

## *Chapter 6:*

# **Skilled mobility as a challenge for Croatian diaspora and migration policies**

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## **Abstract**

This paper looks at the development of the scholarly debate on brain drain/gain/circulation in Croatia over the past two decades. It describes how the debate has reflected the impact of domestic socioeconomic and political dynamics on skilled mobility and diaspora politics within the context of the Croatian post-socialist transition and the ethno-national state-building process that followed the dissolution of the Yugoslav Federation. We critically review empirical research on the interconnections between knowledge and development as well as migration patterns in, to, and from Croatia. The local media and social network discourse is also reviewed in order to contextualize the scholarly debate and the production of social knowledge. We furthermore assess the development of migration policies and the corresponding institutional policies as well as the successes and failures in implementing these and we provide examples of good practices in tackling skilled mobility, taking general migration patterns into account. The paper looks at the strategies and instruments that neighbouring countries have used to deal with brain drain/gain/circulation and concludes with some recommendations for further research. We also recommend some policies that are required to respond to current dynamics. Accordingly, the paper seeks to highlight the linkage between future migration trends and the human resources needs of Croatia as an aging society and new member state of the European Union.

**Keywords:** skilled mobility, diaspora politics, post-socialist transition, ethno-national, state-building.

## **Introduction**

Countering brain-drain dynamics, coping with global competition for skilled labour and developing brain-gain incentives have all been important concerns for stakeholders in Croatian politics, the business community and the civil society for quite some time. The demand for young talent and professionals and demographic development require policies that will make Croatia an attractive destination for so-called knowledge workers and migrants. However, immigration in general and brain

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gain in particular are topics that are still much less discussed than brain drain. Croatia has traditionally been a country of emigration and only recently has it begun to embrace the idea of having to become a country of immigration, even though, aside from temporary labour migration, it has already seen considerable co-ethnic and return migration from the diaspora since the early 1990s. However, these post-socialist migration dynamics involving skilled migrants, the re-integration experiences of former emigrants and their “returning” offspring, examples of knowledge transfer and assessments of the socio-cultural impact of remigration from diasporas all over the world, have so far mostly remained unreported<sup>3</sup> (see Čapo Žmegač 2010a, 2010b; for the Croatian-German migration context, see Čapo Žmegač 2012; Hornstein Tomić 2011; Hornstein Tomić and Ivanda Jurčević 2012).<sup>4</sup>In order to address the skilled potential of the Croatian diaspora, we must first understand the processes that have contributed to the current situation. With this in mind, (1) we shall briefly sketch the key features of Croatian diaspora politics and migration dynamics since the collapse of socialism in general. We consider this to be necessary background knowledge for (2) our contextualization of the research and reports on brain drain/gain in Croatia that have been published since then. Furthermore, (3) we shall point out the correspondences between institutional policies, such as the Unity through Knowledge Fund, which will be introduced as an example of a good practice, and general developments in current migration, diaspora, and innovation politics in Croatia. Finally, (4) we conclude with some suggestions about how to manage skilled mobility more effectively and enhance Croatia's attractiveness to highly skilled migrants.

### **Key features of Croatian diaspora politics and migration dynamics**

Even as far back as the late 1980s, Franjo Tuđman, who would soon become the first President of an independent Croatia, had a good appreciation of the role that the Croatian diaspora could play as a positive resource on which to capitalize. During the preparations for the political transition from socialism and the first multi-party elections, Tuđman visited diaspora organizations and representatives in Europe and beyond to introduce his ideas about Croatia's future and the mission of his party, the Croatian Democratic Union / Hrvatska Demokratska Zajednica (HDZ). He was determined to bridge the gap between former partisans and nationalists, representatives of the communist regime and their opponents, and to unify all Croats under the umbrella of the Croat cause. In order to gain credibility amongst political emigrants, he broadened their perspectives of any possible involvement they might

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<sup>3</sup>The project “Remigrations and transformations in post-socialist European regions” is currently establishing a discursive platform about remigration and its impact on the post-socialist transition process. Integration/participation, culture/knowledge transfers, and identity/ethnicity are researched in cross-national and interdisciplinary perspective by linking empirical case studies and related studies, diaspora outreach policies, and artistic representations of (re-)migrant mobility ([www.remigrations.pilar.hr](http://www.remigrations.pilar.hr)). The project is led by Caroline Hornstein Tomić (Pilar Institute, Zagreb) together with Sarah Scholl-Schneider (Mainz) and Robert Pichler (Graz), and it is funded by the ERSTE Foundation (Vienna).

