Introduction

The European Commission has estimated that by 2020 there will be a Europe-wide shortage of between one and two million health workers; the prognosis for nurses was a shortfall of 600,000 within a decade, and 230,000 for doctors (European Health Forum Gastein (EHFG), 2011). In the core economies of the European Union (EU) this problem has been addressed, in part, by the recruitment of health workers from elsewhere in Europe and beyond. However, the increased mobility of health workers, fac

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ilitated by the enlargement of the EU in 2004 and 2007, is having markedly uneven effects. Whereas in 2011 the number of foreign doctors working in the United Kingdom and Belgium was 43 per cent and 25 per cent respectively, at the other end of the spectrum, Hungary and Poland had a dramatically lower number of immigrant doctors (5 per cent and 3 per cent respectively) (EHFG, 2011). Increased mobility is therefore further promoting disparities in the distribution of health care workers, both between and within core EU economies and New Member States (NMS).

The global migration of health workers from low- to high-income economies from the end of the Second World War onwards is a well-documented phenomenon (Bach, 2010; Connell, 2012; Valiani, 2012; Yeates, 2009). In particular this has been understood through the lens of global care chains (Ehrenreich and Hochschild, 2003; Hochschild, 2000; Yeates, 2005, 2009), which have been used to link the structural and personal dimensions of feminised migration. The criticism that this approach lacks spatiality and is overly focused on domestic workers (Walton-Roberts, 2012) has been partly addressed by an extension of the discussion to the care sector, and nurses in particular, in institutionalised sites of care from a global commodity chains perspective (Yeates, 2012).

The main aim of this article is to examine the mobility of health workers in an enlarged Europe and the scalar transformation of the sector. The study focuses primarily on two broad categories each of which is governed by a different set of dynamics; doctors (highly skilled workers) and nurses (skilled workers). The conceptual contribution of this article, in contrast to those perspectives that analyse migration in terms of ‘chains’ or bilateral relationships across space, lies in positing an open political-economy approach (McKinnon, 2011) to provide a more complex and fine-grained picture of the inter- and intra-economy drivers and impacts of labour mobility. Emerging from a broad Marxist project that uncovers the social production of space under capitalism (Harvey, 2006 [1982]; Herod, 2011), this approach views the social construction of scales as material entities (McKinnon, 2011). Moreover, the non-essentialism of the approach lies in the assumption that the material underpinning of scale, the politics and institutions of scale and agency of workers are mutually constitutive.

The argument advanced is that the materiality of neoliberalism, in its concrete manifestation of marketisation, is driving the scalar transformation of health care in the EU. Further, it is argued that this rescaling of the governance of health care is forging new intra-state spaces, which shape the movement of labour and produce complex new scales of health workers’ mobility. While an analysis of these spatial dynamics is the salient focus, in addition the article explores how far these processes are driven by and exacerbate uneven development between and within EU economies (Perrons, 2009) and the extent to which processes of downward cumulative causation (Massey, 1990; Myrdal, 1957; Williams, 2009) in the regions and localities of sender countries are set in motion.

The conceptual framework is translated into a taxonomy that draws on three strands. First, combined and uneven development points to the significant economic variation between established EU states and NMS, differences between NMS and regional differences within them. Second, scale-shaping politics and institutions are critical in understanding the governance of migration processes in terms of tensions between national and supranational levels and the unintended outcomes for regions. Third, rather than viewing workers as passive pawns of wider economic and political imperatives, their individual and collective agency is central to elaborating a non-deterministic account.

The research draws on primary data that comprise EU-wide questionnaires and interviews. In the case studies of two NMS sender countries – Poland and Romania – multiple interviews were conducted at both national and regional level in order to more thoroughly interrogate inter- and intra-country mobility.

The structure of the article is as follows; the next section elaborates an open political-economy approach and the taxonomy that is used to inform the analysis of the data is discussed through the dimensions of the structural unevenness, formal and informal institutions and the individual and collective agency of workers; the third section discusses definitional problems in investigating the mobility of health workers and outlines the methodology used in this study. Sections four and five discuss trends in the mobility of health care workers and emerging divisions of labour at national and regional level. Section six reports the data in line with the taxonomy and
through the lenses of responses to structural factors, institutional embeddedness and the agency of labour. Section seven explores the implications for unevenness and the concept of cumulative causation.

**An open political-economy of scale perspective**

Drawing on Brenner’s (2001) theory of scalar structuration, rather than assuming that scales exist perennially and as ontological fact, we argue that they are produced as dimensions of wider sociospatial processes such as capitalist production, social reproduction and state regulation. Vertical relationships (national, regional, local and global) are forged and unforged through path-dependent interactions and political projects to modify or change established arrangements (McKinnon, 2011). However, the ‘political-economy of scale’ has been subject to criticism from post-structural approaches, which argue that within this perspective social relations are cast in overly hierarchical and fixed terms stressing vertical links between bounded territories and space as a nested hierarchy of scales (McKinnon, 2011). The openness of this account lies in the presupposition that these vertical relationships do not form a coherent hierarchy; rather they are subject to contestation within and between structures with contradictory and open-ended outcomes (Swyngedouw, 1997). Further, in line with critiques of the absence of workers in space-shaping processes, the agency of labour is considered as an important element in the analysis (Cumbers et al., 2010; Herod, 1998, 2006; Herod and Wright, 2001; Rainnie et al., 2010, 2011). In particular, the approach developed here emphasises the way in which the material practices of neoliberalism have both reconfigured sub-national space and increased fluidity between public and private spaces of production.

While the elements of the broad theoretical framework are interrelated and mutually constitutive, in order to analyse the data concretely, we have generated a taxonomy as a heuristic device. This consists of three analytical strands: firstly, the structural dimensions of unevenness and the underpinnings of markets and their mutual constitution and reconstitution through sociopolitical processes; second, the role of formal and informal institutions, and the state in particular, in controlling and mediating labour mobility; and third, the individual and collective action of workers in negotiating, accommodating or contesting the first two elements. The analytical strands are divided into three levels of analysis; EU, national and regional. These elements are summarised in Table 1.

