FROM BRAIN DRAIN TO BRAIN EXCHANGE: HOW TO USE BETTER HIGHLY SKILLED WORKERS
A CONCEPTUAL APPROACH

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Introduction

Skills shortage seems to be an approaching challenge for several European regions. Foremost, in times of anew migration growth within Europe, international labour migration can be regarded as a jigsaw piece in the strategy to counteract this phenomenon. In this article we argue that despite the European right of free movement within Europe, which aims at promoting inter-regional knowledge flows, labour migration-related knowledge still is not entirely exploited. To fully use the potentials and knowledge of labour migrants, regions need new concepts, which function complementary to national or even EU policies such as e.g. qualification recognition of foreign diploma and degrees, but simplify the entrance into the regional or even local society and labour market. Such required concepts cannot be designed at the national level, but as the article will present, rely on the contribution of actors and communities in the particular socio-economic regional context. Thus, this article’s main objective is the conceptual presentation of labour migration-related knowledge effects on home and recipient regions. In that line, regional concepts will be suggested to reverse the negative brain drain and brain waste into positive brain gain and brain exchange knowledge effects in order to entirely utilize the migrants’ skills potential. In that manner, this article aims at revealing the decreasing but still existing entrance obstacles for (re-)migrants to labour markets and societies in the domestic and foreign region.

Knowledge – a Resource essential to Regions

In the context of skills shortage, the future of EU discourse on labour migration should enhance its focus on:
1) a better and faster mobile citizens’ knowledge and qualification recognition,
2) the prevention of mobile citizens’ knowledge waste, and
3) the fully usage of mobile citizens’ entire knowledge.

Knowledge is literally one of the key resources for regions to stay competitive and to prosper. In the case of a positive knowledge impact on regional innovation activities and a sustainable regional development in economic terms, knowledge can be regarded as locational advantage. In addition, knowledge owes its growing importance for regions to the structural change from industrial to knowledge-based economies. A long time, knowledge was regarded as embodied in machinery, capital equipment and complex systems. Nowadays, knowledge is primarily considered embodied in human capital. The term human capital is defined as the performance potential of citizens represented by qualified and skilled individuals. In other words: human capital is the common regional potential expressed in human labour, skills and knowledge. So far, an exact correlation between knowledge and innovation processes has not been clarified yet. Anyhow, the role of human capital as knowledge-holder seems to be important for knowledge-based innovation systems and knowledge-intensive business services, which are described by Strambach as “knowledge carriers, producers and mediators.”

In this context, tacit knowledge is awarded highly relevant to regions. Tacit knowledge is generated and anchored in a regional context of certain processes and cultures. It is primarily passed through personal interactions (face-to-face). On the contrary, codified knowledge can be spread and transported inter- and intra-regionally faster and more cost-efficient by using language, codes or images etc. By the need of spatial proximity, acting as an exchange platform, tacit knowledge is a distinguishing feature to regions, contributing to a regional competitive capacity. Polanyi noted that human beings are aware of various issues, which cannot be communicated to others in spoken form. He characterizes tacit knowledge as a kind of previous knowledge that therefore can only be ascertained with difficulty. By evoking collective learning effects within regions, tacit knowledge cumulates in the course of a human life. As a result, the importance of human capital moves to the foreground. For regions that rely on growth and competitiveness, a sector-specific, in human capital embodied mix of knowledge (e.g. synthetic, analytical and symbolic knowledge) can mean an advantage over the competitors. The more types of knowledge a region bears, the more promising is the starting position of the region concerning national and international competition.

In particular, Metropolitan areas benefit from the accumulated knowledge. As opposed to smaller cities and peripheral regions, they have an access to a larger pool of human capital. In contrary to the periphery, metropolitan areas are often characterized by a diverse corporate landscape, attractive job opportunities and a well-developed infrastructure. These attributes seem to attract a large number of highly skilled workers. Thus, in the future regions will be under even higher pressure to compete for skilled human capital, as not only the quantity, but also the quality of workforce count.
Foremost, the highly qualified workers are said to contribute to regional economic development. Morrison suggests regional companies as gatekeepers of knowledge through their performance of knowledge searching, transcoding and sharing. Transferring his idea into the concept of human capital as knowledge carrier, the contribution of highly skilled workers could be described as follows: First, they identify knowledge and transfer/provide it to further regional actors. Second, the highly skilled workers examine knowledge due to its regional importance, and third, they exploit knowledge using their absorptive capacity. Al-Laham et al., and Cotic-Svetina et al. declare that regional tacit knowledge is embodied in the employees’ skills and activities and unfolds in interactions with other employees. Despite the fact that proximity, human capital interactions and regional history matter for knowledge generation and exploitation, a continuous inflow of external knowledge is an essential precondition for regions’ competitiveness and economic growth. In this vein, Martin and Sunley state that missing external knowledge can turn regional advantages into hazards, which result in regional inflexibility. Above all, there are regional branches and clusters that rely on a variety of knowledge for innovation. As noted before, intra-regional knowledge transfer is important, but not sufficient for innovation processes. It is rather about inter-regional interactions which contribute to the knowledge flow. In literature, geographers and innovation researchers discuss the possibilities of how knowledge can be transferred and later anchored regionally in order to make it useable. In a study on knowledge use and circulation, Smed Olsen et al. suggest four main interaction channels, through which knowledge enters and is re-circulated into regions. In addition to events, acquisition of codified knowledge and firm-level interactions, they present job-related mobility as a knowledge inflow and re-circulation channel. By job-related mobility the authors understand both, employees moving/circulating within an organization, but also individuals migrating or employees’ inner-firm migrations from abroad. Also Faggian and McCann regard human capital migration as a recognized means of knowledge to be transferred between regions. However, in the context of regional innovation study, very little is known about the ways of such knowledge transfer and probably it is not possible to identify exact mechanisms of such knowledge spillovers. What is known so far is that mobile citizens’ knowledge still is not used entirely regarding their migration processes.