<sup>4</sup>A first monography about return migration to Croatia is currently in preparation (editors: Jasna Čapo, Katica Ivanda, and Caroline Hornstein Tomić).

have in the building of the Croatian state. Indeed, diaspora representatives and organisations were already involved in political lobbying back then and they would subsequently play a crucial role in collecting financial means and weapons for the “Homeland War” (see Hockenos 2003; Božić 2005; Winland 2005; Ragazzi 2009). Tuđman’s public statements reveal that it was also his intention to attract the Croatian business community abroad for the purpose of homeland investment and to prepare their prospective return. However, such ideas were never translated into official policies. To this day, the Croatian public has viewed its diaspora mostly through the prism of politics. While some take pride in the diaspora as an exemplary thriving expatriate community, others tend to demonize it as an excessively political and regressive force. Both positions have been criticized as public misperceptions; however, they are influential factors with respect to return migration and diaspora politics (Perica 2011; Skoko 2013).

Migration to Croatia since 1990 - disregarding temporary labour migration - has in fact been primarily co-ethnic, homeland, and return migration (Čapo Žmegač 2005). The immigrants of the 1990s arrived alongside war refugees and displaced persons, many of whom came from neighbouring Bosnia and Herzegovina and other parts of the Former Yugoslavia, while some came via other states in Western Europe. These immigrants included former guest workers returning after retirement as well as former emigrants who were returning to Croatia to take part in the democratisation process. There was a notable influx not only of first-generation but second-generation co-ethnic migrants as well, who saw the political changes as an incentive for homeland return. Like political emigrants and returning business elites, the “returning” offspring of former emigrant generations were often skilled or knowledge migrants who had a tertiary education, and they were willing to take risks and were motivated to contribute to, have an impact on, and/or take advantage of political changes and economic transformation. These potential or actual agents of change represent a part of the post-socialist transition process in countries such as Croatia (Barbić 2008: 7; Hornstein Tomić 2011: 13-15). That this co-ethnic skilled migration has not received much attention to this day is noteworthy to say the least, especially if we consider the fact that Croatian diaspora politics rely not only on economic and political capital, but on the potential human capital resources available among its large diaspora as well.

Even though official statistics tried to take records of in- and out-migration throughout the 1990s, no clear distinction was made between immigration and war-related migratory movements or between the various migrant types (Lajić 2004). For example, registered immigration totalled 45,967 persons between 1990 and 1998, differentiated only by the original country of residence (Vidak 1998: 58).<sup>5</sup> There are no accounts of how many return migrants have come and actually stayed or of those

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<sup>5</sup>These data do not include refugees from Bosnia-Herzegovina, the Socialist Republic of Yugoslavia (later Serbia, Kosovo, and Montenegro), Slovenia, or Macedonia. What the data do show, for example, is a peak of return and immigration to Croatia in 1992; about 50% of those immigrants actually came from Germany. Due to double residency or commuting practices, it is impossible to assess how many of these have left again in the meantime.

who have returned to their original countries of residence. For example, estimates of (re-)migration to Croatia in this period ranged from 5,000 to 55,000 (Barbić 2008: 7). Skilled migrants as a group and category in their own right were neither registered nor particularly considered in spite of concerns about skilled labour being lost through emigration. Since 2000, declining immigration and temporarily stagnating emigration rates have been recorded. However, these have been on the rise again since 2009, leading to continuous net negative migration and contributing to population-shrinking processes. The 2011 census shows a population decrease of more than 150,000 people (3.43 per cent of the total population) over one decade.<sup>6</sup> The year 2011 showed the most pronounced migration dynamics of the past decade, with 12,699 registered departures and 8,534 arrivals. The most intensive flows (both in and out) were registered between Croatia and some of its neighbouring countries, especially Bosnia-Herzegovina and Serbia. Also in 2011, more than 2,500 people left Croatia for European Union countries. Forecasts show that the largest migration flows will continue to be registered within the immediate region. The largest age cohorts of emigrants are between 20 and 44 years of age.<sup>7</sup>

