International Applicability of Education and Migration Aspirations

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Abstract

We analyze perceptions of international applicability of one's education and migration aspirations and intentions among university students in Czechia, India, Indonesia, Italy, Mexico, the Netherlands, and Spain. Students in law perceive their education least internationally applicable. Perceived international applicability strongly predicts migration aspirations and intentions also after controlling for study fields, individual characteristics, and university fixed effects. Furthermore, among those not studying law, hours spent studying are increasing with perceived international applicability of one's education. Our findings are consistent with predictions from a model in which students invest in their education before learning their mobility status.

JEL-Codes: F220, I210, J240.

Keywords: education, migration, migration aspirations.

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1 Introduction

International migration generates major efficiency gains in global production (Borjas 1995; Clemens 2013). As migrants from most countries are better educated than non-migrants (Grogger and Hanson 2011), the effects of migration are larger than the overall share of migrants in global population (3.6 percent in 2020) alone would suggest. In addition to reallocating human capital between countries, international migration potentially affects incentives to invest in human capital. Mountford (1997) and Stark et al. (1997) showed that if the mobility of the educated is stochastic, a relatively low probability of being able to migrate from a poor to a rich country may generate brain gain through brain drain. The prospect of being able to migrate to a rich country encourages all potential migrants to invest more in their education, and the human capital of those who are not able to migrate benefits the country of origin. Beine et al. (2001) analyze cross-sectional data for 37 developing countries and conclude that the possibility of a beneficial brain drain "could be more than a theoretical curiosity." In addition to changing overall investment in human capital, the possibility of migration tends to make internationally applicable education more attractive to students (Poutvaara 2004, 2008).

In this paper, we analyze perceptions on international applicability of one's education in different study fields and in different countries and how these are related to study effort and whether students would like to emigrate. Our empirical analysis is based on student surveys in 19 universities in seven countries: Czechia, India, Indonesia, Italy, Mexico, the Netherlands, and Spain. Students were asked about background information, including their study field, and an assessment on how applicable their education is in their home country and abroad, in case of migration, as well as whether they would ideally like to permanently emigrate, and whether they currently have plans to emigrate. We refer to the desire to permanently emigrate as migration aspirations, and to current plans to emigrate as migration intentions. Furthermore, students were asked how many hours they devote to their studies per week, during the semester. We use this as a measure of investment in education.

We start by presenting a theoretical framework on decisions by students on how much effort to invest in their studies, and whether to plan to emigrate if the realization of a stochastic mobility component allows it, and how these decisions depend on the perceived applicability of one's education abroad. After that, we study perceptions of international applicability of one's education and how these perceptions are correlated with migration aspirations and intentions, and time spent studying. When doing so, we control for potential confounding factors, like willingness to take risks and patience that can be expected to influence both study field choices and desire to migrate. Importantly, we also use between-individual variation in perceived applicability of one's education to study how this is related to differences in migration aspirations and intentions among students studying in the same field. We include university fixed-effects to capture any systematic differences between universities, whether in the quality of education or in the socio-economic

background of their student body.

We find substantial differences in the perceived international applicability of one's education between study fields and countries. Across countries and institutions, students in law are much less likely to find their education to be internationally applicable, both in absolute terms and relative to the applicability of their education in the home country. This pattern prevails in all countries from which we have law students in our sample (Czechia, Mexico, and Spain). Students in STEM degrees and in social sciences find their education most internationally applicable, with three out of four (75%) viewing their education very applicable or applicable, compared with somewhat more than half of economics and business students (56%) and about two of five law students (41%). In terms of countries, Dutch and Mexican students viewed their education most internationally applicable, and Czech students least applicable. This cannot be explained by different distributions of study fields among respondents from different countries: Czech students in all study fields viewed their education less internationally applicable than students studying the same field in each other country, although differences are not always statistically significant.

Our empirical analysis also confirms that study field and perceived international applicability of one's education are strongly correlated with migration aspirations and intentions. Importantly, perceived international applicability predicts migration aspirations and intentions also after controlling for study field, university fixed effects, individual demographic background variables as well as risk attitudes and patience, and perceived applicability at home. The association of perceived international applicability with migration aspirations is strong for both genders, while the association with plans to migrate is driven to a large extent by women who would ideally like to work full time.

Finally, we analyzed to what extent perceived applicability of one's education at home and abroad predicts study effort, measured by hours spent studying. We find that both perceived applicability at home and difference between perceived applicability abroad and at home predict higher study effort. The effect of perceived applicability abroad is statistically significant only among those with migration aspirations, which is in line with perceived applicability abroad increasing only expected returns to human capital investment of those emigrating with a positive probability.

Generally, college graduates are much more likely to live abroad than those with less education for most countries of origin. Docquier et al. (2009) analyze which share of college graduates aged 25 or more lived in year 2000 in an OECD country in which they were not born, defining migrants based on country of birth even if education was completed abroad. The share of the college-educated living abroad was 10.4 percent for Africa, 5.7 percent for Asia, 7.2 percent for Europe, and 11.0 percent for Latin America and the Caribbean. At the same time, the share of those with less than secondary education living in an OECD country in which they were not born was 0.9 percent for Africa, 0.4 percent for Asia, 4.3 percent for Europe, and 4.1 percent for Latin America and the Caribbean. The United States and Canada exhibited an opposite patterns, with 0.9 percent of the college educated and 2.2 percent of those with less than secondary education

living abroad in another OECD country.

The effects of high-skilled emigration vary widely between different origin countries. While many African countries suffer from the brain drain of medical professionals and high-skilled emigration is also a challenge for many European countries with 17 to 29 percent of researchers in science and technology born in Germany, Italy, and the United Kingdom living and working in the United States. At the same time, Indian high-skilled diaspora has played a major role in the rise of the Indian IT industry. (Docquier and Rapoport 2012) Origin countries can benefit from emigration also through remittances (Lucas and Stark 1985; Rapoport and Docquier 2006), facilitation of international trade (Gould 1994; Rauch and Trindade 2002; Parsons and Vézina 2018), and knowledge that migrants transfer to their origin countries (Kerr 2008; Fackler et al. 2020).

On the theory side, our paper is most closely related to Poutvaara (2008) which analyzes public and private educational choices when there are two types of human capital: internationally applicable and country-specific. Poutvaara (2008) shows that an improved international applicability increases students' private incentives to invest in study effort. If students can freely decide on their study field, a higher share chooses internationally applicable education when its applicability abroad improves. The government, instead, has an incentive to reduce the number of study places in internationally applicable education, like economics and engineering, and provide more country-specific education, like law, to keep a larger tax base. We extend Poutvaara (2008) by including multiple study fields, as well as by allowing both returns to and costs of education to differ by gender and country. Other related papers include Andersson and Konrad (2003) and Thum and Uebelmesser (2003) which highlight that mobility of university graduates helps to alleviate time consistency problems by boosting tax competition. The government's decision problem has an interesting parallel to the firms' decisions on providing general and firm-specific training that Becker (1993) analyzed. Just like firms which are unwilling to pay for general training, governments can be expected to be reluctant to pay for internationally applicable education.

The rest of the paper is organized as follows. In Section 2, we present a theoretical framework on how much effort students invest in their education when facing uncertainty about their future mobility, and how this investment depends on the expected returns to human capital at home and abroad on their study field. Section 3 presents the data and the empirical strategy. Section 4 studies students' perceptions of the international applicability of their education, across study fields and countries. In Section 5, we analyze how perceptions of the international applicability of education are associated with aspirations and intentions to emigrate, both with and without study field and university fixed effects. We also examine how this relationship depends on gender and whether one would like to ideally work full time after graduation. Section 6 focuses on to what extent perceived international applicability of one's education and migration aspirations are associated with time invested in studying, and section 7 concludes.

2 Theory

We analyze decisions by students on how much effort to devote to their studies and whether to plan to emigrate, as well as how these decisions depend on expected returns to their education in the home country and abroad and on migration costs. There are S study fields, denoted by index s, two countries, denoted by A and B, two genders, denoted by index g with values f for female and m for male, and two periods. In the first period, individuals are students and decide how much effort to invest in their studies, given their gender-specific expectations on future labor market returns to such investments at home and abroad and individual migration costs. In the second period, individuals are graduates. At the beginning of the second period, they learn a stochastic component related to their mobility and decide then whether to migrate in case they can migrate, and work the remainder of the second period. Working time is normalized to one. We analyze choices of students in country A after they have entered a university and chosen their study field, to be in line with our empirical analysis that is based on surveys of students who have already chosen their study field.

We denote human capital of student j by h_j. In case of staying in A, future log wages of student j depend on study field s, gender g, and human capital h_j:

$$log(w_j) = \alpha_{sg} + r_{sg}h_j. \tag{1}$$

In equation (1), α_{sg} is a gender-specific basic component for those with study field s in country A and r_{sg} denotes the gender-specific after-tax return to human capital for those with study field s in country A. Modelling log wages as a function of gender-specific returns to human capital is in line with Aksoy and Poutvaara (2021). Whereas Aksoy and Poutvaara (2021) analyzed how self-selection of female and male refugees and irregular migrants with given stocks of human capital depend on risks related to staying in an unsafe country of origin and risks related to migration, our focus is on the interaction between human capital investments and migration plans.

The utility cost of accruing human capital stock h_j is the product of h_j^2 and a gender-specific constant γ_g, $\gamma_g h_j^2$. The gender-specific term may reflect gender differences in both psychological effort costs and opportunity costs of time spent studying.

Wage available in case of migrating to country B is denoted by $\hat{w}_j$, with $\hat{r}_{sg}$ capturing also to what extent human capital of study field s from country A is applicable in country B:

$$log(\hat{w}_j) = \hat{\alpha}_{sg} + \hat{r}_{sg}h_j. \tag{2}$$

Migration cost has two components. The cost of migration in case of being mobile, c_j, is known already in the first period, and could be negative for students with a very strong preference for living in B. The stochastic component of the actual mobility status is revealed only at the beginning of the second period, with students being mobile after their graduation with probability

p, $0 < p < 1$. That students' actual realization of mobility is disclosed only after completing their education may reflect uncertainty related to realized language and cultural skills and family formation, as suggested by Poutvaara (2007), or uncertainty regarding immigration policy in the intended destination country, in case it is not part of a common labor market. The mobile ones can migrate freely with the individual-specific cost while the non-mobile ones cannot migrate as they face infinitely high mobility costs (captured by p=0).

Utility in the second period is the log consumption net of migration costs in case of migrating. Individual j migrates as graduate if being mobile and if $log(\hat{w}_j) - c_j > log(w_j)$. When deciding on study effort in period 1, individual j discounts expected utility from the second period with individual-specific discount factor β_j, $0 < \beta_j \le 1$. We denote the strategy in which a student would not wish to migrate even if being mobile by N, corresponding to "no migration", and use superscript N to denote corresponding choices. In that case, optimal investment in education is given by

$$h_j^N = \arg\max_{h_j}[-\gamma_g h_j^2 + \beta_j(\alpha_{sg} + r_{sg}h_j)] = \frac{\beta_j r_{sg}}{2\gamma_g} \tag{3}$$

We denote the strategy "migrate if mobile" by M, and use superscript M to denote corresponding choices. With strategy M, optimal investment in education is given by

$$h_j^M = \arg\max_{h_j}[-\gamma_g h_j^2 + \beta_j(1-p)(\alpha_{sg} + r_{sg}h_j) + \beta_j p(\hat{\alpha}_{sg} + \hat{r}_{sg}h_j - c_j)] = \frac{\beta_j(1-p)r_{sg} + \beta_j p\hat{r}_{sg}}{2\gamma_g}. \tag{4}$$

By (3), the utility in case of strategy N is

$$U_j^N = \beta_j\alpha_{sg} + \frac{\beta_j^2 r_{sg}^2}{4\gamma_g}. \tag{5}$$

By (4), the expected utility of those with strategy M is

$$EU_j^M = \beta_j(1-p)\alpha_{sg} + \beta_j p\hat{\alpha}_{sg} + \frac{\beta_j^2}{4\gamma_g}[(1-p)r_{sg} + p\hat{r}_{sg}]^2 - p\beta_j c_j. \tag{6}$$

It is optimal to pursue human capital investment strategy M if and only if $EU_j^M > U_j^N$.