The current literature defines highly qualified in terms of academics and skilled workers, who possess special knowledge and a high level of creativity and talent. Stockhorst provides a differentiated view on highly qualified workers, which is based on their abilities. Thus, he uncouples the notion from certificates and degrees, but assesses staff with regard to their actually performed scope of activities. Stockhorst pleads for a new classification of the highly qualified. He also counts employees without a tertiary education under this term. Thereby, he adds an important aspect to the discussion of the use of the recognition of qualifications in immigration countries. Even if the EU proposes mutual recognition of e.g. diploma or scientific degrees of labour migrants, reality often shows national entrance barriers and obstacles. Thus, he proposes a simplification of current procedures to make full use of the potential of knowledge and skills of mobile citizens, instead of wasting brains.

From brain drain to brain waste – mobile citizens’ unused potentials

Brain flow is a natural phenomenon anchored in migration processes. It describes highly qualified knowledge flows from emigration to immigration countries or regions. At the first glance brain flow leads to positive effects on receiving regions, which benefit from the impact of human capital by absorbing the inflowing knowledge and optionally utilizing it for regional products and processes. In turn, home regions suffer a brain drain. Brain drain was coined in the 1960s. It originally describes the emigration of highly skilled workers from developing to developed countries and the loss of skills and knowledge, which can reduce the potential for economic growth.

Nowadays, the term is also used as part of an inter-regional labour migration. Brain drain can hit each region. Even economically strong regions complain about knowledge drain. In contrary to less successful regions, these can compensate the knowledge loss by new knowledge flows from abroad. Thus, primarily peripheral and economically weak regions are affected by brain drain and its long-term consequences. Hence, knowledge loss can lead in structurally weak regions to an economic, cultural and social collapse. A further effect of highly qualified outflow on regions is the loss of symbolic, social and cultural capital.

As an ideal state of the brain flow phenomenon and a win-win-situation for all involved, the brain circulation can be introduced. Brain circulation and brain exchange seem to be roughly the same. Even so, brain circulation differs from the brain exchange concept by the adoption of a permanent (on-going), inexorable knowledge circulation as a result of a high mobility of the knowledge elite. In addition, the brain circulation concept (process-oriented) assumes a definite return of highly skilled professionals into their home regions. In the case of return migration, a complete use of the re-circulated knowledge is expected. But brain circulation in terms of entire knowledge exploitation occurs infrequently due to national and regional restrictions. Thus, by speaking about brain circulation, in most cases, the brain exchange concept is meant – a selective spatial inter-regional knowledge exchange through mobility and new communication and technology channels.

In the case of highly skilled immigration, the seemingly for the home region lost knowledge is theoretically
an available resource for the arrival region. Especially in western European countries, knowledge transfer is seen as an additional opportunity besides the mobilisation of own untapped potentials to counteract skills shortage. In this context, predominantly the phenomenon of brain waste is discussed. Brain waste occurs by excluding labour migrants through the non-recognition of the original qualification and maintaining high entry barriers to the regional labour market and the society. A further distinction can be made between the internal and the external brain waste. While internal brain waste is a home region related negative knowledge effect, external brain waste refers to receiving regions. Both effects describe no utilization or the wrong utilization of existing regional skills or new inflowing/re-circulated knowledge in the region. Hence, brain waste hits both: the arrival and the home regions. Through migration flows mobile citizens acquire new knowledge in form of language, soft skills and intercultural competences on the job. Returning home, these skills could lead return migrants to better job opportunities, but in some cases these are often simply not required, especially with regard to low-skilled workers. Thus, the obtained knowledge gets wasted. In literature, return migrants were long time considered as regional innovators. The mix of notorious structures and new acquired skills abroad was regarded as a generator of new economic impulses in home regions – a phenomenon called inter alia New Argonauts by Saxenian. Saxenian describes the New Argonauts “(...) ideally positioned as insiders and outsiders at home and abroad” and declares:

The new Argonauts are (...) at once the product of search networks among the professionals and companies for whom they have worked and with which they associate, and - in collaboration with parts of government and other domestic public institutions – the co-architects of further networks that extend and adopt to home-country conditions the web of relations they already know.

