

Stancova, Katerina

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## Attracting international research professionals to EU smart regions: evidence from Tuscany.

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# Attracting international research professionals to EU smart regions: evidence from Tuscany

***Dr. Kateřina Stančová\****

Post-doctoral researcher at the European Commission, JRC-IPTS, S3 Platform, Sevilla (Spain)

\* The views expressed are purely those of the author and may not in any circumstances be regarded as stating an official position of the European Commission.

## ***ABSTRACT***

*Human resources is one of the main assets of the regional innovation systems. The development and accumulation of human resources is a crucial prerequisite to keep regional R&I industries highly performing and internationally competitive. Yet, regional policies to attract international research professionals (IRPs) are still underdeveloped for a number of reasons. It is crucial to understand the role of regions in managing IRP migration, as well as factors and obstacles to IRP immigration in order to design effective policy measures. It is argued that the factors that influence the size, composition and distribution of IRPs within a territory are place-based, and they are structural (organisational, policy-related and economic) as well as non-pecuniary (professional, personal, cultural, lifestyle preferences). The framework is interrogated via a case study of Tuscany. Particular attention is paid to organisational, policy-related, economic and human factors. The paper concludes by offering a discussion of policies to be implemented at different levels of governance to improve attraction and recruitment potential, and to achieve the ultimate goal of sustainable management of regional research capacities.*

## ***KEY WORDS***

Smart specialisation, international migration, international research professionals, location choice, Tuscany

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## ***INTRODUCTION***

Global production transformations, new economic and social challenges, as well as local demographic changes pose new challenges to the EU regions. In order to enhance European research and innovation potential, the European Commission calls on the EU regions to improve their Research and Innovation (R&I) policies by adopting Research and Innovation Strategies for Smart Specialisation (RIS3). RIS3 design process is based on a thorough analysis of the regional assets including expertise, knowledge and skills actually present in the region and potentially accumulated in the future. First, the regions analyse their potential for innovation and carry out self-assessment of the assets including human resources, entrepreneurship, education and research, etc. Consequently, they identify their knowledge and innovation-based priorities and elaborate their vision for the future. Since human resources is one of the main assets of the regional innovation systems, it is highly relevant to regional smart specialisation. This leads to an assumption that the development and accumulation of human resources is one of the prerequisites to keep regional R&I industries highly performing and internationally competitive. In fact, the regions have implemented policies to increase their local human capital formation. Yet, policy measures aiming at attraction and retention of international highly skilled migrants, especially international research professionals (IRPs)<sup>1</sup>, have not been developed sufficiently. The reasons are manifold: regions do not have policy-power in the field of international migration, they fear global competition for international talent, they consider local knowledge institutions responsible for attraction of IRPs, etc. Yet, the factors that influence the size, composition and distribution of IRPs within a territory are place-based, and they are structural (organisational, policy-related and economic) as well as non-pecuniary (professional, personal, cultural, lifestyle preferences). This study focuses on factors and local incentives that influence IRPs' choice of destination area to which they move. More specifically, the study attempts to address the question of how institutional setting and goals, policies, economic conditions and territorial attributes affect IRPs and their choice of destination. To shed a light on this research question, international migration of IRPs is conceptualised in terms of migration theories and creative class theory. This is further examined in case of the Italian region of Tuscany. On the basis of the case study, the paper recommends to put in place a complex analytical framework that includes elements such as regional R&D capacities, reputation and quality of knowledge institutions, career opportunities as well as retribution and reward of IRPs.

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<sup>1</sup> The term “international research professionals” refers in this study to persons who hold Master or Doctoral degree and pursue research activities (and eventually some academic teaching activities) at academic institutions in a country other than their country of origin. The category includes postgraduate fellows, PhD students, postdoctoral fellows, and tenured academics (researchers and professors).

The paper concludes by offering a discussion of policies to be implemented at different levels of governance to improve attraction and recruitment potential, and to achieve the ultimate goal of sustainable management of regional research capacities.

### ***DISCUSSION OF CONCEPTUAL FRAMEWORK***

The study set out to explore the factors that influence the location choice of IRPs. Despite the common use of neoclassical and international network theories, migration theory does not offer explanations of why and how IRPs choose their destination place. According to traditional neoclassical economics, the factors driving international economic migration are salary and employment differentials between source and destination countries. Migrants move in response to higher wage rates and workforce demand. At individual level, people relocate internationally to maximise the return on “human capital” and improve their standard of living. In particular, highly skilled migrants move abroad to improve their economic, employment, living and socio-psychological conditions, but also to increase returns on educational investments they or their government have made (Alkire and Lincoln 2006). Thus, they move to places where remuneration and reward is appropriate to their formal education, training and work experience. Lee (1966) also suggests that highly skilled migrants and professionals migrate internationally to advance their professional career and prospects. According to Ackers (2005), international experience is an essential requirement to advance the individual’s professional career in their home country as well as abroad.