To derive empirically testable predictions on how the choice between strategies N and M depends on perceived applicability of one's education at home and abroad and on risk attitudes, assume next that c_i has two components. Both the student and the researcher can observe parameter σ_j, capturing factors like risk aversion. Only the student can observe idiosyncratic parameter ϵ_j that captures individual-specific taste for migration. It is independently and identically distributed, with density function $\phi(\epsilon)$ and cumulative distribution function $\Phi(\epsilon)$, obtaining negative

values for those students who have an inherent preference for living in the other country. Inserting (5), (6), and $c_j = \sigma_j + \epsilon_j$ into $EU_j^M > U_j^N$ allows solving for the cut-off level of ϵ_j below which individual j pursues strategy M:

$$\epsilon_j^M = -\alpha_{sg} + \hat{\alpha}_{sg} + \beta_j \frac{2r_{sg}(\hat{r}_{sg} - r_{sg}) + p(\hat{r}_{sg} - r_{sg})^2}{4\gamma_g} - \sigma_j. \tag{7}$$

We denote the probability (from the researcher's perspective) that student j pursues strategy M by q_j:

$$q_j = \Phi(\epsilon_j^M) = \Phi\left(-\alpha_{sg} + \hat{\alpha}_{sg} + \beta_j \frac{2r_{sg}(\hat{r}_{sg} - r_{sg}) + p(\hat{r}_{sg} - r_{sg})^2}{4\gamma_g} - \sigma_j\right). \tag{8}$$

The comparative statics effects with respect to the probability that a student j pursues strategy M are given by:

Proposition 1.

$$(i) \qquad \frac{\partial q_j}{\partial \hat{r}_{sg}} = \beta_j \frac{(1-p)r_{sg} + p\hat{r}_{sg}}{2\gamma_g} \phi(\epsilon_j^M) > 0; \tag{9}$$

$$(ii) \qquad \frac{\partial q_j}{\partial p} = \beta_j \frac{(\hat{r}_{sg} - r_{sg})^2}{4\gamma_g} \phi(\epsilon_j^M) > 0; \tag{10}$$

$$(iii) \qquad \frac{\partial q_j}{\partial \alpha_{sg}} = -\frac{\partial q_j}{\partial \hat{\alpha}_{sg}} = \frac{\partial q_j}{\partial \sigma_j} = -\phi(\epsilon_j^M) < 0; \tag{11}$$

$$(iv) \qquad \frac{\partial q_i}{\partial r_{sg}} = \beta_j \frac{(1-p)\hat{r}_{sg} - (2-p)r_{sg}}{2\gamma_g} \phi(\epsilon_j^M). \tag{12}$$

Proof. Follows by differentiating (8).

Part (i) of Proposition 1 implies that expected higher returns to human capital abroad unambiguously increase the probability of pursuing strategy M as does, by part (ii), also the probability of being mobile and by part (iii), the fixed compensation component abroad. The fixed compensation at home and observable migration cost component, instead, reduce the probability of pursuing strategy M (part (iii)). Part (iv) shows that the effect of higher returns to human capital at home may go either way, depending on the relative returns to human capital at home and abroad, and the probability of a graduate becoming mobile. The probability of pursuing strategy M is decreasing in returns to human capital at home if $r_{sg} \geq \frac{(1-p)}{(2-p)}\hat{r}_{sg}$ and increasing in returns to human capital at home if $r_{sg} < \frac{(1-p)}{(2-p)}\hat{r}_{sg}$.

The intuition for the decreasing probability of pursuing strategy M when r_{sg} increases if $r_{sg} \geq \frac{(1-p)}{(2-p)}\hat{r}_{sg}$ follows the same logic as part (i): higher returns to human capital in A make staying

a more attractive strategy. The intuition for the opposite pattern if $r_{sg} < \frac{(1-p)}{(2-p)}\hat{r}_{sg}$ is that with very low returns to human capital in the home country and a low probability of becoming mobile, students would choose such a low level of human capital that it does not pay off to emigrate even if being mobile. In such a low-investment equilibrium, an increase in returns to human capital in the home country would reduce the cost of strategy M in case of not becoming mobile. This could, in turn, spur more students to pursue strategy M. This finding is related, yet distinct, from previous literature that has shown that the possibility of emigration may encourage investment in human capital in a poor country of origin, resulting in brain gain through brain drain (Mountford 1997; Stark et al. 1997; Beine et al. 2001). We show, instead, that an increase in gender and study-field specific returns to human capital at home may result in an increase in emigration even if the probability of being able to migrate does not change, as a side effect of increased effort investment by students. The overall effect on the human capital stock would depend on the relative magnitude of this induced brain drain effect, compared with general the brain gain from higher effort investment by those expecting to stay and those investing more in their human capital hoping to be able to reap higher benefits to their effort investment abroad.

Parts (i), (ii), and (iii) of Proposition 1 give our first two testable predictions:

Hypothesis 1: Those who perceive their education to be more internationally applicable are more likely to (plan to) emigrate.

Hypothesis 2: Those more willing to take risks are more likely to (plan to) emigrate.

Equations (3) and (4) imply that investment in education is always increasing in expected returns at home among both those pursuing strategy M and those pursuing strategy N, and also in expected returns abroad among those who would like to emigrate. This gives three further testable predictions:

Hypothesis 3. All students' investment in study effort is increasing in their patience.

Hypothesis 4. All students' investment in study effort is increasing in their expected returns to human capital at home.

Hypothesis 5. Investment in study effort among those students who would like to emigrate is increasing in their expected returns to human capital abroad.

A challenge in empirical testing of Hypothesis 1 is that perceptions of returns to human capital at home and abroad may be correlated. Therefore, we also analyze a modified version that

relates to the difference in perceived applicability of one's education abroad relative to perceived applicability at home:

Hypothesis 1': Those who perceive their education to be more internationally applicable, relative to its applicability at home, are more likely to (plan to) emigrate.

Our model highlights the importance of gender-specific returns to human capital and allows also for gender-specific differences in effort or opportunity costs of investment in study effort. More limited labor market opportunities after graduation would discourage female investment in human capital. On the other hand, more limited job and leisure opportunities for women during their studies would reduce γ_f relative to γ_m, pushing women's investment in their human capital in the opposite direction of women investing more in their human capital due to lower opportunity costs. As a result, it could be that women in a country with a high degree of gender discrimination could still invest more in education than men, especially if social norms restrict their leisure opportunities, for example by making it less socially acceptable for young women than for young men to go out or to do certain sports. In the empirical analysis, we control for gender to evaluate empirically which of these mechanisms dominates, in case there are systematic gender differences in educational investments. We also do our main analyses separately for men and women.

3 Data and empirical strategy

3.1 Data

To test our hypotheses, we use data from online surveys carried out in close cooperation with different universities. The participating universities were:

- In Czechia: Masaryk University, University of Ostrava, and University of Economics Prague (VSE),

- In India: IIT Kanpur and Ashoka University,

- In Indonesia: Institut Pertanian Bogor, Universitas Indonesia, Institut Teknologi Bandung, Politeknik Manufaktur Bandung, and Universitas Padjadjaran,

- In Italy: Università Cattolica del Sacro Cuore,

- In Mexico: El Colegio de México (COLMEX), Centro de Investigación y Docencia Económicas (CIDE), Instituto Tecnológico Autónomo de México (ITAM), and Universidad Nacional Autónoma de México (UNAM),

- In the Netherlands: Maastricht University,

- In Spain: Universitat Autonoma de Barcelona (UAB), University of Barcelona, and Carlos III University of Madrid.

We reached respondents by sending an invitation link via university or faculty email lists. Out of the 10,992 students who had opened the link to the questionnaire, 6,084 started to reply and 3,753 finished the whole survey. This corresponds to a completion rate of 34.1% among those who opened the link to the survey and 61.7% among those who started to reply. 4049 respondents answered the relevant questions for our analysis regarding their study field, the perceived applicability of their education abroad and at home, as well as their migration intentions. These are 36.8% of those who opened the link to the survey and 66.6% of those who started to reply. The surveys were conducted between April 1, 2019 and April 7, 2020. We present the target population and number of respondents by universities in Table 1.

It should be noted that the universities are not representative of all universities in the country they are located in; we were restricted to carrying out the survey in universities willing to send out the invitation to their students. Additionally, there is self-selection among students in whether they reply, which is a common challenge in surveys. Therefore, estimated distributions of beliefs and migration preferences may differ from the general student population, but there is no reason to expect that the estimated relationships of interest between perceived national and international applicability of one's education and migration aspirations and intentions and their link with time spent studying would be systematically underestimated or overestimated.

Our data contains rich information on respondents from different study fields and universities concerning their studies and career plans as well as their socio-demographic background. Table 2 shows summary statistics for key variables in our sample of respondents. Of particular interest for this study are survey questions asking respondents about how they perceived domestic and international applicability of their education, whether they would ideally like to live permanently in another country and whether they already made plans or started to prepare for a move abroad. We define migration aspirations as ideally wanting to move permanently abroad ("Ideally move") and migration intentions as having concrete plans such as a moving date ("Migration plans"). We also asked respondents about their study effort and about their time and risk preferences, which have been shown to play an important role for migration decisions (Jaeger et al. 2010). Men and women in our sample differ along several dimensions: men view their education as more applicable abroad and are less likely to want to ideally move. Women are less willing to take risks compared to men. Men are more likely to study STEM majors and women are more likely to study social sciences, humanities, law, and medicine.

Table 1: Target population and number of respondents

	Target population	Started the survey	Final sample
Czechia			
Masaryk University, Brno	2255	495	348
University of Ostrava	2684	373	233
VSE, Prague	3917	552	392
India			
IIT Kanpur	5261	929	451
Ashoka University, Sonipat	1452	57	38
Indonesia			
Institut Pertanian Bogor	n.a.	26	13
Institut Teknologi Bandung	3481	323	163
Politeknik Manufaktur Bandung	n.a.	55	33
Universitas Indonesia	n.a.	16	6
Universitas Padjadjaran	n.a.	18	9
Italy			
Università Cattolica del Sacro Cuore, Milan	11799	360	268
Mexico			
COLMEX, Mexico City	368	147	119
CIDE, Mexico City	476	59	49
ITAM, Mexico City	5032	716	560
UNAM, Mexico City	2854	623	450
Netherlands			
Maastricht University	261	261	192
Spain			
Carlos III, Madrid	8282	718	511
University of Barcelona	6712	260	185
UAB, Barcelona	1915	96	29
Total	[56749]	6084	4049

Note: The target population are students on the email lists of the contacted universities or faculties. These numbers are missing for four universities in Indonesia. The survey at Maastricht University was taken in class while at the other universities respondents were contacted by email. The final sample includes all respondents who answered the survey questions regarding their study field, perceived applicability of their education abroad and at home, as well as their migration intentions.

