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Empirical Evidence from Small-scale Banking

Franz R. Hahn

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Culture, Geography and Institutions

Empirical Evidence from Small-scale Banking

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Abstract

The fast adoption of Western-style democracy and market economy principles as established by European Union (EU) standards by many of the Eastern European 'transformation countries' since the early 1990s should have raised cross-border lending by banks based in 'old' EU member states to clients resident in new Eastern European EU member states. This should particularly apply to Austria since it shares a long-lasting common history and, hence, common culture with these countries. To account for common culture we propose a new gauge aimed at measuring 'cultural proximity' by making out onomastic similarities between common surnames of Austrian residents and common surnames of residents in the Czech Republic, Slovak Republic, in Hungary and Slovenia, respectively. By exploring, with panel econometric techniques, cross-border lending activities of Austria's small-sized to medium-sized regional banks, located close to its eastern border, over the period from 1996 to 2008 this paper provides evidence that is supportive of the presumption that cultural closeness matters for making basic laws of economics work.

JEL classification: C23, E51, F33, N20

Keywords: panel econometric analysis, cross-border bank lending, geography, common culture, institutions

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Culture, Geography and Institutions

Empirical Evidence from Small-scale Banking

1. Introduction

The discrepancy between theory-based predictions and observation-based patterns of international capital flows has been marked as one of the major failings of economic theory (*Lucas*, 1990). According to the law of diminishing marginal returns, economic theory predicts that capital is supposed to flow from capital-rich countries to capital-poor countries. However, in the world of today what instead we do observe is a rich-rich affair in international finance. Capital moves lavishly within the OECD region, but only barely between OECD countries and developing countries. Historically, this wasn't always so. During the 'first age' of globalization, from 1870 to World War One (WWI), global capital mobility is said to have been more in line with economic theory than during the 'second age', a century later. As elaborately laid out in *Obstfeld – Taylor* (2005), in the period prior to WWI many peripheral capital-poor countries, above all the New World offshoots of Western Europe, enjoyed a rich and constant inflow of capital supplied exclusively by the then capital-rich West European Great Powers (that is, the then highly developed economies with low marginal product of capital).

Reasons, why theory did work then but does not work now, are plenty but the most telling ones are provided by new institutional economics (NIE). Due to this school of thought economic principles linked to international capital transactions only work if poor peripheral countries share (or converge to) the very social and legal norms that are determinant for rich core countries (i.e., strong protection of property rights). This view has forcefully been forwarded more recently, among others, by economic historians such as N. Ferguson (*Ferguson*, 2003) and by theoretical economists such as D. Acemoglu (*Acemoglu*, 2009; *Acemoglu et al.*, 2002), respectively. The former provide

evidence that many of the capital-attracting periphery countries in the late 19th century were imperial outposts of the rich European core countries and, thus, shared with them the same legal norms and business culture. The latter authors argue that the early European settlers immigrating to the then sparsely populated, low-developed regions of the Americas and Australia in days of old brought with them institutions of governance and business culture that strongly protected property rights thereby laying the groundwork for long-run economic growth in these 'remote regions'. Growth that still keeps unfolding.

With the fall of the 'Iron Curtain' in the late 1980s and the swift transformation of the former communist command economies to full-fledged market economies (Westernization of Eastern Europe), history has now provided new institutional economists with another rare and historically unique opportunity to put NIE core propositions to the test within the frame of a natural experiment (that still is evolving for our very eyes). Viewed from the perspective of highly developed countries such as Austria, a further piece of intriguing ‘geographical economics’ (and politics) also comes into play. For example, Austria shares with former command economies (Czech Republic, Slovak Republic, Hungary, and Slovenia) not only almost two thirds of its border but also the heritage of a common cultural and political past (until 1918, the Habsburg Empire reached far East for centuries). Thus, common cultural roots may matter if it comes to explaining extended cross-border activities between Austria and its neighboring Eastern European countries.

