To what extent did the EU 2004 enlargement lead to the projected outflow of health professionals from newly admitted Central and Eastern European Member States?

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Abstract

It was in 2004, when eight Central and Eastern European countries came to enter the European Union. At this time, international organisations and national governments feared that the day of enlargement could mark the start of a mass migration of health workers within the European Union. In 2002, a survey conducted among health professionals in Czech Republic, Hungary, Lithuania, Poland and Estonia revealed that 25-50 per cent of all interviewees considered migrating towards another EU country.

This paper aims to find out whether the forecasted health worker outflow in Central and Eastern Europe has become reality between 01/05/2004 and 31/12/2007 following the Research Question:

To what extent did the EU 2004 enlargement lead to the projected outflow of health professionals from newly admitted Central and Eastern European member states?

The research question will be analysed by comparing data of the pre-enlargement survey with the actual emigration rates in the three new Member States of Poland, Hungary and Estonia. Furthermore, the study applies its results to important models of modern migration theory and examines the role and impact of the European Union on inner-European migration patterns.

As a result, it can be said that the actual outflow of health professionals from the three countries of observation turned out to be far below the outcome that was predicted by the pre-enlargement survey and suggested by classical migration theories as Ravensteins' "Laws of Migration". In this regard, the classical theories which mainly focus on economic factors, failed to explain the low emigration outflow of health workers despite high migration potential in terms of economic incentives.

All together, the outcome of the study suggests that the complex and diverse international environment of the European Union calls for a more comprehensive approach to describe migration currents and gives a stronger emphasis to social and political factors next to the evaluation of economic variables.

Abbreviations

CEEC's	Central and Eastern European Countries
COM	Commission of the European Communities
ECB	European Central Bank
EMU	European Monetary Union
EU	European Union
EU-15	Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden and the United Kingdom
EU-8	Eight Central and Eastern European countries joining the European Union in 2004: Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, Slovenia
EU-10	Countries joining the European Union in 2004: EU-8 + Malta and Cyprus
ILO	International Labour Organisation
IMF	International Monetary Fund
IOM	International Organisation of Migration
MS	Member State
OECD	Organisation for Economic Co-operation and Development
TFEU	Treaty on the Functioning of the European Union
WHO	World Health Organisation

Contents

1. Introduction

It was in May 2004 when the European Union marked its biggest ever enlargement, accepting ten new countries and bringing the number of Member States up to 25. It was also the time when young Estonian surgeon Inna Lupina finished her training program and faced the choice for her future employer: Keep working in Estonia under a strained budget and shaky conditions or continue her career at municipal hospital in the Finnish city of Kotka for a ten size wage. As many of her fellow students, she decided to continue her career abroad where technical facilities and high funding were provided way above the Estonian level.

It was stories like the one told by Lupina that made health policy responsibles fear a westward exodus of health care professionals from the ten newly admitted Member States towards the strong and wealthy EU-15. With their health care system in transition and low economic output, health systems in Central and Eastern Europe faced the challenge to compete with unlike stronger countries in the West at the moment they joined the European Union.

Especially, the free movement of people as a prerequisite of the single European market was argued to be a potential promoter of strong adverse migration outflows from CEEC's (PRAXIS, 2004). However, to better predict the enlargement impact on health worker migration a survey was conducted before the accession to find out about the intentions of health care staff in the new MS. Result of this survey conducted in 5 CEEC's (Voerk et al. 2004) was a high number of 55% Estonian health care workers with intentions to leave the country towards the old EU-15 Member States. Furthermore, 24.7% of all Hungarian respondents revealed to already have a definite plan for moving abroad.

In this light, the study will be to find out whether the emigration rates after the accession confirm the survey prognosis prior to the enlargement and see whether the story of Lupina has turned out to be an exception or a threatening course for the sustainability of Central and Eastern European health care systems. In doing so, the study will work along its overall research question:

To what extent did the EU 2004 enlargement lead to the projected outflow of health professionals from newly admitted Central and Eastern European Member States?

The first chapter of the thesis will provide a summary of relevant backgrounds in modern migration theory and identify the main dynamics and intentions that influence labor market migration. In its second step this chapter will then apply this theory to the pre-enlargement situation of the European health worker market.

The second chapter of the report will be to outline the role of the European Union in the field of health worker migration and analyse the policy changes and their potential to influence and intensify inner-European migration of health professionals.

In its third chapter the study will analyse data of the actual outflow that could be observed in Central and Eastern European countries between 2004 and 2007 and compare the findings to the pre-enlargement survey by Voerk et al. (2004).

Finally, the report will discuss the outcome of its analysis and connect the outcomes to modern migration theory. In doing so, the report attempts to provide an outlook concerning future migration developments between the EU-15 and the newly admitted Central and Eastern European Member States.

2. Chapter I: Health Worker Migration – Theoretical Background

2.1. Introduction

In order to answer the research question and analyse the role of the European Union in shaping migration behaviour of health professionals it will be of importance to first understand the reasons and dynamics behind the international migration of people. To do so, the first chapter will start by giving a brief overview on modern migration theory by outlining its major influences. In a second step, this chapter will portray the European health labour market and explain the special sensitivity of health professional migration. At last, this chapter will combine these background information and apply modern migration theory to the market of European health professionals. In doing so, first conclusions can be drawn regarding the migration potential of health professionals in the moment of enlargement as well as regarding the influence by the European Union on migration factors.

2.2. Modern Migration Theory

In 1885 it was German-British cartographer Ernst Georg Ravenstein who formulated with his "Laws of Migration" what today is known as the beginning of modern migration theory. His so-called neo-classical approach bases on the dominance of economic motives as cause to migration, saying that no current of migration "can compare in volume with that which arises from the desire of inherent in most men to 'better' themselves in material respects" (Ravenstein, 1885). According to Ravenstein, the level of migration is determined by regional differences in economic factors (e.g. wage level) and the costs of movement. Hence, "migrants in a certain centre of absorption [...] will grow less [as distance from the centre increases]" (Ravenstien, 1885). Further, he was the first to conclude that migration is always "setting towards the direction of the centres [...] which absorb migrants" and that "each main current of migration is producing a counter-current" (Ravenstein, 1885).

The neo-classical approach remained the dominant approach to explain migration patterns until in 1962 Larry Sjaastadt introduced the so-called Human Capital Approach, moving Ravenstein's Laws from a macro to a new micro-dimension with the individual in the centre of observation. Migration, according to Sjaastadt (1962), should be treated as an individual investment decision calculated by expected costs

and returns of migrating. Contrary to Raventsteins' Laws, costs and returns in the Human Capital theory not only include monetary but also non-monetary (e.g. psychological) factors. Furthermore, each individual might react differently to potential costs and returns based on personal characteristics as age or gender (Sjaastadt, 1962).

Short time later, by combining both micro and macro approach, Everett Lee (1966) developed an approach that became generally known and widely used as the "Push and Pull model". In his work, Lee concluded that the wish to migrate bases on both unfavourable conditions in the country of origin (push) and external incentives by the country of destination (pull). However, the strength of these two factors is dependent on personal factors (e.g. knowledge about destination country, age, psychological aspects) and intervening obstacles (e.g. immigration policies, physical distance, family planning) (Lee, 1966).

These basic approaches on modelling modern migration have been further amended on several aspects, most notably by the theory of the *new economics of migration* (Stark, 1991) which argues on a meso-level that migration is the outcome of collective decision made by households (e.g. to increase the family income). Other notable theories include the network theory (Massey, 1990) which highlights the importance of social and ethnic networks (e.g. to reduce risks and costs of mobility, increase knowledge about the destination) and the *Harris-Todaro model* (Harris, Todaro, 1970) which concludes that migration decisions are based on perceived rather than on actual differences between the areas of origin and destination. Hence, the Todaro model can be used for example to explain the co-existance of migration to urban regions and high urban unemployment.