The next three sub-sections elaborate and provide the narrative for this taxonomy.

**Structural dimensions of unevenness**

At a meta level the global integration of health labour markets needs to be contextualised in the dynamics of capitalist restructuring (Sassen, 1988; Valiani, 2012). The intrinsically uneven nature of capitalism is characterised by divergent socioeconomic conditions, developmental capacities and institutional arrangements, variegated between and within supranational blocs, urban agglomerations and regional clusters and national territories. The notion of *combined and uneven* development provides a powerful theoretical understanding of the causes of inequalities and of regions as the product of nationally differentiated space (Herod, 2006; Novack, 1972; Smith, 2006).

With respect to inter-country inequalities at EU level, since the 1980s, uneven development has been actively intensified, not only by the re-concentration of socioeconomic capacities in the most globally competitive locations, but also by ‘encouraging divergent, place specific forms of governance [and] public service provision’ (Brenner, 2009 [2004]: 213). EU-driven reforms in regional governance in 1998 in Poland and Romania (and other NMS or prospective NMS) have embedded new competitive-oriented institutional infrastructures for urban governance ‘increasing the geographical splintering, fragmentation and differentiation of state space at various spatial levels’ (Brenner, 2009 [2004]: 213). The production and consumption of health care, predominantly in the realm of the nation state, is now intersected and penetrated by private domestic and transnational capital. At the same time, marketisation is having the paradoxical effect of shifting the governance of health care to sub-national levels of the region, the locality and the individual workplace.

Unevenness has been further compounded by the way in which NMS experienced the 2008 economic
crisis in its most acute form with the most sharp contractions in GDP and subsequent austerity measures that have had deleterious effects on health budgets (Hardy, 2014).

There are significant disparities between high-, middle- and low-wage economies in the EU, with NMS belonging exclusively to the latter (Eurostat, 2011). However, it is important to note that it is not only comparative remuneration between countries that is important, but also the salaries of health workers in comparison to the average salary pertaining within a particular economy. In 2012 the ratio of the salary of a general practitioner doctor to the average salary was lower in NMS; 1.4 in Hungary and 1.7 in Estonia compared with 3.6 in the UK and 3.7 in Germany, for example (OECD, 2011). There are similar disparities in the remuneration of nurses. In the old member states salaries range from 37,000 to 80,000 (US$) per annum and are equal to or above the average wage, while in the NMS (with the exception of Slovenia) salaries range from US$17,000 to 22,000, with wages at or below the average wage (OECD, 2011). Further, unevenness is reflected not only in differences in GDP per head and wages, but also extends to inequalities in what Harvey (2006 [1982]: 399) describes as, the ‘human resource complex’ – that portion of capital dedicated to the reproduction and maintenance of labour.¹

Brenner’s (2009 [2004]: 80) argument that the modification of social conditions may produce indirect social and spatial effects that ‘may be unintentioned or unevenly distributed through the interaction of national state policies with locationally specific sub-conditions’ opens up the possibility of a regional dimension in understanding the drivers and impacts of migration.

The governance of health care is being rescaled by pushing it down to regions, localities and workplaces through the mutually reinforcing mechanisms of decentralisation and marketisation – with implications for the mobility of health workers. The material incentives for migration are therefore manifest in wage differentials that are related to the ability of the region to raise income. In Romania and Poland regions are able to fund equipment, medicines and training in a way that benefits health care locally and provides inducements to prevent staff from leaving. Hospitals in more wealthy urban regions are able to

| Table 1. Scaling the migration of health workers: Conceptual framework. |
|---------------------------------------------------------------|
| **European Union** | **National level** | **Regional level** |
| Structural factors | Demographic factors | Comparative wage with other European economies | Wages in relation to national average in sector |
| | Increasing demands on health services | Comparative working conditions with other European economies | Working conditions in relation to national average in sector |
| | Differential wages | Wages in relation to national average (all sectors) | Increasing responsibility for provision of health care |
| | Integrated market for health | Marketisation/privatisation | Commercialisation |
| | Growth of private capital in health care | Labour shortages | |
| | | Decentralisation of health care regimes | |
| Institutional factors | Formal | Modes of health care | |
| | Directives on labour mobility | Qualifications and training | |
| | Directives on qualifications | Bilateral agreements | |
| | Informal Discourses | Employment agencies | |
| | | Employer recruitment strategies | |
| | | | |
| | | | |
| Individual and collective agency | European Federation | Trade unions | |
| | Public Service Unions | Professional associations | |
| | | Employer bodies | |
raise additional income more easily by charging patients, their families and communities for additional services, such as overnight accommodation, health checks for employment, and outpatient services for non-referred patients.

Therefore regions in Poland and Romania have differential health care resources. In the case of Romania Table 2 shows a very clear pattern of disparities between Bucharest and the west region and all other regions. There is a clear correlation between wealthier regions, lower levels of poverty and a higher number of doctors and hospital beds per 100,000 of the population, while the reverse is true for poorer regions.

Table 3 shows that Poland has a much higher income per household than Romania and the disparities between regions are less marked. There is a very broad correlation between wealthier regions and health resources.

Health care provision is being fractured by a shift toward health care being provided in the private sector (Vlădescu and Olsavsky, 2009; Panteli and Saga, 2011). In Poland for example, between 2000 and 2009, the number of public hospitals decreased substantially, with the total number of private hospitals increasing from 38 in 2000 to 228 in the same period. This is mainly as a result of the transformation of public hospitals into the Commercial Code (which introduces profit-making); between 1999 and 2009 local government commercialised 77 public hospitals (Główny Urząd Statystyczny (GUS), 2012).

