

DENMARK AND NORWAY: MATCHING LABOR MARKET NEEDS WITH QUALIFIED MIGRANTS

Ana Maria ARAGONÉS^I, Uberto SALGADO^{II}

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ABSTRACT

Denmark and Norway: Matching Labor Market Needs with Qualified Migrant

The relevance of our article is based on the fact that migrant workers have been very important in recent years, and since the 2007-2008 financial crisis, these kinds of workers have been playing a substantial role in the developed countries, particularly the highly qualified migrants. These countries are facing several problems. Structural demographic changes have negatively affected the labor market, which has also caused problems in the education sector. These are obstacles to economic growth in the framework of the knowledge economy, and incorporating highly skilled migrants and talented foreign students is a way to overcome these difficulties. In this article, we analyze two Scandinavian countries, Denmark and Norway, and the ways they are adopting various strategies to overcome their problems, implementing new public policies to retain talented foreign students and hiring highly qualified migrant workers.

KEYWORDS: highly skilled migration, qualified worker, knowledge economy, demographics, foreign students

IZVLEČEK

Danska in Norveška: potrebe trga in kvalificirani migranti

Članek obravnava pomembnost visokokvalificiranih migrantskih delavcev. Od finančne krize 2007–2008 igrajo odločilno vlogo v razvitih državah, ki se soočajo s številnimi težavami. Strukturne demografske spremembe so namreč negativno vplivale na trg dela in povzročile težave tudi v izobraževalnem sektorju. Te težave, ki ovirajo ekonomsko rast v okviru ekonomije znanja, premagujejo s privabljanjem visokokvalificiranih migrantov in nadarjenih tujih študentov. Avtorja analizirata dve skandinavski državi, Dansko in Norveško, njune strategije za reševanje težav in uvajanje novih ukrepov, s katerimi bi zadržali nadarjene tuje študente in zaposlili visokokvalificirane migrantske delavce.

KLJUČNE BESEDE: visokokvalificirani migranti, kvalificirani delavci, ekonomija znanja, demografija, tuji študenti

^I PhD in Law, Institute of Economic Research, National Autonomous University of Mexico; Circuito Mario de la Cueva S/N, Ciudad Universitaria, Coyoacán, Ciudad de México, México, C.P. 04510, amaragones@gmail.com

^{II} MA in Economics, PhD candidate, National Autonomous University of Mexico; Circuito Mario de la Cueva S/N, Ciudad Universitaria, Coyoacán, Ciudad de México, México, C.P. 04510, ubertosalgado@comunidad.unam.mx

INTRODUCTION¹

The recessive effects of the 2007-2008 financial crisis have changed some aspects of the labor market in most developed countries. One of the consequences is the formation of a new migratory pattern that is expected to continue in the coming years. Many developed countries are facing demographic and educational difficulties, which can explain why they have been significant receivers of migrant labor. They are forced to hire not only migrant workers but qualified² migrants if they want to continue their economic growth and maintain the level of innovation required in a knowledge economy. Their workers or employees are retiring, causing a dearth of qualified workers. Therefore they are forced to hire qualified migrants. The new migratory pattern in which qualified migrants play a significant role means that developed countries will have to implement more flexible migration policies to satisfy their labor demands in a world where the number of qualified workers is limited.

In previous crises (1929 and 1972) the migrant workers, essentially undocumented and low-skilled migrants, were dramatically affected. But we have to recognize that even if the latest crisis has had similar repercussions on this kind of migrant workers, the circumstances of highly skilled migrant workers are completely different. The first thing to note is that today's qualified migrants benefit from more favorable migration policies and labor conditions (Cerna 2010). This means the world is spawning new conditions for a specific kind of migrant workers, those we call highly qualified migrants. Unlike what happened in previous crises, today, migration of highly qualified workers is not only recovering from a small drop at the peak of the crisis, but the tendency is for that migrant flow to grow significantly because migrants respond to the demands and needs of the international labor market. From these structural conditions we can see how the new migratory pattern is developing.

This has led to a global competition to mobilize, attract, and retain the most qualified workers. This new trend is the result of neoliberal globalization. Globalization, however, was initially characterized by the liberalization of capital and commodities, and at the same time the restriction of worker mobility. But since the end of the last century, a substantial change has occurred, manifested in the liberalization of the global movement of highly skilled labor. This change, based on the development of what has been called the "knowledge economy," generates new knowledge, technology, and innovations in strategic sectors of the economy, allowing developed countries to not only increase productivity and economic growth, but also to overcome the recent global structural crisis (Dabat, Ordóñez 2009; Dabat, et al. 2012). Some authors (Naidoo 2011; Rhee 2009) hold that the development of the "knowledge economy" creates a kind of "new imperialism," in that innovations and the concentration of knowledge correlate directly with countries' economic and political power. In this context, not only is the attraction of highly qualified migrants central, but so are international students in institutions of higher education, who represent a strategic wellspring of resources. This is why many universities in the developed world have policies to recruit and retain them. This global trend of concentrating knowledge as a way of achieving hegemony has given rise to metaphors like "the war for talent." A series of authors have analyzed the way in which this affects higher education and educational institutions as well as the consequences that this involvement has on these institutions in the so-called international "economic war" (Li, Lowe 2016).

In our previous research, we began by analyzing the United States, because it was considered the leader of the knowledge economy, and the structural crisis had dealt a blow to its leadership. We wanted to analyze how the United States tried to recover from the structural crisis and why it thought the ideal strategy for overcoming it and restoring its previous high levels of competitiveness was

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2 In this work, "qualified" refers to a certain level of education or formal qualification (OECD 2002).

through promoting innovation (Aragonés, Salgado 2013). In a second study, we broadened the analysis to include Australia, Canada, Japan, and the United Kingdom. We found very similar features in all of these countries, both with regard to the level of their labor needs and the importance they placed on concentrating on the knowledge economy (Aragonés, Salgado 2014). It was evident that their demographic and educational conflicts interfered with the knowledge economy. The quick solution was to attract skilled migrant workers and create more flexible migration policies for talented³ foreign students. These countries had a very specific interest in retaining the most talented students with graduate degrees in disciplines like engineering, mathematics, technology, and science. It is not surprising that the disciplines preferred by the foreign students were also closely related to knowledge economy requirements. Finally, we also studied two other countries, Finland and Sweden, and the results were very similar to those for other developed countries (Aragonés, Salgado 2015).

In this context, our reasoning is that the United States and a significant number of developed countries, among which we would underline the majority of the countries in the European Union, require the contributions of highly skilled migrants since they face similar internal structural obstacles, such as an aging population, as well as problems in education, that affect labor markets. Both factors are difficult to resolve in the short term, and in this scenario, skilled migration becomes a solution to the shortage of qualified natives. And we should not forget the fact that highly qualified workers contribute to the creation of knowledge, with important repercussions in productivity and growth (Bosetti et al. 2015).