In this paper we make an attempt to apply the NIE-based approach to explore one of the core questions in international banking, namely, to what extent culture, geography and institutions matter as prime mover of cross-border bank lending. Theory suggests that bank lending is facilitated, among other things, by low information and transactions costs (see, for example, *Freixas – Rochet*, 2008). That is, if information and transaction costs are high lending tends to be low and vice versa. Importantly, information and transactions costs, again among other things, tend to be low when lending-related legal and social norms

(that is, business culture) are strong and, above all, are shared and valued equally by both lenders and borrowers. The latter particularly applies to cross-border bank lending. For example, differences in judiciary between countries are considered to be one of the major obstacles for cross-border banking activities since lack of familiarity with the respective foreign legal order may easily translate into high information and transaction costs for lenders all too soon. Further, differences in judiciary among countries tend to be smaller (larger) the closer (farther) is 'cultural proximity' among them. Hence, the fast adoption of Western-style democracy and market economy principles as established by European Union (EU) standards by many of the neighboring Eastern European 'transformation countries' since the early 1990s should have left perceivable footprints in the balance sheets of West-European banks in the form of soaring lending ties with borrowers resident in the respective Eastern European countries[1]).

Even though transaction and information costs play a role in all forms of capital movements, they are most decisive in facilitating cross-border bank lending. Borrowers living and working in their home country have the decisive advantage over their cross-border lenders in that they operate in a social and legal environment they are most likely more familiar with than the lenders, and, most importantly, in case of legal dispute they are most likely provided with a hardly catchable edge on their lenders. However, this borrowers' advantage tapers off the smaller is the gap between the lenders' and the borrowers' legal and social environment and the stronger is the mutual recognition of both cross-border lenders' and borrowers' rights and duties in the respective judiciaries. Again, this ‘culture gap’ may be smaller among neighboring countries than among countries that are far apart. Beyond question, cultural mismatch is definitely smaller among neighboring countries that share a long-lasting common past. Thus, banks are of course more inclined

[1]) Both casual observation and profound analysis confirm that a broad and constant flow of West European capital has been pouring into this region ever since the change of regime in 1989 (see, for example, *Prasad et al.*, 2006; *Abiad et al.*, 2009; and *Maechler – Ong*, 2009).

to provide cross-border loans when they are close to their clienteles both geographically and culturally (that is, when the cultural and/or institutional gap on their customers is sufficiently small or negligible). The latter has apparently occurred, in the recent past, between the European Union and many Eastern European countries in general, and between Austria and its neighboring countries to the east, in particular.

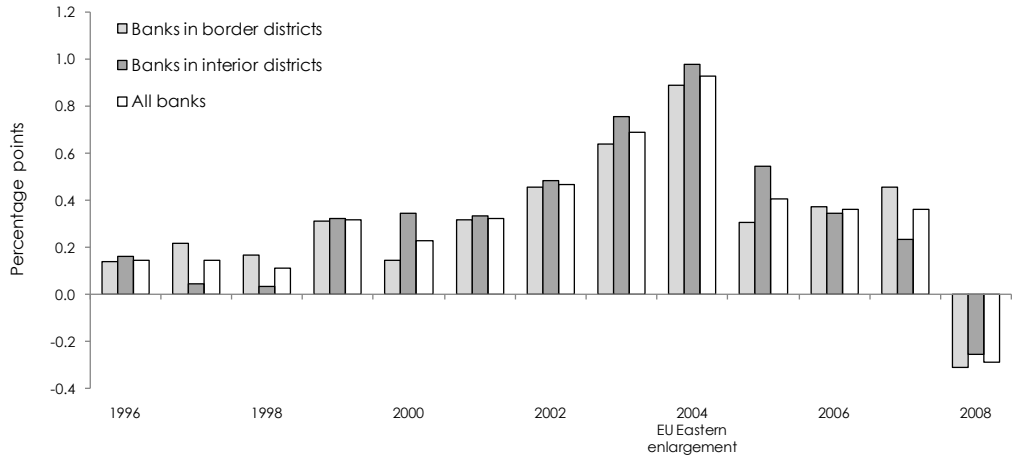
The paper is organized as follows: In the next section we present stylized facts featuring the impact of pro-EU convergence of Eastern European countries, of common cultural roots, and of geographical proximity on the development of cross-border lending of Austrian small-sized to medium-sized banks over the period from 1995 to 2008. Section 3 carries out detailed panel econometric analyses that are aimed at underlining, at the multivariate level, the importance of common culture (geographical proximity) and common institutions (legal proximity) for making laws of economics work. To be exact, we use a unique dataset covering more than 500 Austrian small-sized to medium-sized commercial banks to analyze the impact of common culture, geographical proximity, and of EU-centered, institutional convergence of Austria's eastern neighboring countries on the cross-border lending activities of these banks from 1995 to 2008. Most importantly, we propose a new gauge aimed at measuring 'cultural proximity' on the basis of onomastic similarities between common surnames of Austrian residents and common surnames of residents of Austria's East European neighboring countries, particularly of the Czech Republic, Slovak Republic, of Hungary, and Slovenia, respectively. Section 4 concludes.