Table 2: Summary statistics

	Full sample		Women		Men		t-test	
	Mean	SD	Mean	SD	Mean	SD	Diff	t
Applicability abroad	3.70	0.98	3.64	1.02	3.78	0.92	0.14***	(4.47)
Applicability at home	3.82	0.94	3.83	0.96	3.81	0.91	-0.02	(-0.76)
Migration aspirations	0.56	0.50	0.58	0.49	0.54	0.50	-0.03*	(-2.09)
Migration intentions	0.16	0.37	0.16	0.37	0.16	0.37	0.00	(0.25)
Number of language courses	1.69	1.54	1.84	1.59	1.49	1.43	-0.35***	(-7.26)
Female	0.55	0.50						
Age	22.98	5.28	23.02	5.08	22.85	5.04	-0.17	(-1.05)
Partner	0.37	0.48	0.42	0.49	0.31	0.46	-0.11***	(-7.19)
Multiple majors	0.20	0.40	0.19	0.39	0.22	0.41	0.02	(1.95)
Riskprone (10: risk prone)	5.98	2.11	5.87	2.09	6.12	2.12	0.25***	(3.81)
Patience (10:very patient)	5.90	2.38	5.73	2.42	6.11	2.32	0.38***	(5.06)
Mathematics	0.05	0.23	0.04	0.19	0.07	0.26	0.04***	(4.95)
Computer Science	0.04	0.19	0.02	0.12	0.07	0.25	0.05***	(8.43)
Natural Sciences	0.02	0.15	0.01	0.11	0.03	0.18	0.02***	(4.20)
Engineering	0.09	0.29	0.03	0.17	0.17	0.38	0.14***	(15.71)
Medicine/Health Sciences	0.01	0.12	0.02	0.14	0.01	0.10	-0.01*	(-2.46)
Economics	0.43	0.50	0.43	0.49	0.43	0.50	0.01	(0.43)
Business Administration	0.21	0.40	0.22	0.42	0.19	0.39	-0.04**	(-2.83)
Social Sciences	0.24	0.43	0.29	0.45	0.19	0.39	-0.10***	(-7.28)
Humanities	0.05	0.23	0.06	0.24	0.04	0.20	-0.02**	(-2.72)
Arts	0.01	0.10	0.01	0.11	0.01	0.08	-0.01	(-1.95)
Law	0.08	0.27	0.10	0.30	0.06	0.23	-0.04***	(-5.22)
Other study field	0.00	0.03	0.00	0.03	0.00	0.02	-0.00	(-0.39)
Citizen	0.89	0.32	0.88	0.33	0.90	0.30	0.03**	(2.75)
Observations	4049		2236		1799		4035	

Note: This table shows mean and standard deviation of all variables used throughout our analysis, first overall and then broken down for men and women separately. The last two columns serve to test the hypothesis that means for men and women are the same. Column "Diff" shows the difference between averages (Mean(men)-Mean(women)) as well as the level of statistical significance of the means comparison. The last column displays the corresponding t statistics for the t-test. Applicability abroad and applicability at home are measured on scales from 1 to 5 with one being the least applicable. Citizen is an indicator for whether a respondent is a citizen or permanent resident in the country in which they are taking the survey.

3.2 Empirical strategy

Our theoretical framework focuses on the relationship between perceived applicability of one's education abroad ("Applicability abroad") and migration aspirations and intentions. In the empirical analysis, we first analyze in Section 4 perceptions of international applicability of different types of study fields. We then analyze in Section 5 the role that different study fields play in the context of migration aspirations or intentions. If international applicability varies by study field, we would expect that study fields that are generally seen as more widely internationally applicable, like STEM, to be linked with a higher probability of migration aspirations and intentions. At the same time, individual perceptions of international applicability within study fields might also contribute to individual level variation in migration aspirations and intentions. We test this in our regressions. In the third set of analyses in Section 6, we link perceived international applicability of education and migration aspirations with investment in education, measured by how many hours the respondents report to study.

We first look at the effects of study field on how internationally applicable respondents perceive their education to be. We estimate the following linear regression model:

$$APPL_i = \alpha + \beta_1 Field_i + \beta_2 X_i + \delta Uni_i + e_i, \tag{13}$$

where $APPL$ is a variable capturing the respondent's perception of how much of his or her education can be applied abroad on a scale from 1 (none) to 5 (all). We also construct an alternative dependent variable for which we subtract perceived applicability of one's education at home (also on a scale from 1 (none) to 5 (all)) from the perceived applicability abroad. $Field$ includes a set of dummy variables for a respondent's study field distinguishing STEM, Economics/Business, Humanities, Social Sciences, Medicine, and Law (reference category). We merge Arts and Humanities since we have very few respondents in Arts and we combine Mathematics, Computer Science, Natural Sciences, and Engineering into one field called STEM. X is a vector of individual characteristics which we introduce successively in the estimation model. We include dummy variables for the respondent being female, and for the respondent having answered no reply/not applicable to the question on gender (males being the reference category). Additionally, we include a linear control variable for age and a dummy variable for having a partner. Finally, we also include self-assessed risk and time preferences, both measured on a scale from 1 (not at all willing to take risks / not at all patient) to 10 (risk prone / very patient). In our regressions with an extended set of independent variables, we estimate the model with university fixed effects, denoted by Uni_i.

Our final sample focuses on respondents who are citizens or permanent residents in the country they are taking the survey in, thereby excluding temporary students who are already selected on their realized mobility. In addition, we exclude students who are majoring in multiple subjects. While there might be interesting interactions between subjects that inform about per-

ceived applicability and migration aspirations and intentions, we do not have information on which field is the primary study field. Due to our sample size, we cannot estimate a fully non-parametric specification with dummies specific to field combinations. Consequently, we focus on those with a single major (80% of our sample see Table 2).

Second, we analyze the link between international applicability of education and migration aspirations and intentions. We start by analyzing how individual perceptions of applicability abroad are related to migration aspirations and intentions, controlling for gender, age, degree studied for, willingness to take risks, and patience. We then add controls for study fields. In this full specification, we estimate a logit model

$$M_i = \alpha + \beta_1 APPL_i + \beta_2 Field_i + \beta_3 X_i + \delta Uni_i + e_i. \tag{14}$$

In one specification, M represents a dummy variable equal to one if the respondent has migration aspirations. In the other specification, it is a dummy variable equal to one if the respondent has migration intentions.

In the third set of analyses we explain weekly study hours HRS_i reported by the respondents by how applicable they perceive their education to be abroad controlling for further characteristics in a linear regression model:

$$HRS_i = \alpha + \beta_1 APPL_i + \beta_2 X_i + \delta Uni_i + e_i. \tag{15}$$

It is important to note that we cannot identify causal relationships in our analysis. An unobserved and idiosyncratic desire to migrate may drive the selection into study field, as well as perceived applicability abroad and migration aspirations and intentions.

4 Perceptions of international applicability of education

Figure 1 shows how applicable respondents believe their education to be abroad - across study fields and countries in our sample. Respondents assessed the applicability of their education on a scale from 1 (not at all applicable) to 5 (very applicable). The modal answer for all study fields except law is that respondents believe their education to be applicable abroad, whereas for law the modal answer is that education is somewhat applicable abroad. This matches well with our theory presented in section 2. Knowledge in law is highly country-specific and legal education does not transfer easily to another country so it is reasonable that law students assess the international applicability of their subject lower than students in other fields. Combining the top two categories of applicability, STEM and Social Sciences are viewed as applicable or very applicable abroad by 75% of respondents. Among students of economics and business 56% of respondents think that their education is applicable or very applicable abroad. For law students, the share of those who

report their education to be applicable or very applicable is lowest (41%). The shares also vary considerably by survey country. Almost 80% of respondents in Mexico (77.5%) and the Netherlands (78.1%) think their education is very applicable or applicable across study fields. On the other hand, among respondents in Czechia, only 38.5% selected one of these two categories. Across all countries the fraction of those thinking their education is not at all applicable is very low.

Of course, given the different distributions of study fields across different countries, looking at distributions only across countries or study fields can be misleading. Therefore, Figure 2 breaks down the responses by study field and country. Law students assess the applicability of their education abroad to be lower than students in other fields. This confirms the idea that law degrees are country-specific. Among respondents in Czechia and Spain, STEM students consider their knowledge to be more applicable than respondents in other study fields, while among respondents in Mexico this is particularly the case among humanities students. In India and Indonesia, we do not observe much difference in perceived applicability across study fields. As there is considerable variation in perceptions of applicability across fields but also across countries, controlling for country or institution fixed effects in our analysis is important to isolate the effects of study field or idiosyncratic variation.

Figure 1: Perceived international applicability by study field and country
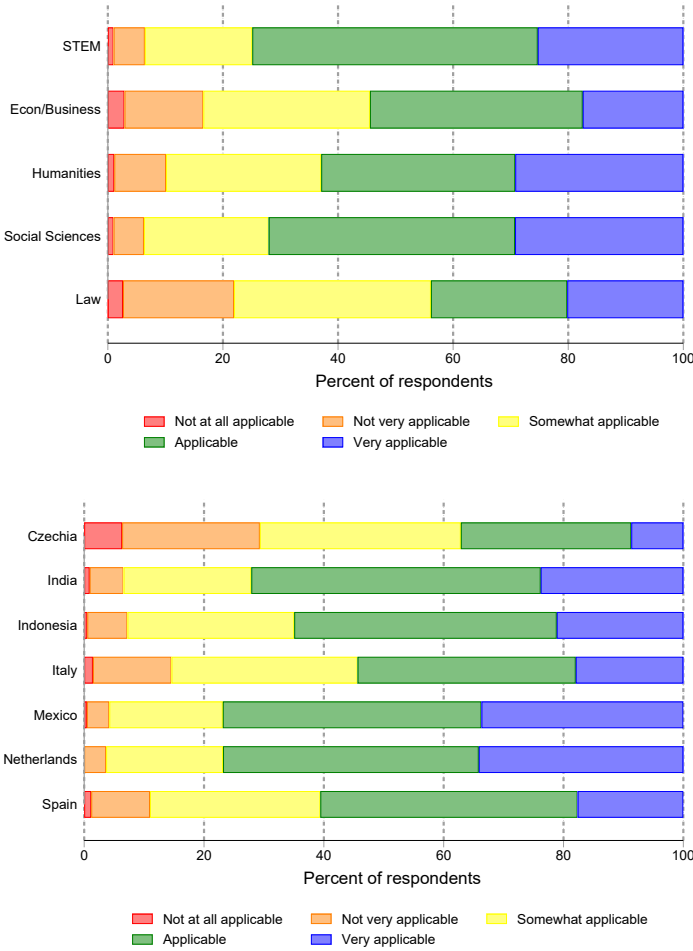
Note: This figure shows the distribution of perceived applicability among our respondents, first by study field (top panel), then by country in which the survey was taken (bottom panel). For the field-specific results we focus on respondents who study a field with at least 10 respondents within a given country to minimize noise.

Figure 2: Average perceived international applicability: heterogeneity by study field and country
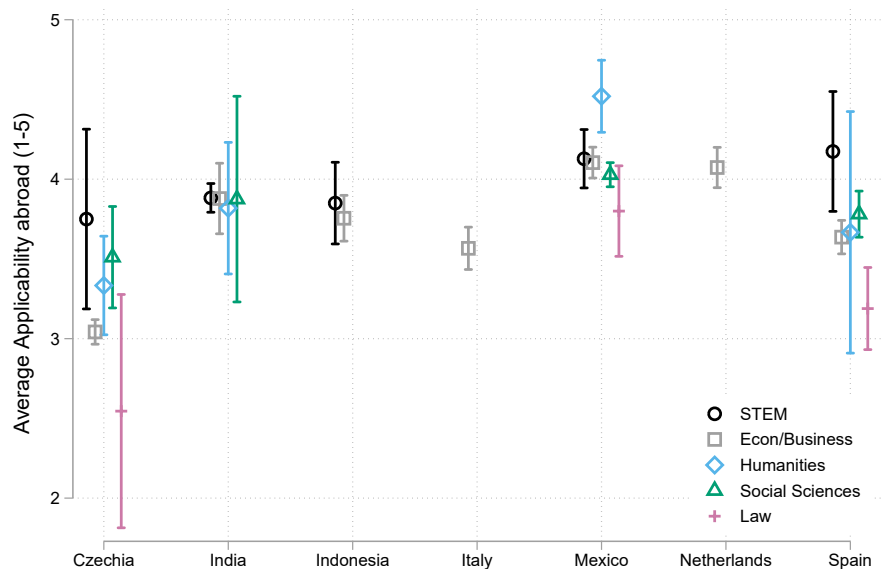
Note: This figure shows variation in perceived applicability abroad by country and field. The plot shows the predicted values and 95% level confidence intervals from a regression of perceived applicability on country by field specific fixed effects for fields where we have at least 10 respondents within a given survey country.

