Determinants of Mobility of Students in Europe: a preliminary quantitative study

Caruso, Raul and de Wit, Hans

Catholic University of the Sacred Heart, Centre for Higher Education Internationalisation (CHEI)

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Raul Caruso*

Hans De Wit**

Abstract

This paper studies the economic determinants of intra-european student mobility. We constructed a panel of 33 European countries for the period 1998-2009. The dependent variable is the inflow of students (ISCED 5-6) from EU-27, EEA and candidate countries. Results show that: a) The expenditure per student appears to be a crucial determinant. It is reasonable to maintain that students are likely to choose countries where the students are granted with adequately funded services and perhaps monetary incentives. Eventually, other significant determinants are: a) the actual level of safety; b) the degree of openness of host country; c) the GDP per capita of host country.

* Corresponding author, Catholic University of the Sacred Heart, Institute of Economic Policy and Centre for Higher Education Internationalisation (CHEI), email: raul.caruso@unicatt.it; tel. +39-02-7234-2721.

** School of Economics and Management of the Amsterdam University of Applied Sciences and Catholic University of the Sacred Heart, Centre for Higher Education Internationalisation (CHEI).

Introduction

Internationalization of higher education has become a crucial issue in the recent years. A proxy to evaluate the internationalization of higher education systems is the number of international mobile students. The first decade of the 21st century has seen the number of globally mobile students nearly double from 2.1 m in 2000 to 4.1 m in 2010, according to OECD, an increase by 99%, and an average annual growth rate of 7.2 %. *(*OECD, 2012, 361) Nearly 36% of all foreign students in 2010, were enrolled in U.S.(16.6%), U.K. (13%), Australia (6.6%), which declined from enrolling nearly half of foreign students in 2000: in U.S.(28%), U.K. (14%), and Australia (7%). According to the OECD, in 2011, international students represented 21.2% and 16.4% of higher education enrollment in Australia and the UK, compared to less than 4% in the US.
China exports the greatest number of students abroad, followed by India and South Korea. Nearly 26% of all student mobility came from these three source countries: China (17%), India (5.9%) and Korea (3.7%) Among the host regions North America and Western Europe receives the highest share of mobile students with a percentage share of 58.6%. The five countries with the highest number of international students already for several decades are: The USA, The UK, Germany, France and Australia.

Evidently, what appears to be clear is that trends in higher education follow the globalization of economy. In other words, trade liberalization and trends in global economy have a significant impact on higher education (Knight, 2002; Bashir, 2007; Tilak, 2008). In particular, internationalization of higher education cannot be disentangled from the international regulations on trade in services held at WTO. In fact, education is now one of the 12 services covered by the General Agreement on Trade in Services (GATS). The sector includes primary, secondary,

post-secondary and adult education services, as well as specialized training[1]. However, in spite of this, with the exception of Australia[2] and more recently the UK, most WTO members still do not collect accurate statistics that disaggregate education services from other items. Available figures relate to the total expenditure on goods and services for people travelling for education purposes. Those figures generally support the trends in student mobility. Predominant exporters of education services are developed economies. The table below is drawn from the WTO secretariat and reports the main figures of travel expenditure to be related to education. The top 10 exporters in 2007 included the United States (US$15.9 billion), Australia (US$10.3 billion), United Kingdom (US$7.6 billion) and Canada (US$2.2 billion). The average rate of growth in total exports from 2002 to 2007 was 12%. Top 10 importers included Korea (US$5 billion), United States (US$4.7 billion), Germany (US$2.4 billion) and India (US$2.1 billion). Developing countries such as Malaysia (US$199 million) also have performed as significant exporters. In general, developing countries are supposed to be increasingly major importers of education services, with India (US$2.1 billion), Malaysia (US$1.3 billion) and Nigeria (US$1 billion) featuring among the top 10 importers for 2007.[3]

There are, however, significant gaps in the data. For instance, as noted above, although not listed among the top 10 importers of education services, China is an important importer. Moreover, it must be noted that China is committed to become also a significant exporter of education services by attracting a lrager number of foreign students. The Chinese Ministry of Education is targeting the number of 350,000 students in

[1] Visit the WTO page on trade in education services for an overview, http://www.wto.org/english/tratop_e/serv_e/education_e/education_e.htm
[2] Detailed statistics on trade in education services for Australia is available at http://www.dfat.gov.au/publications/stats-pubs/downloads/tis-fy2009.pdf
[3] No figure was reported for China.