Compared to its precursors, the current Law on Relations of the Republic of Croatia with Croats outside the Republic of Croatia regulates the relationship between the Croatian state and its diaspora in a more specific way.<sup>8</sup> It also facilitates integration and access to Croatian citizenship, and introduces a new category of “Croat without Croatian citizenship”, targeting non-Croats, partners of Croats and family members. A “Welcome Office” within the newly-formed governmental office dealing with Croats abroad is meant to ease return by providing information about legal rights and obligations.<sup>9</sup> Furthermore, advisors to Croatian returnees inform them about customs regulations, special tax benefits, social services, employment or business opportunities and “integration into Croatian society”. The law also specifically focuses on the offspring of former emigrants, i.e., students (mentioning scholarship offers, etc.). In general terms, the law is seen as a significant step forward towards developing migration policies.<sup>10</sup>

## Research on brain drain and skilled mobility in Croatia

The brain drain phenomenon, which is a major concern in contemporary Croatian public discourse, took its time in becoming a topic of academic research, notwithstanding the fact that it has had a public presence since the early transition period. A survey conducted amongst research personnel at Zagreb University a

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<sup>6</sup>Croatian Bureau of Statistics 2012a.

<sup>7</sup>Croatian Bureau of Statistics 2012b.

<sup>8</sup>It focuses on three basic groups: Croats in Bosnia-Herzegovina, (approximately 400,000; in 1991: 760,852); Croatian minorities in 12 European (not specified whether EU) countries (350,000 approx.); Croatian diaspora in overseas and European countries (3 million approx.). Croatia considers its diaspora much larger than international agencies such as the World Bank do (Croatian diaspora worldwide: 753,900, just over 17% of the total Croatian population (Ratha et al. 2011)).

<sup>9</sup>Article 57, Law on Relations ...

<sup>10</sup>See articles 60 and 61.

decade ago offered the first signs that thinking about and discussing knowledge migration was disproportionately more frequent than its actual realization (Adamović and Mežnarić 2003). The study showed that the percentage of young scientists who had decided to leave the country in search for work and professional advancement had dropped from 11.7 per cent to 2.4 per cent between 1990 and 2000. However, the authors also emphasised the fact that large numbers of young scientists were seriously considering departure at the beginning of the millennium. In order to assess the actual reasons why they were thinking about moving abroad, the authors inquired about aspects of their professional satisfaction (work conditions, workplace atmosphere, salary, advancement opportunities, self-realization in respective academic fields, etc.) as well as their general life satisfaction (quality of life, secured accommodation, cultural life, personal relationships, etc.) because migration motives are usually the result of a multitude of factors. The responses showed that professional satisfaction criteria were given priority. On the other hand, factors contributing to the decision to remain in Croatia were mostly related to general life satisfaction. Finally and importantly, the decisive factor in the decision of the young scientists to leave Croatia were specific offers for further professionalization or work engagements, especially at reputable institutions abroad (Adamović and Mežnarić 2003). An interview-based empirical study from the same period found that a significantly high number of young scientists chose to switch professional fields and enter the private sector and work in knowledge industries rather than go abroad. The author suggested treating this as local brain waste and to regard it as something much more severe than international knowledge mobility. The brain drain discourse and limited professional prospects within Croatia's scientific community were also criticized for reproducing negative stereotypes (Golub 2003). Research conducted in 2005 also showed that both students and junior employees in academia were positively disposed to moving abroad to search for better career opportunities (Šverko 2005). It was argued that "psychological" variables such as self-actualization as well as social capital and personal connections in destination countries had the most crucial influence on emigration decisions. Another expert report on brain drain based its arguments on evaluations of statistical data from the 2001 Croatian census (Bjelajac 2007). The author found that among people temporarily employed abroad (then 6.9 per cent of the domestic population), the percentage of people who were highly educated (12.38 per cent) was significantly higher than the percentage of the highly educated among the total Croatian population (8.01 per cent). One seventh of the country's scientists were working abroad because of better working conditions, higher wages and smaller study groups. Brain drain widened development gaps and further reduced Croatia's competitiveness. This tendency has intensified according to more recent data from the World Bank. In 2011 it was estimated that over a quarter of the current Croatian diaspora has some form of tertiary education (Ratha et al. 2011). However, research on migration to and from Croatia has only barely and marginally touched upon the category of skilled migration. Some articles dealing with past and current features of migration from Croatia to Germany as well as predicted trends look into temporary and circular migration, "homeland return" and transnational modes of living with respect to the first and second migrant generations (Čapo Žmegač 2012; Hornstein Tomić and Ivanda Jurčević 2012). Based on qualitative