Further, in both Poland and Romania, a regional impact is felt because of the concentration of private sector establishments in urban locations. These are typically mono-speciality clinics in gynaecology, dermatology, and some surgeries, which are seen to be more profitable (Haivas, 2010). This specialist occupational and city-based private sector exacerbates regional effects, reinforcing the vulnerability of urban regions to loss of specialist staff out of the public sector, and the attractiveness of urban regions over more rural ones.

Beyond the push–pull effects of uneven development, the notion of cumulative causation enables a dynamic understanding of the impact of migration on regions and localities (Myrdal, 1957; Williams, 2009). Migration flows evolve through reciprocal cause and effect between structures that underpin mobility, thereby inducing structural changes in sending localities and regions which, in turn, brings about more migration (Massey, 1990).

### Formal and informal institutions

Institutional frameworks are necessary for accumulation strategies. Harvey (2006 [1982]: 419) argues that ‘a portion of social capital has to be rendered immobile in order to give remaining capital greater flexibility of movement’ and this is reflected in the significant increase in those employed in sectors dedicated to the reproduction and maintenance of labour such as health care and education. As a result,

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**Table 2.** Health care resources in Romania, 2010.

| NUTS II regions    | Primary income of private households (PPS per inhabitant) | At-risk-of-poverty (percentage of total population) | Available beds in hospitals (per 100,000 inhabitants) | Doctors (per 100,000 inhabitants) |
|-------------------|-----------------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------|----------------------------------|
| North West        | 4547                                                      | 18                                                  | 671                                                 | 266                              |
| Centre            | 4900                                                      | 19                                                  | 649                                                 | 228                              |
| North East        | 3190                                                      | 31                                                  | 566                                                 | 173                              |
| South East        | 4300                                                      | 22                                                  | 521                                                 | 163                              |
| South             | 3980                                                      | 23                                                  | 480                                                 | 136                              |
| Bucharest         | 12,998                                                    | 6                                                   | 990                                                 | 517                              |
| South West        | 3959                                                      | 37                                                  | 568                                                 | 201                              |
| West              | 12,100                                                    | 15                                                  | 705                                                 | 315                              |

Note: PPS refers to Purchasing Power Parity
Source: Iacobuță et al. (2013).
the state plays a key role in the production of health and care services and the governance of its multiple actors (Yeates, 2012). At the same time states are responsible for scaling labour mobility by setting and managing the boundaries of borders in an interstate system. They face the dilemma of balancing the requirement of ensuring a flow of workers with differentiated skills and the costs of reproducing and training them; inward migration enables receiver countries to externalise the renewal costs of labour (Burawoy, 1976; Harvey, 2006 [1982]; Sassen, 1988). Beyond individual states constantly intervening to recast the rules of the game relating to the mobility of workers, there is a complex institutional architecture of educational recruitment strategies, national and international governance and professional and employer organisations (Phillips, 2009; Yeates, 2009).

The governance of labour mobility is much contested between nation states and the EU. While states balance competing discourses and the different demands of immobile capital, the EU aims to create new spaces through a drive to smooth the terrain for the free movement of both capital and labour. Neoliberalism has intensified the unravelling of state territoriality and specifically with regard to the health sector, a series of directives and court rulings by EU institutions have furthered the drive to dis-embed national health care systems and re-embed them in a single European market (Morton, 2011).

Efforts have been made to overcome these obstacles to the labour market for health workers through the EU Directive on the Recognition of Professional Qualifications established in 2005 and revised in 2012, which sets the rules for mutual recognition of professional qualifications between member states (EC, 2005, 2012). EU directives on freedom of movement, the harmonisation of qualifications and the end of transitional arrangements restricting the mobility of labour provide the institutional framework for the movement of workers.

While the key institutional tension is between the nation state and the EU, sub-national formal and informal institutions will play a role. Formal institutions will exert pressure to attract the maximum resources, and will lobby for legislation that best supports this end. Informal institutions of historical and cultural lineages and linkages will influence both the scale and direction of national and regional patterns of migration.
The individual and collective agency of workers

The role of labour in underpinning an analysis of unevenness and spatiality has been much neglected (Harvey, 2006 [1982]; Herod, 2006; Rainnie et al., 2010, 2011). The class that represents capital (in the broadest sense) will employ a myriad of strategies with regard to wages and the organisation of work that will be contested, to varying degrees, by workers, individually or collectively and these will underpin push–pull migration incentives. The subjective nature of labour and its scale in contesting capital is the outcome of complex and contingent factors. In this way trade union practices are multi-scalar and layered from workplaces, through localities and regions to national and international sites of organisation and contestation (Anderson et al., 2010).

At national level trade unions and professional associations in receiver countries play a key role in opening up or closing down national and workplace spaces by ignoring, contesting the entry of, or integrating migrant workers (Fitzgerald and Hardy, 2010; Penninx and Roosblad, 2000; Yeates, 2009). Collectively trade unions and professional organisations in sender countries intervene in mobility processes by trying to ameliorate conditions and reduce disparities while on an individual basis workers may decide to migrate. As Harvey (2006 [1982]: 380) argues, workers are not simply units of labour, but the subjects and authors of their own mobility ‘always struggling, often with some success, to better their lot’. Further, rather than simply reacting to material incentives, outward migration potentially changes the economic and social conditions in the sender country by increasing the bargaining power of those that remain (Kaminska and Kahancova, 2010).

Definitional issues and methodology

There are significant problems in gauging the migration of health personnel due to the limitations of available statistical data (Dussault et al., 2009). Most countries have neither reliable data on the stock of health care professionals, nor on the proportion of them who are active, and in particular information on the private sector is generally scarce. Further, difficulties with international comparisons emerge from a lack of homogeneity with definitions of occupational categories and because data are rarely available for the same year or the same period. Most countries do not systematically collect information on migratory flows and it is inconsistently measured; in some cases being measured by health workers’ country of birth and in others on their country of training (either can be used as a proxy).