2015[4] and also is planning to provide cross border education in London and other parts of the world[5].

Table 1 – Exporters and Importers of Education Services

Rank	Exporters	Value	Share of top 20	Annual %	Rank	Importers	Value	Share of top 20	Annual %
1	United States	15960	38.2	9	1	Korea, Republic of	5025	21.3	11
2	Australia	10314	24.7	32	2	United States	4760	20.2	6
3	United Kingdom	7612	18.2	14	3	Germany	2400	10.2	6
4	Canada	2263	05.4	9	4	India	2152	9.1	99
5	Italy	1711	4.1	-4	5	France	1844	7.8	22
6	New Zealand	1124	2.7	9	6	Malaysia	1345	5.7	22
7	France	479	1.1	17	7	Canada	1154	4.9	5
8	Austria	422	1.0	19	8	Nigeria	1076	4.6	927
9	Greece	383	0.9	25	9	Italy	1000	4.2	17
10	Czech Rep.	318	0.8	28	10	Australia	659	2.8	12
11	Turkey	296	0.7	10	11	United Kingdom	324	1.4	15
12	Malaysia	199	0.5	33	12	Turkey	280	1.2	20
13	Ireland	186	0.4	9	13	Greece	267	1.1	6
14	Hungary	147	0.4	7	14	Morocco	220	0.9	28
15	Dominican Rep.	95	0.2	37	15	Czech Republic	210	0.9	136
16	Israel	88	0.2	-10	16	Libya	193	0.8	5
17	Costa Rica	79	0.2	15	17	Venezuela, Rep. Bol.	182	0.8	379
18	Bulgaria	61	0.1	20	18	Cyprus	172	0.7	-3
19	Korea, Rep. Of	45	0.1	61	19	Luxembourg	140	0.6	13
20	Slovenia	44	0.1	25	20	Pakistan	138	0.6	12
	Above 20	41826	100.0	-		Above 20	23540	100.0	-

Source: WTO, Background Note by the Secretariat 10-.1798

[4] As reported in University World News, 13 march 2011, http://www.universityworldnews.com/article.php?story=20110312092008324

[5] See University World News no 273, 25 May 2013

However, in spite of the growing significance of mobility, its quantitative dimension is uncertain. As pointed out by Rumbley (2012), the data on international mobility of students are unclear and inaccurate for many reasons that range from the complexity of the phenomenon to the actual process of collecting data. For sake of simplicity hereafter we will use the data drawn from the Eurostat dataset. Among European countries, in 2009, according the data provided by Eurostat, UK and Germany are the main recipients of European international students. Table 2 reports the actual figures.

Table 2. Inflow of students (ISCED 5-6) from EU-27, EEA and Candidate countries (figures in 000s)

	2001	**2005**	**2009**
UK	110,6	106,5	175
Germany	105,9	121,6	112,9
France	38,1	42,9	44,8
Netherlands	9,5	18,5	31,7
Belgium	22,6	28,1	31
Spain	7,2	12,3	23
Italy	14	16,3	18,8
Sweden	14,9	18,8	11,9

source: Eurostat

The aim of this paper is to study the determinants of incoming student mobility for a panel of 33 European countries for the period 1998-2009. The dependent variable is the actual number of incoming students. Insights to choose the explanatory variables have been drawn from prevailing literature on internationalization of higher education, in particular De Wit (2008), Bode and Davidson (2011) and Adams et al (2011). The paper is structured as follows: in a first section we look at push and pull factors of international student mobility. In a second

paragraph we present the data and the empirical application. Eventually we refine the empirical results by applying an instrumental variable approach to deepen the relationship between crime and the inflow of foreign students. A final section summarizes the results.