2.3. Migration of Health Professionals

According to the International Organisation of Migration (2000), international migrants are defined as people "who reside in countries other than those of their birth for more than one year". Only between 1975 and 2002 their number has more than doubled to a total number of an estimated 175 million people (2.9% of the world population). Although international migration is an existing phenomenon for centuries, the recent growth is seen to be a significant reflection of new dynamics in the movement of population (IOM, 2002). Some factors significantly accounting for this development are the establishment of free trade blocks, a reinforced service sector liberalization, greater information exchange and better transportation links (OECD, 2002; Stalker, 2000; Castles, 2000).

Next to these driving factors of international migration, health labour markets have grown quickly in many developed countries resulting from growing welfare states and the demographic change towards an ageing population. In 2002, with the exception of Sweden, all EU Member States have shown an increasing health service employment lead by Spain (5 %), Portugal (3.9%) and Germany (3.2%) (ILO, 2002). The increasing demand for health professionals in these countries has to a large extent been satisfied by recruiting health personnel from abroad to maintain the quality of health provision. Giving an example, in the UK the number of foreign-trained nurses exceeded the number of nurses trained

domestically in 2002. Further, the number of foreign nurses in the UK doubled only between 1999 and 2002 (Aiken et al., 2004).

As a result, countries with a lacking workforce as the United Kingdom who actively recruit health professionals from abroad contribute to severe health worker shortages in a number of developing countries in Sub-Saharan Africa or the island states of the Caribbean and Pacific. As one example, the country of Swaziland is annually loosing about 60-80 nurses to the United Kingdom while less than 90 nurses graduate from Swazi schools per year (WHO, 2007).

As shown by the example of Swaziland, "brain drain" marks an obvious downside of international migration that can jeopardize the health system stability in developing countries. In its 2004 resolution also the World Health Assembly was "recognising the importance of human resources in strengthening health systems […]" and "noting with concern that highly trained and skilled health personnel from developing countries continue to emigrate" (WHO, 2010). However, health worker migration cannot be described as a purely negative event and affects source and destination countries in very different ways.

Starting with the destination country, implications of health worker migration can indeed be very beneficial. Many countries use health worker migration as a so-called "quick fix" to overcome unanticipated staff shortages (OECD, 2010). As an example, without health worker migration it would have been unachievable for the UK government to increase its nurse workforce by 20,000 within only two years to reach its 2004 policy target (Bach, 2003). Furthermore, solving health worker shortages on domestic level would not lead to successful outcomes in the short run as it takes 3-5 years for training a nurse and even 15-20 years of training for an experienced senior physician (Buchan, 2008). Moreover, focusing on immigration carries the advantage of low training costs.

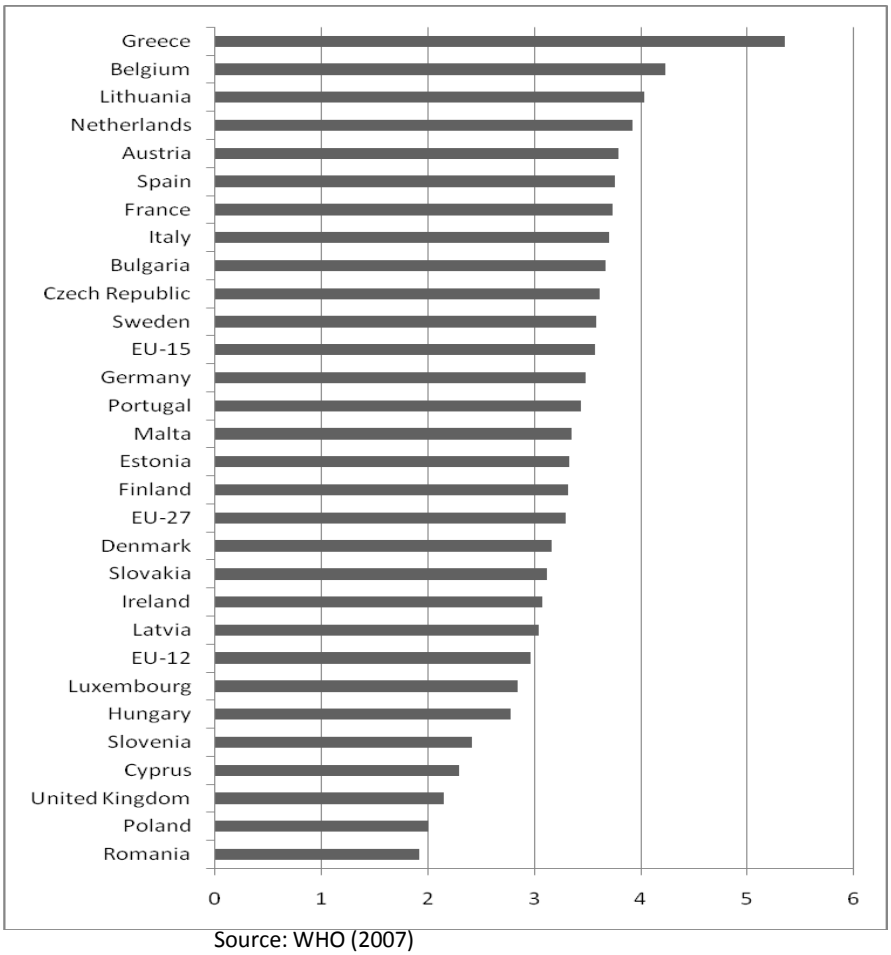
Also, for source countries health worker migration can show positive effects. First of all, migration can be a way to assist countries with an oversupply of health workers and therefore reduce unemployment in the health sector (Buchan, 2004). A number of countries as the Philippines or China even make use of the increasing demand for health workers by training nurses and doctors for export (OECD, 2010). Moreover, source countries benefit indirectly from remittances which highly contribute to the income of countries as India ($11.5) or Mexico ($6.5) (Bach, 2003). Further, migration contains the opportunity for individual health workers to improve their career opportunities and standard of living. In case health workers only migrate on a temporary basis, source countries further profit from the improved knowledge and skills which raise the quality of health provision once they return.

However, a study in the UK has shown that professional workers from less developed countries are relatively unlikely to leave the destination country after a few years of residence (Finlay, 2002). On the contrary, permanent migration characterises permanent losses of expertise that can result in reducing the health care quality of the source country. Furthermore, the source country is not only loosing expertise but also the money spent on training programmes and tax revenues from the respective earnings (Bach, 2003).

2.4. Structure of the European health workforce

Not only developing countries suffer from emigration of health personnel but also European countries loose health workers in high numbers due to migration (mostly to the United States). According to OECD (2010), the United Kingdom and Germany were ranked second and third of the biggest global suppliers of health personnel, following the Philippines. Hence, shortages of health workers in countries of Western Europe can partly be explained for the fact of high emigration rates. The high emigration of Western European health workers towards the USA can further assume an application of Ravensteins' law of "migration by stages" to the global health worker market with the USA as its centre and Western Europe being its immediate periphery. According to Ravenstein (1885), such a current of migration towards the centre of growth will most likely produce a counter-current, meaning migration from the second ring of the periphery to its first. Hence, the loss of health workers in Western Europe might lead to a compensating counter-stream of migration from its closest neighbors.

Figure 1: Density of Physicians in the European Union per 1000 Population, 2006



Source: WHO (2007)

When looking at the national density level of physicians in the above figure it becomes obvious that the supply of health care workers differs strongly among the EU MS. In 2006, Greece shows more than twice the density of physicians than Slovenia or Poland (WHO, 2007). Furthermore, with Slovakia, Latvia, Hungary, Slovenia, Cyprus, Poland and Romania seven out of the twelve new Member States since 2004 are part of the bottom ten which have the lowest physician density in the European Union. Overall, the newly admitted EU-12 with an average physician density per 1000 population of 2.97 perform obviously weaker than the EU-15 (3.57). However, the EU-15 are not forming a homogeneous block with especially the United Kingdom (2.15) far behind the EU average density. Further, also the density of Denmark, Ireland and Luxembourg is lower than the total EU average.