To fully use highly skilled and low-skilled return migrants’ knowledge for regional development, regions are still in charge to develop new policies. Particularly, low-skilled mobile citizens are often not aware of their newly acquired skills. In addition, a lack of regional structures in the home region, providing the returnees with information about possibilities to use the re-circulated knowledge, complicates their re-integration into the domestic labour market. Hence, current studies dissociate from the solely positive view on return migration effects. Apart from positive brain gain effects, they consider negative brain waste effects of return migration in home countries and regions.

Consequently, this article continues considering migration-related knowledge effects on both, the home and the arrival regions. By this means, the authors emphasizes present the increasing need for action to improve regional policies to better absorb incoming knowledge from abroad. So far, the focus on migration-related knowledge effects on regions was dominated by the view of the arrival countries. Against the background of new migration patterns, caused by the European phenomenon of open borders, new communication and technology systems, migration-related knowledge effects call for a differentiated approach.

Migration-related knowledge effects

So far we argued: that if regions do not recognize, safeguard and use migration-related knowledge flows, transferred knowledge often results in negative effects on regions such as brain drain or brain waste. Based on this categorization, in the following a distinction between cases of migration patterns and the resulting migration-related knowledge effects on home and arrival regions is made. Using these categories is promising in order to identify different kinds of migration patterns bringing forth possible knowledge effects on home and receiving regions. The following table provides frequently occur-

Table 1

Migration-related knowledge effects on regions, own source

<table>
<thead>
<tr>
<th>Migration</th>
<th>Home region</th>
<th>Receiving region</th>
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<tbody>
<tr>
<td></td>
<td>Emigration</td>
<td>Accept migration/ knowledge</td>
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<tr>
<td></td>
<td>without effects</td>
<td>low effects</td>
</tr>
<tr>
<td>Seasonal Migration</td>
<td>brain drain</td>
<td>internal brain waste/brain gain</td>
</tr>
<tr>
<td>Circular Migration</td>
<td>brain drain</td>
<td>internal brain waste/brain gain</td>
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<tr>
<td>Long-term Migration</td>
<td>brain drain</td>
<td>brain exchange</td>
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<tr>
<td>New Nomads</td>
<td>brain drain</td>
<td>internal brain waste/brain gain</td>
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<tr>
<td>Permanent Migration</td>
<td>brain drain</td>
<td>brain exchange</td>
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ring European migration patterns which vary in reality widely. Notwithstanding this, the outline serves as an overview in order to increase possible regional absorption strategies to make full use of labour migrants’ skills.

1. Seasonal Migration

As European seasonal migration mainly refers to harvest-work, consequently it is largely tied to harvest periods. As a general rule seasonal migration takes some weeks. A large number of seasonal workers are students or jobseekers. For them, seasonal migration is an option to earn “quick money” and to rapidly return home. That is why seasonal migration does not have any effects on both: neither on the home nor on the receiving region. The drained knowledge is in the near future again available for the home region. The return migration effects on the home region are low but present. Return migrants possess new acquired basic language skills and intercultural experiences. Theoretically, these skills may find use in the domestic labour market. Practically, the new knowledge acquisition is too marginal to be absorbed regionally.

2. Circular Migration

In contrast to the seasonal migration, the circular migration can be repeated a number of times – thereby the labour migrants circulate between the home and arrival regions. Circular migration is not limited by time duration. In the 1990s circular migration replaced to a large extent the permanent European migration and was for a long time the most popular migration form between eastern and western European countries. The central controlling process of circular migration is the migrant’s financial profit given by job opportunities and higher wages in the receiving regions. By achieving the financial goals, circular migrants return home for an undetermined duration. In case of spending the abroad-earned money, the labour migrant tends to do a renewed emigration in order to gain revenue. Especially in border regions these kinds of circular migration processes are well established. Predominantly, the effects of circular migration lead to brain drain effects on the home regions due to the lack of out-migrated knowledge for an undefined time. In case of making no full use of the incoming knowledge, circular migration can lead to an external brain waste in the receiving region. Such cases seem to occur frequently, since it is circular migrants who, in many cases, work far below their skill level in the arrival regions. Circular migration is one of the examples illustrating that the knowledge re-circulation to the domestic economy holds both possibilities and problems/negative side effects: an internal brain waste and a brain gain. It depends on the home regions’ absorptive capacity and inclusion if the newly acquired knowledge leads to positive or negative effects.