Push and Pull Factors of international student mobility

International student mobility is stimulated or refrained by a series of push and pull factors. Agarwal *et all* (2008, 241) identify four broad categories of push and pull factors: mutual understanding, revenue earning, skill migration and capacity building. They give the following push factors:

- Educational factors, such as availability of higher education, basic human resource capacity, ranking/status of higher education, enhanced value of national versus foreign degree, selectiveness of domestic higher education, increasing presence of private and/or foreign providers, experience with international mobility and strategic alliances with foreign partners
- Political/social/cultural factors, such as linguistic isolation, cultural disposition, colonial ties, political instability, regional unity, information isolation, emigration policies, strategic alliances and academic freedom; and
- Economic factors, such as dependence on world economy, financial capacity, human development index factor, employment opportunities on return and geographic distance.

Pull factors are the opposite of these:

- Educational factors, such as higher education opportunities, system compatibility, ranking/status higher education, enhanced value of

national degree, diversity of higher education system, absorptive capacity of higher education, active recruitment policy, cost of study, existing stock of national students, strategic alliances with home partners

- Political/social/cultural factors, such as language factor, cultural ties, colonial ties, lure of life, regional unity, stock of citizens of country of origin, immigration policies, strategic alliances with home country and academic freedom
- Economic factors, such as import/export levels, level of assistance, human resource development index, employment opportunities during and after study and geographic distance.

A recent study of World Education Services (Choudaha, R., Orosz, K., & Chang, L. , 2012), has made manifest that one can and should not place all international students under the same category as for their push and pull factors. It identifies for the US, the following types of international students: Strivers [30%], Strugglers [21%], Explorers [25%] and Highfliers [24%].

Strivers, according to them,are the largest segment of the overall US-bound international student population. Among all segments, they are the most likely to select information on financial aid opportunities among their top three information needs (45%). Financial challenges do not deter these highly prepared students from pursuing their academic dreams: 67% plan to attend a top-tier US school.

Strugglers make up about one-fifth of all US-bound international students. They have limited financial resources and need additional preparation to do well in an American classroom: 40% of them plan to take an ESL program in the future. They are also relatively less selective about where they obtain their education. Only 33% of them selected

information about a school's reputation among their top three information needs.

Explorers are very keen on studying abroad, but their interests are not exclusively academic. Compared to the other segments, they are the most interested in the personal and experiential aspects of studying in the United States, with 19% of this segment reporting that information on student services was in their top three information needs during the college search. Explorers are not fully prepared to tackle the academic challenges of the best American institutions and are the most likely to plan to attend a second-tier institution (33%).

Highfliers are academically well prepared students who have the means to attend more expensive programs without expecting any financial aid from the institution. They seek a US higher education primarily for its prestige: almost half of the respondents in this segment (46%) reported that the school's reputation is among their top three information needs.

There have not been made similar analyses of types of international students for Europe or other regions, but one can assume that the picture will not fundamentally differ from the US context. It is important to recognise these distinctions in connection to push and pull factors of student mobility, as too easy mobile students are considered in analyses as a non-diverse group. (See also Choudaha and De Wit, 2013).

Another issue in connection to push and pull factors is related to mobility of talents and the stimulus of increased stay rate of mobile students.

Northern America, Europe, Australia and Japan face a demographic challenge. The knowledge economies of the OECD member countries require highly skilled people which, due to ageing and also due to less interest of the own youth in the hard sciences, will not be sufficiently

available, and so skilled immigrants are needed to fill the gaps. The pattern of low skilled immigration from the co-called South to the North of the past century is replaced by a need for high skilled migrants. Several countries, over the past decades, have made it more attractive for highly skilled people to come and work, while at the same time restricting immigration of lower skilled people (Sykes, 2012, 9)