According to the migration network theory, choices made by individuals are influenced by the social and professional networks in which highly skilled migrants are embedded (Vertovec 2002, 2009). Scholars argue that closer economic and market integration and swift improvements in information and communication systems help migrants to develop and maintain contacts and relations on multiple sides across time and space. According to Portes (1997, 812), migrants live in “transnational communities” that are “dense networks across political borders created by immigrants in their quest for economic advancement and social recognition”.

As Castels contends,

migrants are not isolated individuals who react to market stimuli and bureaucratic rules, but social beings who seek to achieve better outcomes for themselves, their families and their communities by actively shaping the migratory process

(Castels 2007, 37).

Massey, Arango, Hugo, Kouaouci, Pellegrino, and Taylor (1993, 448) define migration networks as sets of interpersonal ties that link together migrants, former migrants, and non-migrants in origin and destination areas through bonds of kinship, friendship and shared community origin.

Migration networks have a crucial impact on migrant residential location choice and his/her job relocation preferences. As Massey *et al.* (1994, 732) suggest “migrant networks have a powerful role in structuring individual migration decision and in promoting and directing aggregate flows of immigrants”. Vertovec (2002, 6) specifies that

the networks that internationally mobile research students and other research professionals develop may also serve to provide opportunities for colleagues and friends from home country as well as other countries.

Recently, a number of studies on the location decisions of highly skilled migrants and the analysis of migration patterns of researchers have been published by mainly American scholars (Florida 2002, 2005, 2008; Garmise 2006). Florida has made one of the major contributions to the discussion. In three books on creative class and talent management he discusses how local areas can best attract talented and creative people. At the core of Florida’s thesis lies the argument that locations able to attract and retain creative and talented human capital, often embodied in highly skilled people, can enjoy a competitive advantage and growth. Collective creativity leads to an increase in production and innovation, and consequently to economic wealth and wellbeing. As he suggests, “the clustering force makes people productive, which in turns makes the place more productive, generating increases in input and wealth” (Florida 2008, 9). Productive and innovative areas attract additional flows of highly skilled and talented people.

Florida’s location decision theory was incorporated into the conceptual construct of this study because it helps to overcome some shortcomings of neoclassical and international networks theories. According to Florida’s location decision theory, a migrant who decides to relocate internationally makes his/her location choice based on lifestyle preferences. Clustering of talent occurs primarily around places with presence of attractive tangible and intangible amenities such as cultural, social and recreational opportunities as well as technologies, talent and tolerance (Florida 2002). Attractive places have three dimensions (Florida 2002):

- (1) “what is there” – combination of built and natural environment, as well as local setting and tangible amenities;

- (2) “who is there” – diverse and tolerant people/communities;
- (3) “what is going on” – active, exciting and vibrant environment, and intangible amenities.