3. Long-term Migration

Taking the time dimension into consideration, the long-term migration should be positioned between the circular and the permanent migration. In both cases, the migrant’s homeward journey is initially planned or the migrant is forced to return home by external events. In this context, a special focus lies on the choice of the return area of long-term migrants. While circular migrants usually chose their home region, long-term migrants often select an economically well-developed region to return. Among these, especially long-term migrants originating from peripheral or economically weak regions hike back to metropolitan areas of their homeland. In economic terms, these areas offer wider implementation opportunities for the migrants’ abroad acquired skills. With regard to the long-term migration knowledge effects, a loss of knowledge (brain drain) can be stated for the home region by emigration. The effects on the receiving region can lead to both: brain gain and an external brain waste effect. In that case, brain gain is justified in the length of the migration and thus differs from the previous two cases. The long-term migrant is assumed to be better integrating into the receiving society and its labour market. Hence, their skills are better absorbed. In contrast to a brain gain, an external brain waste occurs in the receiving region, when the knowledge absorption of the long-term migrant is not successful because of a failed inclusion. Unlike the first two examples, in the case of a return the long-term migrant leaves behind a brain drain effect in the receiving region, depending on their regional integration level and labour market involvement. Due to the workers’ long migration experience, the preparation activities for a possible return home include among others a better implementation of skills into the domestic society and economy. This well-planned preparation leads to a brain gain through knowledge re-circulation to the domestic area. Brain gain can turn into internal brain waste, when the knowledge of the returners stays unutilized. Alongside brain gain and brain waste, long-term migration also leads to the brain exchange phenomenon. Caused by the long stay in the receiving region, the mobile citizens spin personal and professional networks. Using these they interact and exchange knowledge. Returning home, these networks are under certain circumstances still active and at the best provide both sides with knowledge and information or further capital.

4. New Nomads

In the broader sense, new nomads can be regarded as circular or long-term migrants. The new nomads are a small group of highly qualified professionals at the age of 25-29, starting migration between multiple regions after graduation. They are characterised by a high mobility and flexibility. Good wages and job possibilities are the key motivation for their frequent migration flows. By the phenomenon of transmigration, Pries provides a concept which makes the migration patterns of new nomads
comprehensible. As transmigration he understands a meaningful ideal type of international migration, in which the shift between different places in various national societies is not a temporary exception, but a recurring part of a (survival-) oriented strategy. By migration flows from one region to another, over the time new nomads spin multilingual networks, which they can later use for a transfer of capital. Emigrating, new nomads leave behind a brain drain in the home region, which in case of a good re-inclusion is neutralized by their return migration. The feasibility of an internal brain waste by knowledge re-circulation also depends on inclusion opportunities and the exploitation of the absorbed nomads’ skills. Through the immigration of new nomads, the receiving region can expect a knowledge increase, which is characterized by their migration experience in the intercultural context. An external brain waste in the arrival region occurs when the transferred skills cannot be used regionally by the come-into-effect of national and regional restrictions. These restrictions disrupt an efficient inclusion and integration into the labour market and the society and are the selection criteria for new nomads to choose the next region of destination. It is common that new nomads accept a job offer before leaving their home region - a procedure reducing the risk of an external brain waste. Due to the remaining transnational network structures of the new nomads they are often good examples how brain exchange for all involved regions can work.

5. Permanent Migration

Particularly within Europe the permanent migration has long roots and traditions. It already reached its first peak in times of industrialization. In those days, strong migration networks occurred, which are partially still valid to the present day. During the past years, the permanent migration has declined due to Europe-wide political changes. According to the newest trends and the current European crises, permanent migration is popular again. For the domestic regions this has grave consequences of brain drain, especially when losing the knowledge elite. For the arrival regions the knowledge effects shift between brain gain and external brain waste. To a great extent it depends on the regional absorption and inclusion capacity if knowledge effects turn out positive or negative. The higher the qualification degree of a mobile citizen is, the better are the opportunities to gain a foothold in the foreign labour market. The permanent migration excludes any return to the home region. Permanent migrants can bring gain for both regions by using their inter-regional networks for brain exchange.

Making Full Use of Knowledge – Regional Inclusion and Absorptive Capacity

So far, we have argued that migration process-related knowledge spillovers do not exclusively lead to positive effects on regions, but contain the possibility of knowledge loss through brain drain and brain waste effects. The accomplished conceptual approach (Table 1) reinforces with its ideas our argumentation. It even goes one step further and suggests that under certain circumstances brain drain and brain waste effects can even occur in home regions. This problem arises when the highly qualified cannot find adequate employment possibilities or when they are paid inappropriate for their work. Furthermore, Table 1 outlines the possibility that emigration does not guarantee an improvement in living conditions in the region of destination. Arriving in a foreign region, mobile citizens still face insurmountable barriers to enter the regional labour market and society. Moreover, Table 1 submits that different migration patterns can cause both: positive and negative knowledge effects. It depends on regional structures which of these effects prevail. In the further course of this text it will be analysed how and which structures can convert negative brain drain/brain waste effects into positive brain gain/brain exchange effects on regions.

Additionally to the results of Table 1, our literature overview summarizes that the following: First, knowledge is a key resource to regional innovation connected with highly-skilled workforce. Researchers understand innovation as a result of regional interactions and knowledge spillover effects arising from cumulative learning. Thus, a stock of a highly-qualified human capital is of high relevance for regions. Second, despite regional proximity and shared knowledge creation through regional cumulative learning effects, Caragliu/Nijkamp and Malmberg/Power regard the continuous inflow of external knowledge through exchange channels (pipelines) as essential for regional growth. Faggian and McCann ascribe the role of knowledge provider between regions to human capital. Following this argumentation, the labour migration is considered one of the most important channels of knowledge transfer. Hence, the need for regional policies grows which recognize, safeguard and exploit inflowing knowledge and in doing so counteract brain drain and brain waste. To suggest possibilities to avoid negative knowledge effects on regions, the approaches of regional inclusion and absorptive capacity will be discussed in the following. In this context, the role of networks in the development of regional policies and as supporting mechanisms to better knowledge identification and exploitation will be examined.