2. Stylized Facts: Cross-border Bank Lending – Common Cultural Roots, Geographical Proximity and Institutional Convergence

The process of EU eastern enlargement began with the start of the accession negotiations between the European Union and a group of 10 European states, including the Czech Republic, the Slovak Republic, Hungary, and Slovenia in

1999. It is worth mentioning that the common currency Euro as book money was also introduced in this very year. These four Eastern European countries share borders with Austria and used to belong to the Habsburg Empire, as Austria, until 1918 for centuries. In 2003, the EU accession negotiations were successfully closed and all four countries became EU member countries in 2004. Austria has been an EU member state since 1995.

Figure 1: Cross-border Lending of Austrian Commercial Banks per District
Foreign assets as percent of total assets, annual changes

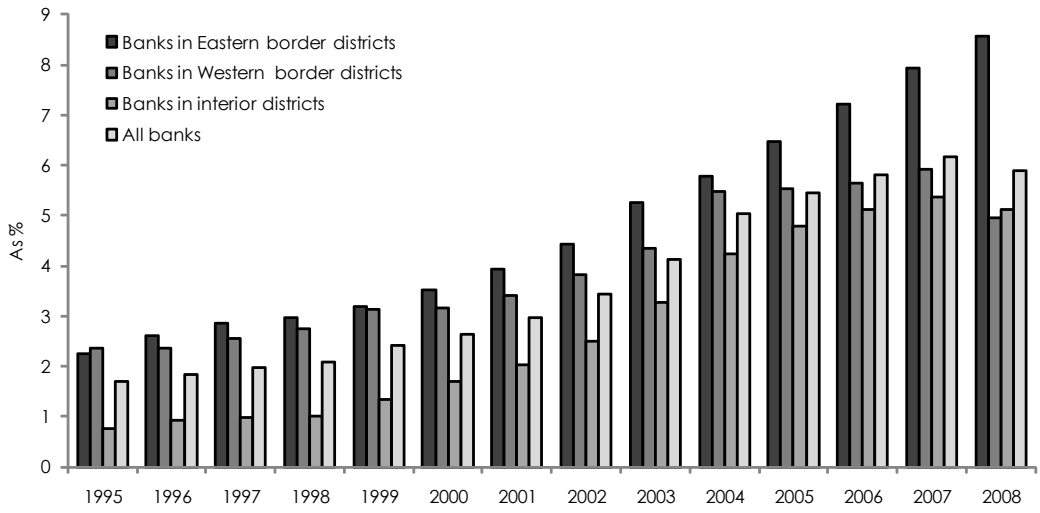


Source: WIFO bank-panel dataset.

Figure 1 displays the development of cross-border lending of 543 small-sized to medium-sized Austrian commercial banks assigned to their home districts from 1995 to 2008. A glance at the graph suggests that cross-border lending activities of all Austrian banks considered accelerated significantly in 1999 (Austria's eastern neighbors starting EU accession talks), picked up further momentum around 2004 (Austria's eastern neighbors getting full EU membership status) and then leveled off somewhat on average, but not so with those banks located and operating in the eastern border districts. Of course, the year 2008 marks the onset of the global financial crisis with a sharp decline of cross-border lending transactions across-the-board.

