

Export, Migration, and Costs of Trade: Evidence from Central European Firms

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Appendix A

Table A1: Marginal effects and elasticities on the export probability

Variable	PROP [1]		PROP [2]		PROP [3]		PROP [4]	
Export Probability	0.207		0.148		0.206		0.141	
	Marg. Eff.	Elasticity	Marg. Eff.	Elasticity	Marg. Eff.	Elasticity	Marg. Eff.	Elasticity
ln Immigration	0.062	0.300	0.073	0.493	0.062	0.302	0.076	0.538
ln Distance	-0.047	-0.228	-0.044	-0.298	0.013	0.065	0.019	0.134
Border*	0.099	0.479	0.081	0.543	0.084	0.406	0.063	0.449
Language*	0.136	0.658	0.149	1.004	0.094	0.456	0.108	0.767
ln GDP region	-0.081	-0.392			-0.084	-0.409		
ln GDP / capita region	0.072	0.349			0.082	0.397		
ln Population density region	-0.014	-0.070			-0.013	-0.065		
EU*	0.029	0.139	-0.004	-0.025				
ln GDP destination	0.052	0.252	0.055	0.368				
ln GDP / capita destination	0.075	0.361	0.113	0.765				
Type of FE	industry		firm		destination-industry		firm destination-industry	
N	9,628		9,181		9,253		8,797	

Notes: Marginal effects are computed at means. * denote that marginal effect is computed on a discrete change of a dummy variable from 0 to 1. The corresponding value of binary variables in the column reporting elasticity levels are semi-elasticities.

Appendix B

The supplementary material summarized in this Appendix B underpins the robustness of the findings of the main text of the article by accounting for the (potentially biasing) selection effect when estimating the intensive margin elasticities, by using a different endogenous variable (on the export volume), by using the share (instead of the number) of immigrants, by dividing immigrants by their length of stay in the host country and by using all firms when analyzing firms' export destination choice (instead of restricting the sample to exporters). When interpreting the results I mainly focus on the parameter estimates on the variables concerning migration and on variables that are not included in the analysis reported in the main text of the article. All additional variables included in this Appendix B are summarized in Table B1.

As discussed in the main text the selection of firms into export markets might be non-random, which can lead to biased parameter estimates. To control for this (potentially biasing) sample selection I perform a HECKMAN (1976)-type two-stage least squares (2SLS) estimation that estimates the selection of firms into export markets first and corrects for the (potentially biasing) sample selection when estimating export volumes (see WOOLDRIDGE, 2002, for an introduction). The challenging task in this procedure is to find variables that influence firms' decisions on export destinations, but have no impact on their exported volumes. The model developed by CHANEY (2008) summarized in the main text suggests that variables influencing only fixed export costs fulfil these requirements, as fixed export costs affects the number of exporting firms (or, equivalently, the probability of a firm to export), but not their export volumes. HELPMAN et al. (2008) argue that variables indicating the hurdles to start a business are correlated with fixed, but not with variable trade barriers. Variables based on the difficulties to start a business can therefore be excluded from the regression on export volumes and are therefore well-suited to identify the second stage regression (without relying only on the normality assumption of the selection equation).

I follow HELPMAN et al. (2008) and use variables based on the number of days, the number of legal procedures, and the relative costs for an entrepreneur to start a business as indicators of these difficulties. Data on these variables is available from the World Bank's World Development Indicators (WDI)

database and are from 2009.¹ I follow MANOVA (2013) and use the sum of the value for each variable for the country, where the firm is located, and for the export destination.² I interact these three variables with a dummy variable indicating whether import and export countries share a common border to allow for non-linear effects between neighbouring and non-neighbouring countries.

The estimation results accounting for the sample selection are summarized in Table B2. A probit model is used to specify the first stage selection equation. The endogenous variable of the selection equation is binary and takes the value one if a firm exports to a particular destination and reports its export volume. In specification Heckman [B1] (Heckman [B2]) fixed industry (firm) effects are included in both first and the second stage regression.³ The selection equation indicates a positive impact of the variable on immigration on the export propensity. All parameter estimates of variables excluded from the second stage equation are significantly different from zero: The sum of costs to start a business in the home and the destination country has a significantly negative effect on firms' export probability. However, the effect is significantly smaller (in absolute terms) for the decision to export to neighbouring countries. On the other hand, the number of procedures and the number of days necessary to start a business has (surprisingly) a positive influence for non-neighbouring countries, but the influence is significantly smaller (in absolute terms) for pairs of countries that share a common border.

In the second stage regression on the export volumes immigration has a statistically significant positive impact at the ten percent significance level when fixed firm effects are included (*Heckman* [B2]), but is statistically insignificant when only industry fixed effects are considered (*Heckman* [B1]). While the parameter estimates on the geographical distance are significantly negative in the selection equation, the respective coefficients are not significantly different from zero in the second stage regression. In both specifications the coefficient on the inverse Mills' ratio (included in the regression on export volumes to control for the sample selection) is not significantly different from zero. I interpret this as an indication

¹ I am grateful to Elisabeth Christen for sharing the data with me. The procedure applied in this article is very similar to CHRISTEN et al. (2014).

² HELPMAN et al. (2008) use dummy variables indicating whether the hurdles of both export and import destination are above the median. Given the smaller number of export and import destinations these binary variables would be weak instruments in my case.

³ Note that industry-destination fixed effects are not included in the Heckman procedure. The parameter estimates of the variables excluded from the second stage regression (indicating the hurdles to start a business) are not significantly different most of the time if industry-destination fixed effects are included. Probably the (remaining) variation of these variables is too small in this case.

that the self-selection of firms into export markets does not affect the results of the analysis on export volumes. The results of the HECKMAN (1976)-type 2SLS procedure are therefore reported in this appendix only.

As a sensitivity analysis an additional variable measuring the cultural distance between home and destination country is included. This composite index draws on different dimensions of cultural distance between home and destination country, such as differences in power distance, individualism, masculinity/femininity, as well as uncertainty avoidance. These dimensions of cultural proximity were developed by HOFSTEDE (1980). I follow KOGUT and SINGH (1988) and use a composite index based on these variables. This index CD_{cd} between home country c and export destination d is calculated as:

$$CD_{cd} = \sum_{i=1}^4 \frac{(I_{ic} - I_{id})^2}{4 V_i} \quad (7)$$

Where I_{ic} (I_{id}) stands for the index in the home (destination) country and V_i is the variance of the respective index. This metric variable on cultural distance is expected to reduce both firms' export propensities and export volumes. Information on these cultural dimensions is not available for Croatia, Slovenia and Ukraine. Including CD_{cd} therefore reduces the size of the sample in the empirical analysis (which is the reason for excluding CD_{cd} in the regression analysis reported in the main text).