research (surveys and interviews), the latter describe such dynamics as the predominant pattern of skilled labour mobility, which reflects general mobility trends in Europe. Structural incentives, historical socioeconomic and political developments, expectations and images regarding both the home and the host environment are all being discussed as driving forces of migrant activity. Transfers of knowledge, culture, and experience that are associated with migration activities are pointed to as aspects with a potential (unfortunately often undisclosed) for innovation and development and for international (bi- and multilateral) cooperation. According to the research-based 2012 EUROSTUDENT report for Croatia, published by the Institute for the Development of Education (Institut za razvoj obrazovanja), a majority of university students in Croatia have foreign language skills and would consider studying abroad were it not for the financial constraints; only 2 per cent had any foreign study experience (Cvitan et al. 2012). According to a UNESCO report on student mobility, 4.6 per cent of Croatian students are currently studying abroad (UNESCO Institute for Statistics 2012). The unquestionable rise in student mobility and the current context of global integration dynamics show a move from a brain-drain concept to one of brain-circulation (Hornstein Tomić and Ivanda Jurčević 2012; Ivošević and Ščukanec 2012). The mobility of young professionals should be supported both by public and private stakeholders and “value-oriented” policies that approve and encourage mobility as an opportunity rather than a negative trend.

Opinion polls today suggest that up to 85 per cent of young people in Croatia would be prepared to leave the country. With nearly 20 per cent of all registered unemployed individuals under the age of 25,<sup>11</sup> the link between brain drain and youth unemployment is evident, even though such statements ignore patterns of circular migration and the aforementioned discrepancy between intentions and realization. The Facebook group “Mladi napustimo Hrvatsku” (Young people, let’s leave Croatia), which provides support and information about the work-permit and visa policies of destination countries, reflects the same problem. One favourite destination is Canada, which, according to newspaper reports, issued 275 visas for working holidays, young professionals and internships in a record time of 45 minutes in February 2013.<sup>12</sup> Like Facebook, classical media also report on the widespread pessimism and general dissatisfaction with domestic economic and political conditions that have fuelled the discourse about leaving the country.

At a conference earlier this year,<sup>13</sup> it was claimed that between 60,000 and 70,000 people had left Croatia over the past three years, most of them from the more developed regions and the capital, Zagreb. The conference, which was primarily concerned with future demographic developments, stressed the importance of

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<sup>11</sup>Croatian Employment Service 2013.

<sup>12</sup>See, for example, Večernji List, 24 February 2013.

<sup>13</sup>The conference Nacionalni Forum (National Forum) was organized at the Croatian Academy of Sciences and Arts in Zagreb on 26 February 2013 by the association of the same name, and was devoted to the topic “Demografija – Uvjet Hrvatske Budućnosti” (Demography – precondition of Croatia’s future).

diaspora outreach in tracking migration outflows, keeping contact with emigrants and engaging diaspora capital (economic, social, and cultural) for homeland development and policymaking. Improvements in political and economic conditions at home, investment aimed at strengthening and incentivizing entrepreneurship and home ownership support for young people were equally emphasized as measures that are needed to counter permanent emigration.