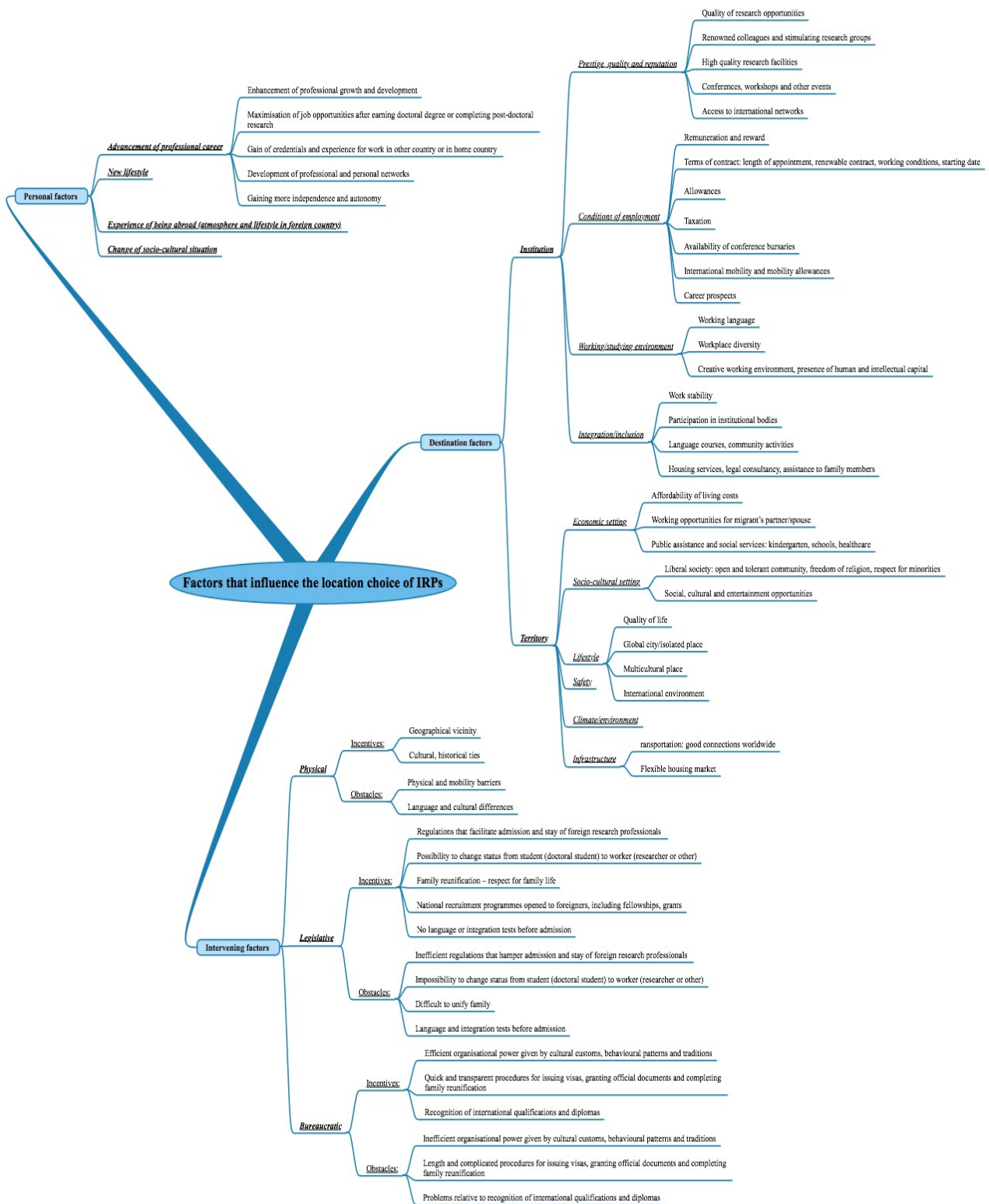
In particular, attractive destination areas for highly skilled people are characterised by cultural amenities, entertainment and recreational opportunities. Also considered desirable are a tolerant and diverse community, the proximity of talented and highly educated people, good infrastructure and services, the openness of the community towards new business as well as a mild climate. To Florida, the level of tolerance and openness of the local community towards diversities including religion, sexual orientation, nationalism, authority, family, women’s rights, individual rights, self-expression, divorce and abortion are determinants. According to Florida, a local area should possess all the above described qualities and at the same time offer economic and career development opportunities as well as services such as education, health and safety, housing and infrastructure. In addition, diversity, tolerance, self-expression, trust, cultural and recreational amenities should be in place. Finally, localities must encompass technology and talent (Florida 2005, 156).

This study supports the conceptual propositions described above and expands the construct to include a wide range of local factors that influence IRPs in their choice of location. In particular, I argue that location decision depends on a combination of

- (1) factors at the destination place;
- (2) intervening factors; and
- (3) personal factors.

Factors at the destination location are described as the attributes that make it appear attractive and desirable for IRPs. These factors are institution-based, and they include prestige, quality and reputation of the knowledge institution; conditions of employment; working/ studying environment; and integration/ inclusion. Territory-based factors include economic setting; socio-cultural setting; lifestyle; safety, climate and environment; and infrastructure. Intervening factors can be defined as obstacles or positive forces that stand in between the places of departure and arrival. These factors can be physical, legislative and/or bureaucratic, with both positive and negative impact on IRPs. Finally, personal factors include advancement of ones' professional career, new lifestyle, experiencing life abroad or change of social position.

Figure 1: Factors influencing the location decision of internationally mobile research professionals



## ***RESEARCH METHOD***

The analytical approach used in this study is descriptive and evidence supporting the analysis is derived from different sources. The following four methods of research provide the data and information needed for the generation of answers to the research questions. First, the study relies on an extensive review of existing scholarly literature and on sources of factual information such as laws, reports, official statements and materials posted on the websites of the academic institutions of concern.

Second, the analysis of factors that attract IRPs towards academic institutions in Tuscany is based on a small-scale survey conducted at four study sites between June and September 2010. Altogether, 323 foreign research professionals received the survey. There was a 30 percent response rate, meaning that 98 research professionals answered the questionnaire. It is important to point out that IRPs who did not succeed in reaching an academic institution in Tuscany due to institutional, bureaucratic, or geographic barriers were not included in the survey. This represents a limitation of the study in terms of eventual undervaluation of the migration barriers.