Looking at both the comparably low density of physicians in some Western European countries as well as the increasing health worker emigration from Western Europe, a strong current of health workers from the new CEEC's to the EU-15 seems one potential outcome of an enlarged European Union. However, as the theory shows migration is dependent on more than only the macro-economic environment (Human Capital Model, Harris-Todaro Model) which will make it important to now take a closer look on reasons to migrate for European health workers in order to forecast the potential of emigration.

2.5. Reasons to migrate for European Health Care Workers

In order to evaluate the reasons for health workers from the EU-8 to migrate westward, this section will apply the market of European health care workers to the "push and pull model" by Lee (1966).

The below table summarizes a number of relevant push and pull factors that characterize the labour market for health professionals (Buchan, 2002). As a mainly rational-choice driven approach the factors present a mirror image on issues as relative pay, employment and career prospects, working conditions as much as the economic and political environment (Buchan, 2002).

Table 1: Main push and pull factors for the international migration of health care workers

Push factors	Pull factors
Low income (absolute or relative)	Higher income
Poor working conditions	Better working conditions
Lack of resources to work efficiently	Better resources health system
Limited career/employment opportunities	Career/ employment opportunities
Limited educational opportunities	Provision of post-basic education
Impact of HIV/AIDS	Political Stability
Unstable work environment	Travel Opportunities
Economic instability	Opportunities for aid work

Source: Buchan, 2008

Looking at the economic performance of the EU-15 and the newly admitted CEEC's, it becomes visible that the new Member States perform significantly below the level of the EU-15. For instance, the income gap between the accession states and EU-15 was estimated to be around 60% before the enlargement (Buchan, 2008). Further, also the differences in wage levels for health care workers reveal a significant gap that cannot be bridged easily (Vujicic, 2004). Moreover, the gap in life-satisfaction could play an important role on the influence of push and pull factors. In a study on the perceived living conditions in an enlarged Europe (Delhey, 2004), satisfaction has proven to be higher in the EU-15 compared to the accession countries. While the average level of satisfaction in the EU-15 was measured with 80% the accession countries only reached 64%. Out of the new Member States only Cyprus, Malta and Slovenia ended above the overall EU-25 average of 77%. Most notably, old and new Member states differed in their satisfaction regarding their financial and employment situation as well as the health care system and personal safety (Delhey, 2004).

Concluding from the selected factors, the new Member States face a remarkable pressure by push and pull processes that could make it easy for EU-15 Member States to attract their health workers. Especially countries as Ireland and the UK which already massively recruit health workers abroad to tackle their chronic shortages could make use of their strong pull factors to attract health workers from economically weaker Member States. Hence, an eradication of major "intervening obstacles" (e.g. immigration policies) has the potential to cause a more disproportionate migration from EU-8 health workers to the West containing the danger of a more unintentional steering of health workers, steering them not to the place they are most needed but to the contrary letting them leave the most vulnerable Member States in terms of health care provision.

However, next to the push and pull factors there are a number of other factors that can facilitate or complicate the migration of health personnel and strongly impact the size of outflow. One of the modern migration theories that should be mentioned in this regard is the aforementioned network theory (Massey, 1990) as there are a number of existing migration networks within Europe that have grown historically. These networks can for instance be grown historically between European countries and their former colonies as they can be observed between Portugal and Angola or the Netherlands and Suriname. However, the network theory can also be used to explain explaining inner-European migration networks play an important role between countries that share similarities in culture and language (e.g. migration between Austria and Germany or Ireland and the UK). Taken these factors into account, migration of health workers might therefore be expected higher where old and new member states are linked by traditional historic or cultural networks as for instance Estonia and Finland or Hungary and Austria. Furthermore, these factors can also facilitate migration within the CEEC's as between Slovakia and the Czech Republic (Bach, 2003).

However, also well established migration paths between two countries with different cultural backgrounds will be likely to stimulate further migration. Applied to the European Union, the large communities of Polish migrants in Ireland and the UK might promote stronger bilateral migration using the social network channels. Supporting this theory, a study revealed that for the 1,500 nurses who arrived in the Netherlands from accession countries, personal reasons (including marriage) were most important (De Veer, 2004)

Moreover, intervening obstacles such as the perceived geographic distance and ease of travel can be seen to be an important argument for cross-border migration (Lee, 1966; Ravenstein, 1885). Here, the experience has shown inner-European health worker migration to be significantly stronger along border areas as between Belgium and the Netherlands or Germany and Austria (Buchan, 2004). Hence, once borders open for a free movement of people, the perceived geographic distance is likely to decrease significantly. Also, enhanced infrastructure and modern technology in transport and communication could decrease geographical distance and thereby facilitate migration.

However, there are other intervening obstacles that cannot be quickly overcome by the enlargement. Most notably language barriers might considerably lower the overall expectations for health worker migration in Europe as active communication is an integral part of most professions in the health care sectors (Bach, 2003). Hence, the multilingualism of the European Union might remain a factor to prevent circular migration across Member States and instead concentrate migration to bilateral patterns between countries of a shared historic and societal background.

2.6. Conclusion

All together, it can be said that relevant models of modern migration theory as Ravensteins' Laws, the push and pull model by Everett Lee as well as the Network Theory by Massen can be used to predict a certain potential for increasing migration of health professionals in the first years after the accession. This is mainly due to the high economic gaps between old and new Member States as well as decreasing geographic distance through improved infrastructure and transportation. Also, some social and traditional migration networks already exist between EU-15 and the EU-8. However, with remaining language barriers as well as missing networks and cultural ties between many European countries there are also obstacles that eventually can complicate the outflow of health professionals.

3. Chapter II: Influence of the European Union on Health Worker Migration

3.1. Introduction

Long it was generally believed that the European Union would have no influence when it comes to health politics, even less on the provision of health care services.

Indeed, at the European Union level social policies on health have only slightly developed. Although the EC agreement obliged the European Union to promote public health, explicit authority was only granted in few fields of health care protection (Gerlinger, 2006). Two important areas that were assigned to the European Union in this regard are consumer protection and work place safety where the EU is setting minimum standard. However, the role of the European Union in health is still shaped by its subsidiary nature and rather functioning as a complement to national health politics of its MS. This principle is enshrined in article 168 TFEU that strongly asserts: "*The Union shall fully respect Member States responsibilities for the definition of health policies and organizing, delivering health services and medical care."*

However, the power of the Member States in the field of health care appears limited only at first glance as the EU influence does not primarily root in article 168 TFEU. More importantly, the EU derives its influence from the common market and monetary union (EMU) providing the principle freedoms of movement that are broadly shaping the European health sector (Gerlinger and Schmucker, 2007).

In this light, the chapter will show in how far the European Union changed the pre-conditions to migration of health professionals and influenced the existing intervening obstacles on political level for health professionals in the newly admitted CEEC's.

3.2. Principle of Free Movement

When creating the common market in 1993, the European Union not only provided free movement for capital and goods but also for people and services (Gerlinger, 2006). Laid down by article 45 TFEU and further developed in regulation 1612/68, the principle of free movement became one of the fundamental freedoms of European Union Community law (Inoue, 2010). Moreover, the right for establishment (Article 49 TFEU) provides for the right to work as a self-employed person in another MS. These fundamental freedoms apply to the health care sector as they do to any other (Baeten and Jorens, 2006). Hence, health care workers have the right to work in every other MS as an employee. In several decisions, the European Court of Justice made clear that all MS must abide by these principles of free movement of goods, capital, services and persons when exercising their authority (Gerlinger and Schmucker, 2007).

The implementation of the single market principles are the task of the responsible authorities for economic affairs and the internal market on national and European level. Thus, the common market and the economic integration set a limit to the free action of national authorities in the field of health care policy (Gerlinger, 2006).

3.3. Mutual recognition of diplomas and certificates

In order to guarantee an effective functioning of the common market principles the EU Member States agreed on a mutual recognition of certificates and diplomas for health care professionals. Since 1975, the EU has prepared for a number of sectoral directives for health care workers such as doctors, nurses, midwives and pharmacists. These directives set binding minimum standards which were allowed to be raised on the national level. However, Member States were not allowed to use higher national standards to discriminate against health professionals from other countries who fulfill the minimum requirements (Gerlinger, 2007). As an example, the minimum standard for nurses consisted of a three years training including a minimum of 4,600 hours of practice (Gerlinger and Schmucker, 2007).