An additional complication in gauging the migration flows of health workers is that the literature has not been clear as to whether this represents temporary migration. New forms of temporary migration have developed, with some workers maintaining family and work in separate countries, either migrating for successive periods or working abroad for a few days while retaining positions in their own countries (Dustmann and Weiss, 2007). Therefore the classification of countries as either source or destination countries can be difficult as observed patterns are complex with the emergence and increased tendency towards circular or pendular migration and for varying lengths of time.

The empirical research that informs this study comprises three elements. First, we report the data from a questionnaire undertaken with affiliates of the European Federation of Public Service Unions (EPSU). The structured questions elicited the degree of mobility for doctors, nurses and other health workers, patterns regarding destination and sender countries, reasons for and the permanence of migration, and the impact of accession in 2004 and 2007 and the 2008 crisis. A section for open-ended comments was included. Twenty-one returns were received from 17 countries: six NMS (Bulgaria, Cyprus, Latvia, Poland, Romania, Slovakia); established states (Austria, Belgium, France, Germany, Ireland, the Netherlands and the United Kingdom); and three Nordic states (Finland, Norway and Sweden). Questions were answered by research departments, departments that specifically dealt with migration or senior officials. Given sparse and inconsistent national data, trade unions are able to provide quantitative and qualitative answers and insights, which inform understandings of broad patterns of migration between countries and drivers of and inhibitors to labour mobility.
Second, one face-to-face interview was undertaken with the research department or with national representatives of trade unions in the following countries: Belgium, Germany, Ireland, Italy, Netherlands, Poland, Romania, Sweden and the United Kingdom (UK). In the UK (receiver country), interviews were conducted with trade unions/professional bodies (the Royal College of Nursing, the British Medical Association and the Unison trade union) who were reliable informants through their close links with government. The UK and Germany were included as core economies with high inward migration (particularly in the case of the former); Romania and Poland were selected as NMS sender countries exhibiting different levels of development; Italy, Ireland, the Netherlands and Belgium represented a cross-section of established members and Sweden represented a Nordic economy.

Third, two countries were developed as case studies. In Poland and Romania (sender countries) multiple interviews were undertaken. These comprised government officials, hospital managers, professional body officials, trade union officials and health care staff at national, regional and hospital workplace levels. In Romania a total of 30 people were interviewed (either individually, in pairs or in small groups); in Poland 21 individual interviews were conducted.

In Poland at national level interviews were conducted with; the Federation of Trade Unions of Health Care and Social Care Workers (OPZZ); the All-Poland Trade Union of Nurses and Midwives (OZZPiP); the Department of Higher Education; and the Ministry of Health (responsible for doctors, dentists and physiotherapists). In Romania at national level interviews took place with senior officials from the Ministry of Health, the national president of the nurses’ order (professional body), national president and vice president of the Sanitas trade union.

At sub-national level interviews were conducted in contrasting regions in each country. In Poland interviews took place with presidents of the nurses’ union (OZZPiP) in the less developed Lubelskie region (voivode) (east Poland) and relatively more developed regions of Lubuskie and Opole counties (west Poland). In order to capture intra-regional dynamics interviews were conducted with the Chamber of Nurses and the nurses’ union in a small city, Radom (65 km from Warsaw) in the Mazowiecie region. In Romania at regional level interviews were conducted in the city of Ploesti in the south region (60 km from Bucharest) and the city of Brasov (150 km north of Bucharest) in the central region.

Fourth, we conducted two key interviews with supra-country organisations. The European Federation of Public Service Unions provided an overview of labour issues regarding migration in the European Union (and beyond). Extensive information and knowledge from its affiliates made it well placed to comment on trends and tensions. An interview with the president of the Visegrad doctors’ organisation (Czech Republic, Hungary, Poland and Slovakia) provided important insights into issues regarding migration from the perspective of highly skilled health care workers.

Secondary data in the form of academic articles, reports and statistics at European, national and regional levels has been used to supplement, elaborate and corroborate the data from interviewees.

Emerging inter-country divisions of labour of health workers

This section reports the findings of the questionnaires and interviews in order to identify new patterns of migration and emerging divisions of labour within the EU. General patterns of mobility are outlined and this is followed by a discussion of trends related to skills, spatial and sectoral mobility and duration.

General patterns of mobility

Three notable features that characterise the movement of health workers within the European Union from 2004 were identified from the data. The first feature is the outward migration of health workers from New Member States (NMS) to higher-income European economies, which has to be set in the context of significant general outward migration since their entry into the EU in 2004 and 2007 (Fitzgerald and Hardy, 2010). The questionnaires from Bulgaria, Latvia, Slovakia and Romania reported high levels of outward migration for all health workers. Three NMS (Bulgaria, Romania and Latvia), which had experienced the crisis most severely, reported an acceleration in outward migration after 2008.
In all cases Germany and the UK are the most cited destinations. Other destinations are influenced by language (Romanians to countries that speak Latin-based languages) or proximity (for example Slovaks to Austria and the Czech Republic; Latvians to Norway and Sweden; Russians and Estonians to Finland; nurses from western Poland commuting to Germany). In general, mobility and outward migration was highest for doctors and lowest for care workers. NMS reported low or very low levels of inward migration to replace the outflow of doctors and nurses. The small number of inward migrants to NMS tended to be from developing countries (in Africa and South America in particular) or neighbouring non-EU countries with relatively lower salaries (for example, Ukraine and Moldova).

The second feature of post-2004 mobility reported by interviewees was a strong continuation of the post-war pattern of mobility between Nordic countries (Norway, Sweden and Denmark), but with low or negligible levels of outward migration outside of them. The exception to this pattern of Nordic cross-border mobility is Finland, where high levels of both outward and inward migration by doctors and nurses were reported. Motivated by higher salaries elsewhere, Norway, Sweden and the UK were the main destination countries. Doctors and nurses were recruited to Finland from the geographically proximate countries of Russia and Estonia, but also from Somalia and other non-EU countries.