The survey specifically aims to explore why IRPs chose an academic institution in Tuscany, and how they feel about their decision. Also, the survey focuses on their perception of the study, working and living conditions in the region. Finally, the analysis reveals information about the participants' future professional and migration plans. The questionnaire contains 19 questions divided into four thematic clusters:

- academic position, nationality, gender and education background;
- reasons for moving to Tuscany;
- work/doctoral studies in Tuscany;
- future professional and migration plans.

To get a better understanding of the phenomenon it was necessary to complement the survey with in-depth interviews. In total 20 interviews were conducted with IRPs. By combining the information received via the web-based survey and the interviews, it was possible to gather interesting and revealing information about IRPs.

The following three open questions were posed:

- Why did you choose this academic institution?



- How do you feel about your decision and your experience?
- What are your future plans? In which country/sector are you going to work afterwards?

Third, qualitative material on institutions' policies, objectives, mission, working and economic conditions were collected from official documents and structured one-to-one interviews conducted with the institutional representatives such as Directors, Presidents, Deans of Studies, etc. In particular, 12 in-depth interviews were conducted between May and August 2011. Each interview lasted approximately 90 minutes and the interviews were recorded and later transcribed.

### ***DISCUSSION OF EMPIRICAL FINDINGS***

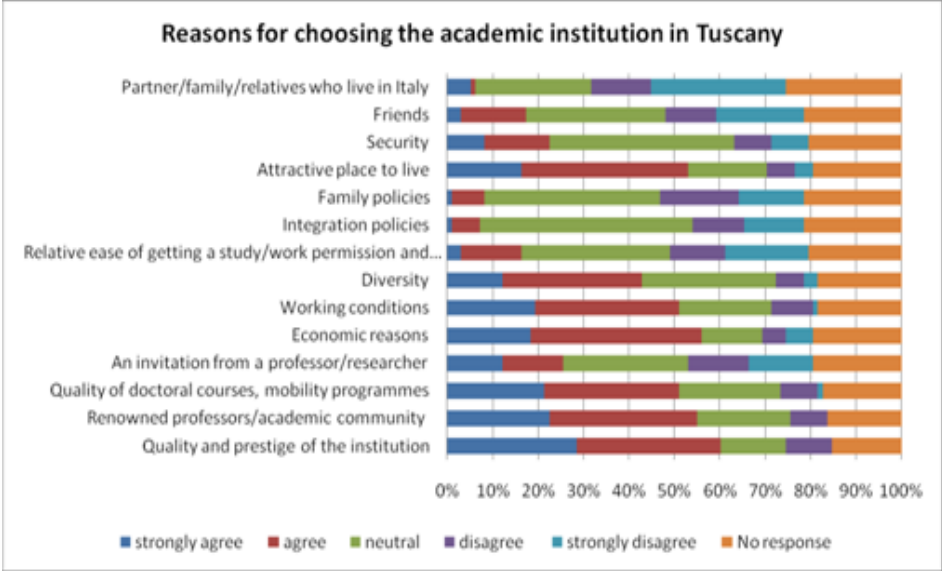
This study reveals that IRPs in Tuscany are attracted most by the quality and prestige of academic institution, as well as economic conditions including scholarships, research grants, and services such as free meals and housing. In addition, a distinguished faculty and academic community are important factors to foreigners. Also, an “attractive place to live” in terms of local cultural amenities, environment, climate and tolerant community is an important reason to the respondents while other reasons appear to be less relevant. It is revealing that respondents to the survey consider diverse academic environment as an important, but not crucial, reason for immigration. Also, respondents strongly disagree with an assumption that “family”, “friends” and “family, integration and immigration policies” are reasons for coming to Tuscany. Finally, the reason “invitation from a professor” generated a broad spectrum of answers from strongly agree to strongly disagree. In many ways, these results are not surprising; instead, they are consistent with the theoretical proposition discussed in the second chapter of this study. However, further analysis is necessary to understand what factors or reasons motivate individuals from different countries, scientific fields, occupational categories and gender.

Table 1: Reasons for choosing an academic institution in Tuscany

1.	Quality and prestige of the institution
2.	Economic reasons
3.	Renowned professors/academic community
4.	Attractive place to live
5.	Quality of doctoral courses, mobility programmes Working conditions
6.	Diversity
7.	Invitation from a professor/researcher
8.	Security
9.	Friends

10. Relative ease of getting a study/work permission and visa
11. Family policies
12. Integration policies
13. Partner/family/relatives who live in Italy

Figure 2: Reasons for choosing an academic institution in Tuscany



However, distinction should be made between migrants who are EU citizens and who can thus relocate freely from one to other EU country, and those who are non-EU citizens who need Italian immigration visas and leave to stay. In fact, EU citizens agree that the relative ease of obtaining immigration documents was one of the reasons for choosing an academic institution in Tuscany. On the other hand, non-EU citizens claim that the visa and leave to stay procedure is stressful and time-consuming due to its complicated and bureaucratic nature. However, complicated immigration policies and procedures do not discourage non-EU citizens from choosing academic institutions in Tuscany.

