

Italian PhD students abroad

Exploring the mobility of PhD students in urban studies

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ABSTRACT

Global changings in higher education as well as the internationalisation of European education and research institutes have occurred during the last decades deeply affecting the Italian PhD system. The mobility of PhD students has become an important issue to take into account both for its impact on the evolution of the Italian academia and for the job market. The study presented here aims to have an insight into the consequences of the internationalisation process. It is based on a two-step data collection (a data enquiry and a survey) on PhD students of urban studies who were hosted by non-Italian universities during their doctoral course between 2002 and September 2015.

According to data, PhD students of urban studies could represent a great potential for the internationalisation process of the Italian academia even though both doctoral students and institutions do

not seem to be completely aware of this and to fully invest on it yet. Furthermore, the gathered data has shown that experience at a foreign university proves valuable for PhD candidates, who state they had thus improved or acquired considerable skills and opportunities. The study revealed also that part of PhDs who participated in the survey is currently in the research field, both in academia or in the public or private research sector.

INTRODUCTION

During the last two decades the PhD system has been affected by the main changes in higher education that were occurring all around the world. The part of the population accessing higher education during the second half of the 20th century has massively increased (Altbach, 1999). Furthermore the modern society has been transformed into the so-called 'learning society' in which a substantial part of the population is "more or less continually engaged in formal education of one kind or another" (Trow, 2005; p.275). These phenomena raise the question of what a PhD title means in Western countries and globally today. Questioning the role of PhDs becomes even more important considering the almost rampant increase of PhD titles which occurred in many countries between 1998 and 2008 (Cyranoski et al., 2011). The ongoing debate about the importance of PhD courses to foster the generating of specific figures for the academic or the research field has become a main issue in the US and other countries, where the system of PhD education is in dire need of a shift to avoid the future collapse of development of the job market and the impending lack of economic resources due to a generalised crisis (Taylor, 2011).

Between the late 1990s and the beginning of the new millennium, European universities were asked to take on an active role to face the challenges of globalisation and to promote a more interlinked education system (European Commission, 2003). The EU internal cohesion became fundamental to co-ordinate single national efforts in the field of research to become more competitive (Banchoff, 2003).

This study focuses on Italian doctoral students in urban studies, mainly in disciplines of urban and territorial planning and policies. Even though an exhaustive reconstruction of the European education policy evolution is beyond the scope of this paper, the study has been conducted on the background of the main innovations that have been introduced in the Italian and European higher education system in response to the global phenomenon. The aim is to gain an insight into doctoral students as part of the current Italian academia and of the future job market. It is based on the data collection from PhD students of urban studies. Most of them studied in planning and policies programmes and all were involved in mobility activities to foreign universities during their doctoral course between 2002 and September 2015¹. Thus, the attempt is to answer three main questions:

- Does the mobility of PhD students of urban studies foster co-operation between Italian and international academia?
- Does the mobility of those students in international academia result in additional skills and results for PhDs?
- Are their international experiences of value to entering the research job market as PhDs?

The paper is structured in four sections. In the first section, the consequences of the main reforms of the Italian PhD system for urban studies are introduced, based on the background of the European process of internationalising the fields of education and research during the last two decades. In the second section, the methods of the research work, the institutions involved for the data collection and the PhD programmes selected are presented. In the third section, the results of the survey are reported. The sample of forty-nine doctoral students, who participated in the survey from nine selected Italian higher education institutions, is presented and the mobility is investigated in terms of their destinations, motivations and the

¹ The period 2002-2015 was selected according to data availability.

economic aspects related to the experiences at foreign universities. Feedback on their research stay is collected to provide information about the outcome of their experiences. The job opportunities for PhDs are also analysed as focusing on Italian PhDs who had international experiences during their studies. Furthermore, the career choices they made afterwards and the opportunities they were offered are further investigated.

In the final section the results of the study are discussed in order to answer the three main questions on which it focuses.

BACKGROUND

Two main steps, the promulgation of the Bologna Declaration (EHEA, 1999) and the institution of the EU's Lisbon Research Agenda (2000), characterised the European main innovation which also influenced the evolution of Italy's higher education system. The former – a milestone in the process started in 1988 – was mainly directed towards transforming degrees into comparable titles and was supported by the European Commission. The latter focused on the research policy for growth and occupation, attributing a fundamental role to universities. Reforms and innovations on the two levels – of education and research – continued during the following years and the European Commission expanded its role in reforming the higher education system (Keeling, 2006). In 2010 the European Higher Education Area (EHEA) was finally formally instituted to promote the necessary European dimension in higher education as the Bologna Declaration had affirmed eleven years before. In addition, the European Research Area (ERA), whose aim is to support the knowledge-based economy on a European scale and an “internal market” in research (European Commission, 2005), enabled a major turning point.

Since the beginning of the Bologna Process a more interconnected global system of higher education is emerging (Robertson and Keeling, 2008). A big effort has been made in Italian academia and within institutional contexts to understand the role of universities in what was later named the EHEA. The institution of the Italian PhD, formalized through the Presidential Decree 382/80 in 1980, has been

deeply influenced by the European framework and by the Bologna Process. PhD programmes have followed the adaptation strategy to the new European standards by introducing a credit-based system and fostering cross-border exchange and cooperation. Nevertheless, the Italian national reforms of the PhD system of the last years have not always been mutually coherent, especially in recognising the importance of PhD courses through an adequate economic support and national support in terms of the creation of specific positions for PhDs (Avarello, 2012).

The Italian higher educational institutions, including institutions of urban studies, were deeply involved in that process. PhD programmes were reorganised several times in just a few years² and educational institutions of urban studies made the effort to revise their educational programmes and to strengthen international relationships as the national policy frame had required. Furthermore, PhD courses in planning, policies and other fields of the territorial and city transformations had to face many challenges in the attempt to redefine the identity of the discipline. Nonetheless both the administrative reorganisation of the PhD system as well as the decrease of resources prevailed within the cultural project of PhD courses (Bianchi, 2012).