One of the requirements to fully utilize inflowing knowledge in the home and receiving regions is the regional inclusion of the mobile citizens into the labour market and the society. In this context, regional inclusion creates the basis for trust, which, as we learnt, is essential for the interaction of the actor. These interactions again are considered as crucial for knowledge spillover effects. The concept of inclusion is indeed frequently used in the context of migration, but is extremely difficult to distinguish from the better-known concept of integration. In
this article, we understand integration as the involvement of minorities into majorities, such as the labour migrants into the society of a region. Integration is all about approximation, the understanding of the other person and the discovering of common ground. Integration should not be equivalent to the loss of the culture and identity of migrants in favour of the new living environment. Nevertheless, integration often claims unconsciously for migrants’ assimilation to the regional context.

Maintaining the migrants’ roots applies equally to the term inclusion. We differentiate between integration and inclusion according to the viewing angle. While integration works with instruments assisting immigrants to operate within a society (by e.g. language courses), the inclusion moves one step further. Inclusion ensures each individual an entry into the society, without too high expectations from the beginning or too many certain conditions to be fulfilled. Thus, the inclusion does not put higher requirements on the labour migrants than on the society, but expects the society to open up and to fully include minorities into its given structures and claims for an active support of regional actors in the processes. Hence, in this article inclusion describes more than political framework conditions, but regional actors’ ability of a full embeddedness of (return-) migrants into the respective societies. To counteract the waste of knowledge, full inclusion can take place through differentiated consideration of the migration patterns of mobile citizens and their individual knowledge potential. Thus, individual knowledge potentials can better be exploited regionally and provide (re-) inclusion of labour migrants into the home or receiving region. With the increase of migration dynamics and diversity, inclusion is without doubt a challenge. In return, regions depriving inclusion run the risk to waste migration-dependent knowledge.

By giving the example of the return migration, Cassarino demonstrates how important it is to understand every single migration process due to the various types of returnees. Alongside, he describes the factors that lead to a successful knowledge absorption within regions. Based on a literature review, Cassarino pleads for a differentiated view of the plans, motives, desires and experiences of return migrants. Thereby, he hopes for a better insight into the “(...) who returns when, and why; and why some returnees appear as actors of change, in specific social and institutional circumstances at home, whereas others do not”. Cassarino assumes that the difference between whether a migrant is able to contribute to the regional economy or not, results from further motives than solely the qualification degree. He cites two factors for a successful return migration, coupled with positive socio-economic effects: (1) resource mobilisation, and (2) the returnee’s preparedness. These factors are influenced by two components, which are the time and the type of made experiences. The impact of the return of a migrant on the regional economy is higher when the migrant has spent enough time in the foreign region to collect optimal and positive migration experience, and when he has had enough preparation time to mobilise the resources for a possible return. In this context, Cassarino does not only consider the experience the migrant went through during the migration process, he also takes into account the political, economic and institutional changes that took place during the absence of the migrant in the domestic region. These changes are necessary for the resource mobilisation in the case of a return. They are regarded as providers of structures in order to implement the migrant’s potential coming back to the domestic economy. In this vein, we argue that a successful inclusion in the foreign region, which enables optimal migration experiences, contributes to positive knowledge effects and a faster (re-) inclusion to the home region in the case of a return migration. By the preparedness of return migration, the mobile citizen opens up to include his newly acquired skills to the domestic economy, and thereby simplifies the absorption of his knowledge.

The idea described above claims that a full inclusion of the labour migrant to the domestic and foreign regional structures is necessary so that trust-based interactions and knowledge transfer can take place. The so-called absorptive capacity of a region is regarded in this article as a possible continuation of the presented inclusion concept. In 1990, Cohen and Levinthal created the concept of the absorptive capacity. Originally the concept referred to a company’s ability (a) to identify, (b) to assimilate and (3) to use the value of new, external information. The authors name individual cognition as the basis of the absorptive capacity approach. Transferring this idea from the company to the regional level, the already existing regional knowledge base is the basic framework to absorb external knowledge. Cohen and Levinthal claim that the already accumulated knowledge base possesses the capability to attract new knowledge and retrieve it at any time. Moreover, the concept of absorptive capacity expects external knowledge to be fully recognized and utilized if it is similar to the already existing regional knowledge base. The more contact points are given between the already existing regional knowledge and the new transferred knowledge, the higher the absorption probability. On the contrary, if there are major differences between the external knowledge and the regional knowledge base, it cannot be abundantly absorbed and a brain waste effect might occur. Caragliu and Nijkamp call such a phenomenon the “lack of local absorptive capacity”. The absence of absorptive capacity increases the risk of the unused knowledge to move on to a different region. The loss of knowledge leads to a loss of possible regional innovation. This article shares the view of Caragliu and Nijkamp. It therefore recommends making greater investments into regional human capital and regional R&D activities to increase the regional knowledge base. In turn, a broad regional knowledge base (including several knowledge types) implies higher probability to identify new knowledge and lately to absorb and include it.
The Role of Networks – Structure Development for Knowledge Absorption and Inclusion

We have argued before that both, (1) the regional inclusion and the (2) absorptive capacity, can influence the quality of migration-related regional knowledge effects. The ability to recognize inflowing knowledge and exploit it creating new regional technologies and knowledge-intensive labour processes can positively raise the regional firm performance\(^{45}\). Again, innovation is an important factor for companies to stay competitive in times of globalisation.