The parameter estimates on immigration are hardly affected by including this composite index of cultural distance (and by the accompanying restriction of the sample), as reported in Table B3 and Table B4. The parameter estimates on the composite index of cultural distance do not give convincing results when estimating firms' export propensities, as the estimated coefficients take a positive and negative value twice and are significantly different from zero in one out of four specifications only. One reason for these unstable parameter estimates might be that this variable varies more strongly across destinations compared to firms' home countries. The respective parameter estimates are negative and statistically significant only if destination specific variables (and destination fixed effects) are excluded from the regression analysis. Contrary, this composite index has a robust negative effect on export volumes. The respective parameters estimates take a negative sign throughout all model specifications and are

significantly different from zero in three out of four models. Interestingly, cultural closeness seems to have a stronger influence on firms' export volumes than on their export propensity.

Table B5 reports the parameter estimates of the relative export volumes to a particular destination country (sales to this country over total sales, denoted as SHARE). The parameters on immigration are significantly different from zero at the five (ten) percent significance level in two (all) model specifications. The estimated elasticities are between 0.064 in specification SHARE [B1] and 0.083 in model SHARE [B4] and are therefore very similar to the respective results obtained from analyzing absolute export values (reported in Table 4 of the main text).⁴

In Table B6 and B7 the share of immigrants (among the entire regional population) is included instead of the absolute number. In all specifications the share of immigrants has a significantly positive effect on firms' export probability (summarized in Table B6), although the extensive margin elasticities based on these parameter estimates are somewhat smaller than for the absolute number of immigrants and range from 0.15 to 0.26. While the parameter estimates of the share of immigrants on the export volume of exporting firms are positive in all model specifications (Table B7), the estimated coefficients are not significantly different from zero.

As discussed in the main text it might take time (after the immigrants' arrival in the host country) for the trade enhancing effect of immigrants to evolve. To account for this (potentially) different impact I divide the immigrants according to their length of stay in the host country in two groups (less than and at least 10 years). Table B8 reports the estimation results on the export propensity. The effect of the number of immigrants with at least 10 years of residence is positive and significantly different from zero in all model specifications. The size of the respective coefficients is only slightly smaller compared to the basic model specification summarized in Table 3 in the main text. The parameter estimates on more recently arrived immigrants (with less than 10 years of residence) are, however, rather small (in absolute values) and not significantly different from zero in any model specification. The results suggest that immigrants that have

⁴ For the model specifications including fixed firm effects (SHARE [B2] and SHARE [B4]) the parameter estimates – except for the intercept – are identical to the parameter estimates on the absolute export volume (SALES [2] and SALES [4] in Table 4 of the main text), as $\ln \text{SHARE}_{fd} = \ln(\text{SALES}_{fd}/\text{TOTAL SALES}_f) = \ln \text{SALES}_{fd} - \ln \text{TOTAL SALES}_f$ and as $\ln \text{TOTAL SALES}_f$ is controlled for by fixed firm effects. The results are nevertheless reported in Table B3 to facilitate comparison across different model specifications.

been staying in the host country for longer periods facilitate setting up export relations more strongly that newly arrived immigrants. Contrary, the parameter estimates of the variables of immigration (divided by the length of stay) are not significantly different from zero at the five percent significance level in any model specification when analyzing export volumes. These results are summarized in Table B9.

As an additional sensitivity analysis (reported in Table B10) the sample is not restricted to the 1,120 exporting firms when estimating the export propensity but includes all 8,299 firms that participated in the survey. In all specifications the parameter estimates on immigration are positive and statistically significant. When industry (PROP [B13]) and destination-industry (PROP [B15]) fixed effect are included, the extensive margin elasticities of immigration is roughly 0.27 and therefore very similar to the elasticities when the sample is restricted to exporters (the elasticity of the corresponding specifications PROP [1] and PROP [3] are 0.30, see Table 3 in the main text). In specification PROP [B12] and PROP [B14] region-industry fixed effects are included instead of firm dummies, as firm fixed effects would wipe out all non-exporters. The extensive margin elasticities in these specifications are about 0.35 and are therefore somewhat smaller than in the respective specifications of the main text (with elasticities of about 0.50). Note that these results are not directly comparable as these specifications differ with respect to both sample size and the types of fixed effects included in the regression. Including region-industry instead of firm fixed effects when using the restricted sample gives extensive margin elasticities of about 0.38. These figures are again very close to the elasticities derived when using the entire sample, suggesting that the extensive margin elasticities are hardly affected by including (or excluding) non-exporters.

In the last sensitivity analysis in Appendix B (reported in Table B11 and Table 12) I exclude Russia and Ukraine as potential export destinations from the empirical analysis. I do so as both countries are radically different from all other destination countries: Ukraine and Russia are the only countries in the sample that are neither member of the EU nor have a free trade agreement (as Switzerland) or an Association Agreement (as Croatia). Additionally, both countries are considerably less developed: GDP per capita equals about 6,000 Euros in Russia and 2,000 Euros in Ukraine, whereas this figure is above 10,000 Euros for all other destinations in the sample. The estimated effect of immigration on both export

propensity and export volume is hardly affected by excluding these two destination countries. The most notable difference is that the positive effect of an EU-membership of the export destination country gets larger and the respective parameter estimates become significantly different from zero when explaining firms' export propensities.

In general, the results of the sensitivity analysis strengthen the main findings of the article: The number of immigrants has a sizeable positive effect on the probability of firms to expand their business to the source countries of immigration, but have a much smaller (and statistically less reliable) impact on their export volumes.

Table B1: Summary statistics on additional variables

Variable	Variable Description	# of Obs.	Mean	Std. Dev.	Min	Max
Share	Share of Sales (in per cent) of firm f in destination country d over total sales, if sales > 0	1,056	13.963	19.277	0.043	100
Immigration (Share)	Number of residents in region r born in the destination country d aged 15 or older divided by the total number of residents in region r (in %)	87,393	0.250	0.495	0	3.538
Immigration (at least 10 years)	Number of residents in region r born in the destination country d aged 15 or older (in 1,000) staying in the respective country for at least 10 years	87,393	2.394	4.935	0	29.192
Immigration (less than 10 years)	Number of residents in region r born in the destination country d aged 15 or older (in 1,000) staying in the respective country for less than 10 years	87,393	1.058	2.575	0	12.765
Cultural Distance	Composite index measuring the cultural distance between home country c and export destination d	74,594	1.879	1.236	0.193	3.846
Procedures	Sum of start-up procedures to register a business (in number) in home country c and destination country d	87,393	13.249	2.695	7	19
Days	Sum of time required to start a business (in days) in home country c and destination country d	87,393	34.229	12.068	10	57
Costs	Sum of costs of business start-up procedures (in % of GNI per capita) in home country c and destination country d	87,393	12.168	5.783	3.700	27.100

Note: The index of cultural distance is not available for Croatia, Slovenia and Ukraine.