In 1989, this approach for mutual recognition shifted from “sectoral” directives for individual professions towards a more general framework of recognition with the adoption of the “general system” directive. In this directive it is only distinguished between a time of higher training of more than three years versus less than three years. This system underlies the assumption that qualifications are generally accepted by the Member States and otherwise calls for a case-by-case scrutiny (Nicholas, 2002). The directive covers only those professions which are recognized and regulated by the recipient country. If not recognized, it is up to the national authorities to evaluate the qualifications of applicants from another Member State and to decide on the eligibility to practice the occupation in the recipient country (Gerlinger, 2007).

This scheme got changed only in 2005 when the European Council re-regulated the system of recognition by introducing the principle of automatic recognition for all existing specialties. However, recognition for new occupational titles got linked to the so-called “two-fifth” regulation. For these titles recognition is only granted if it has been introduced in at least ten EU Member States. With this regulation the EU reached a compromise between the two previous systems combining sectoral and general approaches in a simpler and cheaper system that is also facilitating free movement of health care workers (Nicholas, 2002). Further, this system allows for poor countries to hinder emigration of national health professionals by simply inventing new occupational titles that were not recognized by other Member States (Gerlinger, 2007).

3.4. Other EU policies affecting health worker migration

Next to the aforementioned legislation, there is a number of further initiatives having the potential to influence the flows of health worker migration. For instance, during the accession process of 2004 the European Union supported candidate countries in restructuring their training programs for health professionals. Some of these initiatives have been financed by using EU funds. Also the EU funded programs to develop occupational skills in regional areas (Baeten and Jorens, 2006).

Another factor often neglected is the influence on migration exerted by the Bologna reform process (Buchan, 2008). Agreed in 1999, the Bologna reform not only contributes to an improved mutual recognition of diplomas, but also attracts students to migrate for better education opportunities to another Member State. Hence, temporary migration of students seeking better education can improve the health care expertise in the source country when students return to work.

3.5. Restrictions of Free Movement

Until 2004, migration of health care workers within the European Union was hardly visible and mostly took place between countries that share the same language as the UK and Ireland (Buchan, 2006). This was due mostly to the absence of push and pull factors in Western Europe as a result of strong economic homogeneity (Aiken, 2004) as much as similarities in wage levels, working conditions and career opportunities (Buchan and Rafferty, 2004). Further, cultural barriers and missing language skills are factors to lower migration. However, this all changed with the accession of ten new member states in May 2004 when the gap widened between rich and poor Member States.

Due to the large economic differences between the EU-15 and EU-8 resulting in strong push- and pull factors, political authorities expected a mass emigration in the accession countries (Gerlinger, 2006). As a first reaction, many countries were immediately restricting the unlimited free movement for employees from the new accession countries for concerns that the job markets were not ready to handle large flows of immigrating health workers (ECB, 2006).

Although the freedom of movement stays as a fundamental right which is guaranteed to all EU citizens who wish to work and live in another Member State, a seven year transition period is imposed before all Member States must fully open their labour market to workers from the accession countries. The transition period is generally justified to avoid adverse and sudden flows of migration with a negative impact on individual economies. The overall transition period of seven years is broken down into three sub-periods of a so-called 2+3+2 system.

In the case of the 2004 enlargement, the first two-year period ends with the 30th of April in 2006. For this period, almost all EU-15 countries simply kept their immigration policies for health care professionals from the EU-8 (excluding only Cyprus and Malta from restrictions). The only exceptions were made by Sweden, opting for a free and unlimited market opening, as well as Ireland and the United Kingdom. However, the two latter tightened their conditions for accessing their national security benefit system (ECB, 2006).

At the end of the first deadline, a number of Member States (Finland, Portugal, Spain and Greece) decided to lift their restrictions, while others decided to lower them continuously until the end of the second period in 2009. The only two EU-15 MS fully keeping their restrictions were Austria and Germany. As both, Austria and Germany are directly neighboring some of the EU-8 countries, they were projected to be most vulnerable to strong immigration flows from new Member States.

According to the ECB (2006), the extensive utilizing of the transition period by the EU-15 has effectively restricted the migration of health care professionals inside the European Union. Further, it is claimed that the temporary restrictions delay and thereby possibly distort labor market adjustments (ECB, 2006).

Finally, at latest in 2011 the EU-15 will be required to give up all restrictions and fully open their labour markets to a full application of the principles of free movement. However, some market restrictions still remain to be present as for instance the lack of transparency of job openings, the full recognition of qualifications or the portability of pension rights (ECB, 2006). These restrictions have yet to be addressed by the European Union in order to guarantee the full implementation of free movement.

3.6. Conclusion

Despite article 168 TFEU strongly confirming the organisation of health care to be a Member State responsibility, the health workforce management has become increasingly influenced through EU legislation over the past decades. However, the influence does not derive from EU competences on health care but also indirectly through legislation on developing the common market principles. Here, especially directives on professional qualifications and the fundamental principles softened the national authority for managing health worker migration.

Due to the low level of health worker migration among the EU-15, this lacking national authority in human resource management has been only recently given prominence in light of the 2004 enlargement. Fearing the risks of massive migration flows between EU-8 and EU-15, countries in both blocks opted for transition arrangements to prevent strong adverse flows of health workers. Given the fact that the stage of movement restrictions in the transition period vary strongly among Member States, it will make it challenging to prediction of future health worker migration. Especially long transition periods have the potential to show a variety of outcomes and will be hard to predict. For instance, long transition periods could prevent migration by lowering push and pull factors in the meantime or shifting migration towards other countries but also lead to a delay of migration flows which might occur even stronger than anticipated before starting transitional arrangements.

4. Chapter III: Analysis

4.1. Introduction

After looking at the changes to migration opportunities between new and old Member States after the accession in 2004, this chapter will look at the prediction and actual numbers of outflow for the years of an enlarged European Union. Doing so, the chapter will first look at the pre-enlargement expectations before outlining the procedure and results of analyzing the outflow from selected Central and Eastern European Member States between 2004 and 2007. At last, the chapter will draw conclusions from the retrieved data and give an overview of factors that could have influenced the outcome.

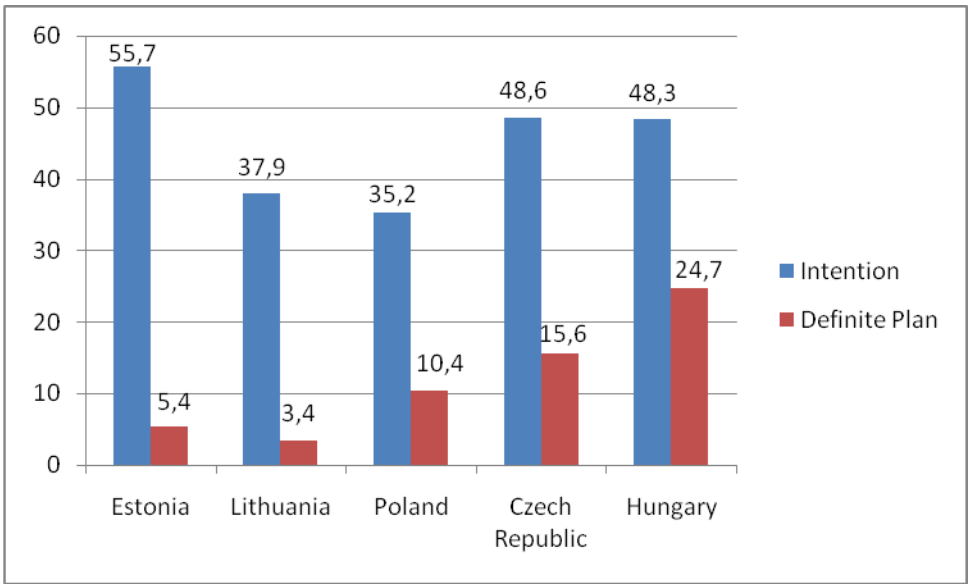
4.2. Pre-enlargement expectations

Given the complexity of health worker migration, the accession states of 2004 faced a great challenge to predict the impact of joining the European Union for their health work force. To achieve a better understanding regarding the likability of a massive health worker migration, national governments supported the idea to conduct a survey among the national health professionals and question them about their intentions to leave after their country joins the EU.