Regions therefore need structures to elaborate concepts in order to foster inclusion and enhance regional absorptive capacity. This is necessary to abundantly exploit inflowing knowledge. In this context, intra- and inter-regional social networks (e.g. policy networks, stakeholder networks, migration networks) can function as facilitators in a twofold manner: they can promote knowledge spillovers and they can identify and exploit knowledge regionally. Despite the wide use of the term network, the different understandings imply common characteristics. Networks can broadly be defined as social organizations\(^{46}\) that follow a specific temporal dynamic and life cycle\(^{47}\). A critical network component is the interweaving of autonomous actors, which should be composed of at least three equal parties. Fürst and Schubert\(^{48}\) define networks as loosely coupled and highly branched organizations that refer to clearly defined subjects and a dispose of horizontal communication structures without strong hierarchies. Bressers et al. refer to policy network relations and state that “The intensity of actors’ interactions and the way in which objectives are distributed among the actors are the basic characteristics of network relations”\(^{49}\). Polanyi’s idea of embeddedness\(^{50}\), which was continued by Grannovetter, bases on the key terms trust and reciprocity and emphasizes that economic network relations are embedded in social network relations\(^{51}\). Referring to Coleman trust within networks means “(...) a willingness to commit a collaborative effort before you know how the other person will behave”\(^{52}\). In that line, reciprocity is declared as “(...) understanding that a given action will be returned in kind”\(^{53}\). Thus, social networks based on trust and reciprocity can foster inter-firm collaborations also in terms of inter-regional conjunctions. Aside from trust and reciprocity researchers state that first-hand contacts (direct ties) are needed for a network formation\(^{54}\), but it is Grannovetter\(^{55}\) who defines the importance of weak in addition to strong ties within networks in order to access new information, different views and opportunities. Weak ties reduce the risk of lock-in effects within networks. Social structures such as networks increase the availability of resources and information by acting as pipelines that transfer e.g. knowledge from one region to another\(^{56}\). Thereby, networks form and are at the same time social capital that is embedded in the network structure itself\(^{57}\). Boshuizen declares that the “(...) principle of social capital is that individuals are able to access resources via others”\(^{58}\).

The view on regions has changed in the recent decades. Nowadays, regions are no longer seen as geographical locations of individual business units, but as a pool of collaborations and interactions, which are intra- as well as inter-regional. “If combination is the key to innovation, then social network activity may be an important predictor of people’s involvement in innovation”\(^{59}\). Networks are crucial to the regional success by elaborating solutions to region-specific tasks and challenges\(^{60}\) such as migration-related knowledge spillovers. To build structures for an effective recognition and utilization of labour migration-related knowledge particularly regional stakeholders and policy networks can matter. Including actors from the public sector, corporations, and educational institutions as well as engaged citizens, networks seem to be an appropriate policy instrument to develop new structures for a better regional knowledge absorption and inclusion. Moreover, in the context of labour migration-related knowledge spillovers a special importance should be given to migration networks. Based on the social network theory it can be assumed that return migrants are mainly carriers of material and immaterial resources\(^{61}\) that diverge depending on the migration experience. Doing so, migration networks can increase the regional knowledge base that leads to a better inflowing knowledge identification and exploitation. Thereby, migration networks are inter alia an important source to build regional social capital.

Migration networks are distinct with regard to their degree of formality (formal/informal), purpose (professional/private) and background (family/friendly). Likewise, migration networks can be divided into personal networks and second-hand networks, to which the access grounds on the involvement of a third party. Despite these distinctions, migration networks possess common features: they are shaped by social relations of citizens from the home and the arrival region. Apart from the function as knowledge transfer platforms, migration networks are often decisive for the migrants’ selection of their region of destination. On the one hand, they facilitate access to the labour market and contribute to the social inclusion of mobile citizens in foreign regions. On the other hand, migration networks act as carriers of economic, symbolic, social and cultural capital\(^{62}\), which they transfer from one region to another. In creating social structures migration networks facilitate mobile citizens before their emigration with information concerning job opportunities, living conditions, political framework, and the society of the receiving region. Planning a return migration networks act as intermediary between the home and arrival region in the process of the return preparation. Pries underpins the importance of migration networks and argues that individuals and households meet their migration decisions in the context of migration networks. Thereby, the transportation of people, goods and information is organized and the
socio-cultural symbol systems interact with each other at individual locations (e.g. mental maps, languages, customs and traditions etc.). He further argues that due to migration processes the distance is less important than the nature of migration networks between home and receiving regions. Within the migration networks social interactions are based on trust and long-term predictability.63

Although today’s highly skilled labour migrants do not depend as strong as their predecessors on migration networks, they still function as reliable social structures between the domestic region and the region of destination and contribute directly and indirectly to regional economies. Bearing in mind the ever-changing migration patterns, a new role can be attributed to migration networks.

