# Researching mobility of university graduates in an Alpine region

#### Vincenzo Bua, Andreas Oberprantacher & Pier Paolo Pasqualoni

#### Abstract

Drawing upon literature on the migration of highly skilled labour as well as on the research project Prospects for University Graduates in South Tyrol-Alto Adige<sup>1</sup>, this paper discusses mobility patterns of university graduates from/to this multilingual and autonomous border region. The topic gains in importance when considering the traditionally low quota of university graduates in South Tyrol-Alto Adige against the background of the European Union's endeavour to establish itself as a knowledge-based economy. The relation of soft criteria to hard criteria as expressed in the rationale for relocating to the region will serve for discussing results and forming conclusions.

**Keywords:** brain circulation, brain drain, brain gain, highly qualified migration, university graduates, South Tyrol-Alto Adige

## 1 The migration of highly skilled labour in the mirror of social science

Research on mobility patterns of university graduates involves sociological, socio-geographical, economic, socio-ecological or socio-psychological theories and methods, or a combination thereof. While *macrotheoretical approaches* tend to measure the in- and outflux of university graduates to and from a domestic economy against the background of economical data (GDP, labour force participation rate, rate of unemployment, etc.) and by highlighting likely *push and pull factors* (Lee 1966), *microtheoretical approaches* generally focus on single individuals or smaller groups. Latter research is generally drawing on personal accounts and emphasizing intergroup relations, biographical narratives, social backgrounds and the decision-making processes involved in migration. (cf. Franz 1984, Hahn 1996, Düvell 2006)

### 1.1 General lines of development

In their classic book *The Brain Drain*, Anthony Scott and Herbert G. Grubel highlight the fact that "academic writings on the brain drain have been surprisingly rare" (Grubel & Scott 1977: 1). Despite mobility being an integral part of academic life since the establishment of the first European universities, this widespread phenom-

<sup>&</sup>lt;sup>1</sup> The research project was carried out over a period of 18 months from January 2006 to June 2007 in close collaboration by the three authors working at the University of Innsbruck, though at different departments: Vincenzo Bua (Department of Educational Sciences), Andreas Oberprantacher (Department of Philosophy) and Pier Paolo Pasqualoni (Department of Sociology)

enon did meet only little attention within social science until the second half of the 20th century.

While a hesitant growth of the interest in qualified migration can be noticed in the late 1960s (Adames 1968, Von Bechhofer 1969, see also Brandi 2004), contours took shape in the mid 1970s as *Brain Drain* became a first, important catchword for referring to the unilateral migration of highly skilled labour. From the early 1980s onward research on the international and domestic mobility of university graduates intensified, particularly in Anglo-Saxon and German-speaking countries (e.g. Caroli 1983, Meusburger 1980). Demographers, sociologists, social geographers and political economists took an increasing interest in studying the general (economic, political, cultural) conditions as well as biographical factors involved in the migration of university graduates (e.g. Meusburger & Schmidt 1996, Rolfes 1996, Jahnke 2005), while giving special attention to student (Tremblay 2005) or scholarly mobility (Avveduto 2005, Lola 2005) and other high profile individuals. In the following paragraphs we will outline some of the most important theoretical models as well as present-day discussions that were relevant for contextualising and conceptualising our research.

#### 1.1.1 Brain drain

In the wake of major East to West and South to North migrations in the second half of the 20th century, the main research interest initially was directed to questions on how large the net loss (or gain, depending on the perspective) of highly skilled labour was for national economies and how this may affect the GDP. Apart from focusing on the quantitative dimension, some researchers on the so-called *Brain Drain* also addressed possible causes why migrants with an academic background would leave their country of origin for permanently settling abroad (Vas-Zoltan 1976, Grubel 1994).

Since the early *Brain Drain*-surveys drew mainly upon macroeconomic assumptions, they usually provided causal research on a very general level. It remains characteristic for many studies in this field to employ national and mostly economic categories and to measure knowledge in terms of the physical presence of knowledgeable people. As a consequence, the biographical dimension of the phenomenon as well as any investigation on the dimension and importance of social networks is commonly omitted.