European migration policy has undergone important transformations since the Lisbon Strategy of 2000. The European Commission has encouraged member states to open up their labor markets to highly skilled migrants since it recognizes that these countries are facing a scarcity of domestic qualified labor (Zimmermann 2004). These were the circumstances that made it possible to establish the basis for a new legal migration framework in the EU, whose aim was to attract workers with higher skill levels and the creation of the Blue Card in 2009. Despite the fact that the blue card can be considered a big achievement, this directive was missing several pieces; the blue card does not guarantee migrants full access to the entire European labor market, but rather only that of their first destination country (González et al. 2013). The explanation given for retaining this restriction is that income disparities exist in member states and that, therefore, many highly qualified migrants could apply for the permit in a poor country and later move to a rich one (Ibid). This is not the case, for example, in the United States, where a highly skilled migrant who works in one state can move without restriction to another one. This lessens Europe's ability to successfully compete for these talents when compared with the facilities offered by the United States (Docquier, Machado 2015).

We turn our attention to Denmark and Norway, even though they don't use the blue card, because they have adopted another kind of migration policy in order to attract highly qualified workers, a situation that places them in the context of global competition for talent. The Scandinavian countries are considered top benchmark countries in their capacity to attract, retain, and develop the skilled employees that their organizations need. According to the 2015 global talent index report (Economist Intelligence Unit 2015), Denmark and Norway hold the second and fifth positions in the global ranking.

Our thesis revolves around the idea that developed countries have internal structural demographic and educational problems which become considerable obstacles in pursuing their plans to advance the knowledge economy. Their strategy for overcoming these obstacles quickly and easily has been to incorporate highly skilled immigrants into their workforce. Demographers point to the difficulty countries face once their fertility rates begin to spiral downwards, because the trend cannot be reversed through internal measures (McDonald 2008). Since highly qualified migrant workers are scarce, the

3 Talented students are defined as those whose skills are distinctly above average in one or more areas of human performance (Gagné 2000).

strategy for attracting them involves making migration policies more flexible, offering better conditions than those in place earlier.

This situation has negative consequences for sending countries. First of all, we cannot overlook the fact that the sending countries have invested in training these workers, and second, that their emigration implies the loss of human capital vital for the country's own development. In this scenario, we might ask what type of strategies should be put in place to turn the potential losses into gains.

HIGHLY QUALIFIED LABOR IN THE CONTEXT OF THE ECONOMIC CRISIS

In past economic crises, migrant workers were the first to feel the effects. This happened in France and Germany during the crisis that began in 1970, prompting them to halt their guest worker programs (Duncan and Waldorf 2010) to protect their labor markets from unemployment. The difference today is that even during the crisis, some countries are reluctant to place restrictions on the inflow of highly qualified laborers. Although the migration of qualified workers is not new, what makes today's trends different from what was happening 20 years ago is the surprising increase in the flow of these types of workers, further encouraged by intense global competition (Ibid). More interesting still, this situation has prompted developed countries to introduce a set of immigration policies to attract these workers by offering them better conditions, even during the global economic crisis. It is also important to note that these kinds of workers bring special abilities, training, and experience not easily replaced in the short term. It is also a way for them to make up for the scarcity of these types of workers in their home markets and still meet those labor market needs (Cerna 2010).

Authors like Krugman (2012) and Pollin (2011) raise the question of a need to encourage innovation and to develop green technologies as central to overcoming the crisis. We are proposing that to achieve this goal, it is necessary for developed countries to hire highly qualified migrants and retain talented foreign students. It is not surprising that Scandinavian countries are characterized by rapid growth and the production of new technologies. These countries have introduced research and development strategies consistent with changes in global economic conditions. They also maintain an extensive, modern system of social protection and labor market regulation that subjects all workers, whether immigrants or native, to the same standards.

The Danish economy has traditionally been organized around flexible, specialized small and medium-sized firms, with a predominance of raw-material-based production and a focus on international markets. The economy has been concentrated in an agro-industrial complex, which is the most important export sector (Danish Agriculture & Food Council 2014). Research and development intensity in Denmark has led to a modern industry that also has competitive advantages in biotechnology and pharmaceuticals, boosting its high-technology profile (Okamoto 2010). In Denmark, the economic transformations were based on social consensus and complemented by a centralized wage negotiation system (Benner 2003).

Norway, meanwhile, was not under as much pressure to structurally change the economy, since the country has large oil reserves. Its investment in R&D is not as significant as other Scandinavian nations (Christensen 2013). Leaving aside the slight differences between Scandinavian countries, overall they have successfully adapted to the demands and restrictions of the knowledge economy and have even done so better than the largest economies in Europe. Jessop (2002) argues that much of this success is due to the application of a model combining a neo-statist strategy in response to the challenges of the new economic regime with active state participation in supplying the infrastructure needed for innovation, supported by decentralized knowledge networks, and the introduction of wage pacts that support wage consensus and changes in industrial organization.

Additionally, Scandinavian countries are highly committed to reducing carbon dioxide emissions by increasing the amount of renewable sources in overall energy production and improving energy

efficiency in all industries (Norden 2014). Denmark and Norway are recognized as the most environmentally friendly economies in all of Europe. Norway generates all its electrical energy from renewable sources, and Denmark derived 43.1% of its electricity from renewable sources in 2013 (Eurostat 2015).

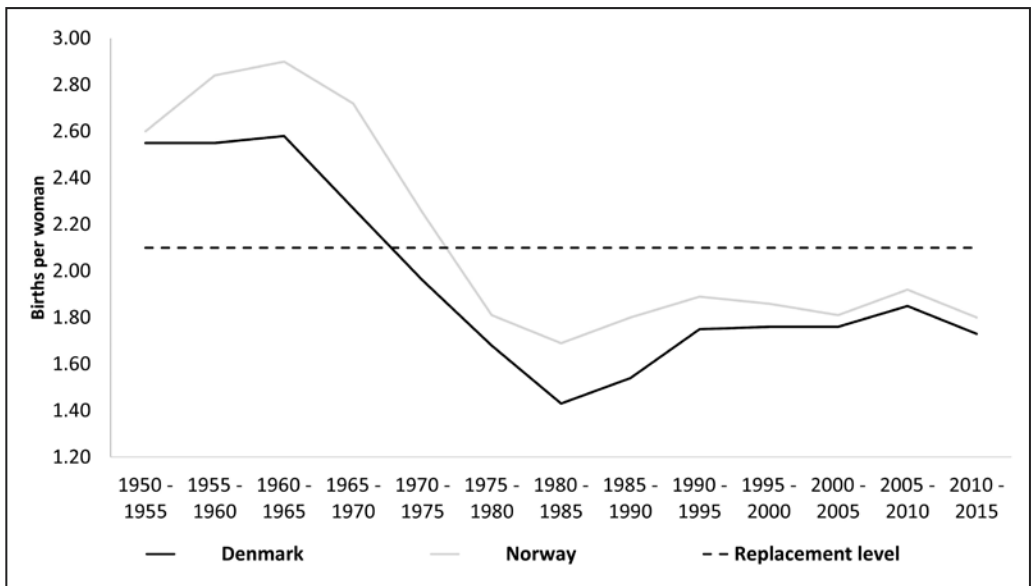
This sector of the economy is tremendously important for Scandinavian countries and creates significant demand for highly qualified workers in order to promote environmentally friendly innovations. So, together with the knowledge economy, these investments in renewable energy increase the demand for highly qualified migrant workers.

The present article is divided into three sections. First it analyzes the demographic characteristics of the Norwegian and Danish populations; secondly it studies the impact of internal policies for improving educational levels and how international student mobility is incorporated in these countries. Finally it presents a brief analysis of the various immigration policies aimed at recruiting and retaining global talent to contribute to the knowledge economy.