In this frame, the mobility of students of urban studies is linked to the process of constitution of the EHEA, as much as the creation of a relevant number of associations between European academics such as the Association of European Schools of Planning (AESOP), the foundation of the European Research Area and the institution of many EU research and innovation programmes³ inside the ERA.

In this study it is argued that mobility in higher education, as part of

² For a complete reconstruction of the evolution of the Italian PhD system, see Cappa (2009) and Mecca and Perrone (2014) in the list of references.

³ For instance the recently introduced Horizon 2020, instituted with the aim to foster interdisciplinary and international partnerships both among European universities and within the private research field, thereby representing the evolution of the Lisbon strategy (European Commission, 2009).

the “evolutionary process” of internationalisation (Knight, 2015), is mainly connected to multidirectional material flows of students and researchers that can be categorised in three groups: entry flow, exit flow and cooperative flow. In this frame, PhD students are considered a consistent part of both the exit flow and the cooperative flow.

RESEARCH METHODS

This study was conducted in two phases. During the first phase, twenty-three PhD programmes of nine institutes were selected from programmes active after the Bologna Declaration.

Table 1: List of the PhD programmes selected for the first part of the study (according to the Cineca database).

	PhD programme	Institute	Department	cycles (activated)
P.1	Pianificazione urbana, territoriale e ambientale*	Polytechnic University of Milan	Architettura e pianificazione (from the 20° cycle)	16°-23°
P.2	Spatial planning and urban development*	Polytechnic University of Milan	Architettura e pianificazione	24°-28°
P.3	Governo e progettazione del territorio*	Polytechnic University of Milan	Architettura e pianificazione	24°-28°
P.4	Urban planning, design and policy	Polytechnic University of Milan	Architettura e studi urbani	29°-30°
P.5	Ambiente e territorio - curriculum in Pianificazione territoriale e sviluppo locale*	Polytechnic University of Turin	Ingegneria del territorio, dell'ambiente e delle geotecnologie	21°-25°
			Interateneo e territorio	26°
			Interateneo di scienze, progetto e politiche del territorio	27°-28°
P.6	Urban and regional development	Polytechnic University of Turin	Interateneo di scienze, progetto e politiche del territorio	30°
P.7	Pianificazione territoriale e politiche pubbliche del territorio*	IUAV- Higher institute of architecture of Venice	Pianificazione (from the 19° cycle)	15°-24°
			-	25°-26°
			IUAV per la ricerca	27°
P.8	Urbanistica*	IUAV- Higher institute of architecture of Venice	Urbanistica (from the 19° cycle)	15°-24°
			-	25°-26°
			IUAV per la ricerca	27°
			-	28°

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	PhD programme	Institute	Department	cycles (activated)
P.9	Architettura, città e design – curriculum in Pianificazione territoriale e politiche pubbliche del territorio	IUAV- Higher institute of architecture of Venice	-	29°- 30°
P.10	Architettura, città e design - curriculum in Urbanistica	IUAV- Higher institute of architecture of Venice	-	29°-30°
P.11	Progettazione della città del territorio e del paesaggio - curriculum in Progettazione urbanistica e territoriale*	University of Florence	Urbanistica e pianificazione del territorio	26°-27°
P.12	Progettazione della città, del territorio e del paesaggio - curriculum in Progettazione paesistica*	University of Florence	Urbanistica e pianificazione del territorio	26°-27°
P.13	Architettura - curriculum in Progettazione urbanistica e territoriale	University of Florence	Architettura	28°-30°
P.14	Urban studies	Gran Sasso Science Institute	-	29°-30°
P.15	Pianificazione territoriale e urbana*	Sapienza - University of Rome	Pianificazione territoriale e urbanistica (from the 19° cycle)	15°-25°
			Design, tecnologia dell'architettura, territorio e ambiente	26°-28°
P.16	Pianificazione, design e tecnologia dell'architettura - curriculum in Pianificazione territoriale, urbana e del paesaggio	Sapienza - University of Rome	Pianificazione, design, tecnologia dell'architettura	29°-30°
P.17	Politiche territoriali e progetto locale*	Roma Tre University	Studi urbani	19°-28°
P.18	Urbanistica e pianificazione territoriale*	University of Naples "Federico II"	Urbanistica (from the 19° cycle)	17°-24°
P.19	Progettazione urbana e urbanistica – curriculum in Pianificazione urbanistica e territoriale*	University of Naples "Federico II"	Progettazione urbana e urbanistica	25°-28°
P.20	Architettura – curriculum in Pianificazione Urbanistica e Valutazione (section of Pianificazione urbanistica)	University of Naples "Federico II"	Architettura	29°-30°
P.21	Pianificazione urbana e territoriale*	University of Palermo	Citta' e territorio (from the 18° cycle)	13°-24°
P.22	Analisi, rappresentazione e pianificazione delle risorse territoriali, urbane, storiche-architettoniche e artistiche - curriculum in Pianificazione Urbana e Territoriale*	University of Palermo	Architettura	25°-26°
P.23	Architettura, Arti e Pianificazione - curriculum in Pianificazione Urbana e Territoriale	University of Palermo	Architettura (DARCH)	29°-30°

*PhD course currently inactive

All the involved institutes (see table 1) were asked to support the

study by providing data about the number of students from the selected programmes and the number of students among them, who visited foreign universities for study and research purposes during their PhD course. In four cases the administrative offices could not provide all the data required due to the absence of dedicated databases or due to the long process of elaboration. Then an indirect reconstruction for Sapienza - University of Rome and University of Naples “Federico II” was attempted with the support of PhD students and researchers. In the case of Polytechnic University of Milan and partially in the case of IUAV, both the data enquiry and the indirect reconstruction did not succeed, consequently affecting the statistic. According to data, 51,7% among the students enrolled in the listed programmes went abroad (see tab.2). This percentage could probably be even higher for Polytechnic University of Milan and IUAV. In fact most of the participants in the second phase of this study are from those two institutions.

Table 2: Students enrolled in the selected PhD programmes compared with the number of the students eligible for the survey.