#### 1.1.2 Brain gain

From the perspective of the industrialised target countries the attraction of *human capital* from developing countries and emerging nations was soon deemed to be a strategic economic asset for further developing domestic economies. In the wake of this interest a new methodological as well as economical and political approach was adopted: *Brain Gain* became the new leitmotif of a competitive economic immigration policy. The aim was to attract as much highly skilled labour as officially needed by the domestic labour market. As a consequence, the development and safeguarding of *pull factors* promoting the attractiveness of the target countries received particular attention (cf. Martin 2002, Rollason 2002).

Exemplary for this approach are not just proposals for a restrictive immigration policy. As recent debates on the introduction of a *Green Card* in Germany (Hunger and Kolb 2003, Pethe 2006) and the commitment to the European Commission to introduce a *Blue Card* regulation demonstrate, most labour market policy measures were designed to attract specific target groups by resorting to incentive schemes (Martinello 2006).

#### 1.1.3 Highly skilled migration, brain circulation and exchange

In the face of these general lines of development, Paul Ladame directed a serious objection against the models underlying both *Brain Drain*-research and its more "offensive" alternative aspiring to *Brain Gain*. As it seemed very likely to him that some migrants would eventually return to their countries of origin, he pointed out the sheer impossibility to consider the migration movements of the 1950s and 1960s as accomplished phenomena. Accordingly, he coined the phrase *la circulation des élites* (Ladame 1970).

This impulse gave rise to a third line of development to be subsumed under the keyword *Brain Circulation*, or *Brain Exchange* (Beaverstock 1994, Staubhaar 2000, Hunger 2003, Jöns 2003). Contrary to the two standard concepts, the new conceptual framework primarily focuses on the exchange of knowledge and not (exclusively) on the impact of labour on a domestic economy.

Though a 'critical mass' of highly qualified labour may be necessary to build a knowledge-based society, recent studies have progressively disengaged from the assumption – dear to both the *Brain Drain*- and the *Brain Gain*-approach – that knowledge is necessarily tied to the physical presence of highly skilled individuals. Rather, the overall research interest has shifted towards the study of so-called *diaspora networks* (Meyer 2001). These networks are constituted by academically trained migrants who remain obliged to their respective home countries and who may transfer knowledge and technology while working abroad (Hunger 2003, Hunger 2004).

Such terms as Highly Skilled Migration or Qualified Migration are commonly in use to refer to the mobility of academically trained individuals tendering their labour force to multinational companies and international networks (Wolter 1996). Even though they are related to the more general concept of Brain Circulation/Exchange, these notions differ from the traditional concepts insofar as qualified migration is explicitly correlated with the expansion of conglomerates under the auspices of economic globalisation.

### 2 Researching qualified migration from/to South Tyrol-Alto Adige

South Tyrol-Alto Adige may be characterised by a complex social structure and history, which is mediated – in different versions – by the collective memory (Halbwachs 1992) of its main linguistic groups (see Baur 2000). This circumstance represents a genuine challenge to any research on highly qualified migration.

As several studies drawing upon a variety of statistical data maintain, the overall economical performance in South-Tyrol-Alto Adige is rather high – with a steady growth of the GDP and a rate of unemployment, both consistently ranging between 2 and 3% (WIFO 2007). Furthermore, the landscape is commonly acclaimed for offering an exceptionally high living standard while the social services are far above the national standards.

Yet, and in sharp contrast to this seemingly favourable socio-economic condition, there is evidence for a consistent number of university graduates who, having grown up in South Tyrol-Alto Adige, are not returning to their place of origin after having completed their studies elsewhere (cf. Amt für Arbeitsmarkt 1989, Larcher et al. 1997). This phenomenon may be partly explained by the rather recent establishment of the Free University of Bolzano (1997). As a consequence, most students were left with the option to study somewhere else and settle there, if only temporarily. However, in times of a higher degree of competition among university graduates it remains unclear why the employment opportunities South Tyrol-Alto Adige offers do not attract more graduates who, by their educational curricula, fulfil the linguistic requirements for higher job positions.

This circumstance further gains in importance if we consider the notoriously low quota of university graduates in South Tyrol-Alto Adige (2001: 6.4% of the population aged six years or older hold a university degree; national mean: 7.5%, ASTAT 2006), not least in the context of the latest endeavours of the European Union to establish itself as a knowledge-based economy.