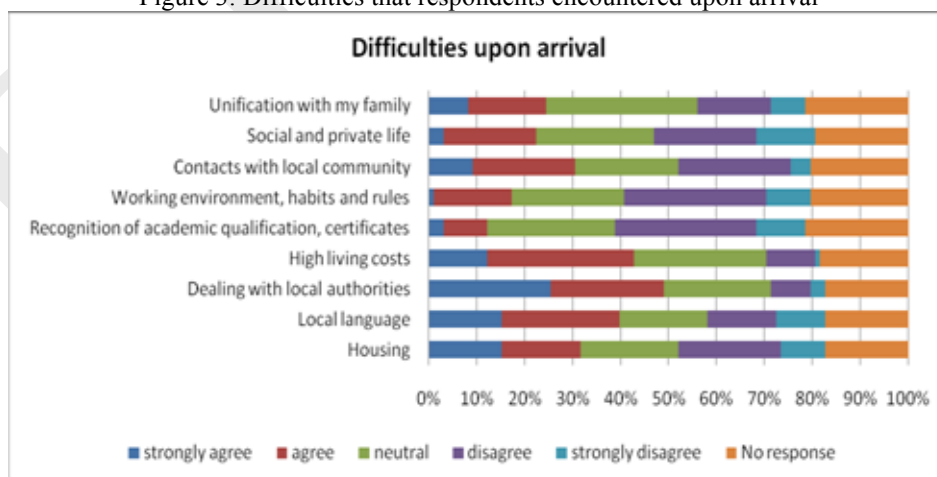
Analysis revealed that IRPs are influenced in their choice of destination by their friends and colleagues. In the case of Tuscany, IRPs reported that they had been informed about study/research opportunities by their friends who were at that time students or researchers at one of the Tuscan institutions themselves. Thus, the capacity to persuade IRPs to choose a specific academic institution lies mainly within migration networks. In addition, it is also linked to migrant capacity to pass adequate information relating to the quality of the institution, economic and working conditions, as well as living standards to others in their network (“word-of-mouth”).

On the other hand, negative information about the destination area is also transmitted via informal communication channels as well as media, internet or social media, and it can discourage IRPs from choosing a specific destination place. In case of Tuscany, analysis revealed a number of structural, administrative and cultural factors negatively impacting on IRPs only upon their arrival in the region, and thus influencing their decision to stay or leave the region. Dealing with local authorities, high living costs and Italian language are among the most frequently mentioned difficulties. It seems that respondents encounter less difficulty at work, and in their social and private life. In fact, they are less concerned about their interactions with the local community or with being reunited with family members. Family matters are a rather distant concern presumably because the majority of respondents are single (51 percent), 12 percent are married and live together with their spouse in Tuscany, while 10 percent of respondents live with their partners. Only six percent of respondents are married and live in Tuscany without their spouse.

Table 2: Difficulties upon arrival in Tuscany

1.	Dealing with local authorities
2.	High living costs
3.	Local language
4.	Housing
5.	Contacts with local community
6.	Unification with my family
7.	Social and private life
8.	Working environment, habits and rules
9.	Recognition of academic qualification, certificates

Figure 3: Difficulties that respondents encountered upon arrival

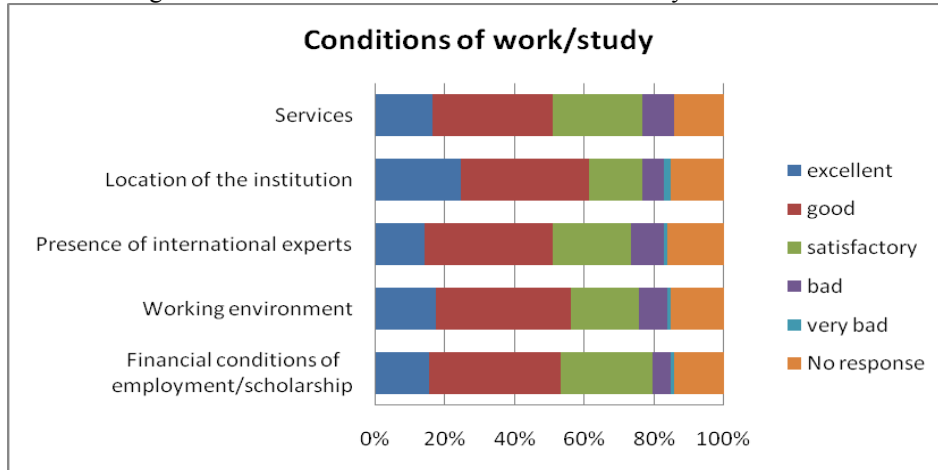


On the other hand, respondents seem to be happy about the financial conditions of employment and scholarship, ranking it second. It is clear that they are less satisfied with services and the presence of international experts.