New Forms of Migration Networks

Distinctive forms of migration networks related to the new nomads are the transnational migration networks. Opposed to bi-directional network structures, transnational migration networks maintain social structures within multiple regions due to the fact that “(a) small but growing number of migrants have even become fully ‘transnational’ – with dual citizenship and residences in both their home and their adopted countries.”64 Transnational migration networks are type casted by transnational social spaces. Schmiz65 describes the ideal type of a transnational social space as a trans-boundary space without a centre that is spread out between different places, regions and countries. Thus, transnational social spaces do not base on the traditional emigration and immigration motives which are expected to be centred in the receiving region as on-going coordination mechanisms for resources such as remittances, lifestyle (e.g. a weekly correspondence with the region of origin by e.g. phone) or personal interests considering career or educational issues. Schmiz decouples the transnational social spaces from the geographic and social spaces. He defines transnational social spaces by the e.g. transmigrants’ activities in the so-called third space, which can mainly be marked as context-related. By moving between diverse locations, the migrant lives in different transnational spaces, in which he functions as facilitator and/or supporter of resources and recreates links from transnational spaces to his domestic region and economy and vice versa. By acting in the third space and using it as an exchange platform, transmigrants accumulate knowledge arising from their transnational interactions. As required, they make their knowledge available to the geographical spaces, in which they operate. In doing so, they contribute directly with their knowledge to regional developments.

In the past decade, authors as Saxenian66 and Iglicka67 discussed the importance of diaspora networks. Diaspora does not seem to be a new phenomenon, but it moved again into the spotlight in the context of highly skilled labour migration. Considering east-western European migration “Polonia” is an example of a well-organized migration network of Polish migrants abroad. Diaspora is mainly characterized by personal relationships between the home and receiving countries, based on a collective cultural identity. Diaspora functions as provider of information and thereby as an exchange channel. One of the characteristics of diaspora is their geographic concentration and organization. In almost all metropolitan areas diaspora networks have established their own infrastructure (shops, churches, restaurants, media, etc.). Moreover, diaspora can lead to a regionally concentrated settlement of migrants in the receiving country. With a view on earlier research the today’s diaspora effects on regions have changed. Saxenian states that, while in past days diaspora likely contributed to the domestic economy by remittance or direct investments, the current research regards diaspora as knowledge networks transferring knowledge and/or technology. Thereby, diaspora shift negative brain drain effects to brain circulation: “Low transportation and communication costs now allow those who go abroad for further training or in search of work to interact and collaborate with their home country counterparts for more extensively than was feasible in earlier eras of emigration68”. Even if direct diaspora effects on development are hard to measure, incremental effects can be assured.

Similar to diaspora networks, alumni networks are a previously known phenomenon, but new in the context of highly skilled workers mobility. These constitute a new form of migration networks and come into play when other migrant-related personal and professional networks between the home and adopted region fail. In addition, alumni networks function as interconnections among alumni groups abroad and allow alumni to find each other (worldwide) to keep69 in touch and exchange knowledge. Especially in the case of a return preparation, alumni networks can provide their members with information concerning regional economy, such as job offers. Furthermore, they can contribute to regional migrants’ (re)inclusion as first-contact points. Although alumni networks currently still function as information intermediaries; their scope of activities should be broadened in the future.

Finally, migration networks have their raising importance for regional development to the new communication and technology channels. Particularly virtual social communities, which are decoupled from time and space, provide migrants with opportunities to stay in touch anytime, anywhere, and share intellectual property. The relevance of these networks is growing steadily. Thus, the influence of migration networks such as the ones presented in this article should remain a key part of the investigation of migration-related knowledge effects on regions in order to avoid negative brain drain and brain waste effects and to foster brain gain or even brain exchange.
Conclusion

This article has aimed to conceptually present labour migration-related knowledge effects on the home and recipient regions with a special focus on highly skilled workers. We argued that in times of skills shortage and increasing European labour mobility migration-related knowledge spillovers still lead - under circumstances - to negative brain drain and brain waste effects, e.g. by national obstacles such as the non-recognition of qualifications and regional high entrance barriers to labour markets and societies. At the same time, our literature analysis could present that knowledge, embodied in highly skilled human capital, is crucial for regional development and firm-related competition. In that sense, regions depend on external knowledge flows to counteract lock-in effects. Hence, we suggested, that regions should develop complementary structures and even policies to respond to knowledge loss and support brain gain and optimum brain exchange. This idea has led us to the presentation of possible supportive concepts: the regional inclusion and the regional absorptive capacity. Both aim at the fast identification of inflowing knowledge, its safeguard and entire exploitation into regional products and processes. Presently, some regions already demonstrate concepts of an inclusive welcome culture in order to attract highly skilled workers. Doing so, they e.g. support regional companies in training programs for employees to increase intercultural competences. Such programs are just the beginning and should be extended also with regard to low-skilled workers labour migration. In this context, we plead for a differentiated consideration of individual migration patterns to recover each mobile citizen’s skills and use it adequately. In this context, social networks, and in particular policy and migration networks function in a twofold manner: as knowledge providing and supportive mechanisms. In both ways they create and are regional social capital and thereby contribute to a broad regional knowledge base, which again is important to absorb inflowing knowledge. Following these argumentations we finally presented new forms of migration networks, which, as we argue, should still be on the agenda of the labour migration discussion.