#### 2.1 Research question and design

In order to respond to this complex point of departure the study *Prospects for University Graduates in South Tyrol-Alto Adige* was designed to meet a double purpose: on the one hand it focuses on the motives of the mobility of university graduates either originating from or relocating to South Tyrol-Alto Adige by integrating a variety of perspectives and data, thus revealing an affinity for both the *Brain Drain* and the *Brain Circulation* approach; on the other hand it addresses the question, characteristic for the *Brain Gain* approach, of how to enhance the capacity of sustainable education and employment policies to generally attract university graduates who could contribute to the social, cultural and economic prosperity of the region.

In this view the project complements macrotheoretical approaches with microtheoretical research allowing the assessment of motives, expectations and value orientations of the participating informants. While the macrotheoretical research mainly draws on literature and data reviews (census reports, labour market reports, etc.), the microtheoretical approach comprises a variety of methods generally ascribed to qualitative research (in particular: key-actors interviews and focus groups) as well as data-modelling software for content analysis. The microtheoretical research part itself comprises two distinct, though interlinked surveys:

- 1. it includes the views of 30 decision-makers and key actors from 22 institutions of the region showing strong sympathies for our research question; and
- 2. it draws on the perceptions and experiences of 56 university graduates.

The key actors were selected from the areas of (1a) politics and administration (5 experts), (1b) labour and economy (10), (1c) science and research (6), (1d) student associations and social networks of university graduates (9). The group of university graduates, in turn, was split up into three subgroups:

- (2a) the first subgroup involved 16 graduates from South Tyrol-Alto Adige who went back after obtaining a university degree and working outside of the province;
- (2b) the second subgroup comprises 26 university graduates from South Tyrol-Alto-Adige who lived and worked either in Austria (Innsbruck or Vienna) or in Italy (Trento or Milan) at times of the investigation;
- (2c) the third subgroup consisted of 14 members of the growing number of university graduates who have there origins elsewhere and migrated to South Tyrol-Alto Adige.

Whereas we relied on theme-centred interviews in approaching the key-actors, the experiences and perceptions of university graduates were collected by means of 8 focus groups comprising 5–8 participants who were invited to discuss in their stronger language (either German or Italian). The academics invited to participate in the focus groups were carefully selected according to a number of criteria like sex, age, field of study, geographical provenance, and linguistic affiliation. To ensure a higher degree of diversity of perspectives, we took care that those criteria would vary systematically within each focus-group when selecting the participants. This contributed to trigger the debate and allowed us to highlight common experiences as related to the rather limited set of communalities within each single group.

#### 2.2 Selected results

The following section provides a concise overview over some findings resulting from our analysis of the extensive talks and discussions with key-actors and professionals. In particular, we will present the predominant perceptions of *pull and push factors* and discuss some hypotheses concerning patterns of highly qualified migration from and/or to South Tyrol-Alto Adige.

## 2.2.1 South Tyrol-Alto Adige: small and beautiful, but not necessarily innovative (key actors)

Virtually all key-actors pointed at the fact that South Tyrol-Alto Adige may be characterised as an economic area structured in small (i.e. consisting of mainly small and medium-sized enterprises) and set in a scenic Alpine environment that offers a variety of leisure facilities. Despite having one of the lowest rates of unemployment in Europe (Eurostat 2005) and showing a consistent economic growth, our interviewees repeatedly highlighted the rather limited number of interesting and challenging vocational opportunities for university graduates in this particular region.

Some of the respondents explained the feeble return of academics by referring to the recent restrictions within the public administration – traditionally the major employer of university graduates – in assuming new employees. According to the opinions expressed in other interviews, this situation is further complicated by political

and social processes that are seen to favour antagonism between linguistic groups and often result in quasi-impermeable social networks.

#### 2.2.2 Adventurous, committed, open-minded: academic nomads (key actors)

Against the background of this geographical, economic and political constraints the key-actors assessed the mobility of university graduates in terms of a general curiosity pushing people beyond pre-conceived (geographical, social, epistemological) limits. For most key-actors this represents the main reason for stating that university graduates relocating to South Tyrol constitute a highly valuable human resource: for academics, who have studied abroad, are deemed to be important because they are expected to have acquired state-of-the-art knowledge and to take risks. Their expertise could eventually lead to higher performance and to technical as well as social innovation.