Figure 2 opens up somewhat refined vistas on the regionally differing dynamics of cross-border lending activities of the respective Austrian banks. Though credit institutions located in Austria's western and eastern border districts started out with about the same level of cross-border activities in 1995, dynamics set about diverging in 1999 with banks in the Eastern region shooting ahead and gaining even more momentum after 2004. By contrast, banks in western regions instead have steadily slowed down their foreign lending activities since the de jure implementation of the eastern EU enlargement.

Figure 2: Cross-border Lending of Austrian Commercial Banks per District
Foreign assets as percent of total assets

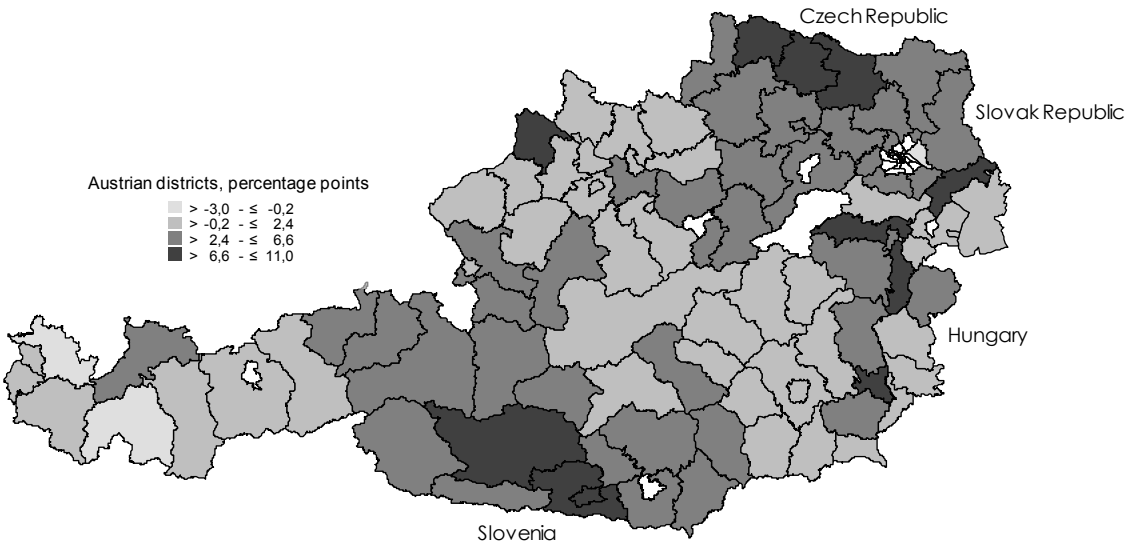


Source: WIFO bank-panel dataset.

A third piece of stylized evidence is provided in Figure 3. Even though we slightly change time windows in this graph it nevertheless becomes evident that it is the eastern region of Austria, particularly those districts close to the state border where the hot spots in terms of cross-border bank lending activities have been from about 2000 onwards.

Figure 3: Cross-border Lending of Austrian Commercial Banks per District

Foreign assets as percent of total assets (average of banks per district), differences in mean for 1995 through 2001 and 2002 through 2008, respectively



