skilled workers from other parts of the world, mainly CEE, but also compete with one another in attracting this new highly skilled work force. The research project, *'Mobility and excellence in scientific labor markets: the question of balanced growth'* (MOBEX) funded by the Economic and Social Research Council (ESRC) as part of the Science in Society Program aims to

explore and facilitate the rapidly changing relations between science and wider society<sup>9</sup>. The project suggests that EU countries such as France and Germany are actively recruiting undergraduate and post-graduate science students from former eastern bloc countries. First indications suggest that “Germany and Austria are now the top choices for many of the brightest foreign students, who are being offered incentives such as university courses in English and favorable funding schemes.”<sup>10</sup> Given that career advancement in the science fields is directly related to excellence, what becomes desirable is where the excellence is appreciated the most. That is why under-funding and ‘knowing-the-right-connection’ attitude discourages many disillusioned with the system to leave their countries and pursue more liberal environment.

In addition to funding shortages and insufficient resources which are rather universal; the chaos created with the transition process in CEE countries; as well as certain cultural elements which drive the group in focus out of their countries and create the problem of brain drain, there is a different perspective when looking at this concept. As stated previously, there is growing concern about the increasing number of intellectuals who leave their countries. The main problem is not that these scientists and intellectuals are leaving to go abroad to work under better conditions - that is certainly beneficial for science as a whole. Rather, the problem occurs when they do not return.

The migration of professionals, even if it is only temporary, only reflects the operation of an international market for specialized human capital. One can only speculate on the reasons for migration depending on the various factors stemming from the socio-cultural, economic, and political experiences of the country. Yet, the highly skilled and talented have always been drawn to countries that offer greater attractions - facilities, salaries, career prospects, satisfaction, prestige. For the last two decades, the conception about the migration of skills has evolved tremendously, putting stronger emphasis on brain gain, which is “based on the idea that the expatriates’ skilled population may be considered as a potential asset instead of a definite loss.”<sup>11</sup> Given top-

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<sup>9</sup> More information can be found at: [www.sci-soc.net](http://www.sci-soc.net)

<sup>10</sup> “Science brain drain – How some European countries attract the top scientific talent”, *Economic & Social Research Council*, Press Release: 15 Mar. 2004 available at: <http://www.esrc.ac.uk/esrccontent/news/mar04-1.asp>

<sup>11</sup> Meyer, Jean-Baptiste and Mercy Brown. “Scientific Diasporas: A New Approach to the Brain Drain – Discussion Paper 41”, World Conference on Science, UNESCO – ICSU 26 June-1July 1999, available at:

level professional, when going abroad for employment purposes, have exposure to a more intellectually flourished environment and tend to work in much better working conditions and have access to better resources, they are placed in a much better position than their colleagues at home. In following an active re-admittance or expatriation policy, developing countries, can benefit substantially from the experiences of their highly skilled. This option has been rather successful in a number of countries, where the many programs of such nature were put into place. Already, “Industrialized countries (NICs) such as Singapore and the Republic of Korea [and] big developing countries such as India and China”<sup>12</sup> along with Ireland and many more are enjoying the fruit of such sound policies. Drastic changes are needed in the official policy toward areas of concern such as Research and Development in CEE Countries. The atmosphere must be changed to make it more favorable for intellectual work and scholars and researchers must be given every incentive to return to their home countries.

In addition to the possibilities of bringing the expatriates back to their country of origin and reshaping the economy through their help and expertise, there are additional signs of hope for the ten accession countries set to join the EU. In July 1997, a survey carried out by the European Union Research and Society for Central and Eastern Europe: Innovation in Europe: Research and Results in ten CEE countries indicated positive signs in the eventual implications of the European integration which is aimed at inclusion of CEE countries. The Survey titled “Migration – European Integration and the Labour force Brain-Drain” tells a powerful story of possible affects migration of the labor force can have on the ten CEE countries economies and the much-anticipated full economic development. The study reveals that “the brain drain was much less serious than once feared. It shows that the EU programmes supporting science in central and eastern Europe have the potential to contribute towards greater stability and to encourage scientists to remain in their home institutes.”<sup>13</sup> By analyzing the economic and political environment in each country and collecting data on all scientific staff who had left their positions (either to go abroad or engage in a new position of the same sector) between

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<http://www.unesco.org/most/meyer.htm>