The questionnaire used for the survey got developed by the Ministry of Labour and Solidarity of France (Borzeda et al. 2002). All together, the survey was conducted prior to the enlargement in five EU-8 countries (Poland, Lithuania, Czech Republic, Hungary and Estonia). In order to review the future intentions, the population was dived into health care workers and medical resident students. For both groups representative samples were drawn on based of a random selection from statistical databases. In order to survey the groups, two different methods were used. While the students were surveyed using an interview method, the employees were questioned via mail, expecting a 50% response rate (Borzeda et al. 2002).

Further, logistic regression was used for estimating possible risk factors. Hence, a number of independent variables were used including age, gender, language skills, marital status and having friends abroad (Gaizauskiene, 2003).

Figure 2: Ratio of health care workers wishing to work abroad



Source: Bourzeda et al (2002); Gaizauskiene et al. (2003); Praxis (2004)

Table 1 shows the outcome of this survey with regards to the overall ratio of health care workers wishing to leave the country in order to work abroad. Obviously, in all accession countries a large proportion of health workers considers working abroad, ranging between 37.9% (Lithuania) and 55.7% (Estonia). However, the ratio of health care worker with definite plans to move is far lower than the ratio of those only intending to migrate. Further, the ratio of health care workers with definite migration plans varies strongly among the CEEC's. In this regard, Hungary more than doubles the ratio for Poland and exceeds Lithuania sevenfold. Further, the largest gap between intended and definite planning can be observed in Estonia where the ratio for intended migration appears eleven times higher than for definite planning. Compared to this, in Hungary the ratio of people intending not even doubles the ratio for definite plans.

Looking at this figure, most evident of all results drawn from the outcome is a high level of uncertainty for all accession states when predicting future emigration. This is true, because definite intentions of migration are not guaranteed to become reality and people might never migrate. On the other hand, people without intentions at the time of the survey might still do so for unexpected developments (Voerk et al. 2004). In this regard, an unexpected event could for instance be the active recruitment of health care workers by other Member States.

In general however, opinion surveys tend to overestimate actual migration (Krieger, 2004). Hence, it cannot be said to what extent people will move abroad when joining the EU. In their analysis, Voerk et

al. (2004) assume that health care professionals with a definite plan will most probably leave and further assume that potentially over half of all health workers intending to leave might migrate in the end. However, they also conclude the there is no “good grounding to conclude anything on the emigration of people without definite plans”.

Concluding, at least a high level of potential migration can be observed as a large percentage of the population considers emigration as a possible option. Further, up to one quartile of the respondents (Hungary) reveal definite plans for working abroad which can be seen as an alarming sign for strong future outflows of health workers from CEEC’s. Further, the existent intentions of many health workers also show the high sensitivity of health worker populations in CEEC’s for active recruitment from the EU-15 (Voerk et al. 2004).

4.3. Analysis

4.3.1. Operationalisation

The research question contains two main variables. First, an independent variable (X) can be identified as: *European Union accession (discussed in chapter II)*
This variable is defined as the change in emigration opportunities for health care professionals in the new Member States resulting from the effect of European Union legislation. The moment when EU legislation was applied to citizens of the new Member States is marked by 01 May 2004 when ten more countries officially became part of the European single market. The units of observation for this variable are the European Union legislation which influence the movement of people and services and thereby facilitate or impede migration of health personnel, including also national policies that restrict or exceed the European legislation during the transition period.

The dependent variable (Y) will be defined as the *outflow of health care workers from the Central and Eastern European Member States.*
The indicator used for measuring the dependent variable will be the number of granted certificates of conformity. These certificates are obligatory to be obtained by health care professionals who seek work in another European Union member state. The certificates are issued by national health authorities in each member state and thereby provide for comparable sets of data. Problematically, the number of certificates does not fully indicate the exact outflow but show a strong intention to migrate. However, as data availability does not allow for another way of measurement, a number of risks to validity have to be taken into account which will be outlined as part of this chapter.

4.3.2. Analytical Framework

After reviewing the outcome of the pre-enlargement survey the data can be compared to the actual outflow of the years between 2004 and 2007. In doing so, it can be shown whether the predictions made by the survey have proven true for the first years after accession. In order to compare the survey outcome to the outflow the following method will be used to compute the real emigration ratio:

At first, data will be collected from national health authorities in Central and Eastern European countries that show the total annual number of certificates that were issued to employees in the health care sector wishing to work in another EU Member State. Before starting the analysis, the number of certificates will be summed up for the time between the 01.05.2004 (day of accession) and the 31.12.2007. In order to make the data comparable to the predicted outcome by the pre-enlargement survey, we have to compute the ratio of health care workers leaving. This will be done by dividing the outflow (number of certificates) by the total registered health workforce between 01.05.2004 and 31.12.2007. The health workforce will be the sum of outflow and national workforce at the end of 2007. Taking the percentage for the result will show the ratio of health workers emigrating from the date of accession until the end of 2007.

In short the ratio of health worker migration can be expressed in the following equation:

$$Oratio_{ij} \equiv \frac{Ototal_{ij}}{P_j + Ototal_{ij}} * 100$$

Where: $Oratio_{ij}$ = the ratio of health worker outflow between year i and year j

$Ototal_{ij}$ = the total health worker outflow between year i and year j

P_j = the total national health worker population at the end of year j

4.3.3. Data Collection

The data collection on this subject appears to be challenging as a result of missing monitoring mechanisms of health worker migration on the European level. Moreover, only a few countries set up national databases in order to measure the emigration level. In Estonia and Hungary governments established a Health Care Board which is given the authority to collect data from certificates of conformity that were issued to its citizens.

However, low data collection by national authorities and the strongly limited number of reliable and consistent data can be viewed as a major problem for studying the flows of health worker migration. Further, there is little standardisation of migration-related documentation which makes it very difficult comparing the levels of migration between countries (Auriol & Sexton, 2001). Having said this, the OECD (2006) concluded it to be impossible to picture the movement trends of doctors, nurses and other health workers or to assess the balance between temporary and permanent migrants. However, what

remains possible is to illustrate country-level examples on the in- or outflow of health professionals which illuminates the dynamics of international recruitment and migration (Buchan, 2006)

The data that are used by this research were directly retrieved from the national authorities in Poland, Estonia and Hungary. As those authorities are the primary source, the data will deliver a high level reliability. The indicator will be the number of certificates issued from the 01 May 2004 until the 31.12.2007. These data will be set into the overall national population of health care workers which can be retrieved from Eurostat. These data will be compared with the prediction made by the survey of Voerk et al. (2004) conducted in five countries of the EU-8.

4.3.4. Case Selection

Due to the fact that not all 2004 accession states collect data over the certificates issued to emigrants, the analysis can only take into account those countries which provide data that are complete and comparable. Due to this fact, the study cannot analyse the situation of all new accession countries and has to reduce its scope down to a case study comparing three of the newly admitted EU Member States, namely Estonia, Hungary and Poland.

Analysing three of the accession states that entered the EU in 2004 will represent 37% of all Central and Eastern European Countries as well as 68% of the CEEC's population. Further, all three countries have been subject to the survey conducted Voerk et al. (2004) and can therefore also be compared regarding their pre-accession expectations. As the countries which are not considered by the research paper (Lithuania, Latvia, Czech Republic, Slovakia and Slovenia) show similarities in their economic performance and health care structure, the reduction to three countries may still allow for drawing conclusion on an overall migration pattern for the accession states of 2004. In Geographical terms the study further considers Estonia as a representative for the Baltic Countries which do not share a common border with any of the EU-15.