DEMOGRAPHIC INDICATORS IN DENMARK AND NORWAY

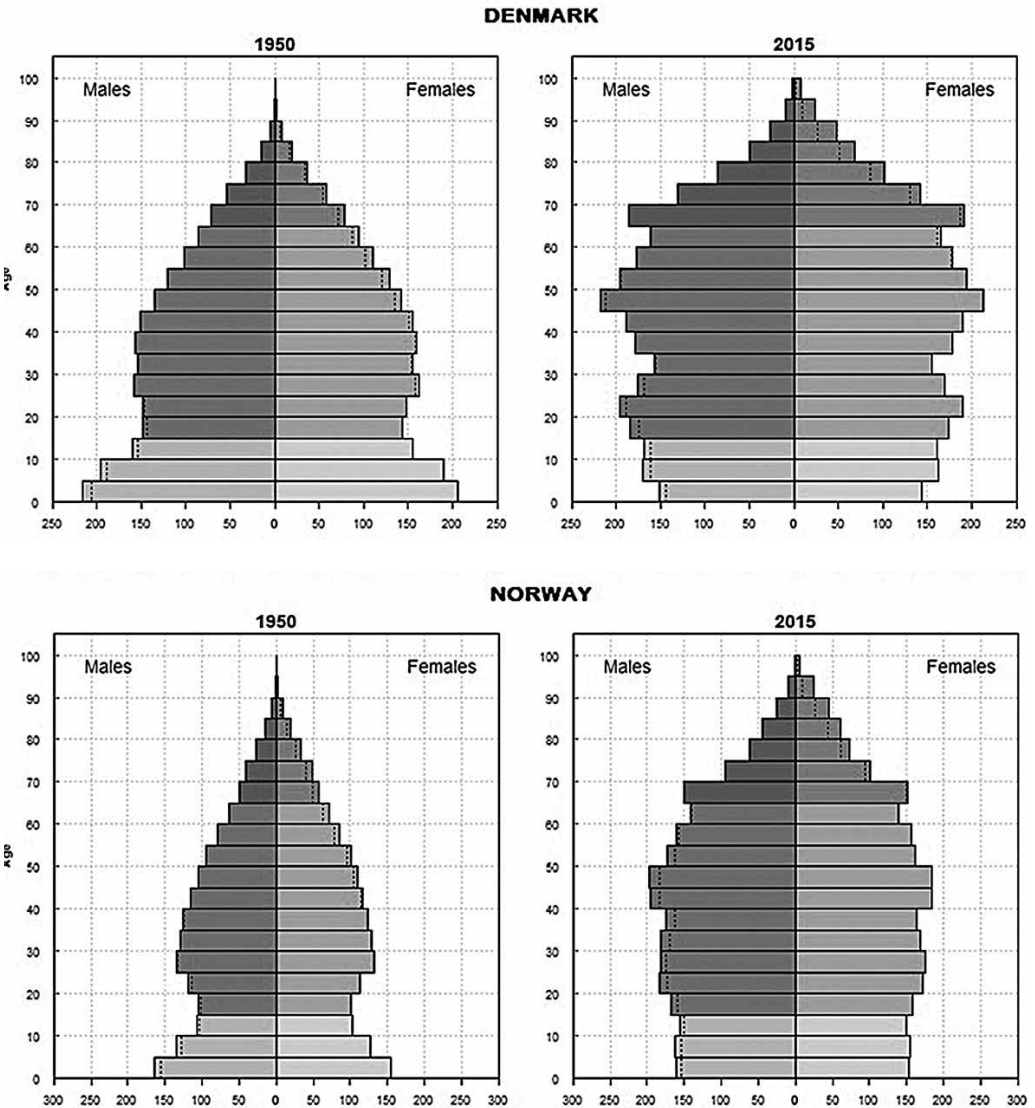
As in the rest of Europe, demographic trends in Scandinavian countries reveal an aging population. Life expectancies have been rising and now average 80 years, a result of the modernization, general scientific, economic and other developments such as social security and welfare programs introduced by their governments in the past. Mortality rates will continue to decline in the future, but to varying degrees according to projections for each country. The aging of the population in Scandinavian countries is a result of several changes: one of the most important determinants of population aging is a below-replacement level of fertility (2.1 births for each woman of childbearing age) (Figure 1); there are also some other important causes of population aging (e. g. mortality decline in older age groups, age selective migrations etc.) (Bryld, Lazdane 2006).

Figure 1: Fertility Rates and Replacement Levels for Denmark and Norway by Five-year Period (1950–2015) (Source: Statistics from the United Nations (2015), *World Population Prospects: The 2015 Revision, Key Findings and Advance Tables*).



Population growth below the replacement rate in Scandinavian countries has resulted in a gradual aging of their populations, which is obvious when we analyze the population pyramid by age groups in these countries (Figure 2). The population was considerably younger in 1950, presenting the characteristic pyramidal form. But we see a rise in the proportion of inhabitants over 60 in the general population, more pronounced by 2010 (Figure 2).

Figure 2: Population by Age Group and Gender (Source: Statistics from the United Nations (2015), *World Population Prospects: The 2015 Revision, Key Findings and Advance Tables*).

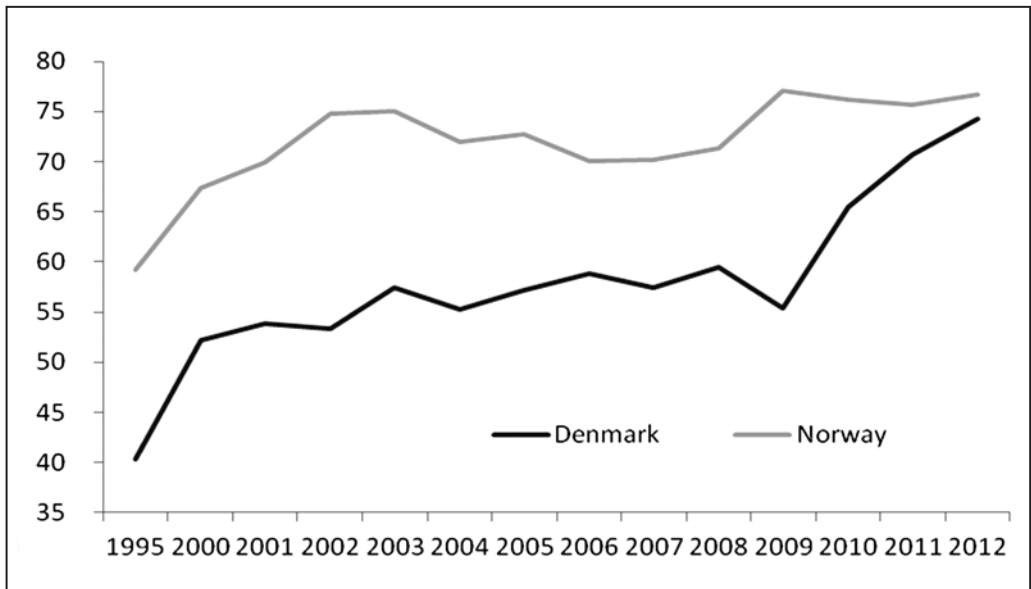


According to demographic projections for these countries, the elderly adult populations will more than double by the year 2050 (Mamolo, Scherbov 2009). Another factor weighing on labor markets is the population of working age. The average retirement age from 2007 to 2012 in Denmark was 65, and in Norway, 67 (OECD 2015), which means more inhabitants depend on each worker. This demographic situation is partially responsible for the scarcity of workers in the labor market, and is, in turn, an obstacle to long-term economic growth potential. It is interesting to note that despite the tremendous effort that all the countries have made to educate their populations, internal demographic contingents remain insufficient to meet the demand of strategic sectors (such as Science, Technology, Engineering and Mathematics, STEM) to build their knowledge economy (SHRM Foundation 2014).