Institute	programmes (ref. tab.1)	selected cycles	n. of total students	n. of students in foreign universities
Polytechnic University of Milan	P.1	18°-23°	na	na
	P.2	24°-28°	na	na
	P.3	24°-28°	na	na
	P.4	29°-30°	na	na
Polytechnic University of Turin	P.5	21°-28°	26*	9*
	P6	30°	12	0
IUAV - Higher institute of architecture of Venice	P.7	20°-27°	na	na
	P.8	22°-27°	na	na
	P.7 + P.8	28°	14	34
	P.9 + P.10	29°-30°	27	
University of Florence	P.11 + P.12	26°-27°	6	1
	P.13	28°-30°	8	1
Gran Sasso Science Institute	P.14	29°-30°	21	4
Sapienza - University of Rome	P.15	21°-23°	na	na
	P.15	24°	6	1
	P.15	25°	na	na
	P.15	26°-28°	20	7
	P.16	29°-30°	10	2
Roma Tre University	P.17	19°-28°	43	35

Institute	programmes (ref. tab.1)	selected cycles	n. of total students	n. of students in foreign universities
University of Naples “Federico II”	P.18	22°-24°	8	4
	P.19	25°-28°	10	7
	P.20	29°-30°	7	1
University of Palermo	P.21	20°-24°	26	19
	P.22	25°-26°	8	7
	P.23	29°-30°	7	2
			259	134

na - data not available

** - calculated as arithmetic average of the aggregated data about six curricula*

During the second phase, the online survey was conducted between August and September 2015 using the Google Form free platform. The administrative offices of the involved institutes were asked to pass on a link to attend an online questionnaire in Italian (see Annex 1). The survey counts forty-nine valid entries from fifty-one total participants. Seven students among them (14,3%) were still abroad in September 2015.

RESULTS OF THE SURVEY

The profile of the participants

The forty-nine students sample is presented in figure 1a and the thirty-two destinations of their visit are indicated in figure 1b.

According to the data collected, 68,6% of the total number of participants⁴ were hosted by universities inside the EU or by countries not officially in the EU but on its borders like in the case of Albania and Turkey, and it is worth mentioning that 21,6% of all participating students went to the UK; 17,7% of the attendants indicated as their destination a city located in Central or South America against 13,7% of them who chose a university in US or Canada.

Figure 1a: Detail of the sample of the participants in the survey.

⁴ A double destination of two participants was taken into account.

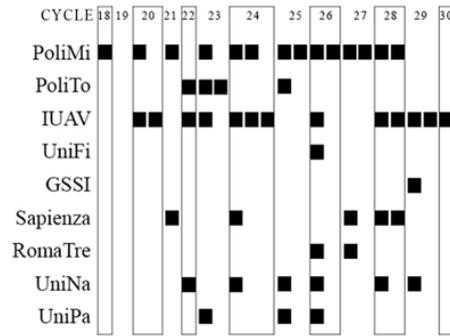
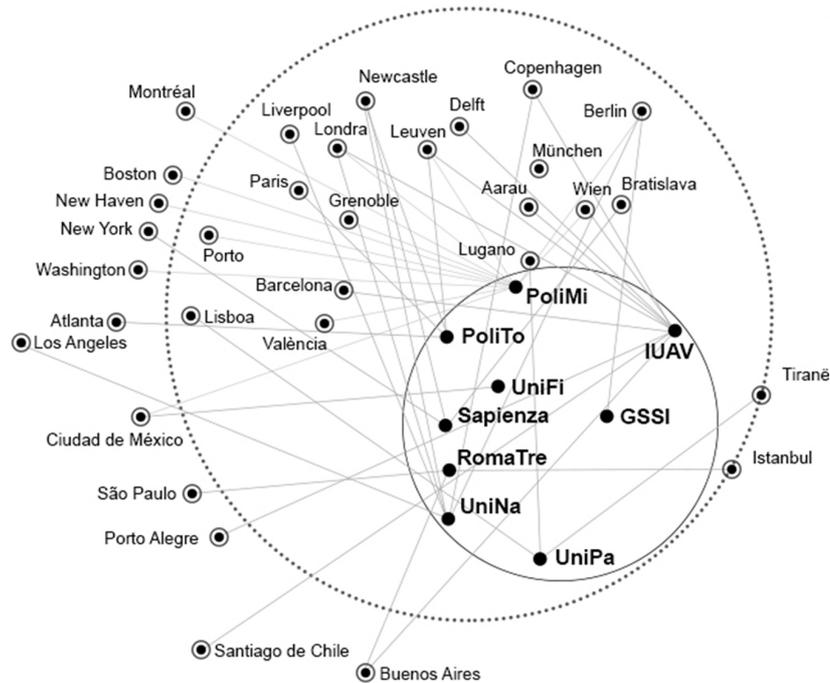


Figure 1b: The map of destinations.

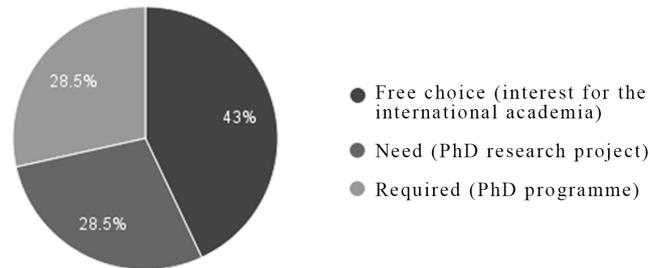


They were also asked how long their experience lasted. From the collected data it was ascertained that medium duration visits are preferred to short visits (16, 3% say their visit lasted less than three months) and long visits (12,2% of the experiences went on for more than one year). Among the ones who stayed for a medium visit period, 38,8% chose the option of 3-6 months and 32,7% chose the option of 6-12 months. All in all, a total of 83,7% of students spent more than 3 months abroad.

The reasons that took the participants of this study abroad were investigated through a set of questions with multiple choice answers. They were asked to define their experience alternatively as an obligation, a free choice or a necessity (see Figure 2). 43% of them indicated the free choice option. Alternatively, 28,5% said that they had to go abroad because of their specific research project and 28,5% mentioned that an international experience had been strictly

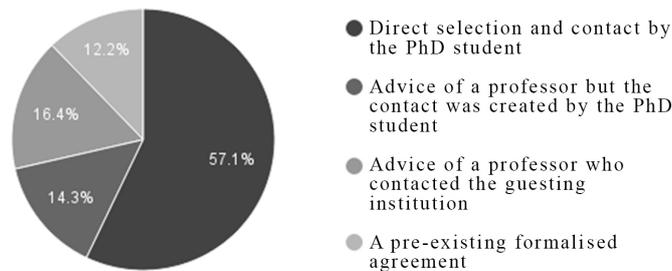
recommended/required by their university.