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Countries increasingly understand that immigration of skilled people is not always effective, and for that reason *"International students have come into the spotlight as an attractive group of prospective skilled immigrants."* (Sykes, 2012, 8). Where in the past, these countries would have an open mind to the receipt of international students in general and even subsidized their education, one can observe in several countries, in particular in Europe, a shift towards a more controlled immigration of international students and measures to increase their stay rate. The Netherlands, Denmark and Sweden are clear examples of such policies. Over the past decade they have on the one hand introduced full cost fees for non-EU students and at the same time developed scholarship schemes to stimulate selectively targeted talents and created opportunities to stay after graduation. The percentage of international students which stay after their graduation in the country of study, the so-called 'stay-rate', is for OECD-countries on average 25% (Sykes, 2012, 10-11), where the regional and local alumni retention rate in general is 60% for all graduates and 70% for master and doctoral graduates[6]. (See also Hawthorne, 2012, 432)

International students are increasingly becoming calculated rational consumers who explore the best options in their home country, their country of study as well as other countries. Lack of integration,

[6] Musumba et al. (2011) show that this is true for US and there is no significant difference between students from developing and developed countries.

discrimination, and lack of support are important push factors driving international students away after graduation.

In an analysis of international student mobility one has to look at the broad range of push and pull factors, the types and drivers of international students related to these factors, as well as changing policies on the relation between recruitment of international students and skilled immigration needs.

The Data and the empirical application

Hereafter we present an empirical estimation on some key social and economic 'pull factors', determinants of inward mobility. Other factors that play a key role, such as the language of instruction (English) and the reputation of the system and institutions in the systems (rankings) are not dealt with in this analysis. The estimation is based upon a panel of 33 European countries[7] for the period 1998-2009. The dependent variable is the inflows of students (ISCED 5-6) from EU-27, EEA and candidate countries (expressed in thousands of units). Eurostat defines foreign students as "*Students are non-national students or foreign students if they do not have the citizenship of the country for which the data are collected*" . However, as noted above, Rumbley (2012) working on Teichler et al. (2011) highlights the definitional complexity of student mobility. In particular, the Eurostat data on inbound students are variable from country to country because of the sharp differences in defining and collecting the data. Therefore, albeit official, data from Eurostat have to be, in any case, handled with caution.

The explanatory variables are listed below:

[7] Countries considered are: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Macedonia, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtnstein, Lithuania, Luxemburg, Malta, Netherlands, NOrway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, UK, Turkey,

1) a measure of crime recorded in the host country;

2) a measure of cost of living proxied by means of current inflation change;

3) a degree of economic openness;

4) GDP per capita

5) the current expenditure per student at ISCED 5 and 6 levels.

All the variables are logged. Most data are drawn from the Eurostat dataset. Data on GDP and population are drawn from the Penn World Tables 7.0. Data on tuition fee are drawn from Cesifo DICE report 2007/2008 and from an independent website www.studyineurope.eu. Table 2 reports the definition and the sources of data.

Table 3. Variables and descriptive statistics

	Sources	**Definition**	**obs.**	**mean**	**st. dev.**	**min**	**max**
Incoming Students (logged)	EUROSTAT	Inflow of students (ISCED 5-6) from EU-27, EEA and Candidate countries in thousands	359	8.146	1.913	4.605	12.072
expenditure per student (ISCED 5 and 6) (logged)	EUROSTAT	Annual expenditure (in europs) on public and private educational institutions per student at tertiary level of education (ISCED 5-6)	271	8.879	.479	7,573	9.768
Crime (logged)	EUROSTAT	Actual number of offences	414	12.352	2.007	6.678	15.708

		yearly recorded by the police					
Inflation (logged)	EUROSTAT	Annual average rate of change (%) of HICP (2005=100)	453	1.071	.903	-2.303	5.042
Openess (logged)	Penn World Tables	Openness at 2005 constant prices (%)	416	4.502	.433	3.578	5.782
GDP per capita (logged)	Penn World Tables	PPP Converted GDP Per Capita (Chain Series), at 2005 constant prices	416	9.943	.590	8.632	11.405
Average Tuition fee (logged)	CESIFo and studyin europe	Actual level of tuition fee in euros	285	6.14	.882	4.605	8.161