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1 OECD, International Migration Outlook 2012


23 Brain gain describes positive knowledge effects on regions caused by highly qualified migration flows and thereby is the opposite of brain drain.

24 Brain drain was coined in 1963 and was originally used as a description of highly skilled migration from developing to industrial countries and also the migration of researchers from Europe to the USA. See e.g. A. Breinbauer, Brain Drain – Brain Circulation or...What Else Happens or Should Happen to the Brains. Some Aspects of Qualified Person Mobility/Migration, 2007, IFW – Working Paper.


26 Brain circulation was coined as Circulation des élites by Ladame in 1970.

27 Brain exchange was coined by the geographer Allan Findlay in 1990 to describe the spatial exchange of highly skilled workforce in industrial countries. Brain exchange is a balanced process of knowledge exchange between regions.

28 Brain waste expresses the non-recognition of qualifications of labour migrants in arrival countries/regions. In this article, the authors use a broader definition of brain waste. Brain waste describes the incomplete usage and thereby the waste of knowledge.


34 In economics, knowledge spillover effects can be included to externalities representing the uncompensated impact of economic decisions.


45 J. Boshuizen, Join the Club! Knowledge Spillovers and the Influence of Social Networks on Firm Performance, Dissertation at the University of Twente, 2009.


50 “Embeddedness” is an original concept of Karl Polanyi, published in: K. Polanyi, The Great Transformation, 1944. Nowadays, embeddedness is accepted as a concept, but in the original version “embeddedness” is a mix of ideas and thoughts, see Vančura, M., Polanyi’s Great Transformation and the Concept of Embedded Economy, IES Occasional Paper: 2/2011: 3.

51 J. Boshuizen, Join the Club! Knowledge Spillovers and the Influence of Social Networks on Firm Performance, Dissertation at the University of Twente, 2009 and A. Schmis, Transnationalität als Ressource? Netzwerke vietnamesischer Migrantinnen und Migran-
MIGRACJA CZY MOBILNOŚĆ – WYKORZYSTYWANIE PRZEZ ROMÓW PRAWA DO SWOBODNEGO PRZEMIESZCZANIA SIĘ OSÓB

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Od 2009 r. instytucje Unii Europejskiej (UE) coraz więcej uwagi poświęcają Romom. Jednocześnie polityka wobec tej grupy etnicznej staje się o wiele bardziej realistyczna. Nowe podejście polega nie tylko na uwzględnianiu potrzeb Romów, ale także na oczekiwaniu podjęcia przez nich wysiłku zbliżającego ich do społeczeństw UE. W 2009 r. trwały przygotowania do Europejskiego Roku Walki z Ubóstwem i Wykluczeniem Społecznym, przeprowadzano pierwsze oceny skutków kryzysu finansowego, załamaly się brytyjskie i niemieckie nadzieje związane z polityką wielokulturowości1. W tym samym czasie zaczęły się ujawniać skutki drugiej fazy ostatniego rozszerzenia UE (2007 r.) o dwa państwa Europy Wschodniej – Bułgarię i Rumunię, w których żyje wielu Romów (odpowiednio: 2,5% i 4,7% ludności), przeważnie z unijnych sprawami są i kilkuletniego wzmożonego zainteresowania instytucji unijnych ich sprawami są Unijne ramy dotyczące krajo-

Konsekwencją zmiany stanowiska UE wobec Romów i kilkukrotnego wzmożonego zainteresowania instytucji unijnych ich sprawami są Unijne ramy dotyczące krajo-

W artykule poza wskazaniem na główne kulturowe uwarunkowania romskiego sposobu traktowania prawa do swobodnego przemieszczania się osób w Unii, autor przedstawia przede wszystkim stopień legitymizacji mobilności Romów i analizuje problem równowagi, traktowania migrantów i mniejszości etnicznych – obywateli państw członkowskich. Podejmuje także próbu wskazania sposobów załagodzenia i rozwiązania problemów wynikających z uwarunkowań kulturowych, stano-

Romowie to wszystkie grupy narodowościowe związane etnicznie lub prowadzące podobnie mobilny tryb życia3. Problem migracji Romów po 2004 r. odnosi się jednak głównie do konkretnej grupy etnicznej z Europy Środkowej i Wschodniej (ESW), z wyłączeniem szerzo-


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70 years between Berlin and Vietnam, Bielefeld: Transcript Verlag 2010.


58 J. Boshuizen, Join the Club! Knowledge Spillovers and the Influence of Social Networks on Firm Performance, Dissertation at the University of Twente, 2009:25.

59 J. Boshuizen, Join the Club! Knowledge Spillovers and the Influence of Social Networks on Firm Performance, Dissertation at the University of Twente, 2009:38.