Table B2: Results on two stage least squares estimation on export volumes controlling for sample selection into export markets

Variable	Heckman [1]		Heckman [2]	
	2 nd stage (OLS)	1 st stage (probit)	2 nd stage (OLS)	1 st stage (probit)
ln Immigration	-0.009 (0.098)	0.146 *** (0.018)	0.053 * (0.030)	0.261 *** (0.027)
ln Geographical Distance	0.013 (0.154)	-0.074 * (0.043)	-0.047 (0.064)	-0.195 *** (0.071)
Border	-0.136 (0.270)	2.294 *** (0.850)	0.219 ** (0.098)	3.428 *** (1.216)
Language	0.551 ** (0.238)	0.255 *** (0.070)	0.071 (0.094)	0.645 *** (0.104)
ln GDP region	0.321 * (0.183)	-0.189 *** (0.054)		
ln GDP / capita region	0.193 (0.248)	0.343 *** (0.056)		
ln Population density region	-0.369 ** (0.171)	-0.312 *** (0.021)		
EU	0.428 * (0.247)	0.079 (0.085)	0.074 (0.090)	0.150 (0.126)
ln GDP destination	0.026 (0.094)	0.100 *** (0.024)	0.139 *** (0.030)	0.250 *** (0.041)
ln GDP / capita destination	0.236 (0.274)	0.471 *** (0.073)	0.161 (0.101)	0.621 *** (0.110)
ln # Procedures		0.727 ** (0.302)		1.621 *** (0.543)
ln # Procedures x Common Border		-0.458 (0.341)		-0.864 * (0.483)
ln # Days		0.503 *** (0.105)		0.565 *** (0.151)
ln # Days x Common Border		-0.603 *** (0.119)		-0.783 *** (0.169)
ln # Costs		-0.317 *** (0.099)		-0.545 *** (0.148)
ln # Costs x Common Border		0.363 *** (0.128)		0.634 *** (0.191)
constant	-6.596 (4.658)	-10.331 *** (1.292)	1.524 (1.219)	-15.379 *** (2.068)
Mills' ratio	0.198 (0.619)		-0.193 * (0.103)	
Type of FE	industry		firm	
N	1,029	9,646	1,052	4,250
R ²	0.139		0.012	
log likelihood	-2,643.18		-1,396.91	

Notes: Standard errors in parentheses. *** (**) [*] denote the significance at the 1% (5%) [10%] level.

Table B3: Results on probit estimation on export propensity including cultural distance

Variable	PROP [B1]	PROP [B2]	PROP [B3]	PROP [B4]
ln Immigration	0.237 *** (0.033) [0.309] ¹	0.350 *** (0.041) [0.513] ¹	0.236 *** (0.025) [0.311] ¹	0.348 *** (0.029) [0.514] ¹
ln Geographical Distance	-0.154 * (0.080)	-0.279 *** (0.085)	0.082 (0.069)	0.021 (0.090)
Cultural Distance	0.057 (0.042)	-0.080 (0.049)	0.147 *** (0.035)	-0.120 (0.082)
Border	0.374 *** (0.103)	0.317 ** (0.140)	0.315 *** (0.084)	0.320 *** (0.103)
Language	0.400 *** (0.125)	0.525 *** (0.139)	0.366 *** (0.130)	0.420 *** (0.140)
ln GDP region	-0.283 ** (0.121)		-0.250 *** (0.081)	
ln GDP / capita region	0.205 ** (0.094)		0.177 ** (0.074)	
ln Population density region	-0.065 ** (0.031)		-0.060 ** (0.028)	
EU	0.026 (0.104)	-0.144 (0.139)		
ln GDP destination	0.198 *** (0.037)	0.267 *** (0.047)		
ln GDP / capita destination	0.367 *** (0.132)	0.428 *** (0.156)		
constant	-3.630 ** (1.736)	-7.613 *** (1.675)	1.124 (1.240)	1.246 (1.113)
Type of FE	industry	firm	destination- industry	firm destination- industry
N	8,206	7,715	7,938	7,439
log likelihood	-4,018.07	-2,972.99	-3,792.45	-2,746.63

Notes: Standard errors in parentheses. Standard errors are clustered with respect to region-destination. *** (**) [*] denote the significance at the 1% (5%) [10%] level. ¹ Figures in squared brackets denote the corresponding elasticity of the variable "ln Immigration". The respective marginal effects are computed at means.

Table B4: Results on least squares estimation on export volumes including cultural distance

Variable	SALES [B1]	SALES [B2]	SALES [B3]	SALES [B4]
ln Immigration	0.057 (0.039)	0.083 ** (0.040)	0.057 (0.044)	0.083 * (0.046)
ln Geographical Distance	-0.121 (0.088)	-0.108 (0.096)	0.093 (0.103)	0.154 (0.111)
Cultural Distance	-0.109 *** (0.038)	-0.082 ** (0.038)	-0.296 *** (0.099)	-0.105 (0.170)
Border	0.257 ** (0.128)	0.321 ** (0.132)	0.250 (0.162)	0.367 ** (0.164)
Language	0.245 * (0.138)	0.120 (0.144)	0.036 (0.206)	-0.017 (0.240)
ln GDP region	0.205 (0.264)		0.105 (0.283)	
ln GDP / capita region	-0.054 (0.245)		0.061 (0.275)	
ln Population density region	-0.170 (0.117)		-0.152 (0.124)	
EU	0.038 (0.132)	-0.033 (0.134)		
ln GDP destination	0.146 *** (0.040)	0.170 *** (0.042)		
ln GDP / capita destination	-0.165 (0.176)	-0.062 (0.185)		
constant	2.092 (3.862)	4.146 ** (1.895)	1.371 (3.871)	3.884 *** (0.674)
Type of FE	industry	firm	destination- industry	firm destination- industry
Hausman test statistic	40.62		175.97	
p-value	0.000		0.000	
N	967	967	967	967
R ²	0.103	0.012	0.152	0.053

Notes: Standard errors in parentheses. Standard errors are based on heteroscedasticity consistent estimates of the covariance matrix (WHITE, 1980). *** (**) [*] denote the significance at the 1% (5%) [10%] level. Specification [1] and [3] include random firm effects. Hausman test statistics are based on non-robust standard errors of the respective model specifications.