### **Institutional policies / good practices: limits and challenges**

Croatia's neighbours Bosnia-Herzegovina and Serbia have similar brain-drain experiences and youth unemployment rates and their discussions about the lack of employment and the unsatisfactory working conditions for the highly skilled are also similar. Return migration of young professionals and reintegration support may relieve some of the problems (Božić 2012), but they could arguably make others more severe. Between 2002 and 2011, World University Service (WUS) Austria implemented the so-called *Brain Gain Plus* programme in Bosnia-Herzegovina in collaboration with relevant local partners and stakeholders and support from the Austrian Development Agency. As a means of "regaining brains" to network and transfer knowledge, the programme funded the short-term return and employment of approximately 100 experts mainly – but not exclusively – from the diaspora. Similarly, the Swiss Agency for Development and Cooperation funded 160 internships to help young skilled workers return from abroad (Pozzi 2011) in order to help improve research and development (R&D), the educational sector and the private entrepreneurial sector. The partners involved in the programmes stressed the effectiveness and sustainability of the return of these workers - albeit on a temporary basis - by pointing to the success in establishing long-term international cooperation. However, no impact evaluation has been carried out so far. Other programmes such as the *Youth Employability and Retention Programme* have been aimed at training and retaining young professionals at home. Local officials praised this programme, which apparently succeeded in training ten thousand and employing four hundred young professionals (Southeast European Times 2012). In Serbia, private companies such as *Coca-Cola Hellenic* ran similar programmes and highlighted the potential and the benefits of public-private partnerships.

In Croatia, concerns about brain drain have also contributed to a systematic rethinking of diaspora outreach strategies in general and to the targeting of the skilled diaspora in particular, while at the same time a knowledge-based development strategy has been seen as visionary for a country that is poor in natural resources and industrial capacity. The buzzword 'knowledge society' has been excessively employed as a key reference in the Croatian public discourse for a decade and even more so in the expert discourse (Švarc et al. 2004; Švarc 2009; Afrić et al. (eds.) 2011), but its local meaning has remained vague. That it succeeded in achieving a considerable legitimacy in the academic, scientific, and educational sphere is mainly due to three factors: (a) Croatia's integration into the Bologna system; (b) the adoption of the *acquis communautaire* in preparation for EU accession; and (c) the process of deindustrialisation. The restructuring of the economic system and the privatisation of

state-owned companies in the past two decades brought with it the closure of internal research units which were once key production centres for knowledge and technological innovation. The research and development units of former state-owned companies such as PLIVA (pharmaceutics, now Israeli-owned), INA (Croatian Oil Company (whose main shareholder is Hungarian), and TELEKOM (German-owned) are now closed and their activities have been outsourced to the countries of the new owners. Universities and research institutes have taken over as centres of knowledge production and innovation and the industrial sector has been de-skilled.<sup>14</sup> While the functions and functioning of the educational system and the objectives of education in general are being debated (Pilić et al. (eds.) 2008) a National Innovation System is checking the usefulness and adaptability of the knowledge produced in the educational system for economic development (Švarc 2009). The aim of the “Entrepreneurial University” is to increase the commercial benefits of academic (scientific) research activities (Švarc 2009; Lažnjak and Švarc in Afrić et al. (eds.) 2011). Critics in the humanities and social sciences are concerned about the commoditisation of knowledge, while some foundations and civil initiatives engage in raising awareness of the need to reform the educational system, and state that academic life should not be detached from market interests and requirements, not only with regard to the natural and technical sciences but the social sciences and humanities as well. As the EU Framework Programme for Research and Innovation “Horizon 2020” has pointed out, they are considered as equally important fields of knowledge production and are crucial for innovation and for helping to solve social problems.