#### 2.2.3 Different groups, different mobility patterns (university graduates)

A differentiated analysis of the focus groups according to the defining categories and to the theoretical approaches of *Brain Drain* and *Brain Circulation* reveals significant variations in the mobility of university graduates along the lines of place of study and linguistic affiliation. Among the graduates living and working outside of South Tyrol-Alto Adige, most respondents specified that their decision to remain afar was not necessarily motivated by a single consideration or event. Rather they argued that most commonly it was a slow, but steady process initiated by the preceding decision to study abroad and amplified by the long lasting efforts of building up social and professional networks *in situ*.

In contrast to the opinions expressed by the key-actors, the university graduates from South Tyrol-Alto Adige did not only refer to *hard criteria* like limited career opportunities and prospects for professional as well as personal development. Assessing differences between living in a small scale province and living in a metropolis like Milan or Vienna they added a number of *soft criteria*, opposing the higher degree of freedom they experienced to social control and a rather closed mentality in South-Tyrol-Alto Adige which was particularly seen to offer a very limited sub-cultural scene. Finally, some of them criticised the current socio-political situation that inadequately accommodates their interest of living in a pluralistic, multi-linguistic society.

#### 2.2.4 Remaining in the vicinity (university graduates)

The decision of staying in Innsbruck or Trento after graduating from university was most commonly motivated by career opportunities, particularly in the field of science. This tendency may also be explained by the fact that up to the present day R&D is rather limited in South Tyrol-Alto Adige. Young graduates in search of an opportunity to do research in technical, natural, medical, and social sciences usually find it more difficult to find an adequate position in South Tyrol-Alto Adige than in the neighbouring provinces and regions. Yet, the respondents were well-informed and interested in career opportunities in South Tyrol-Alto Adige, thus behaving according to the *Brain Circulation* model.

One of the most important issues that was discussed in Trento and in Innsbruck, even though from different perspectives, was the predominant mentality in South

Tyrol-Alto Adige – a mentality that was often characterised as "closed" or simply as "conservative". In the line of argumentation of our informants this is a particularly problematic restraint for it prevents innovative approaches and marginalises alternative views. Consequently, in Innsbruck and Trento most respondents strongly pleaded for a further opening of social structures and for the support of alternative culture in South Tyrol-Alto Adige.

Another interesting finding concerns the fact that those university graduates living in the neighbouring university towns tend to hold up essential social contacts in South Tyrol-Alto Adige even though they visit the region on an irregular basis. According to contemporary research on migration this might be a case of "transmigration" (cf. Pries 2001, Fürstenberg 2005), according to which individuals interacting in transnational or transregional networks may generate forms of hybrid identities.

The focus group in Trento strongly differed from the Innsbruck group with regard to the question whether returning to South Tyrol-Alto Adige was at all conceivable. A clear majority of Italian-speakers answered in negative by pointing out that due to missing or lost linguistic competences, the high cost of living as well as political doubts they had no intention of returning in the next future. Most German-speakers, on the other hand, did not refute the chance that they would return, given the case conditions were favourable.

#### 2.2.5 Charming metropolis (university graduates from South Tyrol-Alto Adige)

Graduates having settled in Vienna demonstrated a rather strong and outspoken social distance to South Tyrol, in particular to their local provenience. Among the most important motivations for staying in Vienna, general career opportunities as well as offers for professional development ranked first. None of the informers living in Vienna at times of the research could imagine to return to South Tyrol-Alto Adige. In this sense their behavioural pattern may best be explained in terms of the *Brain Drain* model discussed in the antecedent chapters.

In part, their decision to remain afar was explained also by referring to the geographical distance and the subsequent break-away of social contacts. As a further consequence they had only little or no information on actual developments in South Tyrol-Alto Adige. Yet, university graduates living in Vienna were reluctant to discuss the possibility of returning to South Tyrol-Alto Adige even on a more abstract level. They justified their attitude by repeatedly designating South Tyrol-Alto Adige as a rural, though scenic region offering only little to people in search for challenging experiences and a multicultural environment.

As opposed to the university graduates living in Vienna the clear majority of our interviewees living in Milan, in turn, affirmed that they expected to return to South Tyrol-Alto Adige one day, even though they wanted to experience metropolitan life and gather professional experience for the time being. Female participants in particular repeatedly stated the wish for moving to a place with a better living quality the moment they started a family. In this context South Tyrol-Alto Adige was considered to be a better option than a city like Milan.

The views expressed in these two focus groups clearly indicate that the decision to remain afar from South Tyrol-Alto Adige is not an immediate, but a gradual one.