Table B5: Results on least squares estimation on relative export volumes

Variable	SHARE [B1]	SHARE [B2]	SHARE [B3]	SHARE [B4]
ln Immigration	0.064 *	0.079 **	0.082 **	0.083 *
	(0.034)	(0.037)	(0.041)	(0.047)
ln Geographical Distance	-0.141 *	-0.079	0.066	0.143
	(0.079)	(0.092)	(0.094)	(0.104)
Border	0.128	0.246 **	0.272 *	0.385 **
	(0.109)	(0.118)	(0.141)	(0.157)
Language	0.161	0.100	0.054	0.034
	(0.114)	(0.129)	(0.176)	(0.200)
ln GDP region	0.135		0.050	
	(0.169)		(0.189)	
ln GDP / capita region	-0.664 ***		-0.746 ***	
	(0.167)		(0.186)	
ln Population density region	0.005		0.045	
	(0.066)		(0.071)	
EU	0.103	0.065		
	(0.112)	(0.122)		
ln GDP destination	0.194 ***	0.164 ***		
	(0.036)	(0.041)		
ln GDP / capita destination	0.187	0.197		
	(0.115)	(0.132)		
constant	2.678	-2.151	8.002 ***	0.354
	(2.151)	(1.352)	(2.407)	(0.647)
Type of FE	industry	firm	destination-industry	firm destination-industry
Hausman test statistic	11.57		80.25	
p-value	0.116		1.000	
N	1,029	1,029	1,029	1,029
R ²	0.191	0.058	0.258	0.076

Notes: Standard errors in parentheses. Standard errors are based on heteroscedasticity consistent estimates of the covariance matrix (WHITE, 1980). *** (**) [*] denote the significance at the 1% (5%) [10%] level. Specification [B1] and [B3] include random firm effects. Hausman test statistics are based on non-robust standard errors of the respective model specifications.

Table B6: Results on probit estimation on export propensity using the share of immigrants

Variable	PROP [B5]	PROP [B6]	PROP [B7]	PROP [B8]
Immigration (Share)	0.408 *** (0.116) [0.153] ¹	0.564 *** (0.178) [0.232] ¹	0.392 *** (0.087) [0.153] ¹	0.606 *** (0.126) [0.262] ¹
ln Geographical Distance	-0.232 *** (0.073)	-0.286 *** (0.092)	-0.035 (0.068)	-0.118 (0.080)
Border	0.600 *** (0.103)	0.722 *** (0.118)	0.581 *** (0.097)	0.751 *** (0.110)
Language	0.578 *** (0.156)	0.758 *** (0.176)	0.408 ** (0.179)	0.553 *** (0.183)
ln GDP region	-0.061 (0.103)		-0.058 (0.077)	
ln GDP / capita region	0.265 *** (0.096)		0.247 *** (0.081)	
ln Population density region	-0.064 ** (0.030)		-0.058 ** (0.028)	
EU	0.220 * (0.117)	0.191 (0.140)		
ln GDP destination	0.194 *** (0.040)	0.250 *** (0.052)		
ln GDP / capita destination	0.009 (0.086)	0.083 (0.113)		
constant	-4.299 *** (1.213)	-3.993 *** (1.270)	-2.139 * (1.219)	0.449 (0.739)
Type of FE	industry	firm	destination- industry	firm destination- industry
N	11,915	11,676	11,490	11,188
log likelihood	-5,098.29	-3,969.12	-4,799.91	-3,653.55

Notes: Standard errors in parentheses. Standard errors are clustered with respect to region-destination. *** (**) [*] denote the significance at the 1% (5%) [10%] level. ¹Figures in squared brackets denote the elasticity of the variable 'Immigration (Share)'. The respective marginal effects are computed at means.

Table B7: Least squares estimation on export volumes using the share of immigrants

Variable	SALES [B5]	SALES [B6]	SALES [B7]	SALES [B8]
Immigration (Share)	0.043 (0.084)	0.072 (0.087)	0.095 (0.108)	0.124 (0.109)
ln Geographical Distance	-0.056 (0.078)	-0.067 (0.084)	0.070 (0.088)	0.090 (0.093)
Border	0.211 * (0.114)	0.275 ** (0.117)	0.313 ** (0.142)	0.427 *** (0.141)
Language	0.325 ** (0.133)	0.243 * (0.139)	0.237 (0.183)	0.128 (0.186)
ln GDP region	0.284 (0.254)		0.213 (0.273)	
ln GDP / capita region	-0.061 (0.245)		-0.144 (0.271)	
ln Population density region	-0.178 (0.117)		-0.149 (0.126)	
EU	0.239 * (0.128)	0.182 (0.133)		
ln GDP destination	0.132 *** (0.038)	0.148 *** (0.041)		
ln GDP / capita destination	0.088 (0.117)	0.099 (0.123)		
constant	-2.285 (3.638)	2.291 * (1.193)	2.472 (3.815)	4.191 *** (0.575)
Type of FE	industry	firm	destination- industry	firm destination- industry
Hausman test statistic	22.72			
p-value	0.002			
N	1,095	1,095	1,095	1,095
R ²	0.096	0.014	0.131	0.059

Notes: Standard errors in parentheses. Standard errors are based on heteroscedasticity consistent estimates of the covariance matrix (WHITE, 1980). *** (**) [*] denote the significance at the 1% (5%) [10%] level. Specification SALES [B5] and SALES [B7] include random firm effects. Hausman test statistic is based on non-robust standard errors of the respective model specifications. In specification SALES [B7] the asymptotic assumptions of the Hausman test are not met.

Table B8: Results on probit estimation on export propensity with immigrants decomposed by their length of stay

Variable	PROP [B9]	PROP [B10]	PROP [B11]	PROP [B12]
ln Immigration (at least 10 years)	0.181 *** (0.042) [0.220] ¹	0.241 *** (0.047) [0.331] ¹	0.154 *** (0.031) [0.184] ¹	0.287 *** (0.049) [0.388] ¹
ln Immigration (less than 10 years)	-0.014 (0.044) [-0.017] ¹	0.028 (0.067) [0.039] ¹	0.000 (0.040) [0.000] ¹	0.069 (0.055) [0.094] ¹
ln Geographical Distance	-0.170 * (0.096)	-0.260 ** (0.103)	-0.007 (0.098)	-0.073 (0.129)
Border	0.283 ** (0.140)	0.275 (0.194)	0.166 (0.123)	0.238 * (0.145)
Language	0.496 *** (0.164)	0.545 *** (0.209)	0.592 *** (0.178)	0.458 * (0.257)
ln GDP region	-0.253 * (0.145)		-0.239 ** (0.100)	
ln GDP / capita region	0.219 * (0.123)		0.230 ** (0.102)	
ln Population density region	-0.047 (0.036)		-0.034 (0.032)	
EU	0.151 (0.162)	0.042 (0.229)		
ln GDP destination	0.183 *** (0.043)	0.238 *** (0.054)		
ln GDP / capita destination	0.231 * (0.119)	0.547 *** (0.176)		
constant	-2.505 (1.691)	-8.029 *** (1.749)	1.856 (1.502)	6.859 *** (0.997)
Type of FE	industry	firm	destination- industry	firm destination- industry
N	6,156	5,493	5,841	5,109
log likelihood	-3,174.05	-2,129.23	-2,968.37	-1,899.67

Notes: Standard errors in parentheses. Standard errors are clustered with respect to region-destination. *** (**) [*] denote the significance at the 1% (5%) [10%] level. ¹Figures in squared brackets denote the corresponding elasticity of the variables on immigration. The respective marginal effects are computed at means.