Figure 2: How the participants defined their experience abroad.



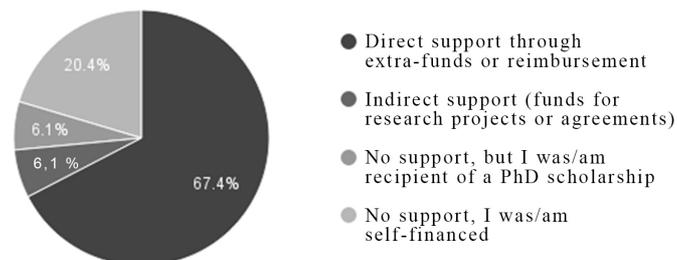
Furthermore, the participants were asked to specify the modality they used to select the foreign university (see Figure 3). 57,1% stated to have made a selection in a completely independent way by autonomously choosing the destination, individually collecting information about the hosting institution and by consequently submitting an application to be accepted as temporary visiting students. A considerable 30,7% were directed in their choice by a professor; almost half of these (16,4%) were actively supported by the same professor who also established a first contact with the respective institution, in contrast to the remaining ones (14,3%) who directly contacted the suggested institution themselves. Only a small part of 12,2% says to have chosen the destination because of an institutional agreement between their Italian home university and the foreign university. Summarised, the percentage of students who established a contact outside of formalised and pre-constituted agreement, shows a very relevant 87,8%.

Figure 3: How the participants selected the destination.



Financial aspects were also taken into account during the survey to consider how relevant the monetary support is to foster international experiences of PhD students (see Figure 4). 73,5% were supported by an individual scholarship and among those, 67,4 % says the scholarship was increased by the sending institution to cover the expenses related to the visiting period. 20,4% of all students attending the survey say to have been self-financed and not recipients of any scholarship during their three-year course. The remaining 6,1% of the participants received economic support through a financial programme or a specific agreement such as the recently introduced EU programme Erasmus+.

Figure 4: The monetary support to the PhD students abroad.



Intentions and results of travelling abroad during the PhD

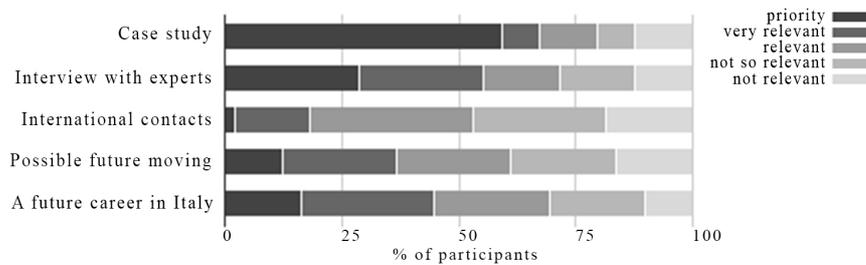
In the section ‘b’ of the survey, participants were asked to give a feedback on their experience as part of their PhD education. Here, intentions, actual gained competences and main problems of the PhD

students were central to take stock of their experiences. Question with multi-item scale answers and additional open questions were used for this section of the survey.

The most important collected information is that a notable 91,8% of participants gave the experience they had gained at the foreign universities a mark of 4 or 5 (on a 1 to 5 scale), thus evaluating the experience as indispensable or at least very important for their PhD education. This number goes up to 98% if we include the ones who gave a mark of 3, still recognising a certain relevance to the experience.

Secondly, a question regarding the specific aims that characterised their experience with five possible answers were given. The participants had to assign a judgment to every answer on a scale of five levels of importance going from “not relevant” to “priority” (see Figure 5). The option that was indicated as “priority” from the greatest number of participants (59,2%) is to study a case directly located in the country they were going to, while the number goes up to 79,6% if we also consider who marked this intention as “very relevant” or “relevant”. In second place, the answers that gained the highest marks (from “relevant” to “priority”) are “to interview foreign expert” (71,5%) and “to gain knowledge and competencies for a future career in Italy” (69,4%). It is worth to report that the participants were asked how important “to get new institutional international contacts or strengthen existing institutional contacts with foreign institutions” was for them, only the small part of 2% among all the participants selected it as a “priority”. 61,2% were interested in the exploration of international academia for a possible future transfer (they selected the options from “priority” to “relevant”).

Figure 5: Aims of the experience abroad.

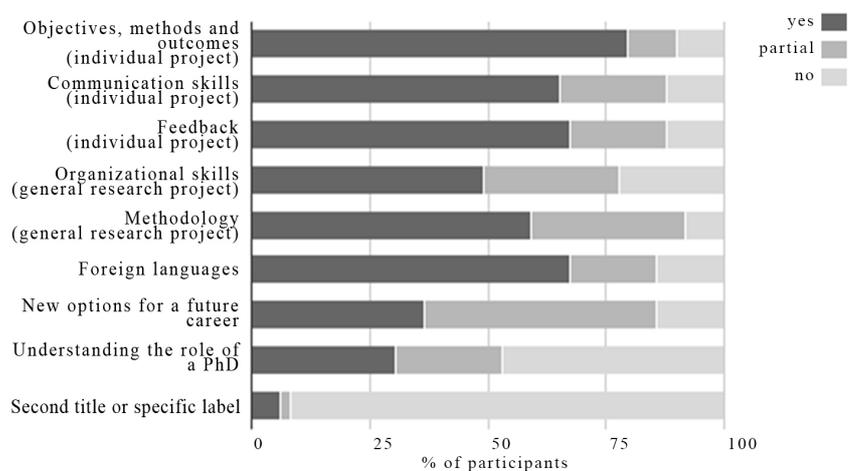


The participants were also asked which skills and results they had gained thanks to the international experience (see Figure 6). A three-grade scale was provided to evaluate every option (a “yes-partially-no” scale). The most notably data is that 79,6% indicated they certainly had clearer objectives, improved methods and outcomes regarding their research project at the end of their international experience while a small percentage of 6,1% got awarded an international label or a specific international title (e.g. a title related to a joint PhD programme between an Italian and European university or the label of Doctor Europaeus).