The third feature, specific to the UK, was a shift from recruiting non-EU to EU health workers showing a marked discontinuity in terms of the pattern of the immigration of health workers. This was confirmed by secondary data which reported that in the early part of the 1990s between 10,000 and 16,000 international (the vast majority non-EU) nurses were added to the UK register. By 2010 this figure had fallen to 2500 (Buchan and Seccombe, 2011). The recruitment of non-EU nurses to the UK had practically collapsed by 2011, in part because of reduced UK demand and in part because entry to the UK for non-EU nurses has become more challenging and costly. In 2009/2010, 78 per cent of international registrants were from the EU, compared with less than 7 per cent in 2001/2 (Buchan and Seccombe, 2011). In addition, there has been a decrease in the reliance on non-EU doctors.

Skills, spatial patterns and duration of stay
A more detailed picture was reported by interviewees within these general macro patterns of migration. In two of the NMS the specific outward migration of doctors with specialist skills was reported. In Poland 10 per cent of doctors were estimated to have migrated by 2011; this was much higher in particular specialisms, with anaesthetists being the largest group (18.3 per cent of the total), followed by plastic surgeons (17 per cent) and chest specialists (15.5 per cent). A similar pattern was reported in Romania with the highest outward migration from specialist doctors and nurses in anaesthetics, radiology, obstetrics, gynaecology, intensive care services and psychiatry.

In addition, information gathered indicates that regional disparities are affecting higher-income countries. The representative from the Norwegian trade union reported that ‘The distribution of health care workers varies widely across the country. Rural areas are dependent on inward migration to maintain health care in hospitals and in the municipalities’. Similarly, interviewees from Germany and France (receiver countries) suggested that vacancy levels for health workers are higher in rural areas than in urban areas and this drives demand in a targeted way for migrants from NMS, through incentives such as housing for migrants to locate to fill these rural vacancies.

Patterns of duration of stay were very mixed and hard data are not available. Doctors and nurses were cited as having more of a tendency to migrate permanently. Although alongside this ‘move and settle’ model, doctors (from Germany and Poland) were ‘flying in’ to cover shifts in the UK in addition to employment in the home country.

The next section focuses on the regional dynamics and intra-country mobility in the two case study countries.

The dynamics of intra-country mobility: Poland and Romania
If data on inter-country mobility is lacking and inconsistent, the data on intra-country mobility are nonexistent. However, interviews in the two case study countries, Poland and Romania, identified a number of themes; modest internal migration, movement between different hospitals (regional and city level),
internal and external circulatory migration, and an increase in working in the private sector spaces.

First, in both Poland and Romania a small-scale pattern of movement from rural to urban areas and small to larger towns and cities was reported – but more in the case of doctors than nurses. Internal migration in Romania was reported to be constrained by family and property ties. Doctors leaving was as proportionally high in the rural towns of the central region as in Bucharest, however, the nursing workforce was said to be more regionally stable, particularly for generalist nursing staff, according to the interviewees from the county doctors and nurses’ organisations.

According to the nurses’ union representative in Poland, there was an east to west dimension, with nurses moving from the poorer eastern regions such as Lubelskie to the more developed west of the country and cities such as Poznan and Wroclaw in particular. The algorithm used to calculate budgets favoured hospitals in the west of the country that had more specialist functions that attracted higher funding.

Second, there was movement between different types of hospitals. In Poland this was particularly from city (powiat) hospitals to those better funded by the region (voiode), and where a difference in salaries of 1000 zloty (£200) was reported by interviewees at both national and regional level. However, as we discuss in a later section in Romania this is more complex, with some cities being better funded than those under the administration of the region.

Third, circulatory migration in the nursing sector was reported in Poland. The interviewee from the Lubelskie region (east Poland) reported that between 2000 and 2004 there was a widespread pattern of nurses from the region working in Italy. With the collusion of the hospitals that had financial restraints and did not want to ‘lay off’ employees, nurses would work three months as care workers in Italy and three months as nurses in their hospitals. This is evident in Table 4 below.

On an intra-country scale there was circulatory migration between Radom (a distance of 60 kilometers from Warsaw) and Warsaw, which according to the Chamber of Nurses in Radom, ‘sucked in nurses’ and could ‘absorb as many nurses as want to go’.

However, this was for a limited time period as they would seek employment in the home town on getting married and having families.

Information from the Chamber of Nurses in Lubelskie provides a breakdown of outward migration. For the whole region between 2004 and 2013, 1147 nurses asked for certification to be validated to work abroad. Information was available in one of the four sub-regions (powiat) – Zamosc – for the destination of nurses (see Table 4).

Fourth, there was a movement from the public to the private sector, which took a different form in the two case study countries. In Romania health workers took up full-time jobs in the private sector where the remuneration was better. According to a medical director in Romania, ‘Those who leave the public sector mainly join private clinics – this applies particularly to nurses with specialist experience’. A hospital manager reported that in the case of gynaecology ‘in the first few weeks of 2012 six had left to join the private sector compared to four migrating abroad’. In Poland, deterred by the lack of sickness benefits and pension provision in the private sector, rather than switching sectors nurses used short-term contracts in private hospitals and clinics as a way of supplementing poor wages.

We now turn to looking at the drivers and inhibitors of labour market mobility through the themes of uneven development, institutional frameworks and the agency of workers.

Table 4. Destination countries of nurses from Zamosc powiat in Lubelskie region.

| Year | Italy | UK | Germany | Other |
|------|-------|----|---------|-------|
| 2004 | 50    | 1  | 2       | 3     |
| 2005 | 87    | 10 | 1       | 4     |
| 2006 | 27    | 21 | 0       | 7     |
| 2007 | 12    | 11 | 0       | 9     |
| 2008 | 11    | 3  | 0       | 6     |
| 2009 | 4     | 3  | 0       | 3     |
| 2010 | 2     | 1  | 0       | 2     |
| 2011 | 1     | 5  | 4       | 2     |
| 2012 | 0     | 42 | 14      | 2     |
| 2013 | 0     | 42 | 14      | 2     |

Source: Lubelskie Chamber of Nurses (2013).
Responses to structural factors, institutional embeddedness and agency

This section reports the data using the taxonomy developed in Table 1 by looking at the salience of structural factors in determining migration, the persistence of institutional embeddedness and the agency of workers.