In Table 3, we analyze how different study fields and further observable characteristics are related to how applicable respondents perceive their education to be abroad. We estimate in a linear regression model how individual characteristics explain the perceived applicability of one's education abroad. We start by including only study fields in column (1). Relative to Law, the reference category, other study fields are positively and statistically significantly related to a higher perceived applicability of respondents' education abroad. The results are robust to the inclusion of university fixed effects in column (2) and further variables in columns (3)-(4). We control for university fixed effects in columns (2)-(4) to capture student selection into university based on unobserved characteristics related to perceived applicability of one's education abroad. Studying for a doctoral degree is associated with higher perceived international applicability. Other variables do not seem to matter much; e.g. there are no systematic gender differences in perceived international applicability after controlling for university and study-related factors as well other individual characteristics. In column (4) we additionally include a measure for risk attitudes (on a scale from 1, very risk averse, to 10, very risk prone) and patience (on a scale from 1, not at all patient, to 10, very patient). Results indicate that respondents who reported to be more patient and less risk averse perceive their education to be more internationally applicable after controlling for the above mentioned variables. Higher perceived applicability among patient respondents could be related to their generally higher study effort, which then also boosts international applicability of their education. Higher perceived applicability among those who are less risk averse could be explained by their willingness to try their luck in new circumstances; it could also be that risk

aversion is related to more pessimistic attitudes towards big changes like migration.

Our theoretical predictions take into consideration that individuals compare returns to education abroad to those at home. Table 4 therefore examines how the difference in perceived applicability abroad and perceived applicability at home varies between study fields. We find that coefficient sizes for study field dummies are even larger than in the previous table when we consider the difference in applicability. This is suggestive evidence that relative to law, respondents in other study fields perceive their education to be more applicable abroad *relative to* at home.

Table 3: International applicability and majors

	(1) Applicability abroad	(2) Applicability abroad	(3) Applicability abroad	(4) Applicability abroad
STEM	0.556***	0.629***	0.635***	0.622***
	(0.113)	(0.125)	(0.126)	(0.126)
Economics/Business	0.124	0.469***	0.486***	0.475***
	(0.109)	(0.107)	(0.108)	(0.107)
Humanities	0.424**	0.619***	0.602***	0.607***
	(0.151)	(0.145)	(0.146)	(0.146)
Social Sciences	0.564***	0.461***	0.485***	0.473***
	(0.112)	(0.111)	(0.112)	(0.111)
Medicine	1.011***	1.134***	1.143***	1.137***
	(0.184)	(0.219)	(0.240)	(0.231)
Female			-0.0380	-0.0279
			(0.0371)	(0.0371)
No reply on gender			-0.310	-0.327
			(0.203)	(0.180)
Age			-0.00506	-0.00632
			(0.00520)	(0.00523)
Partner			-0.0207	-0.0144
			(0.0384)	(0.0382)
Master's student			0.00704	0.0216
			(0.0542)	(0.0539)
Doctoral student			0.423***	0.436***
			(0.0918)	(0.0912)
Riskprone (10: risk prone)				0.0339***
				(0.00898)
Patience (10: very patient)				0.0281***
				(0.00767)
University f.e.	No	Yes	Yes	Yes
Observations	2854	2854	2811	2811
R^2	0.051	0.179	0.187	0.195

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Note: This table shows the results from estimating Equation 13 on the sample of respondents who give answers to the questions of perceived applicability at home and abroad, study field, and migration intentions. We also limit attention to respondents who are either citizens or permanent residents of the country in which they are taking the survey and who are not temporary students. We include those who do not give a response to the gender question and code them as "No reply on gender" (males form the base group). The dependent variable is perceived applicability abroad (on a scale from 1 to 5). Major-specific fixed effects are estimated relative to the base group of those studying law. The base group for degree levels is students studying for a Bachelor's degree.

Table 4: Difference in applicability abroad vs at home and majors

	(1) Appl. abroad - at home	(2) Appl. abroad - at home	(3) Appl. abroad - at home	(4) Appl. abroad - at home
STEM	1.043***	1.049***	1.006***	1.004***
	(0.132)	(0.146)	(0.148)	(0.149)
Economics/Business	0.663***	0.838***	0.810***	0.808***
	(0.127)	(0.130)	(0.133)	(0.132)
Humanities	0.914***	1.055***	0.949***	0.950***
	(0.184)	(0.186)	(0.183)	(0.183)
Social Sciences	0.865***	0.845***	0.838***	0.836***
	(0.132)	(0.134)	(0.137)	(0.136)
Medicine	1.066***	1.200***	1.241***	1.240***
	(0.283)	(0.278)	(0.259)	(0.258)
Female			-0.0871*	-0.0852*
			(0.0415)	(0.0416)
No reply on gender			-0.171	-0.174
			(0.423)	(0.419)
Age			-0.0140*	-0.0142*
			(0.00580)	(0.00581)
Partner			-0.0208	-0.0196
			(0.0419)	(0.0418)
Master's student			0.00671	0.00943
			(0.0587)	(0.0586)
Doctoral student			0.129	0.131
			(0.102)	(0.102)
Riskprone (10: risk prone)				0.00642
				(0.00974)
Patience (10: very patient)				0.00511
				(0.00845)
University f.e.	No	Yes	Yes	Yes
Observations	2854	2854	2811	2811
R^2	0.040	0.073	0.077	0.077

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Note: This table shows the results from estimating Equation 13 on the sample of respondents who give answers to the questions of perceived applicability at home and abroad, study field, and migration intentions. We also limit attention to respondents who are either citizens or permanent residents of the country in which they are taking the survey and who are not temporary students. We include those who do not give a response to the gender question and code them as "no reply" (males form the base group). The dependent variable is perceived applicability abroad - perceived applicability at home (both running on a scale from 1-5). Major-specific fixed effects are estimated relative to the base group of those studying law. The base group for degree levels is students studying for a Bachelor's degree.

5 International applicability of education and migration aspirations and intentions

5.1 Distribution of migration aspirations and intentions

Figure 3 illustrates the distribution of respondents' replies concerning questions on whether they would ideally like to live permanently in another country (left panel, migration aspirations) and their migration plans (right panel, migration intentions) separately for different countries in the sample. In the left panel, referring to the question on whether respondents would ideally want to move permanently abroad, the Netherlands, Mexico, and Spain stand out as over half the respondents want to ideally live abroad permanently. In the right panel, the largest difference in shares of chosen response categories can be observed for the more extreme categories, i.e. never wanting to move or having already concrete plans or a date for the move. The middle categories combined take up 60-70% in each country. Among respondents from Indonesia we observe the largest fraction of those who intend to never move (over 20%) while the lowest fraction (less than 5%) of respondents who intend to never move can be observed among respondents in the Netherlands. At the other end of the scale, less than 5% of respondents have a concrete date for moving, in most countries. The highest fraction of students stating that they already have a date for a move can be found among respondents in Spain. The combined share of those having plans and those already having a date for a move is highest in the Netherlands, followed closely by Spain. Note that this figure excludes international students who make up a considerable fraction of the overall sample in the Netherlands.

Figure 3: Migration aspirations and intentions by country
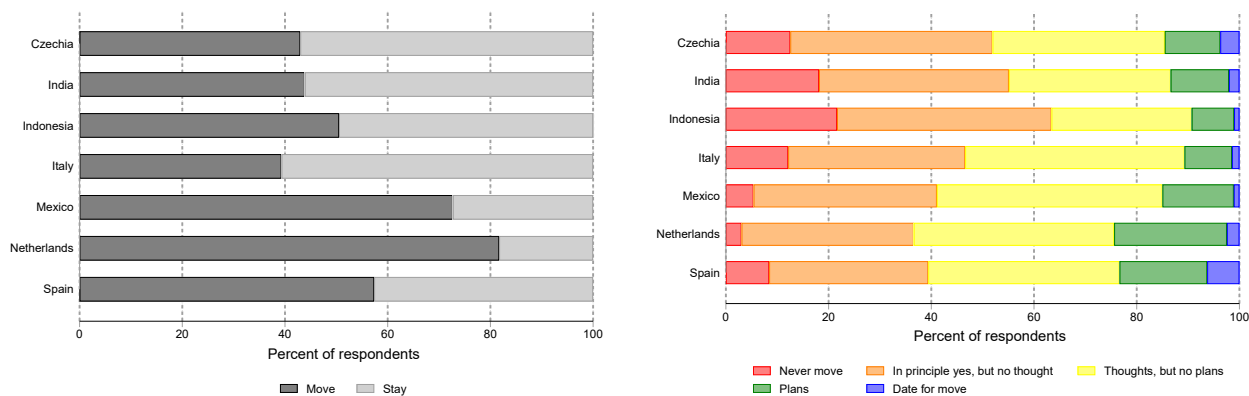
Migration aspirations   Migration intentions (plans)

Note: This figure shows the distribution of migration aspirations (left panel, whether or not a respondent wants to ideally move) and migration intentions (right panel, whether a respondent has actual plans to move) among our respondents. We show the breakdown by survey country.

5.2 Estimation results

In this section we test Hypothesis 1, i.e. that those who perceive their education to be more internationally applicable are more likely to aspire or intend to emigrate. Figure 4 relates respondents' perceived international applicability of their education to whether they want to migrate ideally (migration aspirations) and to their migration plans (migration intentions). We estimate a logit model with binary dependent variable *ideally move* or *migration plans* and report average marginal effects.
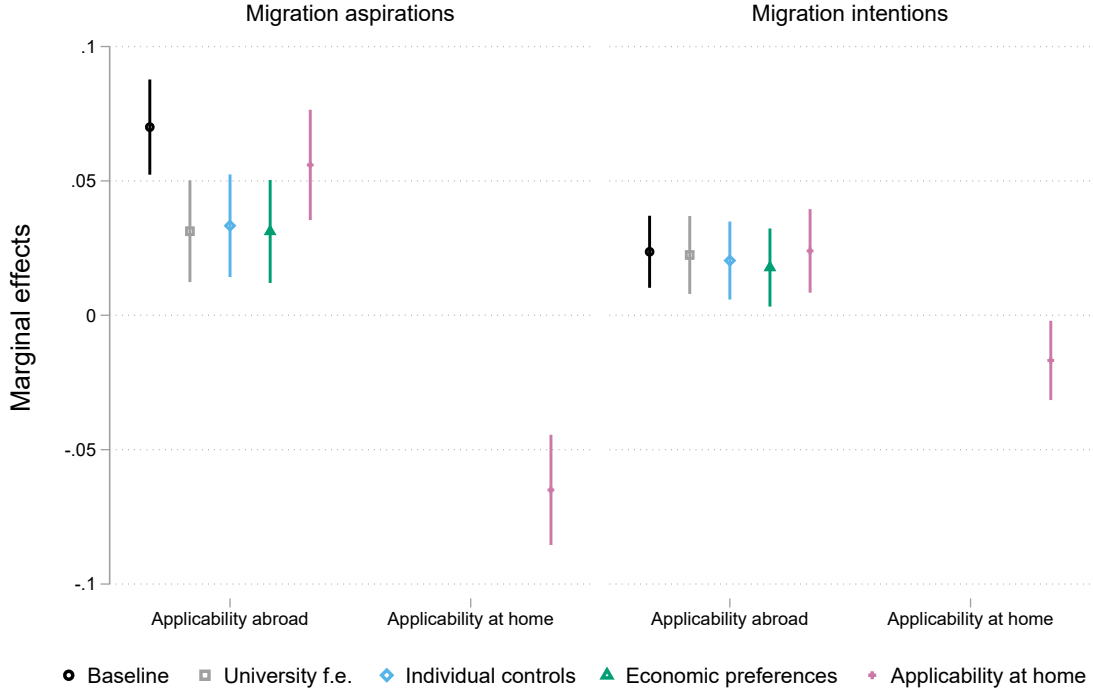

Figure 4: Migration aspirations and intentions (marginal effects)

Note: This figure shows marginal effects of perceived applicability abroad from estimating Equation 14 for the sample of respondents who give answers to the questions of perceived applicability at home and abroad, study field, and migration intentions. The left panel uses migration aspirations as dependent variable (whether or not a respondent wants to ideally move) while the right panel uses migration intentions/plans as dependent variable (whether a respondent has concrete migration plans). Table A1 shows the full results. The model description below the table indicates which controls are being added in every new model. Individual controls include controls for gender, age, having a partner, and type of degree studying for. Controls for economic preferences include a measure of risk proneness and a measure of patience. We limit attention to respondents who are either citizens or permanent residents of the country in which they are taking the survey and who are not temporary students. We include those who do not give a response to the gender question and code them as "no reply on gender" (males form the base group).