EDUCATIONAL ASPECTS IN DENMARK AND NORWAY

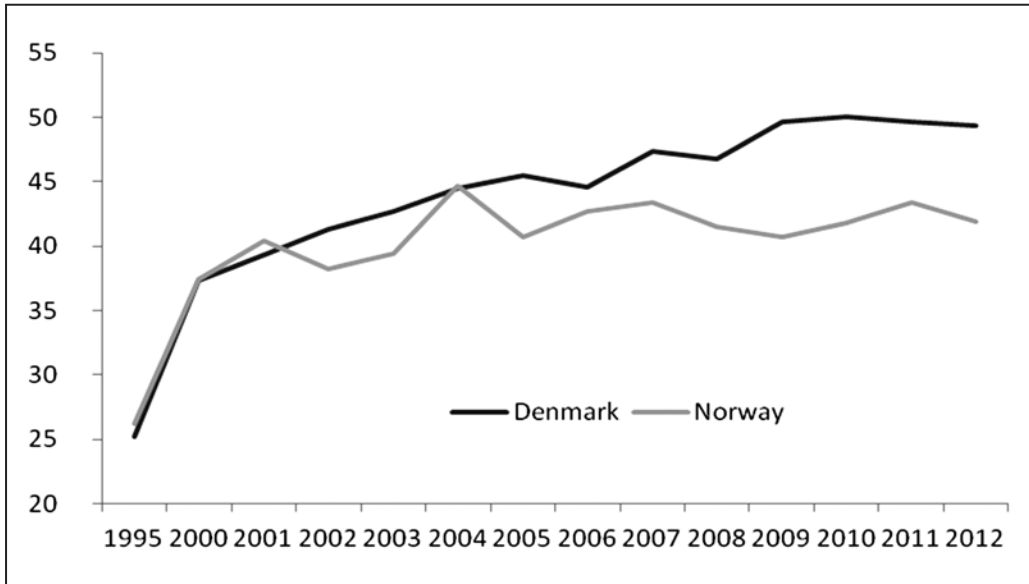
Knowledge is the driving force in international economic competition and the capacity to attain higher levels of development. For this, a country needs enough human capital trained in certain professions, like scientists, engineers, mathematicians, and computer technicians, so they can produce innovations that can generate an extraordinary surplus. Because of this, Denmark and Norway have made a huge effort to educate their populations, spending 7.9% and 7.4% of GDP respectively for overall education during 2011, both higher than the 6% OECD average (OECD 2014). This educational effort can be seen in Figure 3, which shows that a substantial proportion of young people are enrolled in institutions of higher learning.

Figure 3: Students Enrolled in Higher Education in Denmark and Norway (percentage of the corresponding age group) (2000–2012) (Source: Calculations by the authors based on data from the OECD).



When we look at terminal efficiency, we find that in 2012, in Denmark, slightly under half the enrolled students completed their degrees; in Norway, the rate was close to 40% (Figure 4).

Figure 4: Terminal Efficiency Rate for Higher Education in Scandinavian Countries (1995–2012) (Sum of age-specific graduation rates, by program duration) (Source: Calculations by the authors based on data from the OECD).



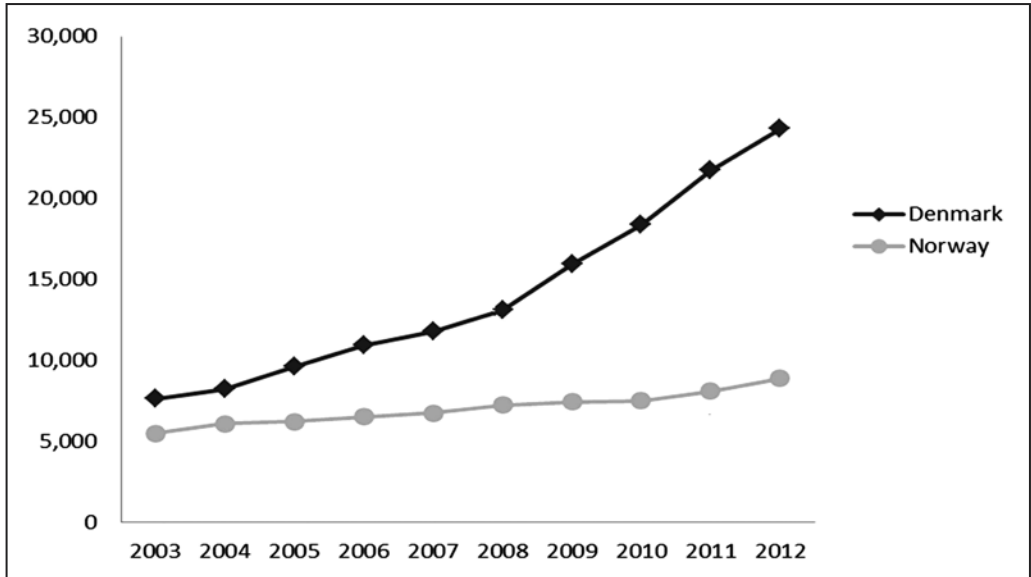
With a gradually aging population and fewer than half of Danish and Norwegian young people completing their academic degrees, the demands of the labor market within the framework of the knowledge economy cannot be met by internal contingents. This makes it necessary to incorporate highly qualified migrant workers. These countries have implemented two mechanisms to recruit global talent. The first is easing immigration policies to facilitate the transition from a temporary to a permanent residence visa (Thuesen 2011). The second mechanism is to attract foreign university students, offering them the guarantee of a job and permanent residence.

Clearly, advances in communications technology and transportation have increased education-based migration to unprecedented levels (Sutter, Jandl 2006). However, in order to make this student mobility and acquired knowledge a strategic mechanism for countries of origin, their governments would have had to plan and create jobs and infrastructure needed to fully incorporate these new professionals and employ them at a level matching their high training. This is what could make student mobility (in order to attain higher levels of training) a trigger for greater competitiveness based on knowledge and contribute to developing their countries of origin. The problem is that very few underdeveloped countries strategically plan this student mobility, and it becomes an obstacle for workers who wish to return (Zaafraane 2011). Ironically, it also becomes an incentive for host countries that urgently need to attract talent from all around the world. International students are ideal candidates because over time they have adapted to receiving countries' cultures and societies. The problem is that these countries' main objective is to make up for the scarcity of talent in their own labor markets, so they do not want highly skilled immigrants to return to their countries of origin (Sutter, Jandl op cit.).