Responses to structural factors

Low pay was given by 11 of the country respondents as a reason for outward migration. This was cited as a reason in all five NMS. In the case of Bulgaria and Latvia this was reported as the only reason, while Romania, Slovakia and Poland also pointed to poor working conditions as an important factor for outward migration.

It should also be noted that relative differences in wages and working conditions were not only important in explaining the movement of workers from NMS to higher-wage economies, but also between core economies. For example, respondents in Finland and France gave pay as the primary reason for outward migration. The questionnaires showed that doctors and nurses in higher-income countries also move between countries to take advantage of better labour markets in terms of working conditions and work/life balance.

The Vårdförbundet trade union in Sweden reported temporary outward migration among nurses to Norway where nurses can earn up to a third more, have better working conditions and uncapped hours. The German doctors’ organisation suggested that working conditions in France were better than in Germany with more holidays and better pay, while in Switzerland doctors were not only paid better, but unlike in Germany, they were also paid for their ‘on call’ time. With regards to leaving the profession, on finishing training doctors in Germany are now moving into occupations outside medicine, in particular the pharmaceutical industry, where the pay and working conditions are more favourable. In the United Kingdom work/life balance was cited as the important reason for doctors emigrating. Cyprus, the Netherlands and Ireland did not refer either to pay or working conditions, but cited a lack of job opportunities as the main reason for migration.

In the two case study countries internal mobility in the cases of nurses, whether temporal, spatial or sectoral, was motivated by trying to improve or enhance salaries. In the case of Poland the absence of a career structure for nurses meant promotion within a workplace for experienced and specialised nurses was non-existent. Many nurses exited the sector after training; before taking up employment; a national attrition rate of between 60 per cent and 70 per cent between 2009 and 2013 was cited by a representative of the Chamber of Nurses from Radom. This constitutes a small percentage of the total number of qualified nurses. In Romania estimates by the Health Ministry and doctors’ professional body suggest that between 2007 and 2012 around 3 per cent of doctors migrated; however the outward migration of nurses is substantial with between 5 and 10 per cent of nurses leaving the country each year. Interviewees in Poland and Romania stressed that nurses who migrated did not necessarily work in the health sector in the receiver country, and if they did they were likely to be employed in less skilled work as carers.

Although differential wages and working conditions are salient factors in explaining migration, the mobility of health workers cannot simply be read from the macro-structuralist ‘logic of capitalism’ scripts of global and European systems (Yeates, 2012). The institutional landscape of capitalism at different spatial scales shapes labour mobility as ‘geographical scales and interscalar hierarchies are continually produced and contested as arenas and outcomes of collective social action’ (Smith, 1995: 61). It is to the politics of scale and agency of workers we turn in the next two sections.

Institutional embeddedness

While the questionnaires established the general direction and pattern of movement, the scale of outward migration has been modest. In Poland the interviewee at the Ministry of Health and the Doctors’ Council estimated that between 8 and 10 per cent of doctors migrated between 2004 and 2007. However, despite predictions of substantial migration, the outward labour mobility of nurses has been relatively...
low; between 2004 and 2007, 158 Polish nurses registered in Ireland 1013 in the UK and 830 in Italy (Leśniowska, 2008).

Barriers to mobility within the EU are substantial. Nurse interviewees consistently reported that the main inhibitors of movements across national boundaries were qualifications and language skills. Despite EU directives there is no uniform acceptance of professional qualifications across EU states and the lack of requisite language skills was a barrier to taking up employment. Doctors were more likely to have linguistic skills and, in the case of care workers, these were less important.

Whereas in some developing countries there is an extensive machinery of arrangements and intermediaries to ‘export’ nurses, with the exception of numerous German agencies operating in Poland, there was little evidence of such systematic structures in the EU. According to the questionnaires, employers, employment agencies and the initiative of individuals were cited as equally important in mediating and facilitating migration. There were examples of bilateral initiatives such as a Swedish agency in Poland providing free language courses for doctors to facilitate their employment in the Swedish labour market. Agencies are particularly oriented to recruiting in shortage areas such as radiologists, gynaecologists, psychiatrists and general practitioners and dentists. In the UK it was reported that some private health care firms or National Health Service (NHS) Trusts targeted countries for recruitment, and particularly in regions where local airports eased travel from the country of origin.

Therefore despite scale ‘smoothing’ or scale ‘jumping’ initiatives by governments or employers, the labour market for health care, for nurses in particular, remains stubbornly scaled at the national level by path-dependent informal (language) and formal (qualifications) institutions.

At regional or local level in the case study countries informal institutions were significant in influencing the scale and direction of migration. For example, the north east region of Romania is historically and linguistically linked with part of what is now Moldova, which leads to extensive cross-border mobility. As a further example, the three counties (Mures, Harghita and Covasna) in the central Transylvanian plains of Romania, have a relatively large proportion of the population that is Hungarian and Hungarian-speaking; therefore health worker mobility between this part of Romania and Hungary is much more common. According to the president of the nurses’ union, ‘From north west Transylvania they go to Germany; from the south west they go to Italy; from Moldava and the north east they go to Spain’. In Opole in Poland, where 50 per cent of the population speak German, there was substantial nurse migration to Germany (particularly after the labour market fully opened in May 2012).

**Labour responses**

The individual and collective responses of labour in sender and receiver countries are critical for influencing migration processes. The United Kingdom is (mainly) a receiver country and has substantial experience of immigrant health workers. The most significant organisations that represent them – the British Medical Association (BMA), the Royal College of Nurses (RCN) and Unison (care workers and nurses) – all subscribe to the principle of freedom of movement and play a critical role in relation to migrant workers through lobbying and advocating, by providing collective and individual support and through shaping workplace spaces through positive discourses.