The left panel looks at the association between applicability abroad and whether someone wants to ideally move (i.e. their migration aspirations), a variable that we believe captures our theoretical predictions best. Associations are positive throughout and highly statistically significant. Controlling for university fixed effects (starting with the second coefficient) halves the size

of the effect indicating a high degree of variation across universities. Women are somewhat more likely to want to ideally move than men (see full specification in Table A1) but this finding is not robust across specifications.

In the right panel of Figure 4, perceived applicability of one's education abroad is positively and statistically significantly related to individual migration plans (date for a move/preparing to move). The results are robust to the inclusion of further variables in the regression model, most importantly, university fixed effects (second coefficient and onward), and the indicator for perceived applicability of one's education in the home country (fifth coefficient). These results are in line with Hypothesis 1 of our model.

In comparison with the left panel, coefficient sizes are slightly smaller for the relationship between applicability abroad and migration plans. This seems reasonable as respondents report more often migration aspirations than migration plans. Moreover, having concrete migration plans can be driven by many other factors such as family situation, financial constraints, etc. While doctoral students are statistically significantly less likely to want to ideally move, they are not less likely to have migration plans (see full table in appendix).

Controlling for university fixed effects shows that results are robust to these additional controls. Starting with the third coefficient, we include age, gender, and partnership status which do not reveal any relationship with the dependent variable. Furthermore, we also control for the type of degree that a respondent pursues; these variables do not reveal any statistically significant relationship with migration plans.

Reassuringly, the coefficients on applicability at home show that it is strongly negatively associated both with ideally wanting to move and with concrete migration plans. Controlling for perceived applicability at home increases the effect of applicability abroad. Conditioning on perceived applicability at home, effectively means that we are capturing the effect of applicability abroad *relative to* applicability at home. The fifth model is therefore our preferred specification. After controlling for the above mentioned variables, Table A2 shows that reported willingness to take risks is positively related to migration aspirations and intentions as suggested by Hypothesis 2.

Figure 5 includes both perceived applicability abroad and study field in regressions predicting migration aspirations and intentions. Certain study fields are associated with a higher likelihood for having migration plans and wanting to ideally move also when included in the regression together with perceived applicability abroad: Relative to the reference category law students studying for a STEM, an Economics/Business or a Social Science degree exhibit a higher likelihood for reporting that they want to ideally move or have migration plans (after including university fixed effects). These results are shown in Table A2.

Comparing results in Figures 4 and 5 shows that the relationship between perceived applicability abroad and ideally wanting to move as well as migration plans is very robust to the inclusion of study field dummies. These figures – since they are almost identical – clearly show
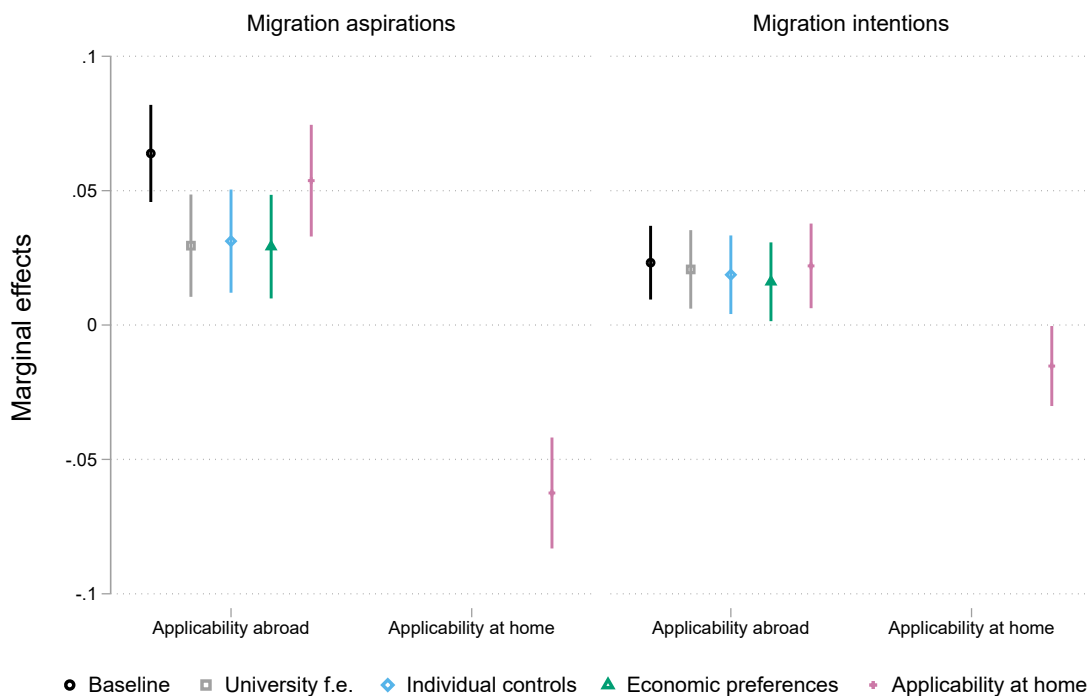
Figure 5: Migration aspirations and intentions (marginal effects) when controlling for the study field

Note: This figure shows marginal effects of perceived applicability abroad from estimating Equation 14 for the sample of respondents who give answers to the questions of perceived applicability at home and abroad, study field, and migration intentions. In contrast to Figure 4 all models include controls for study field with law being the baseline category. The left panel uses migration aspirations as dependent variable (whether or not a respondent wants to ideally move) while the right panel uses migration intentions/plans as dependent variable (whether a respondent has concrete migration plans). The model description below the table indicates which controls are being added in every new model. Table A2 shows the full results. Individual controls include controls for gender, age, having a partner, degree studying for, and whether or not the respondent has multiple majors. Controls for economic preferences include a measure of risk proneness and a measure of patience. We limit attention to respondents who are either citizens or permanent residents of the country in which they are taking the survey and who are not temporary students. We include those who do not give a response to the gender question and code them as "no reply on gender" (males form the base group).

that perceived applicability is capturing more than study-field specific incentives for migration, i.e. that even within specific study fields within a given university, individuals have quite varied perceptions of the applicability of their knowledge abroad that is strongly correlated with migration aspirations and intentions. This could entail private information about the applicability of one's education (especially in the fifth model when we are looking at the impact of relative applicability abroad). It could also capture those having a high unobserved desire to move having made some unobserved additional investments to make their education more applicable abroad.

In our data, we do not have random variation in applicability abroad independent of underlying idiosyncratic migration preferences. For individuals who would like to work full-time after graduation, perceived international applicability abroad should be more clearly related with migration aspirations and intentions than for those who would prefer to work only part time. The reason for this is that if actual migration plans are driven by strategic job market motives, we expect these to be stronger for those wanting to work full-time compared to those wanting to work part-time. On the other hand, if migration aspirations capture the unobserved desire to move then we should not observe a difference in the correlation between migration aspirations and perceived applicability abroad between those who want to work part-time or full-time. We later shed some light on these differences by dividing our sample into subgroups based on gender as well as desired working time.

Before we split the sample by desire to work full-time, we present our current results separately by gender. Women and men could vary in their migration intentions for example due to women being more often a tied mover in a relationship (see e.g. Munk et al. 2022). Figure 6 estimates the 4th and 5th models from Figure 5 separately for men and women for both migration aspirations and migration intentions. Dashed confidence intervals represent results for men, solid confidence intervals show the results for women. The correlations between applicability abroad and migration aspirations (ideally move) are much stronger for men than for women, whereas the correlations with migration intentions (migration plans) are quite similar after controlling for study field.

Next, we split our sample by desired work hours to study whether associations between perceived applicability and migration intentions vary by individuals with different preferred working times. We split the sample according to gender (excluding those that prefer not to answer).

We expect that reaping the benefits of higher applicability of education abroad is strongest for those who want to ideally work full-time and therefore have a higher labor market attachment. Therefore we expect to find stronger correlations with dependent variables that capture labor force attachment for those who want to work full-time. Table 5 Panel A shows little difference in columns (1) and (2) in the correlation between perceived applicability and ideally moving for those wishing to work full-time compared to those wishing to work part-time. This indicates that whether or not someone wants to ideally move might be capturing an underlying preference for migration that is independent of migration incentives driven by country specific returns to education.
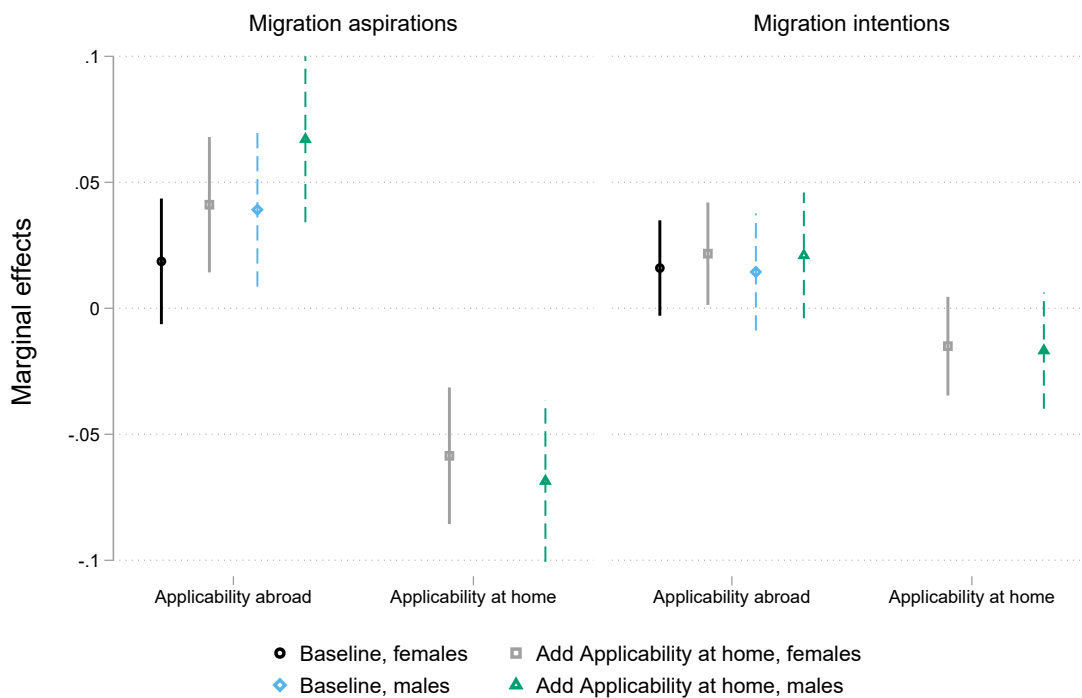
Figure 6: Migration aspirations and intentions - the role of individual-level variation in perceived applicability within university and major by gender

Note: This figure shows marginal effects of perceived applicability abroad from estimating Equation 14 separately for female and male respondents who give answers to the questions of perceived applicability at home and abroad, study field, and migration intentions. Estimates for the models focusing on females are shown with solid confidence intervals while estimates for the models focusing on males are shown with dashed confidence intervals. The left panel uses migration aspirations as dependent variable (whether or not a respondent wants to ideally move) while the right panel uses migration intentions/plans as dependent variable (whether a respondent has concrete migration plans). All models include controls for study field with law being the baseline category as well as individual controls, university fixed effects, and controls for economic preferences. Individual controls include controls for gender, age, having a partner, and degree studying for. Controls for economic preferences include a measure of risk proneness and a measure of patience. We limit attention to respondents who are either citizens or permanent residents of the country in which they are taking the survey and who are not temporary students. We include those who do not give a response to the gender question and code them as "no reply on gender" (males form the base group). Table A3 shows the full results.