Norway does not charge international students enrollment fees; this, together with the availability of programs in English, explains the sharp rise in the number of foreign students enrolled there between 2003 and 2012 (Norwegian Centre for International Cooperation in Education 2007a). The absence of fees for foreign students in these countries, however, prompted a debate about the costs they represent for higher education. In response, Denmark, which formally required no formal enrollment fees for international students, introduced a fee schedule in 2006–2007 for students from outside

the European Union (EU) or the European Economic Area (EEA) (OECD 2011). The Danish government, on the other hand, provides scholarships and assistance through government institutions and loan schemes (West 2013). This policy of subsidizing tuition for foreigners has considerably increased the number of foreign students in the country, as shown in Figure 5. In Norway and Denmark, we can see an increase in foreign student enrollment even during the 2008 crisis (Figure 5).

Figure 5: Foreign Students Enrolled in Higher Education (2003–2012) (Source: Calculations by the authors based on data from the OECD).



NORWEGIAN AND DANISH IMMIGRATION POLICIES

Norway

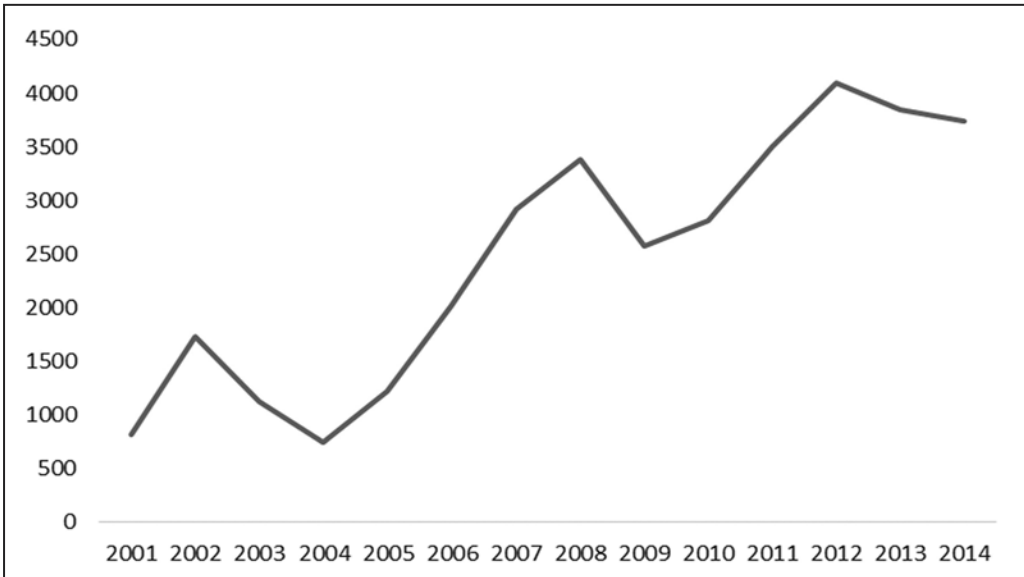
Norwegian immigration policy defines three categories of highly qualified or specialized immigrants: the first category is made up of technicians who received professional training at technical schools or higher levels. The second category consists of individuals who have completed their undergraduate or graduate degrees; and the third category is made up of workers who have a trade and have obtained special qualifications through their extensive experience combined with specialized courses (Utlendingsdirektoratet 2013).

Norway bases its immigration laws on the regions of origin. If they come from the EU or EEA, regulations are less strict, while immigrants from outside those areas face some restrictions. For example, to obtain permanent residency, they must have remained in Norway for three years uninterrupted; these highly qualified immigrants are allowed to bring their families with them, and their spouses are guaranteed a work permit as well. Additionally, in Norway immigrants cannot be paid lower wages than natives with the same qualifications, because the government wants to avoid a social “dumping” effect from hiring cheaper labor (Brenne, Jense 2013).

Norway’s two main political parties (the Labor Party and the Conservative Party) have declared that one of the government’s goals should be to facilitate the attraction of highly qualified immigrants, arguing that importing talent will contribute to the country’s economic growth. Most of the demand for these types of workers comes from the oil and gas industries. In fact, Norwegian political parties

signed a cooperation agreement (*samarbeidsavtale*) on September 30, 2013, dealing with various issues regarding immigration policy, in order to facilitate the entry of a greater number of highly qualified workers (Ibid.). The measures taken by Norway have resulted in a stronger inflow of qualified workers. In Figure 6, we can see a clear rising trend in the arrival of these kinds of workers.

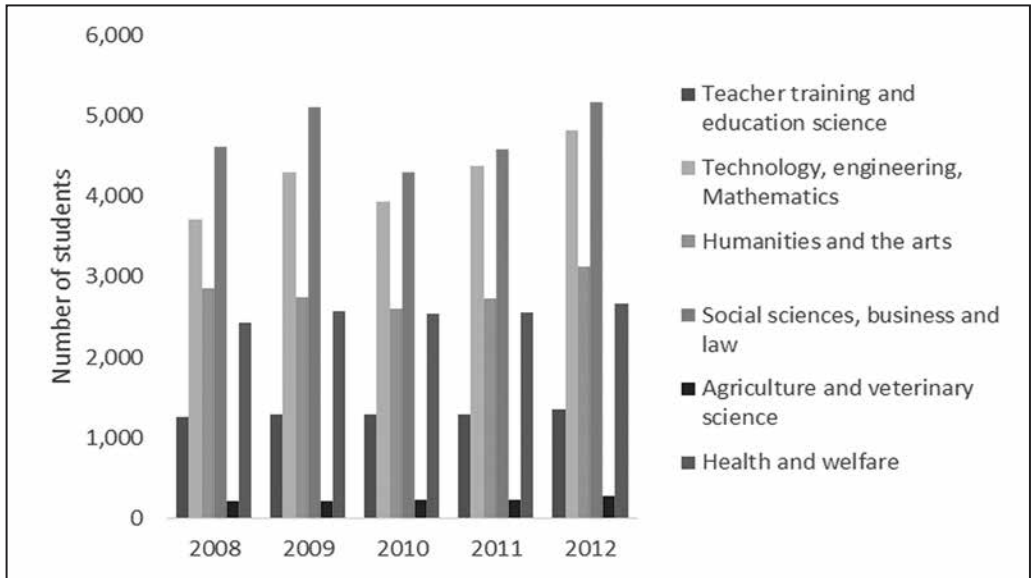
Figure 6: Work Permits Issued to Highly Skilled Immigrants (2001–2014) in Norway (Source: Calculations by the authors based on data from Årsrapport various years, Norwegian Directorate of Immigration.)



Another policy Norway has introduced to attract talent to the country has been to recruit international students, who are allowed to work part-time while studying and full-time during vacations. Norway's high standard of living, good quality higher education, tuition-free higher education even for the international students, coupled with ample financial support for its students and grants to students from Third World countries, have made it attractive to international students (Cox 2012).

The government offers various scholarships for students from developing countries, specifically for Master's and doctoral programs (Norwegian Centre for International Cooperation in Education 2007b). When they complete their studies, students must return to their countries of origin and remain there for 12 months. If they do not return to their country of origin, they must repay the scholarship (Tronstad et al. 2012). The government uses this measure as a way to build relationships of cooperation between developing countries and Norway (Norwegian Centre for International Cooperation in Education, n.d.). In 2005, however, it changed its immigration laws to allow foreign students to exchange their student visa for a residence permit, thus allowing them to settle in Norway for six months after graduation with the intention of finding a job and the possibility to extend their stay (Cox op cit.). This amendment to the law is a clear sign that the government wants to attract and retain qualified personnel. The result of these policies has earned Norway the eighth place among the countries that retain the most foreign students. According to 2008 OECD data, the retention rate was 23%, meaning almost one in four foreign students who arrive in Norway managed to turn their student visa into a permanent residence permit. These legal modifications reflect the tremendous significance of global student mobility in the knowledge economy. It enables Norway to deal with the domestic scarcity of human capital resulting from its demographic difficulties by bringing in foreign students. Interestingly, most of these students enter fields of knowledge related to STEM sectors (see Figure 7).