Even more, there is evidence that this decision does not simply result from the lack of offers in the field of natural, technical, medical and even cultural sciences. In general most young professionals wish for a dynamic and challenging work atmosphere and cultural context – something that South Tyrol-Alto Adige is still lacking in their opinion and may rather be expected from a metropolitan area.

## 2.2.6 Returning to South Tyrol-Alto Adige (university graduates from South Tyrol-Alto Adige)

Two further focus groups that were involved in the empirical survey consisted of people who decided to return to South Tyrol-Alto Adige after some years either spent abroad or in other Italian provinces. Their academic biographies are exemplary cases of *Brain Circulation*.

A thorough analysis of the discussions with these two groups, one predominantly German-speaking, the other predominantly Italian-speaking, gives account of another major shift in the patterns of mobility. Those who spoke about their decisions for returning to South Tyrol-Alto Adige in the predominantly German-speaking focus group stated repeatedly that their reverse migration was a deliberate and well reflected decision. It did not just happen accidentally. To the contrary, the decision for returning to South Tyrol-Alto Adige was clearly motivated by consciously held values and wishes such as: living in a place with a high quality of life, job security, striking or returning to the roots (in the context of family and friends), interesting job offers.

Those participating in the predominantly Italian-speaking focus group explained their return to Bolzano-Bozen in completely different terms: some explained that the reason for moving back was motivated by financial necessity; others mentioned illnesses or deaths in the family as accidental circumstances; others again referred to the wish for exploring (rather than returning to) one's roots. Furthermore, the Italian-speaking people participating in this focus group intensively discussed the notion of "disagio", of discomfort, as a general obstacle for allowing the development of a positive social identity in South Tyrol-Alto Adige.

#### 2.2.7 Migrating to South Tyrol-Alto Adige (university graduates from elsewhere)

In order to give an account of recent developments in the field of academic life in South Tyrol-Alto Adige the initial research design was extended to include the views and experiences of the growing number of young professionals migrating to this Alpine border region. One focus group was organised as to include predominantly German-speaking academics from different EU countries, the other one consisted of graduates mainly speaking Italian, most of them coming from other Italian provinces.

Those in the Italian-speaking group referred mainly to comparatively good job opportunities in South Tyrol-Alto Adige and higher salaries with respect to the standards in other Italian provinces. This, again, is a sign that the labour market of South Tyrol-Alto Adige is evaluated in almost contradictory term, depending on whether the situation is compared with Northern, i.e. Austrian-German, or with Southern,

i.e. Italian, standards. Apart from this many of the respondents mentioned that the region, despite declaring itself as multilingual and multicultural, does not live up to its reputations. Linguistic divisions and social distance between the different groups are felt in everyday life and make it difficult for many of the academic migrants to positively integrate in social networks.

The participants in the predominantly German-speaking group mentioned mainly personal reasons (relationship) as well as the multicultural structure of South Tyrol-Alto Adige as important *pull factors* that motivated their decision. Those living in bior multilingual relationships considered it to be a major advantage living in an area that has the potential to serve as a bridge between German- and Italian-speaking areas. On the other hand, and in accordance to the view expressed in the other focus group, many of the respondents also pointed to the fact that the potential of South Tyrol-Alto Adige was far from being fully actualised. A general demand was that of opening up social structures and institutions divided along linguistic affiliations, but also of investing in multilingual education for further strengthening internationality and mutual understanding.

#### 3 Conclusion

The results suggest that addressing the challenges posed by the low quota of university graduates in a structurally rather disadvantaged Alpine region like South Tyrol-Alto Adige implies unambiguous efforts to establish a knowledge society. Hard criteria like providing appealing job positions, defining priority research areas and promoting professional development remain a necessary precondition for attracting highly skilled labour. Nevertheless, our research suggests that the phenomenon of university graduates migrating from or relocating to South Tyrol is multi-dimensional and, accordingly, calls not only for a rather complex research design, but also for an adequate political agenda: For most of the interviewed graduates focusing on their decision to not return to South Tirol so called soft criteria (higher degree of freedom, opportunities for personal and vocational development) were an important topic.