Table B9: Results on least squares estimation on export volumes with immigrants decomposed by their length of stay

Variable	SALES [B9]	SALES [B10]	SALES [B11]	SALES [B12]
ln Immigration (at least 10 years)	-0.032 (0.040)	0.008 (0.040)	-0.005 (0.068)	0.116 * (0.065)
ln Immigration (less than 10 years)	0.055 (0.044)	0.059 (0.045)	0.072 (0.053)	0.034 (0.052)
ln Geographical Distance	-0.170 * (0.092)	-0.140 (0.100)	-0.048 (0.135)	0.141 (0.148)
Border	-0.010 (0.157)	0.020 (0.161)	0.134 (0.319)	0.299 (0.364)
Language	0.274 * (0.154)	0.083 (0.166)	0.328 (0.260)	-0.167 (0.274)
ln GDP region	0.134 (0.278)		0.086 (0.302)	
ln GDP / capita region	0.124 (0.267)		0.047 (0.296)	
ln Population density region	-0.182 (0.119)		-0.184 (0.130)	
EU	0.291 * (0.154)	0.171 (0.166)		
ln GDP destination	0.172 *** (0.050)	0.182 *** (0.053)		
ln GDP / capita destination	0.110 (0.162)	0.251 (0.180)		
constant	-1.531 (3.776)	1.122 (1.648)	1.167 (4.206)	3.845 *** (1.047)
Type of FE	industry	firm	destination- industry	firm destination- industry
Hausman test statistic	24.80		57.51	
p-value	0.002		1.000	
N	790	790	790	790
R ²	0.109	0.014	0.152	0.040

Notes: Standard errors in parentheses. Standard errors are based on heteroscedasticity consistent estimates of the covariance matrix (WHITE, 1980). *** (**) [*] denote the significance at the 1% (5%) [10%] level. Hausman test statistic is based on non-robust standard errors of the respective model specifications.

Table B10: Results on probit estimation on export propensity of both exporters and non-exporters

Variable	PROP [13]	PROP [14]	PROP [15]	PROP [16]
ln Immigration	0.117 *** (0.016) [0.284] ¹	0.144 *** (0.016) [0.352] ¹	0.112 *** (0.015) [0.270] ¹	0.142 *** (0.013) [0.344] ¹
ln Geographical Distance	-0.126 *** (0.044)	-0.112 *** (0.041)	-0.044 (0.047)	0.007 (0.044)
Border	0.182 *** (0.056)	0.154 ** (0.060)	0.164 *** (0.051)	0.076 (0.047)
Language	0.184 ** (0.083)	0.137 ** (0.063)	0.128 (0.093)	0.050 (0.062)
ln GDP region	0.036 (0.048)		0.036 (0.041)	
ln GDP / capita region	-0.114 ** (0.051)		-0.127 *** (0.049)	
ln Population density region	0.001 (0.018)		0.003 (0.016)	
EU	0.030 (0.066)	-0.051 (0.061)		
ln GDP destination	0.097 *** (0.021)	0.090 *** (0.023)		
ln GDP / capita destination	0.169 *** (0.050)	0.263 *** (0.046)		
constant	-3.272 *** (0.771)	-5.341 *** (0.793)	-0.537 (0.676)	-2.307 *** (0.764)
Type of FE	industry	region-industry	destination-industry	region-industry destination-industry
N	70,068	57,811	63,357	54,624
log likelihood	-9,244.92	-8,627.83	-9,039.26	-8,457.26

Notes: Standard errors in parentheses. Standard errors are clustered with respect to region-destination. *** (**) [*] denote the significance at the 1% (5%) [10%] level. ¹Figures in squared brackets denote the corresponding elasticity of the variables on immigration. The respective marginal effects are computed at means.

Table B11: Results on probit estimation on export propensity excluding Russia and Ukraine

Variable	PROP [17]	PROP [18]	PROP [20]	PROP [20]
ln Immigration	0.236 *** (0.033) [0.302] ¹	0.354 *** (0.036) [0.513] ¹	0.224 *** (0.028) [0.286] ¹	0.353 *** (0.031) [0.514] ¹
ln Geographical Distance	-0.095 (0.069)	-0.073 (0.085)	0.038 (0.062)	0.083 (0.088)
Border	0.397 *** (0.099)	0.437 *** (0.130)	0.313 *** (0.092)	0.355 *** (0.111)
Language	0.426 *** (0.118)	0.529 *** (0.132)	0.300 ** (0.136)	0.422 *** (0.145)
ln GDP region	-0.322 *** (0.118)		-0.317 *** (0.090)	
ln GDP / capita region	0.195 ** (0.092)		0.227 *** (0.081)	
ln Population density region	-0.031 (0.030)		-0.029 (0.028)	
EU	0.442 *** (0.116)	0.487 *** (0.166)		
ln GDP destination	0.101 ** (0.045)	0.119 ** (0.052)		
ln GDP / capita destination	0.726 *** (0.181)	1.228 *** (0.207)		
constant	-5.783 *** (1.718)	-15.221 *** (1.912)	2.300 * (1.291)	0.489 (1.047)
Type of FE	industry	firm	destination- industry	firm destination- industry
N	8,038	7,483	7,744	7,179
log likelihood	-4,023.37	-2,938.77	-3,818.68	-2,716.01

Notes: Standard errors in parentheses. Standard errors are clustered with respect to region-destination. *** (**) [*] denote the significance at the 1% (5%) [10%] level. ¹Figures in squared brackets denote the corresponding elasticity of the variable "ln Immigration". The respective marginal effects are computed at means.

Table B12: Results on least squares estimation on export volumes excluding Russia and Ukraine

Variable	SALES [B13]	SALES [B14]	SALES [B15]	SALES [B16]
ln Immigration	0.063 *	0.083 **	0.075	0.093 *
	(0.038)	(0.039)	(0.047)	(0.049)
ln Geographical Distance	-0.051	-0.073	0.121	0.147
	(0.086)	(0.093)	(0.100)	(0.105)
Border	0.208	0.248 *	0.286 *	0.332 **
	(0.129)	(0.134)	(0.162)	(0.164)
Language	0.229 *	0.109	0.122	-0.019
	(0.132)	(0.137)	(0.200)	(0.207)
ln GDP region	0.187		0.083	
	(0.265)		(0.283)	
ln GDP / capita region	0.003		-0.037	
	(0.243)		(0.267)	
ln Population density region	-0.196 *		-0.150	
	(0.117)		(0.126)	
EU	0.275 *	0.166		
	(0.144)	(0.153)		
ln GDP destination	0.104 **	0.135 ***		
	(0.048)	(0.050)		
ln GDP / capita destination	0.302	0.299		
	(0.243)	(0.258)		
constant	-3.061	0.557	1.867	3.894 ***
	(4.039)	(2.394)	(3.954)	(0.655)
Type of FE	industry	firm	destination-industry	firm destination-industry
Hausman test statistic	31.97		146.41	
p-value	0.000		0.083	
N	974	974	974	974
R ²	0.102	0.010	0.139	0.041

Notes: Standard errors in parentheses. Standard errors are based on heteroscedasticity consistent estimates of the covariance matrix (White, 1980). *** (**) [*] denote the significance at the 1% (5%) [10%] level. Specification SALES [B13] and SALES [B15] include random firm effects. Hausman test statistics are based on non-robust standard errors of the respective model specifications.