4.3.5. Data Validity

In his policy analysis, James Buchan (2006) outlined that registration data on health worker migration can never give a complete and accurate picture but the trend. Due to this fact, measuring the trend is accompanied by a number of risks to the outcome validity that need to be taken into account when analysing the results. In this light, the following section will briefly give note to factors which may influence the validity of this study.

As mentioned earlier, the indicator for this research study will be the certificates of conformity as issued by the national authorities. However, this indicator carries the risk to insufficiently describe the overall unit of analysis *health worker emigration*. The failure to describe the analysed construct poses a threat to the validity of the research outcome. In fact, for a number of reasons the issued certificate failures to perfectly indicate the number of emigrating health care workers. First, the obtaining of a certificate of conformity only signalises an intention and therefore people who hold a certificate may still decide not

to leave the country. Furthermore, health care workers can emigrate without applying for a certificate in case they do not work in their profession abroad. For instance, doctors working as taxi drivers and immigrant nurses working as care assistants will not be recognised when looking at the certificate number (Buchan, 2006).

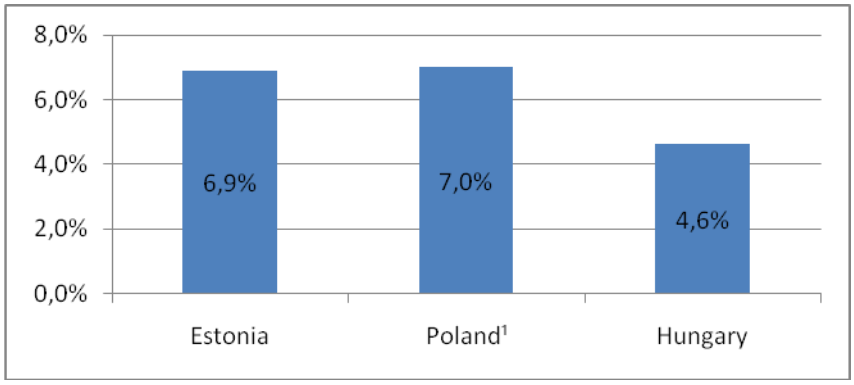
A problem to the internal validity of this research could be the factor of History. Given the fact that the survey we compare our data with has been conducted prior to the enlargement while the certificates have been issued after the enlargement leaves room to disruptions through historic events. These events could be for instance a massive promotion by recruitment agencies from EU-15 countries which could considerably increase the number of emigrants. On the other side, political decisions to increase wages or working conditions in CEEC's for health workers might cause just the opposite. Another historic event which might influence future emigration could be seen in the financial, economic and monetary crisis of the European Union Member States starting in 2008.

A factor threatening the external validity could arise with the selection of three countries as representatives for the EU-8 block of states. As outlined before, the CEEC's are similar in their economic profile as they all were classified as transition economies when joining the European Union (IMF, 2004). Furthermore, they share a similar history and cultural background. However, still there also are differences which need to be taken into account when generalising results to the EU-8 block. First, as outlined in the theoretical part historic ties with other Member States can heavily influence migration patterns. For instance, Estonia characterises a strong relationship with Finland. As found out by the pre-enlargement survey, more than 60% of all health workers who intended to leave Estonia were indicating Finland as their desired destination (Voerk et al. 2004). However, not only Estonia has a strong relationship with EU-15 Member States but also Hungary (with Austria, Germany) and Poland (with Germany, UK, Ireland). As other EU-8 countries might miss strong ties with EU-15 MS their emigration may be lower as health workers do not feel strongly attracted by a specific labour market. However, the specific societal features of a country have the power to lower the external validity of the outcome.

4.4. Results

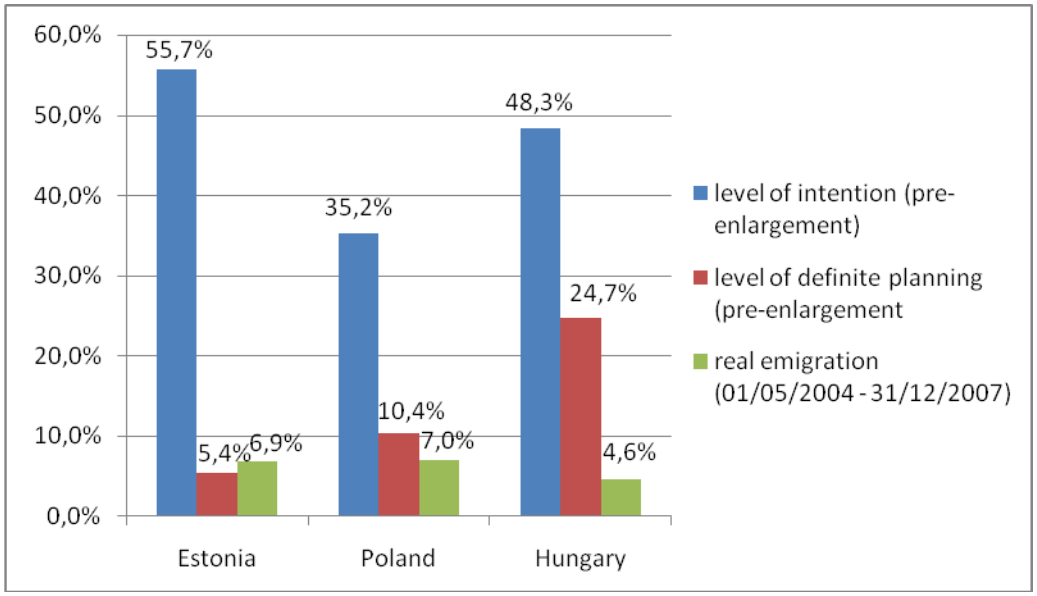
When calculating the post-enlargement outflow ratio for health workers leaving the selected countries until the end of 2007, the following table shows the respective results for each of the new MS.

Figure 3: Ratio of health care workers emigrating between 01/05/2004 and 31/12/2007



Looking at the figures it first of all can be observed that in none of the new Member States the ratio for emigrating health workers exceeds the level of ten percent. The highest relative number of emigrating health care workers can be found in Poland (7%) directly followed by Estonia (6.9%). In Comparison, the health worker outflow in Hungary appears to be on an even more moderate level (4,6%).

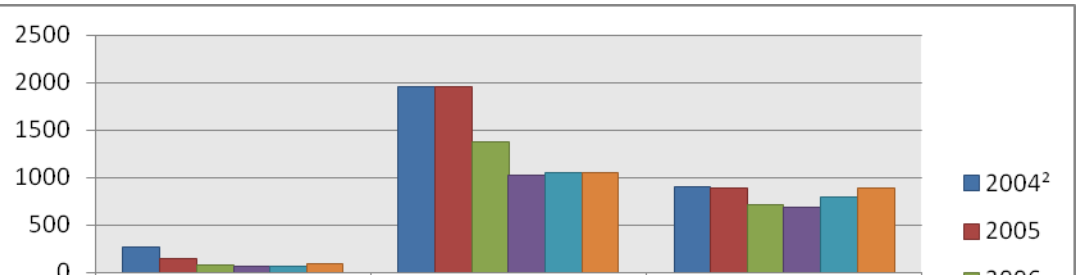
Figure 4: Pre-enlargement ratio of health care workers wishing to worker abroad compared to post-enlargement emigration of physicians in selected countries between 01/05/2004 and 31/12/2007



Source: Voerk et al. (2004)

When comparing the data to the survey conducted by Voerk et al. (2004), it becomes obvious that the real emigration of health care workers appears to be far below the measured level of intention prior to the 2004 enlargement. Moreover, only in Estonia, the level of real emigration outflow exceeds the level of definite planning. Most dramatic is the difference in Hungary where not even 20 percent of the people with definite plans migrated until the end of 2007. All together, it can be said that in all three countries the actual outflow until 2007 turns out to be far below the predicted level from the survey outcome.