While South Tyrol-Alto Adige offers secure jobs and employment for university graduates, in order to accumulate human capital policy makers have to make the region more attractive for highly skilled. A higher degree of transparency in job environments, better accessibility of social networks and openness to social, cultural und social innovation could positively contribute to a *Brain Gain* and *Brain Circulation* strategy. Relevant measures may range from efforts to improve international cooperation between universities, research centres and the local economy, to career perspectives and initiatives granting a higher degree of personal and vocational freedom, to the general readiness to develop the society further in direction of a pluralistic, multi-lingual space characterised by a common interest in a sustainable future.

### Acknowledgment

The research project was funded by the section Education Promotion, University and Research of the Autonomous Province of Bozen-Bolzano with a substantial sponsorship awarded by the Regional Government of Tyrol, the City of Innsbruck and the foundation Südtiroler Sparkasse.

#### References

Adames, W. (ed.) 1968, The Brain Drain, New York

Amt für Arbeitsmarkt 1989 (ed.), Der Arbeitsmarkt für Akademiker in Südtirol. Eine Studie der Beobachtungsstelle für den Arbeitsmarkt. Bozen

Avveduto, S. 2005, "International mobility of scientists and engineers: a study on brain drain and obstacles to mobility", in: Gabaldón, T. & et. Al. (eds): Career paths and mobility of researchers in Europe, Proceedings of the conference ESRM2004 and the MCFA events at ESOF 2004, Göttingen, 16–20

Baur, S. 2000, Die Tücken der Nähe: Kommunikation und Kooperation in Mehrheits-/Minderheitssituationen, Meran Beaverstock, J. 1994, "Re-thinking international labour migration: world cities and banking organisations", Geoforum 25(3), 323–338

Caroli, B. B. 1983, "Recent immigration to the United States", in: Institute for Research in History (ed.), Ethnic immigration groups: the United States, Canada, and England, New York, 49–70

Düvell, F. 2006, Europäische und internationale Migration. Einführung in historische, soziologische und politische Analysen, Hamburg

Franz, P. 1984, Soziologie der räumlichen Mobilität, Frankfurt a. M.

Fürstenberg, F. 2005, "Soziale Aspekte der tansnationalen Pendelwanderung", in: Sterbling, A. (ed.), Migrationsprozesse. Probleme der Abwanderung und Identitätsfragen, Hamburg, 19–31

Grubel, H. & A. Scott 1977, The Brain Drain: determinants, measurements, and welfare effects, Waterloo

Grubel, H. 1994, "The economics of international labor and capital flows", in: Giersch, H. (ed.), *Economic aspects of international migration*, Berlin, Heidelberg & New York, 75–92

Hahn, K. 2004, Die Internationalisierung der deutschen Hochschulen. Kontext, Kernprozesse, Konzepte und Strategien, Wiesbaden

Halbwachs, M. 1992, On Collective Memory, Chicago

Hunger, U. & H. Kolb (eds) 2003, Die deutsche Green Card Migration von Hochqualifizierten in theoretischer und empirischer Perspektive, Osnabrück

Hunger, U. 2003, "Brain Drain oder Brain Gain: Migration und Entwicklung", in: Thränhardt, D. & U. Hunger (eds), Migration im Spannungsfeld von Globalisierung und Nationalstaat, Leviathan Sonderheft 22, Wiesbaden, 58–75

Hunger, U. 2004, "Brain Gain' theoretical considerations and empirical data of a new research of development and migration theory", in: IMIS Beiträge, Migration and the Regulation of Social Integration 24, Osnabrück, 213–224

Jahnke, H. 2005, Der italienische Mezzogiorno auf dem Weg in die europäische Wissensgesellschaft: Eine Untersuchung der Erwerbssituation und der regionalen Mobilität junger Akademiker am Beispiel Siziliens, Berliner Geographische Arbeiten 101, Berlin