Figure 7: Number of Foreign Students by Field of Study in Norway (2008–2012) (Source: Calculations by the authors based on data from EUROSTAT).



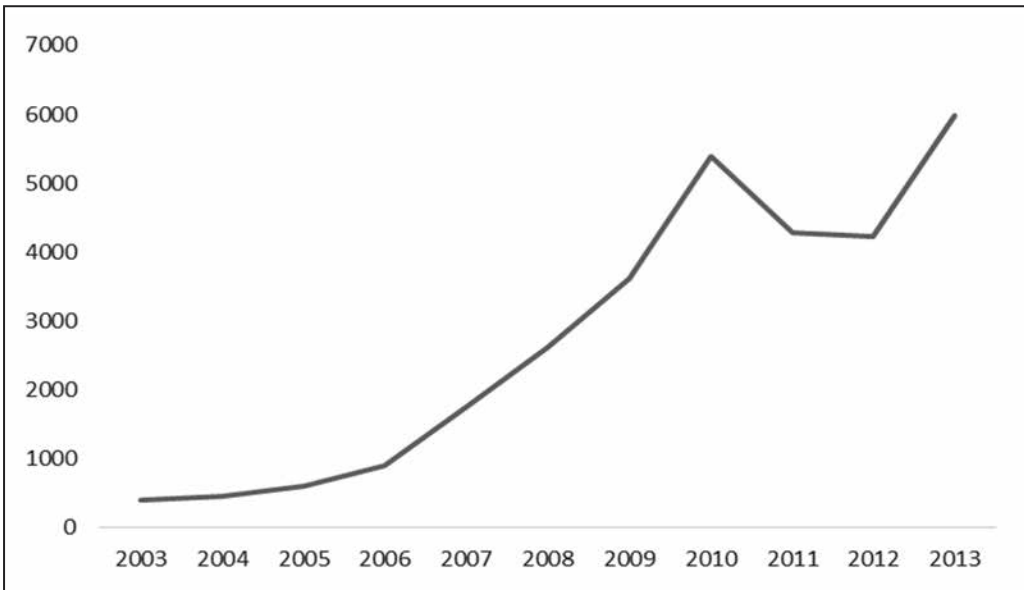
Denmark

Immigration policies in Scandinavian countries are fairly similar across the region. All of them have the same systems for according special status to immigrants from the EU or EEA region, who are freely allowed to join the labor markets. Likewise, all have special regulations that apply to immigrants from regions outside of these. The Danish government has designed a system to facilitate the entry of highly qualified immigrants to the labor market, under one of the job-card schemes established by its immigration service (Danish Immigration Service 2015):

1. If the immigrant is a highly qualified professional, he or she may participate in the “green card” system, which guarantees residency and permission to work in Denmark for three years. This scheme is based on a point system that benefits the youngest and most qualified immigrants.
2. Immigrants with special abilities, such as scientists or guest researchers, can conduct their activities without the need for a residency or work permit if the term of their stay does not exceed three months. If they must remain for more than that, they must apply for a work permit to cover the rest of their stay, and since research is considered to be closely tied to the researcher, this guarantees that they will obtain the work permit.
3. The Positive List scheme is a list of professions and fields in Denmark that are experiencing a scarcity of professionals. If the immigrant has qualifications for any of these published vacancies and can prove that his or her degree of education, salary, and employment conditions correspond to Danish standards, access to the Danish labor market is facilitated.
4. The Corporate Scheme simplifies inter-company transfers of workers with special abilities so they can apply to work at the Danish affiliate. The work this type of immigrant performs must be considered innovative or formative.

These Danish regulation schemes facilitate the transition toward permanent residence for highly qualified immigrants who have resided in Denmark for five years, have not received certain types of public assistance for a period of three years before requesting permanent residence (or while their application is being processed), have passed a Danish language test, and have worked regularly or were part of an educational program in Denmark for between three to five years before requesting permanent residence. Applicants are allowed to continue working while their application is being processed (Ostling 2013). One significant incentive for highly qualified immigrants to decide to work in Denmark is the application of preferential tax rates to researchers or “key employees,” amounting to the equivalent of 26% of their earnings for 60 months (Tax Ministry of Denmark 2015). The result of these policies to facilitate the attraction of highly qualified immigrants can be seen in a rise in residence permits for highly qualified immigrants, as shown in Figure 8.

Figure 8: Residence Permits Granted through Job-card Schemes in Denmark (2003–2013)⁴



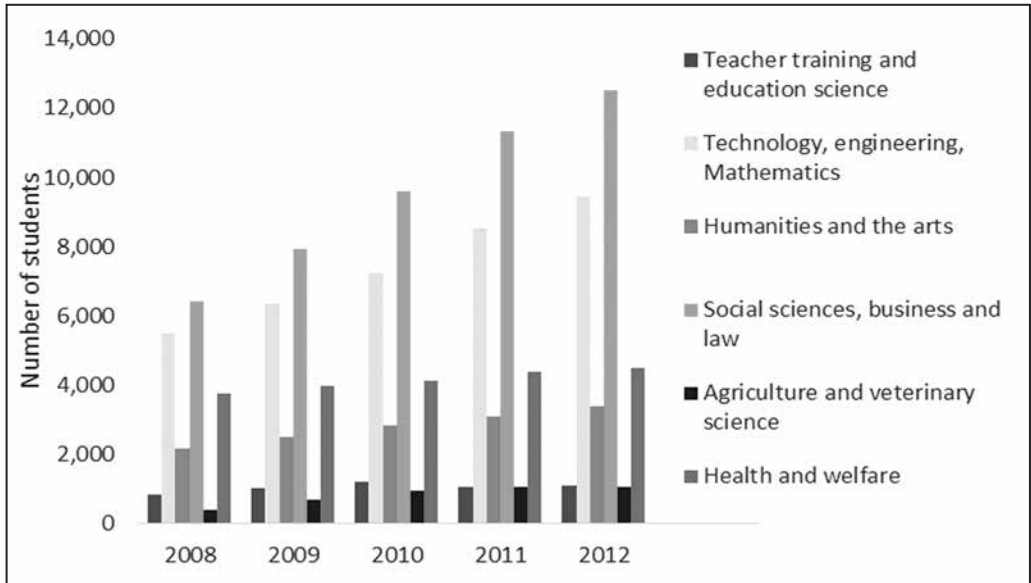
The second mechanism to attract global talent is to bring in students and encourage them to stay and live in Denmark; one such mechanism is allowing foreign students to work while they study. Students enrolled in a higher educational program have the right to work for 20 hours a week during the ordinary school year and to work full-time in June, July, and August (Danish Ministry of Higher Education and Science, n.d.a). Once they have received their degree they can apply for a permit to stay for a maximum of six months to find a job (Danish Ministry of Higher Education and Science, n.d.b), and if they do, it may qualify for one of the aforementioned work schemes, thus paving the way for permanent residence.