A considerable percentage of participants do not link their experience to having a clearer idea about the role of the professional figure of a PhD (47% found it not helpful against 30,6% who considered it helpful while 22,4% found it partially helpful) and most of the participants found the experience important in order to consider new options for their future career (36,7% found the experience helpful and 49% partially helpful). Summing up the results from the answers given by the participants, the experience at a foreign university is mainly important for their individual PhD research projects in terms of defining the objectives, methods and outcomes of the project; in terms of better presenting and communicating it (65,3% yes; 22,5% partially); to receive feedback from foreign professors on their individual projects (67,3% yes; 20,5% partially). At a lower stage, there are general aspects like improving their methodology knowledge for research work (59,2% yes; 32,6% partially) and improving organisational skills, like the ability of structuring a research work or identifying consequential steps of a research work

(49% yes; 28,6% partially). During their international experience, the foreign language skills were also improved by 67,3% of all participants and partially improved by 18,4% of them.

Figure 6: *Skills and results the participants gained.*

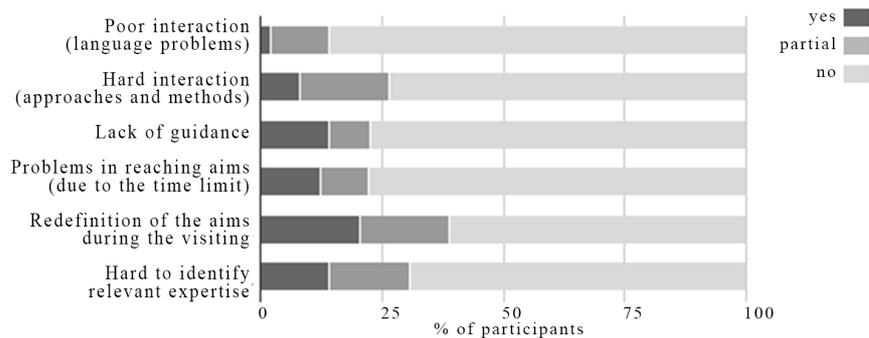


The last question was about identifying the main problems the PhD students had during their visit to a foreign university, once more via a “yes-partially-no” scale (see Figure 7).

The given options were grouped in six categories comprising communication problems, different approaches/methods in research activities, lack of tutoring and guidance in the hosting institution, problems in reaching the pre-established aims due to time limits, the change of some objectives of their research project during the visit and difficulties to identify tutors and professors to talk about their specific topic. All of these categories were evaluated as not related to their respective personal experience by 26,5% of participants who declared to not have experienced any of these difficulties during their visit. A limit in interaction due to the foreign language was listed as less important (2% “yes”; 12,3% “partially”). The necessity to revise the objectives of their research projects during the visiting period (most frequently selected) involved 20,4% and partially involved an additional 18,4%, meaning that 38,8% of all students changed some

parts of their project while having direct contact with a foreign academic environment.

Figure 7: Main problems of the experience abroad.



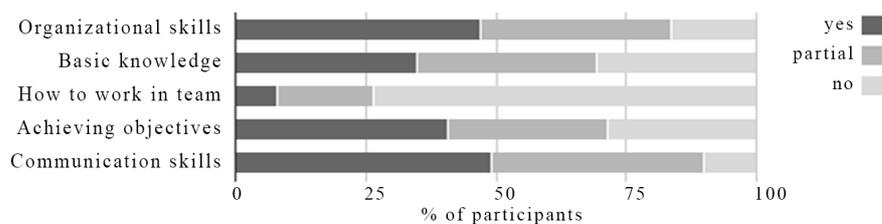
International profile and job market

The last section of the survey was composed of five questions aimed at finding out what happened to the participants when they had completed the stay, their PhD course and had entered the job market. This issue was examined in terms of specific additional skills useful in the job market and linked to the international experience which they supposedly would not have gained in Italy, to verify if the connection with the hosting institution continued or not after they had come back to Italy, if the experience had a direct or indirect influence on the doctors' careers, if the doctors moved to a foreign country for research purposes after having completed their PhD course and if they are currently working in the Italian or international research field.

Participants between a range of 69,4% and 89,8% linked or partially linked four of the proposed skills to the international experience they had had, meaning that they think they gained organisational skills (83,7%), basic knowledge (69,4%), effectiveness in pursuing a specific aim (71,4%) and communication skills (89,8%) through this contact with a foreign university (see Figure 8). Only one of the

suggested skills has not been recognised by the students as dependent on their international experience which is the ability to work in a team (73,5% answered ‘no’). It has to be noted that additionally, open answers were also possible for most of the questions of the survey. 18,4% decided to give more details about which skills they gained through this experience for which some recurrent answers were given, the most recurrent one referring to learning methods and methodology (8,2%) or to learning how to focus pragmatically on specific aims and objectives (6,1%).

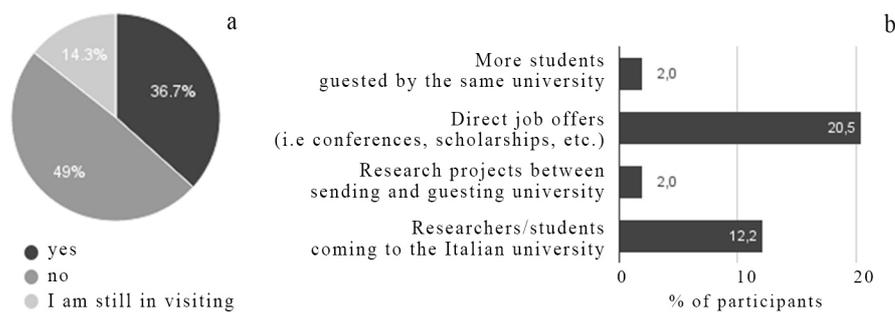
Figure 8: Valuable skills for the job market the participant gained.