Table 3: Satisfaction

1.	Location of the institution
2.	Financial conditions of employment/scholarship
3.	Working environment
4.	Services
5.	Presence of international experts

Figure 4: Satisfaction with conditions of work/study environment



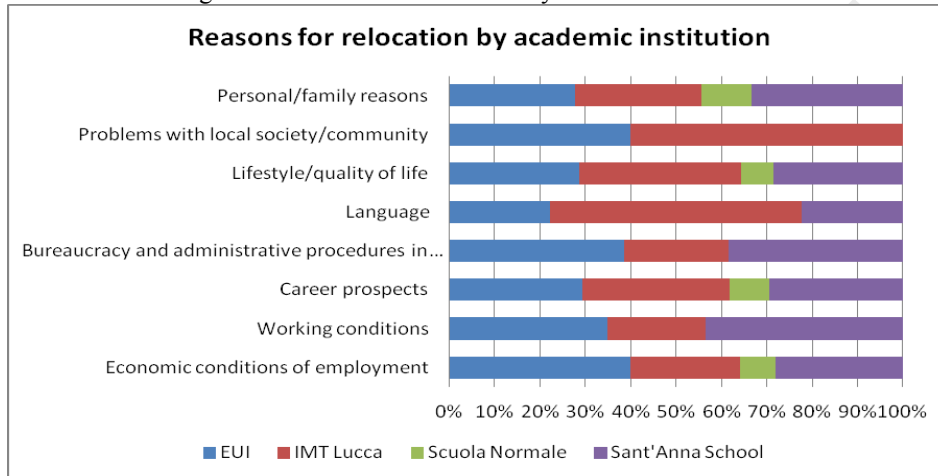
Literature also suggests that IRPs move to places that are linguistically accessible, and that usually overlap with the language they are familiar with. Since English has become the main working and communicating language in the academic and research environment, students and scholars usually choose a destination that overlaps with an English-speaking working environment. The findings confirm that English is the primary language of work for IRPs only at some knowledge institutions in Tuscany. Italian is the primary language of instruction and research at public Universities, and thus professors and research assistants are required to teach and mentor students in Italian. Candidates for permanent academic positions must pass a national public Italian language competition to be eligible for tenure.

Analysis also showed that the most important factors that push foreign research professionals from Tuscany elsewhere are career opportunities, economic matters, and working conditions. The prospect of an academic career can strongly convince foreign researchers to work in another country or return back home. In fact, doctoral students and postdoctoral fellows expressed their wish to return back to their country of origin, but before doing that plan to undertake some postdoctoral research activities in a West-European or North-European country or in the USA. This finding reveals the low retention capacity of the studied academic institutions.

Table 4: Reasons for relocation

1. Career prospects
2. Economic conditions of employment
3. Working conditions
4. Personal/family reasons
5. Lifestyle/quality of life
6. Bureaucracy and administrative procedures
7. Language
8. Personal/family reasons

Figure 5: Reasons for relocation by academic institution

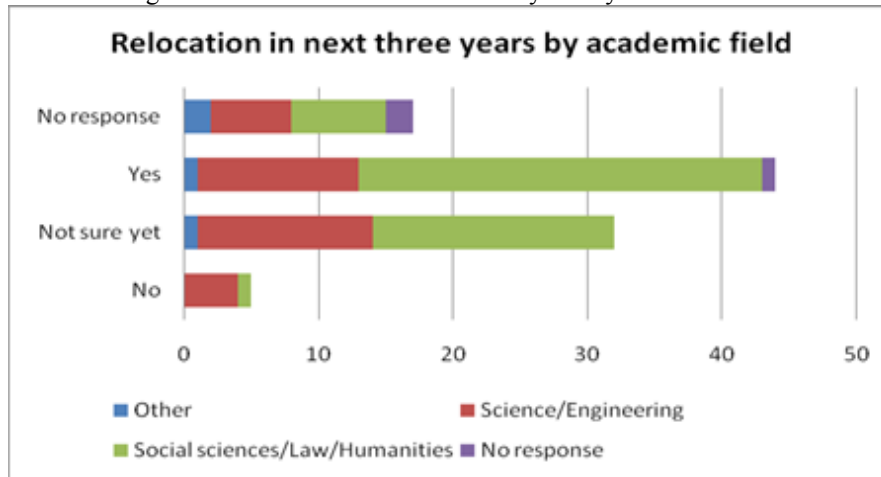


The majority of IRPs who were interviewed expressed their desire to return back to their country of origin. In particular, PhD and postdoctoral fellows from Japan, China, Thailand, India and Brazil wished to return back home in the long-term. Two EU citizens who participated in the interview also plan to return back home, although they would prefer to stay in Italy and work in industry.