The Danish government recently launched an ambitious plan to attract and retain more international students. Minister for Higher Education and Science Sofie Carsten Nielsen declared that her country has a significant need to attract international talent to ensure the future of its economy. The plan consists of 24 initiatives, among them increasing the length of residence permits from the current

⁴ Includes permits regarding the positive list, corporate, and green card schemes; and residence permits for those seeking employment if they have lost their jobs through no fault of their own. Source: Calculations by the authors based on Statistical Overview Migration and Asylum, 2008 and 2013, Danish Immigration Service.

six months to two years. According to Nielsen, these measures are intended to facilitate the transition from study to the Danish labor market for foreign students (Danish Ministry of Higher Education and Science 2014). As in other Scandinavian countries, this policy aimed at retaining students is part of a plan to meet labor market demands related to the knowledge economy. It is not surprising that many foreign students are enrolled in fields of knowledge in which mathematics, science, and engineering play a predominant role (see Figure 9).

Figure 9: Foreign Students by Field of Study in Denmark (2008–2012) (Source: Calculations by the authors based on data from Eurostat).



CONCLUSIONS

Structural crises have given rise to transformations in immigration patterns by changing international labor market demands and needs and the forms of developed-developing articulation. In the context of this new migratory pattern taking shape in response to the 2007–2008 structural crisis, highly qualified workers who played an outstanding role toward the end of the last century are once again becoming increasingly important. Governments are convinced that one of the ways to overcome the crisis is to facilitate the conditions for the knowledge economy. However, since qualified workers are scarce in their countries because of the problems analyzed in this study, they will ultimately require qualified immigrant workers. There has been renewed interest among foreign students to join these countries' work forces once they earn their degrees, particularly those whose professions relate directly to the knowledge economy. This strategy implies tremendous benefits for host countries, since it gives them a ready supply of already trained qualified immigrants. With regard to foreign students trained in host countries, the advantage is that their qualifications are consistent with the needs of the labor markets. If this process continues, what may happen is that the world's countries will begin to have to compete for this talent. This would have various repercussions: among them, highly qualified immigrants would become a form of subsidy for developed countries with very little positive impact on the immigrants' countries of origin, because outward migration implies a loss for the country of origin (Aragonés, Salgado 2011). This would deepen asymmetries with developed countries, condemning the developing nations to remain in the same conditions of underdevelopment.

Another possibility, however, is that countries of origin will realize that development requires not only educating their population in the framework of the knowledge economy, but addressing the pressing need to transform their economic, political, and social projects to create research and technological innovation centers, universities, etc., so they can absorb their own human resources and avoid forcing their graduates and trained professionals to emigrate. This would trigger a basic change that could alter the inequitable relationship of forces and allow countries to progress toward development.

If not, these countries will continue to lose essential human resources and remain in a recursive pattern that is becoming a new way of deepening asymmetries among countries.

REFERENCES

- Aragonés, Ana María, Salgado, Uberto (2015). Finland and Sweden: Matching labor market needs with talented migrants, *Siirtolaissuus Migration 1*, 16–25.
- Aragonés, Ana María, Salgado, Uberto (2014). ¿Competencia internacional por la migración altamente calificada?, *Comercio Exterior 64/2*, 18–26.
- Aragonés, Ana María, Salgado, Uberto (2013). La crisis y la economía del conocimiento en Estados Unidos. Su impacto en la política migratoria, *Norteamérica 8/2*, 71–104.
- Aragonés, Ana María, Salgado, Uberto (2011). ¿Puede la migración ser un factor para el desarrollo de los países expulsores?, *Migración y Desarrollo 9/17*, 45–68.
- Benner, Mats (2003) The Scandinavian challenge. The future of advanced welfare States in the knowledge economy, *Acta sociológica 46/2*, 132–149.
- Bosetti, Valentina, Cattaneo, Cristina, Verdolini, Elena (2015). Migration of skilled workers and innovation: A European Perspective. *Journal of International Economics 96/2*, 311–322.
- Brenne, Geir, Tore, Jense, Helge, Hiram (2013). An overview of Highly-Skilled Labour Migration to Norway – with a Focus on India as Country of Origin, *European University Institute, Robert Schuman Centre for Advanced Studies*, RR2013/46, 1–20.
- Bryld, Jacqueline, Lazdane, Gunta (2006). Low-fertility-the future of Europe, *Entre Nous European magazine for sexual and reproductive health 63*, 1–31.
- Cerna, Lucie (2010). Policies and practices of highly skilled migration in times of the economic crisis, *International Migration Papers 99*, 1–55.
- Christensen, Thomas (2013). *Economic Impacts of Business Investments in R&D in the Nordic Countries: A Microeconomic Analysis*. Denmark: Danish Agency for Science, Technology and Innovation.
- Cox, Marianne (2012). *International student recruitment: Policies and developments in selected countries: Sweden, Norway and Finland*. Netherlands: Netherlands organization for international cooperation in higher education.
- Dabat, Alejandro, Leal, Paulo, Romo, Samuel (2012). Crisis mundial, agotamiento del neoliberalismo y de la hegemonía norteamericana: contexto internacional y consecuencias para México. *Norteamérica, CISAN, 7/2*, 1–36.
- Dabat, Alejandro, Ordoñez, Sergio (2009). *Globalización, conocimiento y nueva empresa transnacional: desafíos y problemas para los países en desarrollo* (ed. Dabat Alejandro). Cambio histórico mundial, conocimiento y desarrollo, Juan Pablos-UNAM-IIEc, 223–260.
- Danish Agriculture & Food Council (2014). *Facts and figures Danish agriculture and food*. Denmark: Landbrug Fodevarer.
- Danish Immigration Service (2015). *New to Denmark*, https://www.nyidanmark.dk/en-us/coming_to_dk/work/work.htm (3. 11. 2015).
- Danish Ministry of Higher Education and Science (2014). *The Danish Government Focuses on Top International Studies*, <http://ufm.dk/en/newsroom/press-releases/2014/the-danish-government-focuses-on-top-international-students> (3. 9. 2015).