Forty-two participants of the survey had already completed their visiting period when they filled in the questionnaire (85,7%) and their experiences are considered to investigate how stable the international connections created through the PhD students are (see Figure 9a and 9b).

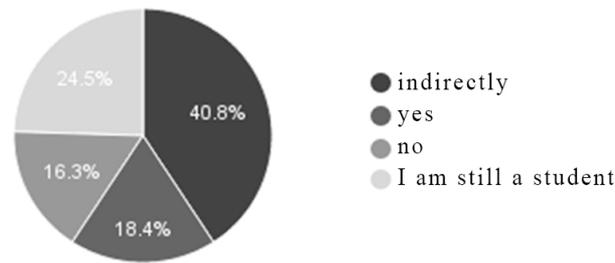
Half of the sample (49%) had no more contacts with the hosting university after the students had come back to Italy. 36,7% said they had more contacts: 20,5% received formal invitations from the hosting institution for post-doctoral programmes, conferences and other research activities; 12,2% of participants state that researchers and students from their former hosting institutions later came to Italy for teaching or research purposes linked to the respective Italian university; 2% are directly involved in research projects between the home and the hosting institution. The remaining 2% say that more students from the same Italian university have been received by the international hosting institution after they came back.

Figure 9a: Contact with the guesting university after the experience.
Figure 9b: Detail of the 'yes' answers.



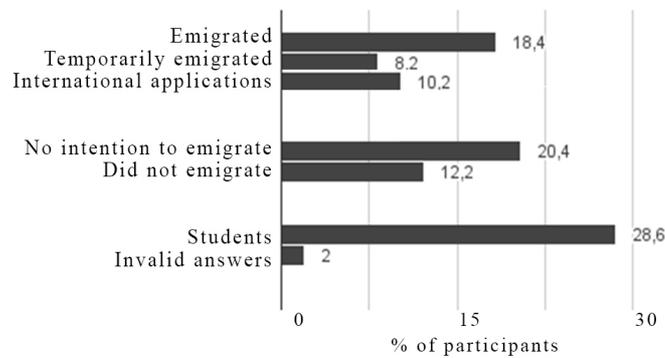
The number of participants who had completed their doctoral course in September 2015 is thirty-seven and their answers might provide information related to work opportunities for PhDs with an international background gained during their study course (see Figure 10). 59,2% of all participants who have already been awarded the title of Doctor of Philosophy confirmed that the experience they had is directly or indirectly relevant for their career. Among them, there are 18,4% who state that they have had job opportunities directly linked to their visiting experience while 40,8% say that the skills gained through the visit are indeed very useful for their professional career. 16,3% do not state a particular link between the utility of the experience and their post-doctoral career.

Figure 10: The participants who gained work opportunities.



Thirty-four participants who had completed their doctoral course declared to be already active in the job market (69,4% of the sample); half of them did not move abroad to work in the research field (32,6%) while 10,2% tried to move abroad by sending some applications which have not been accepted; 8,2% worked abroad in the research field and later decided to come back to Italy and 18,4% of them are still in a foreign country (see Figure 11).

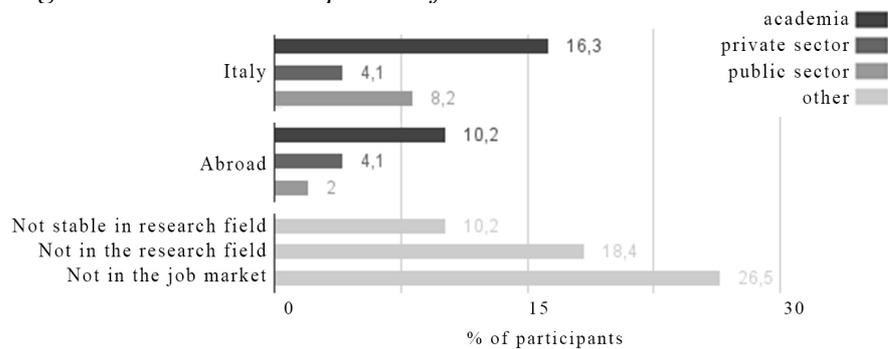
Figure 11: The PhDs who worked abroad in the research field.



Furthermore, 44,9% are currently active within the field of research in September 2015: 28,6% work in Italy as researchers (16,3% in academia, 8,2% are researchers or consultants for public institutions and 4,1% work in the private research field) while 16,3% work abroad (10,2% in academia, 2% are researchers or consultants for public institutions and 4,1% work in the private research field).

Among the thirty-four PhDs who are active in the job market, 18,4% are not in the research field at the moment and 10,2% are not continuously in the research sector or do not have a regular contract (see Figure 12).

Figure 12: Current occupation of the PhDs.



DISCUSSION AND CONCLUSIONS

The whole higher education system has been influenced by phenomena occurring on a global scale during the last century such as, first of all, a wider access to higher education and to PhD titles globally. Since the Bologna Process started, the European Union has supported the internationalisation of academic institutions. The cooperation among universities of European countries has been promoted as a strategy and knowledge has become a main issue to cope with the current challenges and to be competitive on a global scale. Italian universities have also been involved in the internationalisation process. In this study the mobility of PhD students has been considered as a key issue to be investigated, for the eventual role of creating connections between Italian and foreign universities. At the same time the study investigated the specific skills, results and work opportunities directly derived from the PhDs experience abroad.

The mobility of Italian PhD students and international co-operation

The results of the data enquiry which involved twenty-three PhD programmes of nine Italian institutes reveal that the number of PhD students guested by a foreign university during the last two decades is consistent (more than half of the students enrolled in a PhD programme). The number might probably be even higher⁵. Most of the participants were directed to Europe and, surprisingly, none of the participants indicated as their destination Australia, or Africa and Asia, where a very relevant part of the nowadays urbanization process occurs.

According to the results of the study and to the structure of the listed PhD programmes, there is an emerging trend in the Italian PhD system to encourage students to do an internship or a research period abroad at foreign public or private institutions. In some cases, it is specifically required to obtain the title of PhD in Italy⁶. In fact 28,5% of participants also confirmed the international experience had been recommended or required by their PhD programme.