Appendix C

The supplementary material summarized in this Appendix C includes additional estimation experiments to show the robustness of the findings of the main text of the article. In particular, in this section additional information on migration (emigration, immigration from different countries and various interaction terms) and firm specific control variables are included. Finally, as the regional stock of immigrants might be a poor measure for firms located close the region's border, regressions were run using sub-samples to account for this inaccuracy. The results reported in this section support the main findings, namely that immigrants increase firms' export probabilities, but have only a small impact on their export volumes. All additional variables used in this section are summarized in Table C1 below.

Table C2 and C3 summarize regression results including a variable on emigration, the number of immigrants from all other countries and an interaction term between immigration and different destination countries. A large number of emigrants in the destination country might promote export activities of domestic firms as emigrants might have higher preferences for home country products (demand effect) and as emigrants (similar to immigrants) could reduce language barriers and facilitate the development personal ties with other residents of the destination country.⁵ The number of immigrants coming from all other than the destination country serves as an indicator for trade costs to other countries. In this paper I argue that immigrants from a particular country reduce trade costs and therefore increase exports to that particular country while leaving trade flows to all other countries unaffected. ANDERSON and VAN WINCOOP (2003) argue that trade flows between two countries are influenced by both trade costs (or trade barriers) between the two respective countries and by the average trade barriers to all trading partners.⁶ According to their model, a reduction in export costs to a particular country (e.g. due to an increase in immigrants) increases exports to this country, but reduces exports to all other countries (as the relative trade costs to other countries increase). To conduct

⁵ Data on migration based on the country of birth are not available for people migrating to Germany or to countries outside the European Union (EU). Including information on emigration reduces the size of the sample considerable and is therefore included as a robustness check only.

⁶ ANDERSON and VAN WINCOOP (2003) use the term 'multilateral resistance' to describe the average trade barriers of a country (or region) to all trading partners. The multilateral resistance depends positively on all bilateral resistances.

comparative static analyses one has to be able to solve the general equilibrium model before and after the change in trade costs rather than estimating a reduced form regression applied in this empirical exercise. Compared to ANDERSON and VAN WINCOOP (2003), who analyze trade flows between the US and Canada, the indirect effects are expected to be small in this application, as the exports of the countries under investigation are not dominated by one export destination (which is the case for Canada). Nevertheless, as a robustness check, I include the share of immigrants from all other countries as an additional explanatory variable to control for the trade costs to other countries.

A large number of emigrants in a destination country does not only have a positive and statistically significant influence on the export propensity (PROP [C1]), but also a sizable (and statistically significant) effect on the export volume (SALES [C1]). The number of immigrants from all countries has no significant impact on firms' export behaviour, indicating that trade costs to one country have little effect on trade to other countries. Interacting the variable on immigration with destination countries shows a positive and statistically significant influence (at the five percent significance level) of immigration on the export propensity for all but five predetermined destination country (PROP [C2]). Contrariwise, the positive impact on the intensive margin is only significant for three out of 17 destination countries (SALES [C2]).

In Table C4 and C5 I re-estimate the export propensity and the export volume, but include firm specific variables like firm size (number of employees), age, whether a firm is fully or partly owned by foreigners and whether a firm is an individual enterprise, the headquarter or the subsidiary of a corporate group. The results on the effects of the number of immigrants on the export probability (Table C4) are hardly affected by the inclusion of firm specific variables (compared to PROP [1] to PROP [4] in Table 3 in the main text). Due to endogeneity concerns I refrain from interpreting the parameter estimates, but use the respective variables as additional controls.

Including firm characteristics increases the impact of immigration a little bit when estimating the intensive margin elasticities (Table C5). As the estimated coefficients are only slightly below significance levels without controlling for firm characteristics (see Table 4 in the main text), the

respective parameter estimates – despite a rather small increase in size – pass the ten (five) percent significance level in all (three out of four) model specifications.

Throughout the empirical analysis the stock of immigrants at the regional (NUTS-2) level is used as an indicator of the size of the labour pool of immigrant workers and to approximate the source of information spillover effects. Although information on the distribution of immigrants within the NUTS-2 region is unavailable, this measure is expected to be a better indicator for firms located close to the centre of the region compared to firms located close to the region's border. Firms located close to the region's border are expected to be more strongly affected by immigrants living right across the border compared to immigrants residing at the far end of the region where the firm is located. To account for this inaccuracy I restrict the sample to firms located close to the regional capital in one specification and exclude firms located close to the region's border in another model configuration.

Information on the location of the firms is available at the district level.⁷ I restrict the sample in two ways: First, the Euclidean distance between the capital of the district and the capital of the region is calculated. All firms located more than 40 kilometres away from the regional capital are excluded. The estimation results on this restricted sample are summarized in specification PROP [C7] and SALES [C7] in Table C6. Second, the smallest distance between the district capital (where the firm is located) and the capital of a district in a different region is used to evaluate whether a firm is located close to the region's border. All firms located within a distance of less than 30 kilometres to a district of a different region are excluded from the sample (see PROP [C8] and SALES [C8]). The results show that in these restricted samples the influence of immigrants on the export propensity is positive and statistically significant, whereas the impact on export volume is not significantly different from zero (albeit positive). The point estimates (compared to specification PROP [1] and SALES [1] reported in Table 3 and Table 4 in the main text) vary slightly by a statistically insignificant amount. Therefore, there is no indication that firms located close to the region's border are differently affected by the regional stock of immigrants.

⁷ The administrative units denoted as districts are 'Bezirke' in Austria, 'okresy' in Slovakia and the Czech Republic and 'kistérség' in Hungary. These are regional units between the levels of communities and NUTS-2 regions.

Table C1: Summary statistics on additional variables

Variable	Variable Description	# of Obs.	Mean	Std. Dev.	Min	Max
Emigration (share)	Number of residents in destination country d born in home country c (in 1,000)	50,635	12.926	21.195	0	101.505
Other Immigration	Number of residents born in another country than home country c or destination country d aged 15 or older (in 1,000)	87,393	91.997	149.984	1.447	445.659
Size	Number of employees of firm f	87,393	92.047	758.906	0	60,102
Age	Age of firm f (in years)	86,416	20.764	21.402	1	211
Foreign	Takes value 1 if firm f is partly foreign owned and 0 otherwise (reference group: owned domestically)	87,420	0.096		0	1
Partly foreign	Takes value 1 if firm f is completely foreign owned and 0 otherwise (reference group: owned domestically)	87,420	0.044		0	1
Headquarter	Takes value 1 if firm f is the headquarter of a corporate group and 0 otherwise (reference group: individual enterprise)	87,420	0.092		0	1
Subsidiary	Takes value 1 if firm f is the subsidiary of a corporate group and 0 otherwise (reference group: individual enterprise)	87,420	0.054		0	1

Note: Standard deviations on binary variables are not reported.