- Jöns, H. 2003, Grenzüberschreitende Mobilität und Kooperation in den Wissenschaften. Deutschlandaufenthalte USamerikanischer Humboldt-Forschungspreisträger aus einer erweiterten Akteursnetzwerkperspektive, Heidelberger Geographische Schriften 116, Heidelberg
- Ladame, P. 1970, "La circulation des élites", International Migration 8(1,2) 39-49
- Larcher, D. & et al. 1997, Die Bildungsbilanz Südtirols. Abwanderung von Maturanten und Akademikern.
  Bozen
- Lee, E.S.A. 1966, "Theory of migration", Demography 3(1), 47-57
- Lola, M. 2005, "Researcher mobility: opportunities and challenges", in: Gabaldón, T. & et. Al. (eds): Career paths and mobility of researchers in Europe, Proceedings of the conference ESRM2004 and the MCFA events at ESOF 2004, Göttingen, 21–28
- Martin, P. 2002, "Policies for admitting highly skilled workers into the United States", in OECD (ed.): International Mobility of the highly skilled, Paris, 271–290
- Martinello, M. 2006, "The new migratory Europe: towards a proactive immigration policy?" in: Craig, A. P. & T. M. Smeeding (eds), *Immigration and the transformation of Europe*, Cambridge, 298–326
- Meusburger, P. & A. Schmidt 1996, "Ausbildungsniveau und regionale Mobilität. Zur Abwanderung von Hochqualifizierten aus Vorarlberg", in: Horvath, T. & G. Neyer (eds), Auswanderungen aus Österreich. Von der Mitte des 19. Jahrhunderts bis zur Gegenwart, Wien, Köln & Weimar, 411–431
- Meusburger, P. 1980, Beiträge zur Geographie des Bildungs- und Qualifikationswesens. Regionale und soziale Unterschiede des Ausbildungsniveaus der österreichischen Bevölkerung, Innsbrucker Geographische Studien 7, Innsbruck
- Meyer, J.B. 2001, "Network approach versus Brain Drain: lessons from the diaspora", International Migration 5, 91–110
- Pethe, H. 2006, Internationale Migration hoch qualifizierter Arbeitskräfte. Die Greencard-Regelung in Deutschland, Wiesbaden
- Pries, L. 2001, Internationale Migration, Bielefeld
- Rolfes, M. 1996, Regionale Mobilität und akademischer Arbeitsmarkt. Hochschulabsolventen beim Übergang vom Bildungs- in das Beschäftigungssystem und ihre potentielle und realisierte Mobilität, Osnabrücker Studien zur Geographie 17, Osnabrück
- Rollason, N. 2002, "International mobility of highly skilled workers: the UK perspective", in: OECD (ed.): International Mobility of the highly skilled, Paris, 327–339
- Staubhaar, T. 2000, "International mobility of the highly skilled: Brain Gain, Brain Drain or Brain Exchange", HWWA Discussion Paper 88, 1–23
- Tremblay, K. 2005, "Academic mobility and immigration", Journal of Studies in International Education 9, 193–228
- Vas-Zoltan, P. 1976, The Brain Drain: an anomaly of international relations, Leyden: A. W. Sijthoff
- Von Bechhofer, F. (ed.) 1969, Population growth and the Brain Drain, Edinburgh: Edinburgh University Press
- Wolter, A. 1996, "Multinationale Unternehmen als Kanal der Wanderung Höherqualifizierter: ein Erklärungsrahmen für den Anstieg der Wanderung Höherqualifizierter in der EG, in: Discussion Papers in Economic Policy 64, 1–22

#### Webpages

ASTAT 2006, Akademiker in Südtirol. Volkszählungen 1991 und 2001, ASTAT Information, Nr. 4, Februar 2006, on: http://www.provinz.bz.it/pressnotes/module/pres\_getimg.asp?imgID=225409 (6.04.2008)

- Brandi, M. C. 2004, The historical evolution of highly qualified migrations, on: http://www.irpps.cnr.it/ricmob/skills\_mig.htm (6.04.2008)
- EUROSTAT 2005, Statistisches Jahrbuch 2005, on: http://epp.eurostat.cec.eu.int/cache/ITY\_OFF-PUB/KS-AF-05-001/DE/KS-AF-05-001-DE.PDF (6.04.2008)
- WIFO 2007, Wirtschaftsbaromenter. Herbst 2007 / Ausblick Frühjahr 2008, on: http://www.handelskammer.bz.it/de-DE/wirtschaftsbarometer-45de.html (6.04.2008)

## ZOBODAT - www.zobodat.at

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: <u>IGF-Forschungsberichte</u> (<u>Instituts für Interdisziplinäre</u> <u>Gebirgsforschung [IGF]</u>) (<u>Institute of Mountain Research</u>)

Jahr/Year: 2007

Band/Volume: 2

Autor(en)/Author(s): Bua Vincenzo, Oberprantacher Andreas

Artikel/Article: Researching mobility of university graduates in an Alpine region 161-

<u>172</u>