The study also reveals that Italian PhD students can be a powerful element in establish, improve or strengthen the connections between Italian and a high number of foreign universities (as shown in Figure 1b). This is more evident if we consider that most participants autonomously chose the destination for their period abroad and independently established a first contact with the hosting institution.

Nonetheless, the high percentage of students who established a contact with the guesting institution outside of formalised and pre-constituted partnership could reveal both a lack of pre-existing formalised agreements between Italian departments of urban studies

⁵ As mentioned before, data about the students of the Polytechnic University of Milan and IUAV were not available or partially available. A lack of data for Sapienza University was also detected. Furthermore it has to be considered that some students currently enrolled in a PhD programme will probably be guested by a foreign university during the next months.

⁶ For example, it is explicitly required by the PhD programme in 'Urban planning, design and policy' of the Polytechnic University of Milan.

and foreign universities and, probably, a sign of a general lack of connections between the Italian research field in urban studies and the international one. A more certain fact is that more than four out of five PhD students who participated in the survey did not take part in any official mobility programmes or agreements. The PhD mobility in urban planning does not seem to have been fostered by such agreements yet.

It is also worth laying emphasis on the fact that only half of the participants stated that their experience was aimed at foster international co-operation. A not substantial percentage considers it as a priority or in other words seems to feel an essential part of the process. Furthermore, half of the sample stated that the contacts established between the sending institution and the receiving university did not become a durable connection, e.g. through official co-operation or international research projects.

The connections the students created between Italian and foreign universities unfortunately do not seem to be that consistent or permanent. This shows that even if Italian PhD students represent a great potential to foster international relations between universities, institutions do not still take sufficient advantage of it. In addition, the fact that more than one out of five participants were self-financed confirms a lack of investments in the internationalisation of the Italian PhD system as its candidates are not all supported by institutions, in some cases restricting the access to international stay only to them who can afford it by themselves.

Additional skills and results for PhDs

To answer the question related to acquired skills and final results, we may consider that 83,7% of participants spent more than 3 months abroad illustrating that stay in international academia is an important step for students during the conventional 36 months of their PhD study course.

It is worth mentioning that 85,7% of participants related the experience abroad to gain language skills. This is a relevant piece of data if we consider that most of Italy's PhD programmes listed in tab.1 and currently active suggested, recommended or required for the

doctoral students to participate in international activities. Spending a period of time abroad seems to be a useful way to prepare themselves for the interaction in international contexts. This is particularly important if we take into account that most of the listed PhD programmes are still mainly based on the Italian language, even if some exceptions exist⁷.

Furthermore, an impressive 91,8% of the sample affirmed the experience abroad is a necessary or important step to complete their PhD education. The participants mostly agreed that they had not relevant problems during the experience. It was for most of them an important step in order to improve or to gain different skills for their PhD education, both for their individual project and research work. A lower but still relevant number of participants stated they gained useful skills for their future career, apparently impossible to be acquired through a solely Italian postgraduate education.

Nonetheless, in most of the cases the stay did not result in a specific title or label, e.g. a label of Doctor Europaeus. The low number of students who got a specific certification could probably point to the tendency in Italian academia in the field of urban studies to not make any distinction in terms of title or labels between the PhD students with international experiences and the ones who had no experience abroad.

One of the most notably findings emerging from the survey is that the visit seems to be a very individual experience that does not overly encourage or help with learning how to work better in a research team. This result would have to be analysed in further studies.

The research job market for PhDs

Concerning their post-doctoral career, there is a relevant percentage

⁷ This is the case of Polytechnic University of Turin where the new PhD programme of “Urban and regional development” shifted to using English and for almost all of the lessons; or the case of Polytechnic University of Milan where all of the lessons of the actual PhD course of “Urban planning, design and policy” are given in English.

of participants who professionally entered the research field afterwards, and a consistent part entered the Italian or international academia. At the same time the percentage of participants who stated the international experience influenced their career is very high among them who completed the PhD course. Nonetheless, the participants who gained job opportunities related to their experience at a foreign university are a lower number than the students who gained indirect opportunities (one out of two). So, we can allege that there is a link between international experience at foreign institutions and their professional career. Nonetheless, we could maintain the research stay is important mainly in terms of fostering skills to become a researcher than in terms of opportunities directly connected to the experience abroad.

Furthermore 61,2% of participants linked the experience to a long term perspective (they selected the options from “priority” to “relevant”), stating that they had been interested in the exploration of international academia for a possible transfer. The remarkable percentage of participants who declared to currently work abroad, have worked abroad or have applied for a post-doctoral position at a foreign university suggests that mobility can also encourage PhDs to consider wider options for their future career, even if a certain percentage of participants still firmly declared to have never considered a possible move.

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CINECA DATABASE

http://cercauniversita.cineca.it/php5/dottorati/vis_dottorati.php?titolo=&radiogroup=E&ciclo=0000&universita=00&setto=ICAR%2F20&area=0000&vai=Invio

http://cercauniversita.cineca.it/php5/dottorati/vis_dottorati.php?titolo=&radiogroup=E&ciclo=0000&universita=00&setto=ICAR%2F21&area=0000&vai=Invio

GRAN SASSO SCIENCE INSTITUTE

<http://www.gssi.infn.it/education/urban-studies-education/doctoral-programme-social-education>

IUAV

<http://www.iuav.it/SCUOLA-DI-/DOTTORATI/DOTTORATO-/Pianificaz/index.htm>

<http://www.iuav.it/SCUOLA-DI-/DOTTORATI/DOTTORATO-/Urbanistic/index.htm>

POLYTECHNIC UNIVERSITY OF MILAN

<http://www.dottorato.polimi.it/en/phd-programmes/phd-programmes-with-closed-enrolment/spatial-planning-and-urban-development/>

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POLYTECHNIC UNIVERSITY OF TURIN

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ROMA TRE UNIVERSITY

http://architettura.uniroma3.it/?page_id=977

SAPIENZA - UNIVERSITY OF ROME

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http://www.unipa.it/dipartimenti/diarchitettura/.content/documenti/PROGRAMMA-FORMATIVO_Curriculum-3.pdf