*There is very little future for research professionals in Italy, especially for non-Italians. There are not so many opportunities generally, but also pay is low, resources are poor, the career ladder is terribly badly organised and hierarchical. To work at an Italian university or research institute is really not appealing, apart from the nice food and weather.*

PhD student in Tuscany

Figure 6: Relocation in the next three years by academic field



### ***LINKING CONCEPTUAL AND EMPIRICAL FINDINGS***

The study set out to explore the factors that influence the location choice of IRPs in the destination country. Despite the common use of neoclassical and international network theories, migration theory does not offer explanations of why and how IRPs choose their destination place. According to traditional neoclassical economics, the factors driving international economic migration are salary and employment differentials between source and destination countries.

Migrants move in response to higher wage rates and workforce demand. At individual level, people relocate internationally to maximise the return on “human capital” and improve their standard of living. This study showed that high salary differentials and the availability of jobs are clearly incentives for international doctoral students and other research professionals, but on the whole they are definitely not the most important factors influencing migrant location choice. Clearly, IRPs are attracted to universities that offer good research opportunities, excellent working conditions and career development prospects, as well as high quality research facilities. Clearly, neoclassical theory does not consider these non-pecuniary factors that are crucial to academic and scientific migration.

The study also showed that the migration networks of colleagues and friends are important to internationally mobile research professionals. This study confirms that international networks are crucial sources of information on study and work opportunities, living costs and bureaucratic procedures. In fact, foreigners who chose to pursue their doctoral studies or research activities in Tuscany were influenced in their decision by their friends or colleagues

who were at that time studying or working at the academic institution in question, or they were alumni of that institution.

Florida's location decision theory was incorporated into the conceptual construct of this study because it helps to overcome some shortcomings of neoclassical and international networks theories. According to Florida's location decision theory, a migrant who decides to relocate internationally makes his/her location choice based on lifestyle preferences. From Florida's perspective, only locations that are able to satisfy individual living preferences can attract talented and creative people. Although from Florida's point of view young talented experts are "amenity oriented", this research found that young IRPs seem to be rather insensitive to amenities. Rather, they are attracted by research and education opportunities, career prospects and working conditions. In other words, research opportunities and working conditions are more important to IRPs than entertainment and recreation amenities. Since the analysis presented in this research is based mainly on answers gathered from young doctoral researchers and postdoctoral fellows, deeper investigation is needed to understand inter-generational differences in lifestyle preferences and individual relocation decision-making. In addition, it is important to explore whether research professionals exhibit stronger responses to some amenities than others. For example, climate, level of security and general conditions of well-being can be more appealing to research professionals than other amenity factors such as concerts, discothèques, gyms and others. In particular, questions about whether younger research professionals are more amenity-oriented than older migrants and what facilities are important to different categories of international migrants can be addressed by future research.

This study supports the conceptual propositions described above and expands the construct to include a wide range of local factors that influence research professionals in their choice of location. In particular, the analysis suggests that research professionals migrate internationally because it is natural to the intellectual and scientific work they conduct. Also, they wish to gain interesting and rewarding international experience, enhance skills and improve knowledge. Their location decision depends on a combination of the factors present at the destination, and personal and intervening factors.

The findings of the study are summarised in table five.