Table 5: Migration aspirations and intentions - difference between desired full- and part-time work, by gender, marginal effects

	(1) Full-time	(2) Part-time	(3) Women, FT	(4) Women, PT	(5) Men, FT	(6) Men, PT
A Dep. Var.: Ideally move						
Applicability abroad	0.0646***	0.0868**	0.0567**	0.1000**	0.0688**	0.0660
	(0.0145)	(0.0264)	(0.0192)	(0.0335)	(0.0222)	(0.0516)
Applicability at home	-0.0741***	-0.0667*	-0.0769***	-0.0816*	-0.0706**	-0.0579
	(0.0148)	(0.0276)	(0.0201)	(0.0359)	(0.0221)	(0.0518)
Riskprone (10: risk prone)	0.0145*	0.0279*	0.0260**	0.0293	0.00369	0.00934
	(0.00594)	(0.0115)	(0.00840)	(0.0150)	(0.00847)	(0.0217)
Patience (10: very patient)	-0.00593	-0.00311	-0.00819	0.00183	-0.00411	0.00529
	(0.00528)	(0.0100)	(0.00707)	(0.0132)	(0.00791)	(0.0190)
Observations	1503	359	772	224	717	109
Pseudo R^2	0.103	0.149	0.138	0.158	0.092	0.158
B Dep. Var.: Migration plans						
Applicability abroad	0.0347**	0.0127	0.0400**	0.00461	0.0230	0.0227
	(0.0112)	(0.0181)	(0.0150)	(0.0221)	(0.0170)	(0.0415)
Applicability at home	-0.0322**	-0.0459*	-0.0393**	-0.0382	-0.0245	-0.0670
	(0.0108)	(0.0192)	(0.0149)	(0.0239)	(0.0159)	(0.0372)
Riskprone (10: risk prone)	0.0150**	0.0182*	0.0235***	0.0215	0.00690	0.0229
	(0.00463)	(0.00887)	(0.00654)	(0.0118)	(0.00656)	(0.0170)
Patience (10:very patient)	-0.00360	0.0144*	-0.00553	0.0155	-0.000890	0.0334*
	(0.00392)	(0.00678)	(0.00521)	(0.00879)	(0.00592)	(0.0149)
Observations	1488	359	769	227	714	103
Pseudo R^2	0.067	0.103	0.090	0.130	0.070	0.194
University f.e.	Yes	Yes	Yes	Yes	Yes	Yes
Individual Controls	Yes	Yes	Yes	Yes	Yes	Yes

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Note: This table shows marginal effects on perceived applicability abroad from estimating Equation 14 separately for those wanting to ideally work full-time (FT) or part-time (PT) and female and male respondents who give answers to the questions of perceived applicability at home and abroad, study field, and migration intentions. Panel A uses migration aspirations as dependent variable (whether or not a respondent wants to ideally move) while Panel B uses migration intentions/plans as dependent variable (whether a respondent has concrete migration plans). All models include individual controls, university fixed effects, and controls for economic preferences. Individual controls include controls for gender, age, having a partner, and degree studying for. Controls for economic preferences include a measure of risk proneness and a measure of patience. We limit attention to respondents who are either citizens or permanent residents of the country in which they are taking the survey and who are not temporary students. We include those who do not give a response to the gender question and code them as "no reply on gender" (males form the base group).

We also split the sample by men and women to disentangle to what extent the role of gender for migration aspirations is driven by gender differences in ideal working time. We find in columns (3) and (4) that there is a strong correlation between perceived applicability abroad and ideally wanting to move for women independent of whether they want to work full-time or part-time. This further suggests that ideally wanting to move captures individual motives for moving independent of the ones that are related to the labor market. Interestingly, for men we find that there is no statistically significant correlation between perceived applicability and ideally wanting to move if wanting to work part-time (column (6)). Since the size of the coefficient in column 6 is almost identical to that in column 5 this is likely due to a small sample size.

Panel B is structured like Panel A but considers migration plans as the dependent variable. We now find overall and separately for women that for those working part-time there are no statistically significant (and often small) correlations between perceived applicability and migration plans. This strongly suggests that those wanting to work full time and having concrete moving plans are migrating for labor market related reasons and that relative applicability of education abroad plays a large role in this case. For those who do not want to work full time, the perceived applicability of their education abroad is uncorrelated with migration plans which is in line with lower labor market attachment. The estimated correlations for men are smaller and not statistically significant.

Tables 6 and 7 present robustness analyses for the previous results. We focus on those who want to ideally work full-time and run our preferred specification separately for men and women leaving out one country at a time to understand if specific countries are driving our results.

Focusing first on women, Table 6 Panel A and B show a highly robust effect of applicability abroad on ideally wanting to move and migration plans for women wanting to work full time no matter which country is excluded (with very few exceptions). Effect sizes are quite similar for both dependent variables. For men in Table 7, we find robust effects of perceived international applicability on wanting to ideally move, but we do not find the same robustness when leaving out one country at a time for the correlation between perceived applicability and migration plans.

Table 6: Migration aspirations and intentions - robustness analysis, women, desired full-time work, marginal effects

	(1) w/o Czechia	(2) w/o India	(3) w/o Indonesia	(4) w/o Italy	(5) w/o Mexico	(6) w/o Neth.	(7) w/o Spain
A Dep. var.: Ideally move							
Applicability abroad	0.0703**	0.0588**	0.0579**	0.0449*	0.0413	0.0577**	0.0643**
	(0.0234)	(0.0197)	(0.0196)	(0.0206)	(0.0234)	(0.0192)	(0.0209)
Applicability at home	-0.102***	-0.0720***	-0.0757***	-0.0697**	-0.0743**	-0.0747***	-0.0760***
	(0.0230)	(0.0209)	(0.0204)	(0.0214)	(0.0245)	(0.0201)	(0.0227)
Riskprone (10: risk prone)	0.0290**	0.0213*	0.0259**	0.0346***	0.0256*	0.0259**	0.0210*
	(0.0101)	(0.00874)	(0.00868)	(0.00878)	(0.0101)	(0.00842)	(0.00910)
Patience (10: very patient)	-0.0100	-0.0102	-0.00740	-0.0129	0.000485	-0.00903	-0.00706
	(0.00854)	(0.00720)	(0.00720)	(0.00742)	(0.00862)	(0.00711)	(0.00780)
Observations	523	730	731	688	572	760	628
Pseudo R^2	0.143	0.143	0.141	0.146	0.074	0.139	0.155
B Dep. var.: Migration plans							
Applicability abroad	0.0349	0.0422**	0.0419**	0.0384*	0.0347*	0.0422**	0.0412**
	(0.0195)	(0.0152)	(0.0152)	(0.0163)	(0.0172)	(0.0151)	(0.0156)
Applicability at home	-0.0449*	-0.0372*	-0.0418**	-0.0364*	-0.0317	-0.0383*	-0.0453**
	(0.0179)	(0.0153)	(0.0151)	(0.0162)	(0.0178)	(0.0150)	(0.0161)
Riskprone (10: risk prone)	0.0312***	0.0268***	0.0206**	0.0275***	0.0235**	0.0241***	0.0135*
	(0.00846)	(0.00678)	(0.00669)	(0.00718)	(0.00755)	(0.00659)	(0.00660)
Patience (10: very patient)	-0.00664	-0.00835	-0.00552	-0.00766	-0.00326	-0.00636	0.000113
	(0.00661)	(0.00528)	(0.00531)	(0.00565)	(0.00611)	(0.00525)	(0.00550)
Observations	520	727	731	685	569	757	625
Pseudo R^2	0.098	0.103	0.091	0.093	0.087	0.093	0.074
University f.e.	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Note: This table shows marginal effects of perceived applicability abroad from estimating Equation 14 for female respondents wanting to work full time who are studying for a single major and who give answers to the questions of perceived applicability at home and abroad, study field, and migration intentions. In each column we leave out respondents from one survey country. Panel A uses migration aspirations as dependent variable (whether or not a respondent wants to ideally move) while Panel B uses migration intentions/plans as dependent variable (whether a respondent has concrete migration plans). All models include individual controls (age, having a partner, degree studying for), university fixed effects, a measure of risk proneness and a measure of patience. We limit attention to respondents who are either citizens or permanent residents of the country in which they are taking the survey and who are not temporary students.

Table 7: Migration aspirations and intentions - robustness analysis, men, desired full-time work, marginal effects

	(1) w/o Czechia	(2) w/o India	(3) w/o Indonesia	(4) w/o Italy	(5) w/o Mexico	(6) w/o Neth.	(7) w/o Spain
A Dep. var.: Ideally move							
Applicability abroad	0.0559*	0.0971***	0.0551*	0.0898***	0.0663*	0.0630**	0.0559*
	(0.0249)	(0.0248)	(0.0235)	(0.0228)	(0.0263)	(0.0225)	(0.0234)
Applicability at home	-0.0767**	-0.0789**	-0.0714**	-0.0743**	-0.0642*	-0.0668**	-0.0590*
	(0.0247)	(0.0267)	(0.0229)	(0.0228)	(0.0257)	(0.0223)	(0.0234)
Riskprone (10: risk prone)	-0.00762	0.0123	0.0101	0.00522	0.00574	0.00348	-0.00418
	(0.0100)	(0.00962)	(0.00898)	(0.00866)	(0.00964)	(0.00853)	(0.00880)
Patience (10: very patient)	-0.00136	-0.0145	0.00256	-0.00685	-0.00195	-0.00443	-0.00214
	(0.00891)	(0.00906)	(0.00836)	(0.00812)	(0.00947)	(0.00797)	(0.00820)
Observations	558	529	644	676	545	705	645
Pseudo R^2	0.088	0.124	0.099	0.101	0.050	0.091	0.092
B Dep. var.: Migration plans							
Applicability abroad	0.0151	0.0362	0.0253	0.0284	0.0162	0.0240	0.0147
	(0.0194)	(0.0198)	(0.0181)	(0.0178)	(0.0193)	(0.0172)	(0.0173)
Applicability at home	-0.0200	-0.0244	-0.0323	-0.0297	-0.0162	-0.0222	-0.0206
	(0.0183)	(0.0189)	(0.0166)	(0.0165)	(0.0184)	(0.0160)	(0.0161)
Riskprone (10: risk prone)	-0.00197	0.0115	0.0107	0.00865	0.00619	0.00600	0.00638
	(0.00786)	(0.00772)	(0.00701)	(0.00683)	(0.00722)	(0.00660)	(0.00658)
Patience (10: very patient)	-0.00281	-0.000557	0.00128	-0.000947	-0.00720	-0.00136	0.00392
	(0.00691)	(0.00695)	(0.00632)	(0.00615)	(0.00684)	(0.00597)	(0.00591)
Observations	555	525	645	673	542	702	642
Pseudo R^2	0.045	0.099	0.076	0.075	0.082	0.066	0.065
University f.e.	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Note: This table shows marginal effects of perceived applicability abroad from estimating Equation 14 for male respondents wanting to work full time who are studying for a single major and who give answers to the questions of perceived applicability at home, abroad, study field, and migration intentions. In each column we leave out respondents from one survey country. Panel A uses migration aspirations as dependent variable (whether or not a respondent wants to ideally move) while Panel B uses migration intentions/plans as dependent variable (whether a respondent has concrete migration plans). All models include individual controls (age, having a partner, degree studying for), university fixed effects, a measure of risk proneness and a measure of patience. We limit attention to respondents who are either citizens or permanent residents of the country in which they are taking the survey and who are not temporary students.