The founding of the Unity through Knowledge Fund (UKF) in 2007 should be seen in the context of the debates on knowledge-based development and innovation policies.<sup>15</sup> The UKF is meant to serve as an instrument for the further development of research infrastructure and a knowledge-based society as outlined in the Croatian Scientific and Technological Policy. Seeking to connect scientists and professionals in Croatia with those located abroad in order to enhance international cooperation and the competitiveness of domestic knowledge production, the UKF has so far addressed its programmes specifically to those foreign-based scientists who form part of the Croatian diaspora. Prior to its establishment, the Ministry of Science, Education and Sports organized two conferences for Croatian scientists working abroad. The first of these was held in Vukovar in 2004 and the second in Split in 2007. Since then, the Ministry has set up two complementary databases with contacts in order to facilitate connections and cooperation with foreign partners. The Fund encourages approaches and projects that connect leading international scientific institutions to Croatian universities, research institutes and small and medium-sized businesses, offering the potential to strengthen the local economy and thereby support creative and

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<sup>14</sup>We owe thanks to Vjekoslav Afrić and Kresimir Zazar who shared their knowledge and insights into the concepts and debates about Croatia as a knowledge society.

<sup>15</sup>The following descriptions of the mission, its programmes, principles and operational successes are based on self-presentations of the UKF. We are particularly grateful to Alessia Pozzi, the Programme Manager, who generously shared her experiences and insight with us.

innovative responses to the present and future challenges faced by Croatian society. It provides financial support for the development of innovations, patents, commercial and other applications based on scientific results and it matches funds with investments for scientific projects undertaken by the business sector. It offers specific support to projects committed to excellence and young talent and the inclusion of this talent in international projects led by members of the scientific diaspora, as well as those aimed at integrating them into local industry as a counterbalance to brain drain and the search for adequate or better employment abroad.

So far, UKF operations have been made possible by a World Bank loan, which has covered 80 per cent of the costs with 20 per cent coming from the Croatian state budget. The first UKF programme cycle lasted from December 2007 until 2012 and included three programmes: 1. Cooperability; 2. Connectivity; 3. Young researchers. The Cooperability programme (1) was focused on medium-scale collaborative projects, which usually involved between three and four partners. For a period of up to three years, it financed the research, equipment, travel/mobility and employment of participating researchers to the sum of €200,000. A total of 26 projects were funded. The programme also helped facilitate the return of diaspora scientists by paying project salaries within domestic institutions, which were then obliged to open up permanent positions after two years. Nine such projects were funded in all. However, as UKF staff point out, the nine returning scientists - young and advanced researchers - were already in the process of return before the projects were realised. The Connectivity Programme (2) supported short-term mobility: researchers from Croatia received support of up to €10,000 to work in foreign institutions for up to 6 months; diaspora scientists were also eligible to apply for short-term visits to Croatia. The Young Researchers Programme (3) was focused on supporting young PhD-level scientists to conduct their own projects independent of their mentors. It also targeted young researchers who intended to return to Croatia after receiving their PhD abroad, and provided assistance for their reintegration into the domestic scientific or business world.

The UKF issued three calls for Cooperability (1<sup>st</sup> round: three years; 2<sup>nd</sup> round: two years; 3<sup>rd</sup> round: 2 years – these projects ended in 2012) and two calls for Young Researchers, while calls for Connectivity remained open throughout the first cycle. Peer reviews (local and foreign initially but only foreign peer reviewers in later calls) safeguarded the objectivity, neutrality and transparency of the evaluation process, and the quality of the projects was the key evaluation criterion. For the Cooperability Programme, 23 per cent of all applications were accepted; 15 per cent were funded in the Young Researchers Programme; and 59 per cent were approved in the Connectivity Programme with a wide range of activities eligible for funding: apart from research, applications could be made for funding to cover international mobility, conference participation and networking activity, equipment and research infrastructure. However, consulting services/external administration (finances, legal issues, intellectual property, Public Relations) for project management were also eligible to receive support, particularly if they were provided by diaspora members. Post-doctoral projects enabling the transfer of knowledge and investments were

intended to serve as vehicles to foster brain gain if young researchers with PhDs from abroad were participating in, and subsequently integrated into, the industrial sector or at universities in Croatia.

A total of 91 scientific and technological research projects received support during the first programme cycle. Projects from institutions and companies in Croatia were conducted in collaboration with Croatian scientists working at international institutions such as Yale University, Eidgenössische Technische Hochschule Zürich (ETH) and the Royal Institute of Technology in Sweden (KTH). Of the 560 scientists and experts participating in UKF-funded projects, 180 were at foreign institutions, 110 were PhD students and 32 were postdoctoral scholars. UKF financing allowed 42 young scientists from Croatia to visit research and development facilities abroad and 20 were able to lead research programmes on their own for the first time.