In the sender countries of NMS the collective impact of labour was manifest in discontent, with wages and working conditions evident in the industrial disputes and protests among health workers in NMS. In Slovakia in March 2011 there were protests by the Slovak Union of Medical Specialists (SLUS) regarding non-payment for some interventions, poor infrastructure and inadequate wages. In May 2011 the Slovak Medical Trade Union Association (LOZ), following a lack of progress in negotiations, threatened to follow the mass resignations of Czech colleagues to pressurise the government (Eurofound, 2011a). Also in May 2011 the Slovak Chamber of Nurses (SKAPSA) protested outside parliament in support of their demand for an earlier retirement age (60 to 58) and minimum hourly wage of €4.50 (Eurofound, 2011b). In the Czech Republic, the Doctors’ Union (LOK), organised the mass resignation of 4000 doctors in January 2011 in protest against poor working conditions and wages and underinvestment in the health care system (Holt, 2011).
In Poland in 2007, nurses established a camp, 'white city', outside the prime minister’s office in protest against low pay. In March 2011, there was an occupation of the Sejm (parliament) by the Union of Nurses and Midwives and a hunger strike in protest against making it easier for hospitals to hire staff on temporary contracts. In January 2012, there were a series of protests on the streets of Bucharest and other Romanian cities, ostensibly against a Bill to extensively privatise the health sector, which had been presented to parliament for only 10 days’ consultation and over which a popular health leader had resigned in protest.

Industrial action can potentially change the relative differentials, which may affect the motivation for migration. In 2007 in Poland this was the case with doctors (Grzymski, 2008) where the improvement in salaries achieved, at least in part, as a result of protests and industrial action, reduced the material incentive to migrate. The success or otherwise of workers’ ‘voice’ is important in that it has some potential for changing the incentives that underpin migration and therefore the dynamics of labour mobility.

Protests also have a regional dimension. Marketisation and the commercialisation of hospitals have devolved finance and managerial decisions with the effect that industrial relations have been rescaled from the national level to that of the region, locality and workplace (see Stenning and Hardy, 2005). In Poland, interviewees and secondary research reported the eruption of individual workplace protests focused on low wages, aggressive workplace environments and job intensification. In Latvia in 2011, the health union (LVSASA – Latvian Health and Social Care Workers) in three regional hospitals protested about underfunding and employees not being paid for increased workloads (Eurofound, 2011c).

Cumulative causation and uneven development at the regional scale: The case of Poland and Romania

Although we argued earlier that the mobility of health workers has been relatively small, powerful feedback mechanisms that lead to the cumulative causation of migration are likely to be stronger in smaller localities and regions than large urban ones (Fussell and Massey, 2004). According to interviews, migration is easier and more common for staff with specialisms (such as anaesthetics, radiology, obstetrics, gynaecology, other intensive care and surgery expertise, family medicine and psychiatry) (see also Galan et al., 2011), and specialist occupations are more numerous in larger urban centres of population. However, small towns and more rural regions are more exposed to the effects of the loss of a small number of specialists, both through inter-regional, rural to urban, and national migration. In smaller cities in Poland higher wages are paid to retain specialists, squeezing the total wage bill and leading to increased disparities with other occupational groups, particularly nurses, in the health sector.

There is thus a cumulative effect, caused by a combination of market-driven restructuring, consequent decentralisation, and the urban concentration of specialist occupations and private work − with migration as a response. In this context, ‘exit’ by workers in regions – either out of the country, from the public to the private sector or from rural regions and small towns to larger cities – contributes to a process whereby some regions are locked into a downward spiral of cumulative causation. Outward migration of health professionals compounds this
situation by leaving the remaining staff with considerably higher workloads and more difficult working conditions, providing a further incentive to migrate spatially or occupationally. For the inhabitants of less wealthy regions this can lead to a diminished health service and the loss of specialist services.

Information advanced in the interviews was confirmed by the secondary data. In Romania 86 per cent of physicians practice in urban areas, with only 14 per cent in rural areas where they serve 47 per cent of the population (Wiskow, 2006). Rural and deprived areas have been persistently under-staffed due to lack of incentives to work there (Galan, 2006; Wiskow, 2006). Ninety-eight villages are without a health professional and a third of the country is lacking 30 per cent of the medical specialisms found elsewhere in the country (Vladescu and Olsavsky, 2009). For doctors, three-quarters of Romanian districts are staffed below the national average (Wiskow, 2006) with two-thirds of the doctors concentrated in six centres (Haivas, 2010). A 2009 survey in Poland found a shortage of health workers, which included 4113 unfilled posts for doctors (mostly anaesthetists and other specialists) and 3229 for nurses (Panteli and Saga, 2011), again with regional differentials.

Reforms to the health service introduced in Poland in 2007 favoured the wealthier regions of Mazowieckie and Silesia, which have more specialist hospitals. The representative from the nurses’ union in Lubelskie reported that in 2009 there was a protest of the ‘Eastern Wall of Poland’ where the Alliance for the Defence of Hospitals in Southern Poland was established by people from the regions (voivodeships) of Podkarpackie, Lubelskie and Kielcie, which have the poorest health conditions and longest queues in the country. In Lublin, health care employees (nurses, doctors, administrators) and hospital directors threatened to occupy the buildings of the regional National Health Fund in Lublin (Lubelskie). In this case the impact of cumulative causation united the employees and directors in the south-eastern region against employees and managers in other regions who were deemed to ‘not understand the problem’. This action reflects the main cleavage in Poland between the western and central regions – generally wealthier than the poor eastern regions.

In the case of Romania, Bucharest has a concentration of specialist surgery and a relatively large requirement for intensive care, but is also highly susceptible to staff loss. According to one medical director, ‘surgical wards cannot always operate due to lack of staff [and] the loss of specialist doctors has hit intensive care provision particularly hard, with only four intensive care doctors remaining for the whole hospital’. At a similar hospital nearby, a trade union official reported that, ‘surgery had been particularly badly hit because of a shortage of anaesthetists, reduced from seven to three’.