6 International applicability and investment in study effort

In Table 8, we analyze to what extent perceived applicability of one's education at home and abroad predicts study effort, measured by weekly study hours. We do this first for all students (columns 1 and 2) and then separately for law students (columns 3 and 4) and other than law students (columns 5 and 6), given that law differs from all other disciplines in being much more country-specific. We find that higher patience predicts more time spent studying among all students and non-law students with a high level of statistical significance, in line with Hypothesis 3. Among law students, patience and time spent studying are uncorrelated. Perceived applicability at home is associated with more time spent studying, in line with Hypothesis 4, although the relationship is only marginally statistically significant. Perceived applicability abroad is not statistically significantly associated with higher time investment among law students. We also find big differences in study time according to the field of studies. Ceteris paribus, studying medicine is associated with the largest time investment in studying, followed by law (which is visible from coefficient sizes in Table 8), and studying humanities is associated with the smallest time investment in studying, followed by economics and business. Women and doctoral students spend more time studying. Higher willingness to take risks is strongly negatively correlated with time spent studying among law students.

In Figure 7, we analyze to what extent perceived applicability of one's education at home and abroad predicts time spent studying, separately for those who would like to ideally stay in their home country and those who would like to ideally emigrate. When analyzing all students in the top left panel, we find that higher perceived applicability abroad is statistically significantly related to spending more time studying among those students with migration aspirations (as Hypothesis 5 predicts), and not among those students who would like to ideally stay in their home country. This has to be caveated though by the fact that we cannot reject that the coefficients for those who want to ideally stay and those who ideally want to move are the same. The pattern holds more clearly when law students are excluded (top right panel), but not among law students (bottom left panel). In general, we cannot make precise statements about law students. Surprisingly, perceived applicability at home is more strongly related to time spent studying among law students with migration aspirations than among law students without migration aspirations. Overall, these results provide some (albeit not strong) evidence that students that ideally want to move and perceive their degree to be more applicable abroad spend more time studying.

Table 8: Weekly hours spent studying

	(1) All students Hours	(2) All students Hours	(3) Law students Hours	(4) Law students Hours	(5) Non-law students Hours	(6) Non-law students Hours
Applicability abroad	0.679+ (0.385)	0.671+ (0.386)	2.414 (2.203)	2.528 (2.219)	0.655+ (0.392)	0.639 (0.394)
Applicability at home	0.694+ (0.393)	0.705+ (0.394)	4.024+ (2.344)	3.922 (2.362)	0.564 (0.399)	0.584 (0.400)
STEM	-1.320 (2.445)	-1.342 (2.447)			2.627+ (1.363)	2.604+ (1.364)
Economics/Business	-3.809+ (2.090)	-3.806+ (2.092)				
Humanities	-3.714 (2.901)	-3.702 (2.902)			0.214 (2.147)	0.232 (2.144)
Social Sciences	-0.525 (2.171)	-0.523 (2.171)			3.333** (1.111)	3.334** (1.112)
Medicine	4.148 (6.248)	4.166 (6.246)			8.431 (5.870)	8.470 (5.863)
Female	1.719* (0.692)	1.721* (0.693)	1.404 (4.717)	1.458 (4.808)	1.728* (0.700)	1.724* (0.701)
No reply on gender	10.10 (9.608)	10.10 (9.607)	22.37** (6.768)	21.54** (6.824)	9.632 (10.83)	9.579 (10.84)
Age	-0.596*** (0.0948)	-0.597*** (0.0948)	-0.889 (0.611)	-0.919 (0.605)	-0.578*** (0.0960)	-0.579*** (0.0960)
Partner	-0.836 (0.674)	-0.831 (0.675)	-3.697 (4.653)	-3.862 (4.698)	-0.746 (0.680)	-0.735 (0.681)
Master's student	1.698+ (0.908)	1.709+ (0.908)	-6.305 (6.746)	-6.080 (6.720)	1.867* (0.916)	1.879* (0.916)
Doctoral student	5.402** (1.879)	5.424** (1.879)	11.46 (14.75)	11.27 (14.76)	5.385** (1.895)	5.419** (1.894)
Riskprone (10: risk prone)	-0.126 (0.163)	-0.126 (0.164)	-1.552 (1.103)	-1.541 (1.105)	-0.0373 (0.163)	-0.0394 (0.164)
Patience (10: very patient)	0.616*** (0.137)	0.618*** (0.137)	-0.122 (0.903)	-0.105 (0.905)	0.666*** (0.138)	0.669*** (0.138)
Migration aspirations		0.0638 (0.681)		-1.570 (4.200)		0.208 (0.688)
University f.e.	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2707	2706	106	106	2601	2600
R^2	0.157	0.157	0.210	0.212	0.163	0.163

Standard errors in parentheses

+ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Note: This table shows the results from estimating Equation 15 separately for all students and then separately for those studying law and those not studying law on the sample of respondents who give answers to the questions of perceived applicability at home and abroad, study field, and migration intentions. The dependent variable is the number of hours students report studying in a week. We also limit attention to respondents who are either citizens or permanent residents of the country in which they are taking the survey and who are not temporary students. We include those who do not give a response to the gender question and code them as "no reply on gender" (males form the base group). Major-specific fixed effects are estimated relative to the base group of those studying law. The base group for degree levels is students studying for a Bachelor's degree.
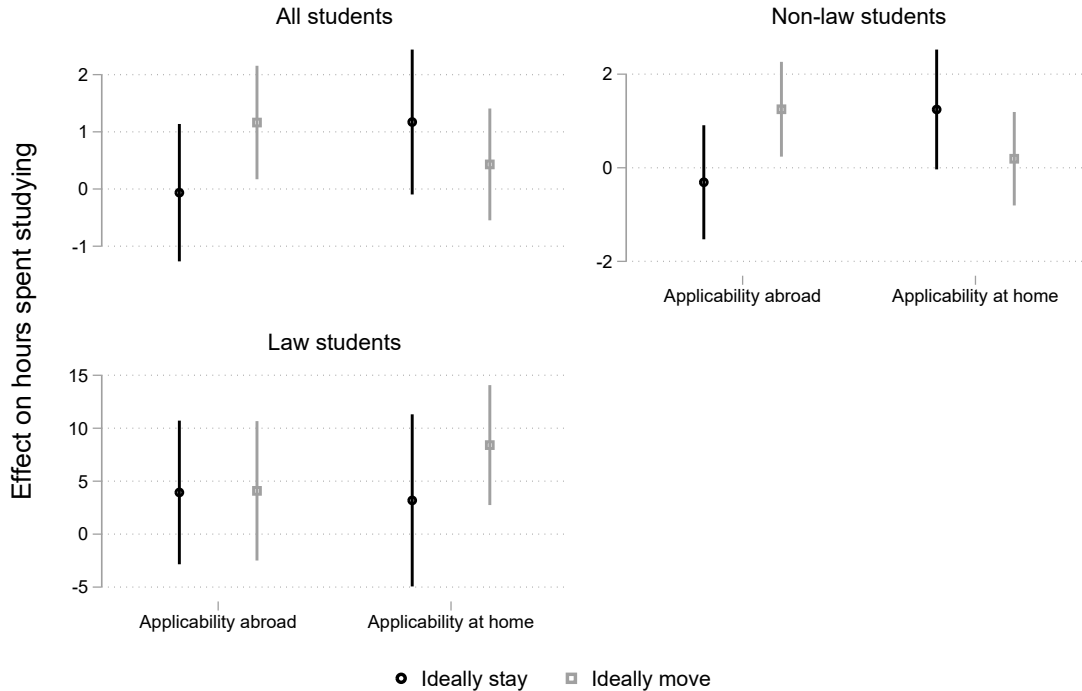
Figure 7: Weekly hours spent studying by migration aspirations

Note: This figure shows the results from estimating Equation 15 separately for all students and then separately for those studying law and those not studying law on the sample of respondents who give answers to the questions of perceived applicability at home and abroad, study field, and migration aspirations. We split the sample further into those students in each category who want to ideally stay in their country and students who want to ideally move. The dependent variable is the number of hours students report studying in a week. All models include major-specific dummies (baseline: law), individual controls, university fixed effects, and controls for economic preferences. Individual controls include controls for gender, age, having a partner, and degree studying for. Controls for economic preferences include a measure of risk proneness and a measure of patience. We limit attention to respondents who are either citizens or permanent residents of the country in which they are taking the survey and who are not temporary students. We include those who do not give a response to the gender question and code them as "no reply on gender" (males form the base group). The base group for degree levels is students studying for a Bachelor's degree. Full results are shown in Table A4.

7   Conclusion

In this paper, we analyzed how students' perceptions of the international applicability of their education are related to their migration aspirations and intentions and the time they spend study-ing. We started by presenting a model on how investment in study effort depends on perceived international applicability of one's education in the presence of uncertainty on the future mobility status. In line with the idea that human capital investments are made to maximize expected utility, our model predicts that those who perceive their education to be more internationally applicable are more likely to aspire to migrate. Furthermore, our model predicts that investment in study effort is increasing in the perceived applicability of one's education at home, and in the perceived

applicability of one's education abroad for those students who aspire to migrate.

We then test our model based on data from student surveys in Czechia, India, Indonesia, Italy, Mexico, the Netherlands, and Spain. The empirical results confirm our predictions: migration aspirations and intentions increase in the perceived international applicability of one's education, even after controlling for observable individual characteristics, study field, and university fixed effects. Furthermore, time spent studying is increasing in the perceived applicability of one's education abroad. When analyzing the association between perceived applicability of one's education abroad and time spent studying separately among students with migration aspirations and those who would ideally like to stay at home, the positive association is statistically significant only among those who would ideally like to emigrate. Although these relationships are correlational as there is no exogenous source of variation for international applicability or migration aspirations, it is notable that all correlational patterns are in line with what our utility maximization model with uncertainty about the future mobility status predicts.

Our findings have also implications for public policies. As governments can expect to capture a smaller fraction of returns to internationally applicable education, there is a concern that public universities would underinvest in such education, from global efficiency perspective. This is an especially severe problem for countries facing major brain drain, like many African and Caribbean countries do. One possibility, already suggested by Bhagwati and Hamada (1974, 1982), is a graduate tax on emigrants from developing countries, with tax revenue transferred to the country that paid for their education. However, such a system would require cooperation from destination countries, and raise concerns about corrupt or inefficient governments expropriating emigrants. Another alternative are educational partnerships in which destination countries would help to finance education in countries of origin, to generate mutual gains. The third solution, pursued prominently by the Philippines, is to embrace and promote large-scale emigration, with remittances financing development in the countries of origin. Establishing differences in perceived international applicability of different study fields can help governments to choose optimal policies, whichever of these strategies they would choose to pursue.

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Table A1: Migration aspirations and intentions (marginal effects)

	(1) Mig. Aspir.	(2) Mig. Aspir.	(3) Mig. Aspir.	(4) Mig. Aspir.	(5) Mig. Aspir.	(6) Mig. Intent.	(7) Mig. Intent.	(8) Mig. Intent.	(9) Mig. Intent.	(10) Mig. Intent.
Applicability abroad	0.0700*** (0.00904)	0.0313** (0.00966)	0.0333*** (0.00974)	0.0312** (0.00978)	0.0559*** (0.0105)	0.0236*** (0.00684)	0.0224** (0.00740)	0.0204** (0.00740)	0.0178* (0.00742)	0.0239** (0.00792)
Female			0.0351 (0.0194)	0.0367 (0.0194)	0.0424* (0.0193)			-0.0167 (0.0142)	-0.0158 (0.0141)	-0.0142 (0.0141)
No reply on gender			0.287* (0.121)	0.290* (0.121)	0.297* (0.120)			-0.0394 (0.103)	-0.0407 (0.102)	-0.0424 (0.0998)
Age			0.000156 (0.00247)	-0.000130 (0.00246)	0.000485 (0.00243)			0.00303 (0.00160)	0.00279 (0.00160)	0.00294 (0.00161)
Partner			-0.0406* (0.0199)	-0.0395* (0.0198)	-0.0391* (0.0197)			-0.0314* (0.0149)	-0.0299* (0.0148)	-0.0298* (0.0148)
Master's student			-0.00976 (0.0263)	-0.00659 (0.0263)	-0.00576 (0.0261)			0.00862 (0.0207)	0.0111 (0.0208)	0.0118 (0.0208)
Doctoral student			-0.113* (0.0461)	-0.108* (0.0461)	-0.0977* (0.0461)			0.0169 (0.0353)	0.0208 (0.0359)	0.0242 (0.0365)
Riskprone (10: risk prone)				0.0136** (0.00442)	0.0145*** (0.00439)				0.0142*** (0.00337)	0.0145*** (0.00336)
Patience (10: very patient)				0.000297 (0.00385)	0.000982 (0.00382)				-0.000162 (0.00278)	0.000109 (0.00278)
Applicability at home					-0.0650*** (0.0105)					-0.0168* (0.00753)
University f.e.	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
Observations	2853	2853	2810	2810	2810	2854	2839	2796	2796	2796
Pseudo R^2	0.014	0.074	0.080	0.083	0.093	0.005	0.030	0.034	0.042	0.044

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Note: This table shows marginal effects of perceived applicability abroad from estimating Equation 14 on the sample of respondents who give answers to the questions of perceived applicability at home and abroad, study field, and migration aspirations/intentions. Columns 1-4 use migration aspirations as dependent variable while columns 5-8 use migration intentions/plans as dependent variable (whether a respondent has concrete migration plans). We include those who do not give a response to the gender question and code them as "no reply on gender" (males form the base group). The base group for degree levels is students studying for a Bachelor's degree. We limit attention to respondents who are either citizens or permanent residents of the country in which they are taking the survey and who are not temporary students.