Table C2: Results of probit estimation on export propensity using additional variables on migration and interaction terms

Variable	PROP [1]			PROP [C1]			PROP [C2]		
ln Immigration	0.217	(0.033)	***	0.187	(0.025)	***			
	[0.300] ¹			[0.253] ¹					
ln Emigration				0.140	(0.028)	***			
ln Other Immigration				-0.062	(0.043)				
ln Geographical Distance	-0.165	(0.069)	**	-0.026	(0.054)		-0.162	(0.076)	**
Border	0.361	(0.099)	***	0.484	(0.095)	***	0.242	(0.104)	**
Language	0.426	(0.119)	***	0.253	(0.120)	**	0.662	(0.170)	***
ln GDP region	-0.284	(0.114)	**	-0.187	(0.083)	**	-0.293	(0.102)	***
ln GDP / capita region	0.253	(0.088)	***	0.351	(0.078)	***	0.261	(0.084)	***
ln Population density region	-0.051	(0.030)	*	-0.008	(0.026)		-0.051	(0.031)	
EU	0.103	(0.099)		0.385	(0.186)	**	0.223	(0.127)	*
ln GDP destination	0.183	(0.037)	***	-0.049	(0.039)		0.199	(0.042)	***
ln GDP / capita destination	0.261	(0.090)	***	0.300	(0.178)	*	0.204	(0.108)	*
ln Immigration x Czech Republic							0.365	(0.074)	***
ln Immigration x Hungary							0.274	(0.060)	***
ln Immigration x Slovakia							0.186	(0.054)	***
ln Immigration x Slovenia							0.341	(0.146)	**
ln Immigration x Russia							0.267	(0.049)	***
ln Immigration x Poland							0.127	(0.034)	***
ln Immigration x Germany							0.126	(0.076)	*
ln Immigration x Italy							0.171	(0.053)	***
ln Immigration x Switzerland							0.191	(0.133)	
ln Immigration x Austria							0.109	(0.067)	
ln Immigration x Romania							0.154	(0.063)	**
ln Immigration x Bulgaria							0.179	(0.115)	
ln Immigration x Ukraine							0.152	(0.085)	*
ln Immigration x France							0.324	(0.066)	***
ln Immigration x UK							0.325	(0.046)	***
ln Immigration x The Netherlands							0.539	(0.197)	***
ln Immigration x Croatia							0.386	(0.192)	**
constant	-2.684	(1.316)	**	-3.896	(2.276)	*	-2.280	(1.370)	*
Type of FE	industry			industry			industry		
N	9,628			5,799			9,628		
log likelihood	-4,456.358			-2,830.978			-4,410.871		

Notes: Standard errors in parentheses. Standard errors are clustered with respect to region-destination. *** (**) [*] denote the significance at the 1% (5%) [10%] level. ¹Figures in squared brackets denote the corresponding elasticity of the variable "ln Immigration". The respective marginal effects are computed at means.

Table C3: Results on least squares estimation on export volumes using additional variables on migration and interaction terms

Variable	SALES [1]		SALES [C1]		SALES [C2]	
ln Immigration	0.059	(0.035) *	0.027	(0.041)		
ln Emigration			0.116	(0.043) ***		
ln Other Immigration			0.163	(0.143)		
ln Geographical Distance	-0.065	(0.085)	-0.092	(0.101)	0.019	(0.095)
Border	0.204	(0.116) *	0.300	(0.137) **	0.362	(0.141) ***
Language	0.212	(0.124) *	0.390	(0.207) *	0.226	(0.203)
ln GDP region	0.249	(0.260)	0.262	(0.396)	0.256	(0.262)
ln GDP / capita region	-0.034	(0.242)	0.001	(0.281)	-0.045	(0.247)
ln Population density region	-0.191	(0.117)	-0.308	(0.132) **	-0.198	(0.117) *
EU	0.134	(0.118)	0.407	(0.203) **	0.134	(0.155)
ln GDP destination	0.142	(0.038) ***	0.067	(0.067)	0.156	(0.045) ***
ln GDP / capita destination	0.150	(0.124)	-0.249	(0.287)	0.076	(0.184)
ln Immigration x Czech Republic					0.022	(0.064)
ln Immigration x Hungary					0.143	(0.086) *
ln Immigration x Slovakia					0.129	(0.078) *
ln Immigration x Slovenia					-0.009	(0.102)
ln Immigration x Russia					0.266	(0.120) **
ln Immigration x Poland					0.090	(0.061)
ln Immigration x Germany					0.008	(0.081)
ln Immigration x Italy					0.025	(0.067)
ln Immigration x Switzerland					-0.213	(0.225)
ln Immigration x Austria					0.062	(0.107)
ln Immigration x Romania					-0.160	(0.100)
ln Immigration x Bulgaria					0.003	(0.232)
ln Immigration x Ukraine					-0.548	(0.446)
ln Immigration x France					0.094	(0.066)
ln Immigration x UK					0.832	(0.217) ***
ln Immigration x The Netherlands					0.280	(0.085) ***
ln Immigration x Croatia					0.404	(0.293)
constant	-2.476	(3.610)	0.452	(6.591)	-2.501	(3.786)
Type of FE	industry		industry		industry	
Hausman test statistic	33.28		39.08		58.66	
p-value	0.000		0.000		0.000	
N	1,029		656		1,029	
R ²	0.100		0.106		0.106	

Notes: Standard errors in parentheses. Standard errors are based on heteroscedasticity consistent estimates of the covariance matrix (WHITE, 1980). *** (**) [*] denote the significance at the 1% (5%) [10%] level. All specifications include random firm effects. Hausman test statistics are based on non-robust standard errors of the respective model specifications.

Table C4: Results on probit estimation on export propensity using firm characteristics