ANNEX 1 - Questionnaire

Section a

- 1) Do you confirm you were involved/are involved in mobility activities in a foreign university during your PhD course?
- 2) From what university did you obtain/are you obtaining a title of PhD?
- 3) What is the PhD programme you participated/are participating in?
- 4) State what PhD cycle you were/are enrolled in.
- 5) How many months in total did you spend/are you spending abroad as PhD guest student? (*choose only one option between the followings*)
 - *More than 12 months*
 - *Between 6 and 12 months*
 - *Between 3 and 6 months*
 - *Less than 3 months*
- 6) Where did you go for your experience as PhD guest student? (*country*)
- 7) In what city is the hosting university located?
- 8) What university did host you/is hosting you?
- 9) How did you select the hosting university? (*choose only one option between the followings*)
 - *A pre-existing agreement between the sending institution and the hosting institution.*
 - *Following a suggestion of a professor of my university who contacted the hosting university at the beginning.*
 - *Following a suggestion of a professor of my university but I contacted the hosting university by myself.*
 - *I selected and contacted the hosting university by myself.*
- 10) Did you receive any funds from the sending university during your visit? (*choose only one option between the followings*)
 - *Yes, extra funds from the sending university in addition to the grant awarded by the same university / Yes, funds for expenses.*

- *Yes, extra funds for the participation in a research project or extra funds for an institutional agreement, e.g. Erasmus+.*
 - *No, but I was/am a recipient of a study grant awarded by the sending university for PhD students.*
 - *No, I was/am self-financed.*
- 11) *Having an experience in a foreign university was: (choose only one option between the followings)*
- *A necessary requirement to obtain the PhD title.*
 - *A necessary requirement to develop my individual research project.*
 - *My free-choice related to my personal interest in the international research environment.*

Section b

- 12) *You visited a foreign university aiming at: (assign a judgment to every answer choosing between five options: “priority”, “very relevant”, “relevant”, “not so relevant” or “not relevant”)*
- *To conduct a case study located in the country of destination.*
 - *To interview experts in the field/topic of my interest.*
 - *To acquire new contacts with foreign institutions for the sending university/ to strengthen existing contacts with foreign institutions for the sending university.*
 - *To consider a possible transfer abroad after obtaining the PhD title.*
 - *To gain knowledge and skills to compete for a future position in Italy.*
- 12+) *According to your experience, are there other elements\reasons to take into account?*
- 13) *Thanks to the experience in a foreign university I... (choose one option between “yes”, “no” or “partial”)*
- *Better defined objectives, methods and outcomes of my research project.*
 - *Improved the presentation and the communication of my research project.*
 - *Received feedback on my research project.*

- *Improved my organisational skills, like the ability of structuring a research work or identifying consequential steps of a research work.*
 - *Deepened my knowledge about research methodology.*
 - *Improved my foreign language skills.*
 - *Considered new options for my future career.*
 - *Had a clearer idea about the role of the professional figure of a PhD.*
 - *Gained specific additional title/labels, e.g. by cotuition.*
- 13+) According to your experience, are there other opportunities/outcomes to take into account?
- 14) The main problems I had during my visit to a foreign university are... (choose one option between “yes”, “no” or “partial”)
- *A limit in interaction with teachers/students due to the foreign language.*
 - *Difficulties due to different approaches/methods in research activities.*
 - *Lack of tutoring and guidance in the hosting institution.*
 - *Problems in reaching the pre-established aims due to time limits.*
 - *The necessity to revise the objectives of research projects during the visiting period.*
 - *Difficulties to identify tutors and professors expert in my specific topic.*
- 14+) According to your experience, are there other problems/difficulties to take into account?
- 15) How important was the experience you had gained at the foreign universities to complete your profile as a PhD? (give a mark on a five-level scale from 1- “not relevant” to 5- “indispensable”)

Section c

- 16) During your stay in the foreign university, what additional skills useful for your career did you improve and you could not have improved in Italy? (choose one option between “yes”, “no” or “partial”)

- *Organisational skills.*
 - *Basic knowledge.*
 - *How to work in team.*
 - *Effectiveness in pursuing a specific aim.*
 - *Communication skills.*
- 16+) In your opinion, are there other skills you gained through the experience that have been useful for your career?
- 17) Did the connection with the hosting institution continue after you had come back to Italy? (*choose only one option between the followings*)
- *Yes, more students from my Italian university have been received by the international hosting institution after I came back.*
 - *Yes, I received formal invitations from the hosting institution for post-doctoral programmes, conferences or other research activities.*
 - *Yes, I was/am directly involved in research projects between the home and the hosting institution.*
 - *Yes, because researchers/students from the hosting university were invited to Italy for teaching/research purposes by my Italian university.*
 - *No.*
 - *I have not concluded the experience abroad yet.*
- 18) In your opinion, did the experience impact (or had the experience any influence on) your professional career after the PhD? (*choose only one option between the followings*)
- *Yes, in terms of job opportunities.*
 - *Yes, indirectly, in terms of gained skills useful for my current professional career.*
 - *Not really.*
 - *I have not obtained the PhD title yet.*
- 19) Have you had experiences in the international research field after the PhD? (*choose only one option between the followings*)
- *Yes, I went abroad where I am currently living.*

- *Yes, I worked abroad for a period but later I preferred to come back to Italy.*
 - *No, I applied for a research position but I did not obtain the job.*
 - *No, I have never considered that option.*
 - *I am not a PhD yet.*
 - *Other (specify)*
- 20) In what area of the research field do you currently work? (*choose only one option between the followings*)
- *I do not work in the research field.*
 - *I do not continuously work in the research sector or I do not have a regular contract.*
 - *I work as a researcher in the Italian academic field.*
 - *I work in Italy as a researcher/consultant in the public field.*
 - *I work in Italy as a researcher/consultant in the private field.*
 - *I work abroad as a researcher in the academic field.*
 - *I work abroad as a researcher/consultant in the public field.*
 - *I work abroad as a researcher/consultant in the private field.*
 - *I am not active in the job market yet.*