The econometric model can be easily described as:

$$y_{it} = \beta_0 + \beta_1 expst_{it} + \beta_2 crime_{it} + \beta_3 inflation_{it} + \beta_4 open_{it} + \beta_5 GDPpc_{it} + \beta_6 tuit_{it} + \varepsilon_{it}$$

Where *expst* denotes the current expenditure per student, *open* the degree of openness, *GDPpc* the GDP per capita and eventually *tuit* the level of tuition fee. All variables are indexed by i(with i=1,…,33) and by year (t=1998,…,2009*)*.

Table 3 below reports the results of a first OLS regression with random effects estimators. Some results appear to be conclusive with respect the main variables. The higher the expenditure per student in the host country, the higher is the inflow of foreign students. A higher level of

expenditure per student seems to attract a large number of international students. Put differently, students seem to take into account rationally the set of economic opportunities and services related to higher education. In particular, the computed elasticity of students' inflow with respect to the expenditure per student is positive and very close to unity (.98). That is, we find evidence that an increase in public expenditure per student has a positive effect on inflows from EU-27 countries. In particular, the increase in the number of students appears to be exactly proportional to an increase in the expenditure per student. If the expenditure per student increases by 1%, the actual number of European foreign students should increase by the same percentage.

Table 4. Inflows of students from EU-27, EEA and Candidate countries (OLS), random effects

expenditure per student (ISCED 5 and 6)	**.898*** **	**.822*** **	**.794*** **	**.955*** **	**.975*** **		
	(.168)	(.204)	(.203)	(.209)	(.211)		
Crime		.005	.005				
		(.045)	(.045)				
Inflation	.022	-.159	.064	.524	-.149	.026	**.733*** **
	(.040)	(.114)	(.402)	(.412)	(.123)	(.039)	(.252)
Openess	**1.137*** **	**.803** **	**.867** **	**.685** **	**.617***		
	(.279)	(.363)	(.364)	(.384)	(.385)		
GDP per capita						**1.452*** **	**1.553*** **
						(.189)	(.174)
Tuition fee per semester		**11.202*** **	**11.236*** **	**11.947*** **	**11.776*** **	**13.837*** **	**14.245*** **
		(4.618)	(4.821)	(5.11)	(4.908)	(4.739)	(4.670)
Inflation squared		.059	.057	.064	.075		**.079*** **
		(.048)	(.049)	(.052)	(.052)		(.0169)
Tuition fee squared		**-.888*** **	**-.888*** **	**-.935*** **	**-.930*** **	**-1.064*** **	**-1.0845*** **
		(.359)	(.375)	(.397)	(.382)	(.376)	(.370)
Inflation*tuition			-.035	**-.107***			**-.135*** **
			(.060)	(.062)			(.039)
Constant	**-4.81*** **	**-36.872*** **	**-37.126** **	**-40.324*** **	**-39.332*** **	**-50.075*** **	**-52.845**
	(1.288)	(14.75)	(25.400)	(16.321)	(15.674)	(15.025)	(14.775)
Obs	248	154	154	158	158	208	208
Groups	29	18	18	18	18	19	19

R square within	.3678	.3185	.3243	.3243	.3061	.2234	.3658
R square between	.0015	.2026	.1837	.2510	.2692	.4346	.4532
R square overall	.0077	.2143	.1963	.2800	.2973	.4123	.4349

Notes: *** significant at 1%, ** significant al 5%, *significant at 10%.

The level of tuition fee presents a non-linear association with inflow of foreign students. That is, the inflow of students seems to be positively associated with the level of tuition fee until a threshold. Put differently, students are willing to pay some tuition fees until a threshold. When the level of tuition fee is too high, it discourages the inflow of foreign students. Put differently, it appears that tertiary education exhibits a bell-shaped demand curve. Such picture is plausible when considering that price can be assumed to be an indicator of quality in education sector (Mixon and Hsing, 1994). Put differently, mobile students take into account tuition fees and interpret them as proxy of quality. Therefore, they are willing to pay the tuition fee until a maximum is reached. After that point, the demand takes the shape of a downward-sloping demand curve. This had been highlighted in Gilmore (1990/1991) with regard to the American scenario and it has been recently confirmed for UK in Soo and Elliott (2010).