Table 5: Summary of findings

Questions	Summary of findings
<p>Why do IRPs choose academic institutions in Tuscany for their work?</p>	<p>The analysis showed that the quality and reputation of the institution, understood in terms of teaching and research excellence, high-quality facilities and access to resources, is the most important factor that attracts IRPs to Tuscany. Economic reasons and distinguished faculty are ranked second and third. Different factors attract different categories of research professional: doctoral students seek good training in research and a degree that gives them access to highly specialised jobs in academia, industry, public and private institutions. Postdoctoral fellows desire to improve their research skills in an institution/laboratory of excellence and build up their professional networks.</p> <p>It is difficult to say how many of those who came to Tuscany as doctoral or postdoctoral researchers did so because of their desire to stay in Tuscany permanently. On the other hand, the findings suggest that doctoral and postdoctoral fellows are most likely to leave their institution and Tuscany after their training period – returning back home or moving to another OECD country.</p>
<p>How do institutional settings, goals, policies, economic conditions and territorial attributes affect IRPs and their choice of destination in Tuscany?</p>	<p>The study shows that institutional setting and objectives, policies and economic conditions of employment are the most important factors that drive and shape immigration in the region. Territorial setting is of secondary importance. It is, rather, the quality of research and education, career opportunities, economic and work conditions that attract international talent. The choice of academic institution is also influenced by the migrant job choice. Finally, the findings suggest that migration of IRPs in Tuscany is driven by networks of friends and colleagues who share information about education and research opportunities, living costs and bureaucratic procedures, etc.</p> <p>The analysis also shows that the factors attracting foreigners to academic institutions also push them from Tuscany to other places. The research shows that IRPs relocate because: (1) they did not find what they were looking for (they are dissatisfied with career development opportunities and the economic conditions); (2) they planned to stay in Tuscany only for a limited period of time from the very beginning (to gain research experience or a doctoral degree and afterwards move elsewhere); (3) they cannot continue their career at the same institution - a rule established by the academic institution (e.g. institutional policy).</p>
<p>What policies need to be implemented at different levels of governance to improve attraction and recruitment potential, and thus to achieve the ultimate goal of sustainable management of regional research capacities?</p>	<p>IRPs are headed towards those places that offer them good research and educational opportunities, high quality research facilities, and good remuneration and reward. Other incentives include supportive working environment, high quality human and intellectual capital, housing and other public services, local amenities, climate, lifestyle and inclusive local community. Policies that support and enhance these assets are required at national, local and institutional levels:</p> <p>(1) National level: (a) ease immigration rules and entitle PhD students to long-term leave to stay, and non-European research professionals with work authorisation to search for a qualified job in the destination country; (b) define general guidelines for recruitment procedures and offer competitive economic conditions including fiscal advantages; (c) develop performance appraisals, compensation incentives and other evaluation measures; (d) address the precarious situation of young researchers.</p> <p>(2) Local level: (a) develop communication channels between immigrants, academic institutions and local authorities; (b) make bureaucratic procedures fast and efficient; (c) improve access to services for foreigners.</p>



Questions	Summary of findings
	(3) Academic institutions: (a) keep the selection system simple, transparent and trustworthy; (b) inform timely and in English about research opportunities; (c) offer good career development opportunities and competitive economic conditions; (d) adopt assessment criteria and performance appraisals similar to those in other countries; (e) reflect upon a suitable retention or integration strategy; (f) eradicate nepotism and inertia.

## ***CONCLUSION***

This study provided a baseline from which future research can further explore international academic and scientific migration and the sustainable migration management of research professionals. The design and concept of this research can be applied to other settings, thus expanding the general understanding of the drivers of international migration amongst research professionals, in addition to the decision making and location choices of individuals. Increasing the number of settings expands the capacity to draw generalisations about what drives the international migration of research professionals towards locales and what influences their permanent stay in the territory. In particular, future research can benefit from the design of this study which has proved useful with multi-source data-related and conceptual issues. On the other hand, future research could usefully address some of the problems faced by this research relating to access to data and to the foreign population. It was especially problematic to get information about tenured academics in Tuscany. This limitation can be addressed in the future.

Further research should also focus on linkages between accumulations of human capital, IRPs in particular, and Smart Specialisation. It was contemplated at the beginning of this study that human resources are one of the main assets of the regional innovation system, and thus highly relevant to regional smart specialisation. Smart specialisation is smart and knowledge based strategy that builds on national/ regional assets, strengths and potentials, and focuses on a limited number of priorities to stimulate growth. Smart specialisation is not limited to only areas of research and innovation, but also aims at non-science innovation such as social innovation, innovation in public sector, innovation in creative industries, service innovation, etc. The very aim of the smart specialisation is to promote job creation for example by stimulating entrepreneurship and collaboration between education institutions and private sector; meet the challenges of innovation Union by promoting partnerships within quadruple helix (public entities – knowledge institutions – businesses – civil society), as well as help to address European gran societal challenges such as aging society, social inclusion,

environment and climate change, etc. Highly skilled workforce is a prerequisite for successful implementation of smart specialisation strategies and a resource in the regional innovation system. Thus it is crucial to understand linkages between these two and define effective IRPS' management policies in order to boost regional research and innovation capacities.

Another topic for future research is the impact of the global recession on international researcher migration. Opportunities and economic resources in research and academia are drying up, and academic institutions have become more selective towards future grant-holders. Consequently, international competition for grants seems to be fiercer than before, and the intensity of global competition for IRPs may have decreased significantly. In consequence, universities may focus on the selection of only the most talented individuals who can make a very significant contribution to scholarship. Thus, according to Lowell (2008), today's challenge is not to implement policies leading to an overall increase in the size and diversity of research professionals at the academic institutions of concern or in the region; rather to design well-balanced selection and recruitment policies, as well as mobilisation and attraction strategies which are able to target, attract and select the most talented and skilled experts.

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