Figure 5: Total annual outflow of Physicians between 2004 and 2009



	Estonia	Poland[1]	Hungary
2004[2]	276	1961,5	906
2005	155	1961,5	889
2006	86	1382	721
2007	63	1029	695
2008	70	1051	803
2009	91	1051	887

The previous figures both clearly showed that the emigration of health care workers has been far behind the pre-enlargement expectations. In this regard, figure 6 indicates an interesting trend when looking at the development in the total outflow of health workers between 2004 and 2009. Here, it can be seen that for all three countries the highest annual outflow was the first year after joining the European Union. From the start the outflow was constantly decreasing every year hitting its lowest point by year 2007. After 2007, in all three countries the level of emigration was again increasing. While the annual outflow in Estonia and Poland is still far from the level of 2004, the total emigration from Hungary almost reached again the level of 2004.

Figure 6: Relative Health Care Worker Outflow by profession between 2004 and 2009 - Estonia

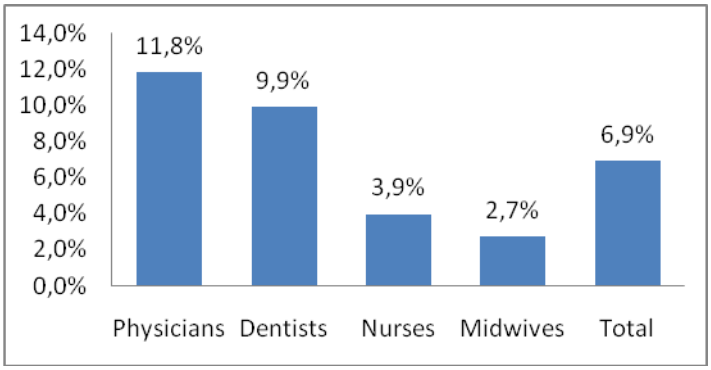


Figure 7: Relative Health Care Worker Outflow by profession between 2004 and 2009 - Hungary

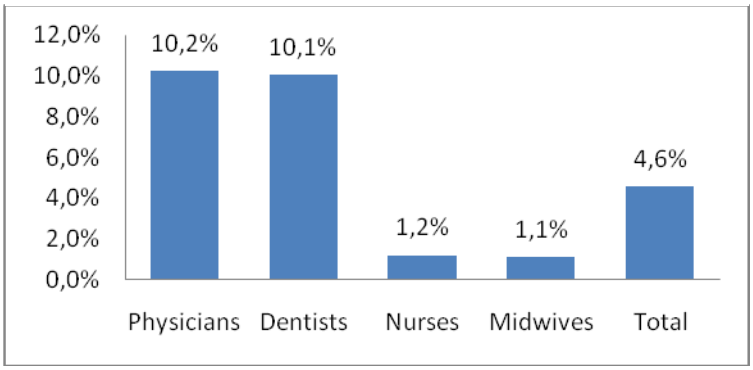


Figure 7 and 8 divide the relative outflow of health care workers in Hungary and Estonia into the major professions of health care workers. Looking at these figures, we can observe in both countries that the health worker emigration of the recent 5 years mostly affected physicians and dentists while nurses and midwives only account for a minor part of the migrant population. As a result, the ratio of physicians and dentists is also by far exceeding the total ratio of national emigration.

Figure 8: Total Health Care Worker Outflow by profession between 2004 and 2009 - Estonia

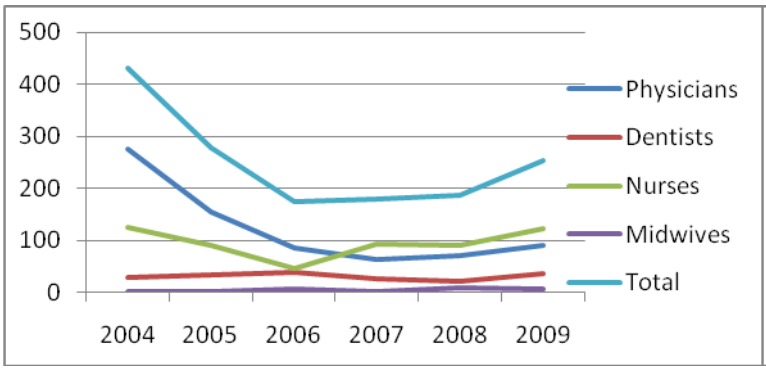
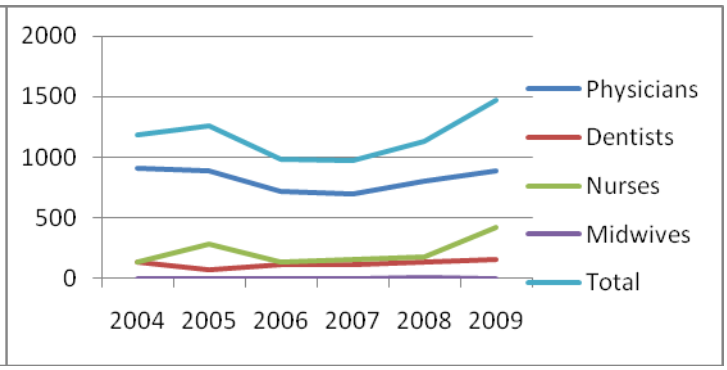


Figure 9: Total Health Care Worker Outflow by profession between 2004 and 2009 - Hungary



However, before arguing about the irrelevance of nurse and midwive migration for the emigration ratio of the entire health workforce, figures 9 and 10 illustrate another notable recent trend in the population pattern of healt care migrants. In both Estonia and Hungary we can observe that after hitting the lowest point of migration in 2006 the following increase appears to be especially growing number of nurses moving abroad. In Estonia nurses already account for the largest number of migrants and in Hungary the number of emigrating nurses had its strongest growth in 20009. Hence, although the relative migration of nurses in Estonia and Hungary is rather low, recent developments indicate a change towards stonger future outflows of nurses.

4.5. Conclusion

The result of the outcome made obvious that the real outflow of health workers from Central and Eastern European countries was much lower than predicted by pre-enlargement surveys. In this light, this part of the report give possible explanations for the failure of the survey to accurately describe the dimension of health worker migration and reveal possible factors influencing the results measured by the conducted survey.

As outlined in chapter three, one important factor that strongly influences the emigration rate of health staff is the political decision making by national governments for the support or prevention of massive migration flows. Most notable in this regard is the transition period which Member States can use to restrict the free movement of persons for the first seven years after the enlargement in order to apply their national policy on labour from EU-8 (ECB, 2006). In 2004, almost all EU-15 Member States opted for this period and kept their national labour market closed for workers from the accession countries, exception only being made by Sweden, Ireland and the UK. With these restrictions, the transitional arrangement hindered migration between Member States. Further, Germany and Austria, both predicted to receive a high share of health care migrants, kept their restrictions until the end of 2009. In doing so, they strongly limited the access to the labour markets of two major destination countries.

Other possible political factors that could have lowered the plans of moving and working abroad include the recognition of certificates (e.g. differing occupational titles in EU-8), administrative barriers or the limited portability of pension rights (ECB, 2006). As all these obstacles might have not been taken into consideration by the survey respondents, they could have kept health care workers from following their intentions to migrate.

As one dominant migration theory, the process of push and pull factors as described by Lee can also be used as a ground to explain the analysis outcome of this study. According to this theory, the flows of migration are mainly determinate by economic factors. When applying the theory to European health worker migration in Chapter two, the model underlined the predictions of a high emigration by arguing on the economic gaps dividing Europe along the borders of enlargement. Concluding from this model, the low migration must be due to changes of the economic conditions.

The dominant factor in this regard is the wage level which has been indicated as the main reason for emigration in all CEEC's according to the pre-enlargement study by Voerk et al. (2004). In fact, all three countries that were analyzed also increased their wages for health care workers since the survey was conducted. Table 1 shows the wage increase in Estonia between 2003 and 2007 to be more than 100% for doctors (109.5%) as well as for nurses and midwives (101.2%). Given this extreme growth, the increase in wages can be seen to be a contributing explanation for the low emigration from CEEC's.