The degree of openness also matters. That is, the higher is the economic openness of a country, the higher is the number of foreign students. In other words, internalization of higher education seems to follow the globalization of the economy. Moreover, if considering GDP per capita as explanatory variable, it turns out that students inflow is higher for richer countries[8]. This confirms the idea expounded in Sykes (2012) according to which mobile students are likely to prefer richer countries because of the employment opportunities during and after the study period. The cost of living, proxied by the level of inflation, seems not to be relevant in the students' choice. Only the interaction term between inflation and tuition fee turned to be negatively significant. In brief,

[8] This is in line with results presented by Baryla and dotterweich (2001).

students as rational actors prefer richer countries irrespectively of the cost of living.

Deepening the relationship between mobility and the perception of crime: an instrumental variable estimation

According to the results presented in table 4 the relationship between crime and number of incoming students is inconclusive. However, this result needs to be deepened because of the relevance given to safety in literature, (see among others Shanka et al. 2005; Warwick and Mansfield, 2003;Broekemier and Seshadri, 1998). In statistical terms, we may think that the error term in the panel OLS regression is correlated with the level of crime because of some omitted variables. In particular, it is reasonable that the omitted variables may be related to some structural factor either institutional or economic. Therefore, we may deepen this relationship by applying instrumental variable approach. That is, hereafter we attempt to find a variable that is correlated with the actual level of crime but uncorrelated with the unobserved factors included in the error term. In order to do that, we exploit the knowledge drawn from economic literature on crime. In particular, we can use youth unemployment as instrument. In fact, recent works clearly confirm that youth unemployment is significantly associated with crime [see Beraldo et al. (2011), Fougère et al., (2009); Falk et al. (2011)].

Eventually, in order to deepen further such analysis, we apply three different measures of crime: 1) the actual number of offences recorded by the police; 2) the actual level of violent crime; 3) the number of robberies. Results of a fixed effects model are reported in table 5. The three measures of crime seem to be significantly and negatively associated with the number of incoming students. That is, the actual level of crime and feeling of lack of safety decreases the number of foreign students.

Students as rational actors take into account the degree of insecurity. Two examples can illustrate that: the negative impact on two incidents with students from India in Australia on the number of students from that country to Australia, and the negative feelings on racism felt by several students in countires like Germany, France, Sweden, The Netherlands and the UK, as reported in Sykes (2012).

In general terms, it is interesting to note that the actual level of crime appears to be a very good proxy to evaluate the 'perception of insecurity' retained by foreign actors. Eventually, the other variables present the same signs and the statistical significance reported in table 3 so confirming the general results.

Table 5.Inflows of students from EU-27, EEA and Candidate countries, IV estimation, fixed effects

Total offences	**-5.11****		
	(2.570)		
Violent Crime		**-.966*****	
		(.325)	
Robberies			**-1.065*****
			(.373)
Inflation	-.045	-.0100	-.004
	(.080)	(.044)	(.044)
Openess	**1.143****	**1.881*****	**1.721*****
	(.611)	(.326)	(.331)
expenditure per student			
(ISCED 5 and 6)	**1.298*****	**.585*****	**.441****
	(.458)	(.209)	(.202)
Constant	**57.327**	**4.901**	**5.999**
	(31.438)	(3.331)	(3.879)
Obs	238	226	237
Groups	29	28	29
R square within	.	.2449	.1821
R square between	.7523	.6316	.5185
R square overall	.7229	.5988	.4916

Notes: *** significant at 1%, ** significant al 5%, *significant at 10%; instrument for different measures of crime is the current level of youth unemployment