A total of €7.8 million has been invested in the activities of the Fund. The Ministry of Science, Education and Sports (through the World Bank loan and the State budget) guaranteed nearly €5.1 million representing 65 per cent of the total value necessary for project implementation, while the remaining funds were provided by international scientific/research institutions (€1.2 million), the private sector (€756,526.43) and Croatian public scientific/research institutions (€845,750.54). Networking with internationally prestigious research institutions and newly-acquired skills and knowledge provided UKF scientist groups with a far more competitive approach and the capacity to attract European and other international funding sources, especially within the Seventh Framework Program of the European Union for research and technological development (€9.03 million from FP7).

The UKF was presented as a success story in “developing human capital and managing migration for more competitive European regions” at the European Regional Economic Forum in 2009. The same year, the UKF was chosen by the International Labor Organization (ILO) as an example of a good practice for promoting linkages between migration and development. The UKF evaluated its first operation cycle by stressing the comparatively high publication rates and the high rate of success in attracting international funding, especially within EU FP7. Its contribution to the strengthening of international cooperation is considered significant, helping to give an important impulse to the transfer of knowledge and technologies to the Croatian scientific sector and building increased capacity for the development of local research infrastructure. By encouraging collaboration between sectors, the UKF has contributed to strengthening connections between universities and research institutions and the private sector and its innovation demands. UKF management considers the Cooperability Programme to have been a real success and it is equally positive about the Connectivity Programme. That the UKF operates in close contact with its beneficiaries is seen as a great advantage. The Young Researchers Programme is also considered successful, especially with regard to fostering the professional advancement of young researchers (at a doctoral and postdoctoral level). The less successful part of both the Cooperability and the Young Researchers Programmes is that fostering homeward mobility and return is seen as

somewhat pointless and even outdated, as more than ever international mobility has become an essential practice for scientists in search of academic institutions of greater prestige. The low interest of the private sector to get involved in UKF programmes may be partly due to a lack of networking. However, its involvement in R&D, which has largely been outsourced (see above), is generally limited, with the interest focussed on connecting with high-level foreign research institutions. The connections between the UKF and Croatia's Science Technology Policy are cited as an advantage and an additional reason for its success and the same applies to the high quality and the transparent selection procedure.

The Ministry of Science, Education and Sports has committed itself to continuing UKF activities for another cycle from 2013 until 2017, once again through matching World Bank /state budget funding. The previous €5.1 million budget will be reduced to €4.3 million and €3 million of this will be reserved for Cooperability (one or two calls; two calls for Young Researchers; continuously open calls for Connectivity). In general, the programmes remain unchanged except for minor operational, technical adjustments and the governance structure (management; steering committee; advisory board) is also unchanged. The UKF management has succeeded in acquiring FP7 funding for an adjoined New Fellowship programme (NEWFELPRO), which (1) gives grants to foreign researchers with or without a Croatian background, who intend to spend two years at Croatian research institutions. No staying conditions are attached to this grant. (2) Croatian scientists will also receive support to spend two years at foreign research institutions. (3) The reintegration of young Croatian scientists with foreign PhDs will be supported by project funding/salaries corresponding to foreign salaries for transition periods, while domestic host institutions are expected to provide infrastructure and equipment. Fostering return has been dropped as a UKF target.

## **Conclusions and recommendations**

In two decades of post-socialist transition, Croatia has been trying to compensate for its lack of marketable natural resources and industrial capacity by following a knowledge-based development strategy. However, expenditure on research and development has shown a worrying decrease over the past ten years, culminating in a record low of 0.73 per cent of GDP in 2010 (UNESCO Institute for Statistics 2010). The strategy is likely to fail at existing state budget distributions (Kurelić in Afrić et al. (eds.) 2011) and equally low private sector investment in research and development (Švarc 2011). The knowledge society will remain a hollow concept if it is not linked to sustainable development strategies (Afrić in Višković (ed.) 2008; Afrić in Leburić et al. 2009). The general economic and labour market situation and the vitality of the economic and educational sectors are of primary importance to Croatia's ranking amongst international destinations for highly skilled workers. However, apart from this, it is the educational environment and research infrastructure that - besides funding - needs orientation and direction if the country is to become more attractive, relevant and competitive.