<sup>12</sup> Supra note 8, p.5

<sup>13</sup> “Surveying the Brain drain from Eastern Europe”, Research and Society Central and Eastern Europe, Innovation in Europe: Research and Results, published July 1997, available at:

<http://europa.eu.int/comm/research/intco/pdf/097e.pdf>



1989 to 1995, the survey aimed at examining the movement of people according to age, motivation, job satisfaction, ambition and working conditions. The findings of the survey are rather positive by revealing that despite a wave of migration in 1991 and 1992 (which may well be associated with the political instability in the region and the war in the Balkans), “fewer scientist than anticipated have left the academic institutions covered”<sup>14</sup>. This result also includes (a great number of) scientists who moved out of their previous jobs but remained in the country. Putting the findings into perspective, the study reports that the scientists “are helping to develop new market economies”<sup>15</sup> in the region providing evidence that policy of support for the former communist countries is worthwhile. The project of European integration can only be beneficial to all sides involved if those lagging behind have the financial support of the economically stronger powers and promotion of east-west exchange is a priority.

### **Measures taken or considered:**

In 2000, IBRO, in cooperation with the Central and Eastern Europe Regional Committee, established a programme of *Scholarships Against Brain-Drain*. The aim of the programme is to provide a salary support for young talented researchers below the age of 40 to carry out further studies in their home countries after obtaining their PhD<sup>16</sup>. A condition of eligibility is for the candidate to accept to stay in their home country for at least nine months to a year. Such financial support for research provides every incentive for young scholars to pursue their research project at home and gain sufficient field experience that will benefit them upon being absorbed in the labor market.

In an attempt to address the growing fear of brain drain in Europe, the Council of Europe in its Recommendation no. r (95)7 titled: ‘On Brain Drain in the Sectors of Higher Education and Research’ introduced a set of measures to combat brain drain in the indicated sectors and recommended that the governments of member states:

- a. *“be guided in their policy on international co-operation and mobility in the fields of higher education and research by the Set of Measures set out in the appendix to this recommendation;*

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<sup>14</sup> Supra note 13

<sup>15</sup> Ibid, p.2

<sup>16</sup> Further information available at:

[http://www.ibro.info/docs/IBRO\\_brain\\_drain.pdf](http://www.ibro.info/docs/IBRO_brain_drain.pdf)

- b. *promote implementation of these measures by governmental agencies and by institutions of higher education and research within the limits imposed by their institutional autonomy;*
- c. *Ensure that this recommendation is distributed as widely as possible among all persons and bodies concerned.*<sup>17</sup>

These measures include: measures to be taken by the affected countries, receiving countries and measures regarding international co-operation. Much of the text of this non-legally binding recommendation has to do with ‘encouraging’, ‘promoting’, ‘improving’, etc. which leave it with rather weak and broad language, it however, introduces certain measures to be taken by receiving countries. That is to say that in the area of higher education and research, such countries are, *inter alia*, encouraged to “provide direct assistance to research institutions in affected countries... grant access to research workers... and provide grants to talented scientists... to continue their research and teaching activities in centers of international repute to the mutual benefit of both sending and host institutions”<sup>18</sup>. Although the Recommendation specifically mentions that it is important “to organize the monitoring and evaluation of exchange and co-operation programmes”<sup>19</sup> such as structured programmes of European and regional, bilateral and multilateral co-operation at government level, it fails to address the ways by which such monitoring schemes are set to operate and what organization will overlook the process. Since the member states are in charge of implementing such policies and programmes, the Recommendation also fails to address how such programmes are initiated given the fact that the most beneficiaries of the brain drain are the Western European states that dominate EU policies.

The state of European science and technology is assessed by the European Commission. In its *Third European Report on Science and Technology Indicator 2003*<sup>20</sup>, the Commission discusses the alarming brain drain situation at EU level. According to the Commission a major reason for the growing number of researchers leaving their

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<sup>17</sup> Council of Europe, Committee of Ministers, Recommendation No. R (95)7: ‘On Brain Drain in the Sectors of Higher Education and Research’, Adopted by the Committee of Ministers on 2 Mar. 1995, full text available at:

<http://www.cm.coe.int/ta/rec/1995/95r7.htm>

<sup>18</sup> Supra note 9, sec. 3, Art. 5

<sup>19</sup> Ibid Art.7

<sup>20</sup> for details of the report and findings see:

[http://www.cordis.lu/indicators/third\\_report.htm](http://www.cordis.lu/indicators/third_report.htm)

countries is the lower level of investment in research. As reported “the EU is currently spending 1.94% of GDP on research and development, compared with 2.8% in the US and 2.98% in Japan”<sup>21</sup>. The Commission blames this largely on the lower contribution private sector investment makes to research funding in Europe. Another telling statistic is the number of researchers in the labor force: 5.4 per 1000 in the EU compared with 8.7 in the US and 9.7 in Japan<sup>22</sup>. The investment gap will certainly widen more drastically with 10 new members set to join the EU as the researcher brain drain has similar patterns in new member state with less money allocated to research and development in Eastern Europe. A European Commission proposal which should also be accepted by the new members outlines ways by which more protection and employment guarantees will be offered in the area of research. These steps include “developing: a ‘European Researcher's Charter’, a ‘code of conduct for the recruitment of researchers’, a common way of evaluating and recording researchers’ skills, qualifications, and achievements; advanced training tools, access to adequate funding, and minimum social security benefits for PhD students.”<sup>23</sup> The result of this proposal is yet to be seen and its implications yet to be tested.

Although the proposal remains a ‘European’ one, that is to say that all 25 members of the union must accept it fully, it is rather difficult to envisage it as a feasible option. A firm decision to stop brain drain of CEE countries is needed by the political elite if the process of unification of Europe, in the sense of ‘economic inclusion’ of most of the countries in transition is to succeed. The goal of socio-economic and political inclusion will remain a distant one if the feeling amongst the new European citizens that they do not actually belong to the European club prevails. The countries that lag behind the European project of unification must be included fully; yet a balance needs to be struck between inclusions and sucking the societies dry of their most talented and skilled. If the latter is to prevail, accentuating disappointment and crises of identity will hunt Europe once again. European integration should not result in a one-sided inclusion that will only benefit the rich but rather a situation of mutual cooperation and assistance is

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<sup>21</sup> Scott, Andrew. “EU Science and Technology check-up”, *The Scientist*, published 20 Mar. 2003 see: <http://www.biomedcentral.com/news/20030320/08/>

<sup>22</sup> Ibid,

<sup>23</sup> Scott, Andrew. “Action to Stop EU Brain Drain”, *The Scientist*, published 24 July 2003 also available at: <http://www.biomedcentral.com/news/20030724/05/>

needed so that *all* members can eventually have the same footing and contribute to greater unity and development.

### **Conclusion:**

By examining the concept of brain drain as a social phenomenon and a new force to reckon with when discussing the implications of social and economic inclusion of Central and Easter Europe, this paper aimed at putting emphasis on possible negatives affects brain drain might have; Yet shedding a light on the tangible reality that CEE countries face and the ways by which brain drain can remerged as a contributing factor to the eventual goal of economic development, prosperity and political stability in the Europe of 25. Various studies, sometimes even contradicting, all agreed that brain drain is a grim reality for almost all CEE countries and will continue to take its toll. However, scholars and study conductors tend to disagree on its level of severity. One this is clear. That is brain drain has come along way and has changed nature over the course of the past two decades in this ever-changing global area. Policies addressing it must also be readjusted to serve their purpose and solve the problem of brain drain without infringing upon the European Citizen's rights to free movement that is guaranteed for all. Brain drain in CEE may not be as serious of a problem as once believed to be; yet, as seen previously, it will certainly have serious implications. Increase in society's confidence in its ability to face challenges of the future and reducing the fear of brain drain are first steps in rationalizing the problem in its current context and taken measures to address it utterly and coherently.

## **Recommendations:**

1. Structural reform and more funding to curb further brain drain at EC level;
2. Increase in Member states' contribution to the EU budget in order to increase funding to discourage researchers from leaving their homelands;
3. Improving CEE countries competitiveness in international markets and trading arrangements;
4. Creating a competitive atmosphere in CEE countries to prevent departure of highly skilled workers by promoting a program of Science and Technology for stability in order to provide direct assistance to basic and applied scientific and technical research in the region.
5. Implementing social programmes and policies or expatriation that would see the departed highly skilled return to their home countries;
6. Improving human resources management for better performance in a modern corporate culture in a globalized economy;
7. Increase in investment by monolithic entities such as the World Bank to allow the nations to build up their scientific infrastructure;
8. Enacting sound policies to create and protect jobs in the region;
9. Improving conditions at home that will make it attractive for graduate to stay in the country.

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