Eventually, table 6 reports the results of instrumental variable regressions with a random effects estimator. Since we are now estimating a random effects model, we have to find some variable able to capture some unobservable and invariant factors. Within Europe the main distinguishing factor is still the difference between western and eastern (formerly communist) countries. Then, we added a dummy variable 'eastern' which takes the value of unity if the country is a former communist country and zero otherwise. Evidently this dummy variable is supposed to capture a set of unobservable factors which are country-specific. Put differently, there are some structural aspects in former communist countries which can affect significantly any social outcome. In other words, the rationale behind distinguishing between eastern countries and the rest of Europe is that institutions as 'rules of the game', either formal or informal, take time to evolve over time. That is, as it is often argued, the process of reforming transition countries is highly asymmetric across countries but it also shows some significant path-dependency. Moreover, as we noted above, there is a quota of international students that take into account economic factors and employment opportunities in host countries. Eastern countries are perceived to be less desirable in this respect because of some structural deficiencies. Therefore, in order to capture such specific institutional characteristic at country level we simply add this dummy variable. Results show a significant association with the inflow of foreign students so stating that eastern countries are by no means attractive for mobile students.

Table 6.Inflows of students from EU-27, EEA and Candidate countries, IV estimation, random effects

Total offences	-2.77		
	(3.137)		
Violent Crime		**-.939*** **	
		(.403)	
Robberies			**-.977****
			(.493)
Openess	**-3.927*** **	**1.138*** **	**.593*** **
	(4.571)	(.403)	(.514)
expenditure per student			
(ISCED 5 and 6)	3.340	**.894*** **	**.898*** **
	(2.396)	(.262)	(.267)
Eastern	-1.199	**-2.721*** **	**-1.930*** **
	(1.137)	(.832)	(.729)
Constant	32.073	4.230	6.586
	(39.873)	(4.229)	(5.391)
Obs	240	228	239
Groups	29	28	29
R square within	.0120	.2671	.2287
R square between	.4410	.1417	.1865
R square overall	.4286	.1491	.1880

Notes: *** significant at 1%, ** significant al 5%, *significant at 10%; instrument for different measures of crime is the current level of youth unemployment

Summary and Concluding remarks

In summary, one can conclude that the results confirm some hypotheses developed in prevailing literature on the topic, namely:

a) The expenditure per student seems to be an important variable. That is, students are likely to choose countries where the students are granted with adequately funded services and perhaps monetary incentives. If the expenditure per student increases by 1% the actual number of European foreign students should increase by the same percentage. Evidently this is a relevant suggestion for economic policy. Morever, it must be noted that the level of expenditure is also a proxy for the quality of the universities and national educational systems.
b) Perception of lack of safety and insecurity in the host country reduces the inward mobility of students. Proxying such insecurity with the actual number of offences recorded by police is based upon the assumption that potential incoming students are rational and take into account actual level of crime.
c) International mobility of students also follows the globalization of the economy. In fact, the more open is the host country the larger is the number of incoming students
d) Economic conditions of the host country are taken into account. Richer countries are more attractive. Richer economies are likely to secure a larger set of employment opportunities during and after study. This is taken into account by mobile students.

In particular, the magnitude of coefficients suggest that the attractiveness of richer countries leads the other pull-factors considered here. However, in terms of economic policy design, more interesting is the result on the expenditure per student. On the other side, among detrimental factors, the impact of crime is dominating the negative effect or raising cost of living. The cost of living in itself does not seem to discourage the inflow of international students. Only the interaction term between inflation and tuition fee turned to be negatively significant. In brief, students as rational actors prefer richer countries irrespectively of the cost of living. In this respect these results do not confirm the evidence proposed by Beine et al. (2012), that show a significant impact of living costs on students' international mobility. In general, these econometric results can be compared to those presented in Kahanec and Kralikova (2011) that stressed the quality of higher education institutions and the supply of programs taught in the English language as fundamental pull factors.

The results expounded here pave the way for further research. First, a more accurate collection of data is necessary to have robust results. Interestingly, what appears clear is that the choice of universities for international mobile students comprehends a set of factors that are related to the institutional (either formal of informal) landscape of regions and territories.

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