However, claims of cumulative causation have to be tempered by two factors. First, in Poland all interviewees, both doctors and nurses, emphasised that it was not migration that caused shortages of medical staff. According to the president of the nurses’ union, ‘there are no recruitment problems, but only financial problems’. Rather, underfunding of health care and the lack of a legally specified minimum number of nurses on wards were seen as the key problems.

Second, intra-regional differences in hospital governance produced different incentives that influence micro-mobility. In Romania, for example, in one part of the central region, the governing board of a municipal hospital is at city level, which can make non-staff investment into the hospital. This is enabled by the relative wealth of the location based on the oil industry; ‘this is a rich county’, according to the hospital manager, where oil revenue has enabled funding for resources such as imaging equipment and sufficient medicines. The hospital is also able to diversify income sources by, for example, undertaking contracts for private clinics and, due to the relative wealth of the area, charging for driving licence medical tests, and pathology work. The Hospital Director said, ‘The working conditions have improved here, we have enlarged facilities, modern equipment, imaging equipment, food vouchers’. By contrast, a hospital, in the same region funded by the county, according to the Regional Director does not receive the local funding it should; he argued that, ‘I should get County money for buildings, maintenance, equipment, ultrasound, but I’ve not received a single Leu – not even for heating’.

This is attributed by both hospital manager and county trade union official to the relative poverty of this location, and is seen to contribute to a higher rate of staff turnover and outward migration.
Conclusion

Accurate and complete information relating to the overall degree of mobility is not available, but our research points to relatively small absolute flows of health workers that have a disproportionate impact on regions and localities in the case study countries. Financial incentives not only induce the migration of health workers from low- to high-income economies, but there are much more nuanced divisions of labour as workers move from weak to strong core economies and from weak to strong peripheral economies. Patterns of migration are further complicated by internal migration from rural to urban areas, and with an increasing drive to privatisation from the public to the private sector.

In the article we have developed an analysis of these observations from an open political-economy perspective that views the social construction of scale as a material entity mediated by institutions of the regional, national and supranational state, and the collective agency of workers. We draw four conclusions.

First, contradiction and contestation are evident in the rescaling of health care. This is manifest in the tension between the legislation and discourses of the EU to disembed national systems of health care and promote the mobility of labour, and the persistence of national institutions of languages and qualifications that constitute a significant barrier to the movement of health workers. In addition, radical changes in the scale of health worker mobility (the UK) exist alongside stubbornly persistent path-dependent patterns (Nordic countries). Therefore in terms of scalar restructuring, new scales are hitting up against established forms, although in the longer run the importance of these factors may diminish in terms of their role in inhibiting labour mobility.

Second, the role of labour organisations emphasises the way in which material entities and collective agency are mutually constitutive. Trade unions have a significant role to play in exercising ‘voice’ in sender countries, thereby reducing the differentials in wages and working conditions with non-NMS economies. Through their collective agency health worker disputes are able to alter domestic conditions in a way that, on the margin at least, influences decisions to migrate – this is especially true of more powerful groups such as doctors. Further, trade unions and professional organisations across multiple scales at EU, national and regional level, play a critical role in shaping spaces of work in receiver countries in terms of influencing policy, mitigating exploitation and promoting cultural sensitivity.

Third, although absolute outward migration across borders is relatively small, the movement of health care specialists can have a disproportionate effect on sender countries and the poorer regions within them through a process of cumulative causation. A lack of specialists leads to a deteriorating provision of health care and additional stress on remaining employees, increasing the incentives for them to move either geographically or occupationally. A key finding is that it is not just cross-border mobility that is important, but also internal - rural to urban, small to large town and public to private.

Fourth, in relation to the previous point, although we have examined the inter-relationship and tensions between different levels, scale cannot be understood as a simple hierarchy and this fine-grained fracturing of space points to inadequacies in simply conceptualising sub-national scale as ‘regional’.

At a general level there is a pattern of downward cumulative causation in regions. However, within regions, localities and workplaces, contradictory dynamics that affect labour mobility are exhibited. In particular, the penetration of private capital in health and the marketisation of public health care have rescaled its governance. The consequent decentralisation of the governance of health has fractured space in fine-grained mosaics that have implications for the mobility of health workers by changing material incentives in complex ways.

A new set of challenges are arising as legislation increases patient mobility, which opens up the possibility of arbitraging labour costs in different ways – namely that of the movement of capital and patients rather than health care workers. This highlights the importance of the agency of communities and trade unions in assessing the outcomes and implications of such market-driven initiatives and intervening through debate and action to achieve solutions that maximise the benefits for the majority of people.
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Notes

1. NMS are at the bottom of the table in terms of expenditure on health per capita. In old member states health expenditure per capita ranged from US$2703 (Portugal) to US$4242 (Austria), while in the NMS it ranged from US$773 (Romania) to US$1924 (Czech Republic). Further, there are disparities between old and NMS in total health expenditure as percentage of GDP, ranging from 9.5 per cent (Italy and Spain) to 11.8 per cent (Germany) of GDP in old member states, to 5.6 per cent (Romania) to 7.9 per cent (Czech Republic) in NMS.

2. Taken together, these include: the introduction of a European Professional Card; better access to information on the recognition of professional qualifications; updating minimal training requirements; the introduction of an alert mechanism for health professionals benefiting from automatic recognition; the introduction of common training frameworks and common training tests; and a mutual evaluation exercise on regulated professions (EC, 2012).

3. Lubelskie, Lubuskie, Opole and Mazowieckie are four out of the 16 NUT II Polish regions. The south and central regions are two of the eight NUT II regions in Romania. (Nomenclature of Territorial Units for Statistics is a geocode standard for referencing the subdivisions of countries for statistical purposes. The standard is developed and regulated by the European Union).

4. Increases in registration requirements from the Nursing and Midwifery Council (NMC) and a shift to a points-based permit system have reinforced the government’s policy of making international recruitment a more difficult option for employers.

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