Table 2: Increase of health worker wages (in Euros per hour) in Estonia between 2002 and 2007

	2002	2007	Increase
Doctor	3,88 €	7,87 €	109,5%
Nurses and Midwives	1,85 €	3,68 €	101,2%

However, in 2004 the compared wage level of Finland exceeded the Estonian wages by more than four times and therefore remains considerably higher even though the Estonian government increased its pay. On the other hand, Voerk et al. (2004) concluded from their survey results that "it appears that the wage level is such that some changes in it should change also migration intentions". In this light, the increased wages might have indeed contributed to an outflow lower than expected.

Another factor that needs to be taken into account when it comes to migration intentions is the overall life satisfaction of the citizens in the prospected source country. An increased satisfaction with the overall living conditions could further explain why people prefer to stay and do not move abroad. In order to measure the change in satisfaction the European Foundation for the Improvement of Living and Working Conditions (Eurofound) conducted a survey in 2003 and 2007 in which they asked citizens in all EU Member States to rank their life satisfaction on a scale from 1 to 10. As a result of this survey, life satisfaction in Estonia (from 5.9 to 6.7) and Poland (6.2/6.9) improved over the time. On the other hand, in Hungary (5.9/5.6) it even slightly worsened (Eurofound, 2003; 2007). Hence, the factor "life satisfaction" might serve partly for a lower emigration in Poland and Estonia but fails to explain the situation in Hungary.

Further, the low migration seems to be linked to cultural barriers and the unfamiliarity with the language spoken in possible destination countries. For instance, 60% of all Estonians intending to migrate abroad were indicating Finland as their desired target. Hence, despite high wages and immediately opened borders, Finish neighbour Sweden struggled to attract health workers from Estonia resulting from weak societal connections.

However, all together it needs to be said that the complexity and individual nature of migration makes it impossible to fully explain why the actual outflow turned out to be so far below the anticipated level. Despite, all abovementioned explanations can be considered as roll playing factors for the individual decision making process as they all are of potential influence for a person's decision to move and in the end contribute to a shifting pattern of health worker emigration.

5. Discussion

5.1. Theoretical Relevance of the Study

As the analysis has shown, the level of migration outflow stood far behind expectations by the pre-enlargement survey among health care workers. Although some of the EU-15 countries with high demands for health workers were opening their borders immediately after the enlargement, migration remained on a low level. Also, strong push and pull factors and decreased geographic distances could not translate into a high outflow from new to old Member States.

Bearing these findings in mind, it appears that the "laws of migration" as formulated by Ravenstein, although well explaining the pre-enlargement survey, fail to deliver explanations for the low actual outflow of health workers. Hence, factors other than economic ones might have influenced migration decisions stronger than it was believed. Some of these additional factors are addressed by the Human Captial Approach by Sjaastadt as well as the "intervening obstacles" formulated by Everett Lee.

Of Lee's intervening obstacles, especially the barrier of language skills as an essential requirement for most health occupations could be part of an explanation to the low outflow. Also, political barriers during the transition period could have reduced the migration (for instance to Germany or Austria).

As outlined by the Human Capital theory also psychological reasons can considerably lower migration rates. These psychological reasons might have not been taken into account by health professionals when surveyed before the enlargement but might increase in importance in a later phase of the individual decision making. For instance, potential migrants might have not been aware of the costs for loosing social relationships as well as their status and responsibility within the community when interviewed during the survey. Furthermore, also the perception of improving circumstances in their own country seems a possible explanation. As wages and life satisfaction are on the rise, these perceptions might as well play an important role.

All together, it can be said that a mere concentration on economic factors as a confrontation of push and pull factors or a mere application of Ravensteins' Laws seems to be an insufficient approach for predictions on migration of health care workers in a complex international environment such as the European Union. The low migration rates after the enlargement can therefore be seen as a good indicator for the importance to stronger consider additional factors such as psychological and language barriers and use more complex approaches for predicting international migration currents.

5.2. Practical Relevance of the Study

Due to the comparatively low outflow of health professionals, negative implications on the health systems in the EU-8 countries are also felt less strong than it was predicted.

However, the results of the analysis for the level of migration between 2007 and 2009 show a trend of increasing numbers of health care workers emigrating from EU-8 countries. Given the soon elapsing transitional period and an ongoing recruitment by EU-15 MS, this trend might further intensify and create an enormous future challenge for human resource management in Central and Eastern Europe. Especially when looking at countries (UK, Ireland, Sweden) which already fully opened borders in 2004 the potential of future migration becomes evident. In Ireland, the number of EU-8 nationals employed in the health sector rose from 700 in September 2004 up to 1300 in September 2005. As another example, in Sweden doctors immigrating from EU-8 more than doubled from 230 up to 720 only in the first year after accession (WHO, 2006).

Hence, to overcome labour shortages in the health sector, recruitment from CEEC's appears to be an attractive option for countries as Sweden or Ireland. However, with many Western European countries facing an ageing workforce and growing health care systems, shortages in the workforce are likely to appear stronger in the future which could further increase the demand for health care immigrants.

Another future challenge deriving from migration is the age distribution of health worker emigrants. As migrants generally tend to be of young age (Raymer & Rogers, 2006) the emigration of young graduates will also affect the ageing process of health workforces in CEEC's. Reminding of the young Estonian Inna Lupina who moved to Finland right after graduation, illustrates that even low emigration rates can potentially threat the health care system of the source countries where effects will become visible in the future. Interviewed by the Baltic Times (2006), Ullar Kaljumae, head of the Estonia Health Care Board, worried not only about the number of emigrants but also about the future health quality in Estonia as "it's the doctors with above average skills who are more likely to migrate".

As the only solution to overcome the dilemma, Kaljumae points the narrowing of gaps in working conditions and salaries that can only be changed by giving health policy a higher priority on the Estonian policy agenda. All together, even though increasing wages and improving job security show a positive direction, resources in the CEEC's remain far below the budget of the EU-15 which makes it very hard to compete with the Member States to the West and North.

Hence, it can be said that fears of massive migration flows due to the EU enlargement cannot be identified as being wrong or gratuitous. The observed increasing outflow in recent years even supports the existent threat posed by emigration on the quality and stability of health care systems in the Central and Eastern European Member States.

6. Conclusion

Concluding, the research question can be answered by saying that the outflow of health care professionals from newly admitted Central and Eastern European Member States between 2004 and 2007 turned out to be considerably lower than suggested by the pre-enlargement survey.

However, the study reveals not only the actual outflow to be lower than predicted. Rather, the study shows the complex nature of migration dynamics and the difficulty to forecast future events of migration. Here, one of the biggest challenges seems to be that factors accounting for migration cannot be viewed individually as measurable constants but rather as an interacting whole.

Therefore, even surveys as the one conducted prior to the enlargement, might fail to give an accurate prediction as respondents themselves are not aware of the complexity in their own decision making. Also, respondents might be unaware of external factors (e.g. language requirements, transportation costs) as well as their personal values (e.g. valuation of social environment).

In this regard, especially the neo-classical approach to only focus on economic variables seems to fail in describing migration currents in more complex environments where different political authorities and diversity in societal features play a more important role. Hence, an area with a high level of heterogeneity as the European Union requires a more diversified approach to describe future events of migration. Having said this, surveys as the one conducted prior to the enlargement must stronger take into account their own abilities to accurately reflect on complex constructs as international migration.

The complexity in international migration further poses a challenge to the generalisation of the analysis. The observed outflow might not sustain in the long run due to delaying factors (e.g. transition period, individual preparation phase) and migration dynamics (e.g. building of international networks) which suggest increasing inner-European migration in the future. Therefore, the analysis only has limited potential for predicting future migration currents on the European health worker market. Furthermore, the generalisation potential to other occupational groups is also limited due to differing emphases on individual factors such as the importance of language skills, active recruitment by the destination country or the perceived responsibility within a community.

All together, the study reveals important challenges to accurately predict migration flows in an international and intercultural context on a macro-level. Most notably, the inclusion of factors other than economic ones and the careful consideration of migration dynamics can be identified as key elements in describing patterns of migration in the European Union.

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