Variable	PROP [C3]	PROP [C4]	PROP [C5]	PROP [C6]
ln Immigration	0.221 *** (0.034) [0.307] ¹	0.264 *** (0.033) [0.375] ¹	0.225 *** (0.028) [0.312] ¹	0.279 *** (0.024) [0.398] ¹
ln Geographical Distance	-0.166 ** (0.071)	-0.152 ** (0.072)	0.039 (0.059)	0.104 (0.069)
Border	0.373 *** (0.098)	0.304 *** (0.102)	0.310 *** (0.087)	0.222 *** (0.081)
Language	0.431 *** (0.116)	0.450 *** (0.113)	0.315 ** (0.135)	0.334 ** (0.139)
ln GDP region	-0.311 *** (0.114)		-0.328 *** (0.085)	
ln GDP / capita region	0.243 *** (0.091)		0.271 *** (0.076)	
ln Population density region	-0.028 (0.030)		-0.022 (0.027)	
EU	0.096 (0.096)	0.002 (0.111)		
ln GDP destination	0.186 *** (0.038)	0.192 *** (0.043)		
ln GDP / capita destination	0.272 *** (0.092)	0.387 *** (0.093)		
ln Size	0.123 *** (0.048)	0.122 ** (0.057)	0.147 *** (0.050)	0.127 ** (0.059)
(ln Size) ²	-0.004 (0.006)	-0.003 (0.008)	-0.007 (0.007)	-0.003 (0.008)
ln Age	-0.013 (0.028)	0.002 (0.023)	-0.008 (0.025)	0.004 (0.024)
Foreign	0.000 (0.057)	0.025 (0.060)	0.014 (0.056)	0.025 (0.063)
Partly foreign	0.100 (0.063)	0.141 ** (0.065)	0.114 * (0.062)	0.147 ** (0.068)
Headquarter	0.050 (0.042)	0.037 (0.046)	0.062 (0.044)	0.035 (0.047)
Subsidiary	0.123 ** (0.054)	0.112 * (0.058)	0.130 ** (0.054)	0.111 * (0.060)
constant	-2.642 ** (1.306)	-7.561 *** (1.442)	1.614 (1.223)	-2.646 ** (1.284)
Type of FE	industry	region-industry	destination-industry	region-industry destination-industry
N	9,555	9,504	9,184	9,118
log likelihood	-4,371.98	-4,131.29	-4,126.89	-3,893.02

Notes: Standard errors in parentheses. Standard errors are clustered with respect to region-destination. *** (**) [*] denote the significance at the 1% (5%) [10%] level. ¹Figures in squared brackets denote the corresponding elasticity of the variable "ln Immigration". The respective marginal effects are computed at means.

Table C5: Results on least squares estimation on export volumes using firm characteristics

Variable	SALES [C3]	SALES [C4]	SALES [C5]	SALES [C6]
ln Immigration	0.073 ** (0.035)	0.086 ** (0.039)	0.092 ** (0.044)	0.097 * (0.051)
ln Geographical Distance	-0.094 (0.083)	-0.085 (0.094)	0.081 (0.098)	0.141 (0.111)
Border	0.184 (0.114)	0.191 (0.127)	0.309 ** (0.154)	0.329 * (0.174)
Language	0.171 (0.121)	0.092 (0.135)	0.128 (0.190)	0.043 (0.214)
ln GDP region	0.011 (0.248)		-0.088 (0.265)	
ln GDP / capita region	-0.190 (0.234)		-0.295 (0.258)	
ln Population density region	0.028 (0.093)		0.078 (0.100)	
EU	0.102 (0.116)	0.039 (0.130)		
ln GDP destination	0.151 *** (0.038)	0.150 *** (0.042)		
ln GDP / capita destination	0.170 (0.122)	0.220 (0.140)		
ln Size	0.981 *** (0.235)	0.939 *** (0.290)	1.008 *** (0.253)	0.908 *** (0.327)
(ln Size) ²	-0.047 (0.031)	-0.039 (0.039)	-0.049 (0.034)	-0.033 (0.043)
ln Age	-0.004 (0.154)	0.108 (0.169)	0.007 (0.167)	0.090 (0.187)
Foreign	0.694 *** (0.263)	0.782 ** (0.314)	0.605 ** (0.283)	0.708 ** (0.348)
Partly foreign	0.502 ** (0.225)	0.807 *** (0.299)	0.474 * (0.249)	0.844 ** (0.332)
Headquarter	0.811 ** (0.323)	0.634 * (0.358)	0.762 ** (0.345)	0.698 * (0.402)
Subsidiary	0.935 *** (0.343)	0.856 ** (0.336)	1.074 *** (0.365)	0.959 *** (0.374)
constant	0.102 (3.281)	-4.594 *** (1.661)	4.550 (3.522)	-2.333 * (1.323)
Type of FE	industry	region-industry	destination-industry	region-industry destination-industry
Hausman test statistic	10.25	14.22	374.24	53.340
p-value	0.175	0.047	0.000	1.000
N	1,029	1,029	1,029	1,029
R ²	0.324	0.632	0.374	0.660

Notes: Standard errors in parentheses. Standard errors are based on heteroscedasticity consistent estimates of the covariance matrix (WHITE, 1980). *** (**) [*] denote the significance at the 1% (5%) [10%] level. All specifications include random firm effects. Hausman test statistics are based on non-robust standard errors of the respective model specifications.

Table C6: Results on estimation on export propensity and export volumes restricted to firms in the core of the NUTS-2 region

Variable	PROP [C7]	SALES [C7]	PROP [C8]	SALES [C8]
Restriction	Distance firm location to regional capital less than 40 kilometres		Distance firm location to regional border larger than 30 kilometres	
ln Immigration	0.231 *** (0.038) [0.308] ¹	0.072 (0.049)	0.219 *** (0.032) [0.329] ¹	0.025 (0.049)
ln Geographical Distance	-0.098 (0.062)	-0.024 (0.109)	-0.247 *** (0.082)	-0.224 (0.139)
Border	0.412 *** (0.109)	0.256 (0.157)	0.322 *** (0.113)	0.227 (0.180)
Language	0.416 *** (0.129)	0.318 * (0.169)	0.500 *** (0.138)	0.331 * (0.174)
ln GDP region	-0.347 *** (0.126)	0.291 (0.328)	-0.315 *** (0.116)	0.308 (0.434)
ln GDP / capita region	0.290 *** (0.083)	0.177 (0.302)	0.330 *** (0.112)	0.422 (0.394)
ln Population density region	-0.050 (0.032)	-0.242 * (0.134)	0.037 (0.084)	-0.255 (0.329)
EU	0.103 (0.114)	0.260 * (0.145)	0.106 (0.113)	0.237 (0.147)
ln GDP destination	0.112 *** (0.036)	0.161 *** (0.049)	0.242 *** (0.034)	0.206 *** (0.055)
ln GDP / capita destination	0.285 *** (0.099)	0.042 (0.161)	0.212 ** (0.103)	0.026 (0.165)
constant	-1.688 (1.472)	-4.356 (4.928)	-2.655 (1.674)	-5.015 (5.546)
Type of FE	industry	industry	industry	industry
Hausman test statistic		56.54		25.83
p-value		0.000		0.001
N	6,145	605	3,960	536
log likelihood	-2,955.05		-1620.474	
R ²		0.146		0.148

Notes: Standard errors in parentheses. Standard errors in specification PROP [C7] and PROP [C8] are clustered with respect to region-destination. Standard errors in specification SALES [C7] and SALES [C8] are based on heteroscedasticity consistent estimates of the covariance matrix (White, 1980). *** (**) [*] denote the significance at the 1% (5%) [10%] level. Specifications SALES [C7] and SALES [C8] include random firm effects. Hausman test statistics are based on non-robust standard errors of the respective model specifications.

¹Figures in squared brackets denote the corresponding elasticity of the variable "ln Immigration". The respective marginal effects are computed at means.