Table A2: Migration aspirations and intentions (marginal effects) when controlling for the study field

	(1) Mig. Aspir.	(2) Mig. Aspir.	(3) Mig. Aspir.	(4) Mig. Aspir.	(5) Mig. Aspir.	(6) Mig. Intent.	(7) Mig. Intent.	(8) Mig. Intent.	(9) Mig. Intent.	(10) Mig. Intent.
Applicability abroad	0.0638***	0.0295**	0.0312**	0.0292**	0.0537***	0.0232***	0.0207**	0.0187*	0.0161*	0.0220**
	(0.00922)	(0.00971)	(0.00980)	(0.00983)	(0.0106)	(0.00700)	(0.00745)	(0.00746)	(0.00748)	(0.00803)
STEM	-0.0327	0.121*	0.140*	0.142*	0.104	0.0267	0.0782*	0.0756*	0.0774*	0.0712
	(0.0532)	(0.0585)	(0.0585)	(0.0583)	(0.0595)	(0.0343)	(0.0357)	(0.0360)	(0.0362)	(0.0371)
Economics/Business	0.00583	0.124*	0.130**	0.130**	0.0982*	0.0355	0.0649*	0.0616*	0.0605*	0.0560*
	(0.0497)	(0.0486)	(0.0484)	(0.0483)	(0.0495)	(0.0320)	(0.0266)	(0.0268)	(0.0268)	(0.0280)
Humanities	-0.0433	0.0909	0.0787	0.0831	0.0480	0.0537	0.0799	0.0690	0.0730	0.0670
	(0.0721)	(0.0703)	(0.0708)	(0.0705)	(0.0715)	(0.0501)	(0.0476)	(0.0481)	(0.0488)	(0.0492)
Social Sciences	0.151**	0.115*	0.114*	0.113*	0.0801	0.0437	0.0588*	0.0586*	0.0573*	0.0518
	(0.0518)	(0.0505)	(0.0501)	(0.0500)	(0.0511)	(0.0337)	(0.0282)	(0.0284)	(0.0284)	(0.0295)
Medicine	-0.172	-0.0204	0.00557	0.00640	-0.0245	0.00397	0.0566	0.0365	0.0332	0.0279
	(0.124)	(0.127)	(0.129)	(0.129)	(0.129)	(0.0811)	(0.0932)	(0.0854)	(0.0836)	(0.0837)
Riskprone (10: risk prone)				0.0135**	0.0144**				0.0142***	0.0145***
				(0.00441)	(0.00438)				(0.00337)	(0.00336)
Patience (10: very patient)				-0.0000359	0.000689				-0.000313	-0.0000598
				(0.00385)	(0.00382)				(0.00278)	(0.00279)
Applicability at home					-0.0625***					-0.0153*
					(0.0105)					(0.00759)
University f.e.	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
Individual controls	No	No	Yes	Yes	Yes	No	No	Yes	Yes	Yes
Observations	2853	2853	2810	2810	2810	2854	2839	2796	2796	2796
Pseudo R^2	0.029	0.076	0.083	0.085	0.094	0.006	0.032	0.034	0.044	0.046

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Note: This figure shows marginal effects of perceived applicability abroad from estimating Equation 14 on the sample of respondents who give answers to the questions of perceived applicability at home and abroad, study field, and migration aspirations/intentions. In contrast to Table A1 all models include controls for study field with law being the baseline category. Columns 1-4 use migration aspirations as dependent variable while columns 5-8 use migration intentions/plans as dependent variable (whether a respondent has concrete migration plans). We include those who do not give a response to the gender question and code them as "no reply on gender" (males form the base group). Major-specific fixed effects are estimated relative to the base group of those studying law. The base group for degree levels is students studying for a Bachelor's degree. We limit attention to respondents who are either citizens or permanent residents of the country in which they are taking the survey and who are not temporary students.

Table A3: Migration aspirations and intentions - the role of individual-level variation in perceived applicability within university and major by gender

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		Women				Men		
	Mig. Aspir.	Mig. Aspir.	Mig. Intent.	Mig. Intent.	Mig. Aspir.	Mig. Aspir.	Mig. Intent.	Mig. Intent.
Applicability abroad	0.0186	0.0411**	0.0160	0.0217*	0.0391*	0.0671***	0.0144	0.0210
	(0.0127)	(0.0137)	(0.00966)	(0.0104)	(0.0156)	(0.0168)	(0.0119)	(0.0127)
STEM	0.237**	0.201*	0.0754	0.0700	0.0667	0.0220	0.216	0.206
	(0.0773)	(0.0783)	(0.0521)	(0.0529)	(0.111)	(0.111)	(0.131)	(0.131)
Economics/Business	0.133*	0.101	0.0501	0.0448	0.122	0.0856	0.202	0.193
	(0.0568)	(0.0582)	(0.0335)	(0.0348)	(0.102)	(0.102)	(0.127)	(0.127)
Humanities	0.0801	0.0431	0.0668	0.0600	0.131	0.0925	0.167	0.157
	(0.0834)	(0.0845)	(0.0598)	(0.0601)	(0.147)	(0.147)	(0.149)	(0.149)
Social Sciences	0.135*	0.104	0.0333	0.0278	0.0636	0.0238	0.213	0.202
	(0.0578)	(0.0589)	(0.0337)	(0.0349)	(0.106)	(0.106)	(0.128)	(0.128)
Medicine	0.0785	0.0555	0.0564	0.0509	-0.162	-0.225		
	(0.163)	(0.162)	(0.116)	(0.117)	(0.237)	(0.240)		
Riskprone (10: risk prone)	0.0235***	0.0244***	0.0192***	0.0196***	0.00251	0.00338	0.00878	0.00900
	(0.00597)	(0.00594)	(0.00465)	(0.00465)	(0.00657)	(0.00653)	(0.00496)	(0.00494)
Patience (10: very patient)	-0.00371	-0.00319	0.000489	0.000759	0.00360	0.00476	-0.00146	-0.00111
	(0.00502)	(0.00499)	(0.00365)	(0.00365)	(0.00598)	(0.00594)	(0.00436)	(0.00437)
Applicability at home		-0.0585***		-0.0150		-0.0686***		-0.0168
		(0.0138)		(0.00999)		(0.0163)		(0.0118)
University f.e.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1539	1539	1527	1527	1258	1258	1244	1244
Pseudo R^2	0.113	0.121	0.061	0.063	0.068	0.077	0.042	0.044

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Note: This table shows marginal effects on perceived applicability abroad from estimating Equation 14 separately for female (columns 1-4) and male (columns 5-8) respondents who give answers to the questions of perceived applicability at home and abroad, study field, and migration aspirations/intentions. Migration aspirations are the dependent variable in columns 1, 2, 5, and 6 while migration intentions are the dependent variable in columns 3, 4, 7, and 8. All models include individual controls and university fixed effects. Individual controls include controls for age, having a partner, degree studying for, and whether or not the respondent has multiple majors. We limit attention to respondents who are either citizens or permanent residents of the country in which they are taking the survey and who are not temporary students.

Table A4: Weekly hours spent studying according to migration aspirations

	(1)	(2)	(3)	(4)	(5)	(6)
	All students		Law students		Non-law students	
	Ideally stay	Ideally move	Ideally stay	Ideally move	Ideally stay	Ideally move
Applicability abroad	-0.0638	1.163*	3.937	4.089	-0.310	1.251*
	(0.612)	(0.506)	(3.347)	(3.242)	(0.621)	(0.516)
Applicability at home	1.171+	0.430	3.186	8.407**	1.246+	0.193
	(0.646)	(0.498)	(4.011)	(2.789)	(0.652)	(0.509)
STEM	-2.730	0.220			2.693	2.249
	(3.702)	(3.466)			(2.228)	(1.772)
Economics/Business	-5.165+	-2.006				
	(2.936)	(3.088)				
Humanities	-6.398	-0.328			-0.921	1.680
	(3.987)	(4.229)			(2.861)	(3.116)
Social Sciences	-0.745	0.683			4.169*	2.991*
	(3.062)	(3.174)			(1.743)	(1.501)
Medicine	0.531	13.08			6.732	15.28+
	(8.577)	(9.310)			(7.950)	(8.892)
Female	1.476	1.792+	14.21+	-8.803	1.117	2.096*
	(1.034)	(0.952)	(7.741)	(8.577)	(1.047)	(0.956)
No reply on gender	8.069**	10.88	18.21		5.192	10.81
	(2.734)	(12.44)	(13.73)		(3.667)	(12.46)
Age	-0.522***	-0.626***	-0.516	-2.421*	-0.507**	-0.611***
	(0.152)	(0.127)	(0.689)	(0.969)	(0.155)	(0.126)
Partner	-0.726	-0.871	-8.809	-6.274	-0.565	-0.789
	(0.963)	(0.950)	(7.548)	(6.756)	(0.970)	(0.956)
Master's student	0.912	2.663+	3.454	-12.40	1.010	2.995*
	(1.228)	(1.372)	(12.27)	(8.641)	(1.250)	(1.371)
Doctoral student	7.682**	3.730	-23.91+	21.43	8.357**	3.174
	(2.855)	(2.466)	(13.42)	(14.12)	(2.872)	(2.460)
Riskprone (10: risk prone)	-0.464*	0.142	-1.987	-2.331	-0.413+	0.252
	(0.233)	(0.232)	(1.449)	(1.701)	(0.234)	(0.231)
Patience (10: very patient)	0.713***	0.548**	0.978	-2.346+	0.728***	0.614**
	(0.208)	(0.185)	(1.332)	(1.253)	(0.210)	(0.186)
University f.e.	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1258	1448	55	51	1203	1397
R^2	0.165	0.162	0.281	0.480	0.172	0.169

Standard errors in parentheses
$^+$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Note: This table shows the results from estimating Equation 15 separately for all students (columns 1-2) and then separately for those studying law (columns 3-4) and those not studying law (columns 5-6) on the sample of respondents who give answers to the questions of perceived applicability at home and abroad, study field, and migration aspirations. We split the sample further into those students in each category who want to ideally stay in their country (columns 1, 3, and 5) and students who want to ideally move (columns 2, 4, and 6). The dependent variable is the number of hours students report studying in a week. We include those who do not give a response to the gender question and code them as "no reply on gender" (males form the base group). Major-specific fixed effects are estimated relative to the base group of those studying law. The base group for degree levels is students studying for a Bachelor's degree. We limit attention to respondents who are either citizens or permanent residents of the country in which they are taking the survey and who are not temporary students.