- Danish Ministry of Higher Education and Science (n.d.a). *Working hours & legalities*, <http://studyindenmark.dk/live-in-denmark/working-in-denmark/hours-and-legalities> (15. 3. 2016).
- Danish Ministry of Higher Education and Science (n.d.b). *Work after graduation*, <http://studyindenmark.dk/live-in-denmark/working-in-denmark/after-graduation> (15. 3. 2016).
- Docquier, Frederic, Machado, Joël. (2015). Global competition for attracting talents and the world economy. *IRES Discussion Papers*, 2014020, 1–34.
- Duncan, Natasha, Waldorf, Brigitte (2010). High skilled immigrant recruitment and the global economic crisis: The effects of immigration policies. *Department of Agricultural Economics*, working paper 10–1, 1–20.
- Economist Intelligence Unit (2015). *The global talent index report: The outlook to 2015*, United Kingdom: Heidrick & Struggles.
- Eurostat (2015), *Energy from renewable sources*. <http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tsdcc330&plugin=1> (23. 11. 2015).
- Gagné, Francois (2000). A differentiated model of giftedness and talent (DMGT), *Retrieved* 20, 1–4.
- González, Carmen, et al. (2013). The EU performance in the global competition for highly-skilled migrants. *TGAE-Elcano* 4, 1–7.
- Jessop, Robert (2002). *The Future of the Capitalist State*. United Kingdom: Cambridge Polity Press.
- Krugman, Paul (2012). *The Iphone Stimulus*, http://www.nytimes.com/2012/09/14/opinion/krugman-the-iphone-stimulus.html?_r=0 (16. 1. 2013).
- Li, Zhen, Lowe, John (2016). Mobile student to mobile worker: the role of universities in the 'war for talent'. *British Journal of Sociology of Education* 37/1, 11–29.
- Mamolo, Marija, Scherbov, Sergei (2009). Population projections for forty-four European countries: The ongoing population ageing. *European Demographic Research Papers* 2, 1–63.
- McDonald, Peter (2008). Very low fertility consequences, causes and policy approaches. *The Japanese Journal of Population* 6/1, 19–23.
- Naidoo, Rajani (2011). Rethinking development: Higher education and the new imperialism. *Handbook on globalization and higher education*, 40–58.
- Norden (2014). *Nordic on climate change*, Nordic Council of Ministers, <http://norden.diva-portal.org/smash/get/diva2:768493/FULLTEXT01.pdf> (14. 3. 2016).
- Norwegian Centre for International Cooperation in Education (2007a), *Tuition*, <http://www.studyinnorway.no/Study-in-Norway/Tuition> (15. 3. 2016)
- Norwegian Centre for International Cooperation in Education (2007b), *Scholarships*, <http://www.studyinnorway.no/Study-in-Norway/Scholarships> (15. 3. 2016).
- Norwegian Centre for International Cooperation in Education (n.d.). *The Norwegian partnership programme for global academic cooperation (NORPART)*, <http://siu.no/eng/Programme-information/Development-cooperation/NORPART> (15. 3. 2016).
- OECD (2002). *International mobility of the highly skilled*. OECD Publishing.
- OECD (2004). *Developing Highly Skilled Workers: Review of Sweden*. France: OECD Publishing.
- OECD (2011). *Education at a glance 2011: OECD Indicators*. France: OECD Publishing.
- OECD (2014). *Education at a glance 2014: OECD Indicators*. France: OECD Publishing.
- OECD (2015). *Ageing and Employment Policies – Statistics on average effective age of retirement*, <http://www.oecd.org/els/publicpensions/ageingandemploymentpolicies-statisticsonaverageeffectiveageofretirement.htm> (3. 11. 2015).
- Okamoto, Yumiko (2010). A comparative study on biotechnology companies in Sweden and Denmark: Why do they perform differently? *Doshisha University Policy Studies* 4, 139–157.
- Ostling, Alina (2013). *An overview of highly skilled labour migration in Denmark with a focus on Indian nationals*. Denmark: Robert Schuman Centre for Advanced Studies.
- Pollin, Robert (2011). *Back to full employment*. United States: New Democracy Forum.

- Rhee, Jeong-Eun (2009). International education, the new imperialism, and technologies of the self: Branding the globally educated elite. *Multicultural Education Review* 1/1, 55–82.
- SHRM Foundation (2014). *What's next: future global trends affecting your organization - evolution of work and the worker*. <https://www.shrm.org/about/foundation/shapingthefuture/documents/2-14%20theme%201%20paper-final%20for%20web.pdf> (15. 3. 2016).
- Sutter, Brigitte, Jandl, Michael (2006). *Comparative study on policies towards foreign graduates. Study on admission and retention policies towards foreign students in industrialised countries*. Austria, Netherlands: International Centre for Migration Policy Development.
- Tax Ministry of Denmark (2015). *Tax scheme for foreign researchers and highly paid employees*, <http://www.skat.dk/SKAT.aspx?old=97319&lang=US> (15. 3. 2016).
- Thuesen, Frederik (2011). Recruiting and retaining highly skilled immigrants, http://www.sfi.dk/recruiting_and_retaining_highly_skilled_immigrants-8255.aspx (15. 3. 2016).
- Tronstad, Kristian Rose, Bore, Lene, Djuve Anne (2012), *Report to the European Migration Network from the Norwegian Contact Point*. http://ec.europa.eu/dgs/home-affairs/what-we-do/networks/european_migration_network/reports/docs/emn-studies/immigration-students/28.norway_national_report_immigration_of_international_students_final_01oct2012_en.pdf (15. 3. 2016)
- United Nations (2015). *World Population Prospects: The 2015 Revision. Key Findings and Advance Tables*. New York: United States: Department of Economic and Social Affairs, Population Division.
- Utlendingsdirektoratet (UDI) (2013). *UDI Statistics, Denmark*. <http://www.udi.no/statistikk-og-analyse/statistikk/statistikk-og-analyse/statistikktabeller/oversiktsider/statistikk-og-analyse/statistikk-%5d> (25. 9. 2015).
- West, Charlotte (2013). To charge or not to charge?, *International Educator*, July+Aug, 34–43, http://www.nafsa.org/_/File/_/ie_julaug13_change.pdf (3. 11. 2015).
- Zaafraane, Hadeed, et al. (2011). *Internationalization of Higher Education in MENA: Policy issues associated with skills formation and mobility*, World Bank Document Report No. 63762-MNA <https://openknowledge.worldbank.org/bitstream/handle/10986/19461/637620ESW0WHIT00SELM20Report-MENA0EN.pdf?sequence=1&isAllowed=y> (15. 3. 2016).
- Zimmermann, Klaus (2004). European Labour Mobility: Challenges and Potentials, *IZA Journal*, Discussion paper 1410, 1–32.

POVZETEK

DANSKA IN NORVEŠKA: POTREBE TRGA IN KVALIFICIRANI MIGRANTI

Ana Maria ARAGONÉS, Uberto SALGADO

Članek obravnava pomembnost visokokvalificiranih migrantskih delavcev. Od finančne krize 2007–2008 igrajo odločilno vlogo v razvitih državah, ki se soočajo s številnimi težavami. V nasprotju z dogajanjem v prejšnjih krizah, danes migracije visokokvalificiranih delavcev po rahlem upadu na vrhuncu krize ne samo naraščajo, temveč so, ker se migranti odzivajo na zahteve in potrebe mednarodnega trga dela, v bistvenem porastu. Strukturne demografske spremembe, kot je staranje prebivalstva, so negativno vplivale na trg dela in izobraževalni sektor. Ovire za ekonomsko rast v okviru ekonomije znanja rešujejo s privabljanjem visokokvalificiranih migrantov in nadarjenih tujih študentov, kar vodi v globalno tekmovanje za mobilizacijo, privabljanje in zadržanje najbolj kvalificiranih migrantskih delavcev. Visokokvalificirani migranti so postali odločilni dejavnik v novih migracijskih tokovih ne samo zaradi pomembne vloge pri premagovanju krize, pač pa tudi kot nujno dopolnilo domači delovni sili in kot način reševanja notranjih strukturnih težav. Avtorja v članku analizirata dve skandinavski državi, Dansko in Norveško, in njuno uporabo različnih strategij za reševanje omenjenih težav. Obe državi sta uvedli dva mehanizma za privabljanje nadarjenih tujih študentov. Prvi je preprostejša priseljenska politika, ki omogoča lažji prehod od vize za začasno bivanje k vizi za stalno bivanje. Drugi mehanizem pa tuje univerzitetne študente privablja s ponudbo za zagotovljeno delo in stalno prebivališče.