Croatia mirrors the Europe-wide trend of societal aging and birth rates have been lower than mortality rates since the 1980s. That immigration and skilled immigration in particular, is necessary for reasons of social, economic and demographic sustainability and to allow a better management of economic restructuring to prevent economic growth stagnation is not yet shared common knowledge. The interconnectedness of population dynamics, ageing processes, labour-market requirements and the sustainability of social welfare systems with immigration has not been considered so far, either systematically or coherently, and migration has been dealt with primarily as a matter of population development<sup>16</sup> but not as a significant economic factor (Barbić 2008). Croatian immigration policies have a strong ethnic bias, and like diaspora politics, they are pigeon-holed into the issue of demographics and ethnic nation-state building. Forecasts indicate that the Croatian labour pool will shrink steadily and the highest deficit will continue to be among scientists and highly qualified personnel.<sup>17</sup> With rising living standards, seasonal and low-skilled labour out-migration should decline further; however, brain drain and emigration by skilled professionals for educational purposes is expected to continue.<sup>18</sup> With Croatia's accession to the EU in July 2013 the supranational coordination of asylum policies, the country's integration into transnational labour markets and the harmonizing of national immigration and naturalization laws with EU policies mean that Croatia will open up further to immigration in general (Mežnarić 2008). The new migration policy currently in progress suggests that for the first time incentives will be there to give an impulse to supporting the circular migration patterns that follow the dynamics of supply and demand (Migration Policy Framework 2013 - 2015).<sup>19</sup> Diaspora outreach strategies and recruiting and networking practices - most prominently those of the Unity through Knowledge Fund - have concentrated on qualified personnel from the diasporas. This strategy alone will probably be untenable in the future, as the UKF has already discovered. It is notable that the UKF has not been coordinated with Croatia's official general diaspora approaches and policies and no synergies have been disclosed either.

- Demographic trends as well as labour market developments need to attract foreign workers – particularly those with high educational profiles - irrespective of nationality or ethnic belonging, and also primarily those who are not from Croatia's neighbouring countries.

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<sup>16</sup>Council Population Policy of the Government of the Republic of Croatia 2006.

<sup>17</sup>One suggestion has been to develop an immigration policy oriented towards attracting people from neighbouring countries to work in the most needed areas of the economy, to foster economic growth and spur demand-driven labour circulation (Crnković-Pozaić 2008). Indeed, the most significant numbers of immigrants and labour migrants continue to be expected from the neighbouring countries of the former Yugoslavia.

<sup>18</sup>In the domestic debate, the case of Poland is often referred to as a warning example since de-skilling of migrating high-skilled labour migrants has been observed there as a consequence of temporarily saturated foreign labour markets.

<sup>19</sup>In the Migration Policy Framework 2013-2015, the government foresees the introduction of a population register (and other measures) to keep track of actual migration dynamics.

- Diaspora and migration policy should consider cross-sector concerns, which requires coordination and the exchange of information; a skilled-mobility strategy should also be included.
- Internationalisation may not be prevented but it should be embraced and the mobility of both students and skilled workers facilitated. There is a need for a paradigm shift from brain-drain prevention to an adequate management of “brain circulation”.
- Educational reforms and policies need to focus more on market affinity. Tertiary-educated personnel should be better equipped with skills that correspond to actual market needs. Communication between educational and economic sectors needs strengthening in order to regularly assess the knowledge and skills needed for innovation and development.
- The skilled/scientific diaspora should be understood as a strategic partner for international networking and a potential assistant for local development; UKF experiences could be used widely. Diaspora mapping and case studies investigating transnational cooperation, existing networks and knowledge transfers could provide insights, and highlight successes and failures/lessons learned.

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