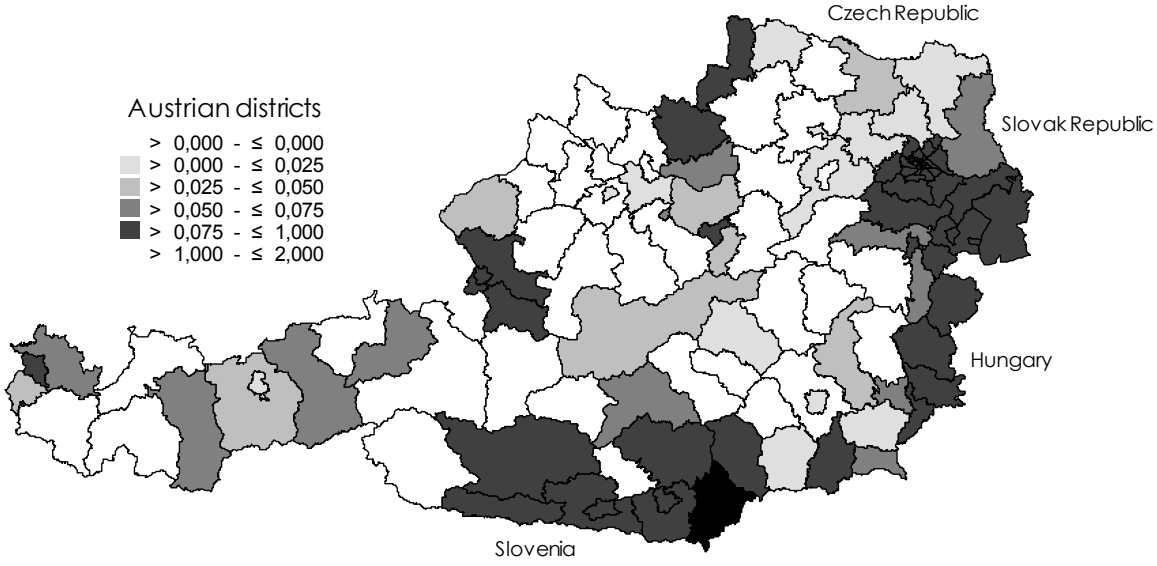
Source: WIFO bank-panel dataset.

Finally, Figure 4 is to reflect the long-lasting cultural proximity between the Eastern border regions of Austria and the adjacent regions across the border. We consider the prevalence of Austrian residents with surname of Czech, Slovakian, Hungarian, and Slovenian ancestry relative to the prevalence of residents with surname of Austro-German origin, per district, to be an adequate measure of 'metering' the common cultural past of the eastern region of Austria and its neighboring countries[2]). Since the selected Slavonic surnames have already become well established in Austria for more than a century (that is, the chosen Eastern European surnames have already become a household name in Habsburg Austria due to migration of Slavonic subjects to the region that forms now the eastern area of the Republic of Austria) we conclude that their prevalence in Austria bear witness for the common cultural heritage

[2]) For the definition of the Eastern European surname descent ratio, see the Appendix. This indicator has been computed with the help of Angela Bergermayer and Axel Linsberger, both of whom specialize in Slavonic onomatology at the Austrian Academy of Sciences, Institute for Lexicography of Austrian Dialects and Names, Vienna. This 'far from likely' encounter of economics and onomastics has given birth to a very interesting research program aimed at testing the water to what extent both disciplines can join forces to their mutual benefit.

shared particularly by the eastern Austrian regions and the adjacent regions beyond the eastern border of Austria[3]).

Figure 4: Eastern European Surname Descent Ratio per District
As measured by the relation of frequency of Slavonic surnames to frequency of German surnames in 2003



Source: Own computations, based on http://www.verwandt.at/ and expertise supplied by the Institute for Lexicography of Austrian Dialects and Names, at the Austrian Academy of Sciences, respectively. Computational details regarding the Eastern European surname descent ratio per district, see Appendix.

Figure 4 shows distinctly that the Eastern European surname descent ratio tends to be larger in the regions along the eastern border of Austria than in the interior districts. Most importantly, the 'colorization' of Figure 4 seems to go quite nicely with that of Figure 3 indicating that cross-border bank lending activities tend to be more dynamic in districts with a higher Eastern European surname descent ratio and, thus, with a 'higher degree' of common, transnational culture.

[3]) Migration of Czech, Slovakian, Hungarian and Slovenian citizens to Austria since the fall of the Iron Curtain has been minor and, hence, cannot be related to the higher prevalence of Slavonic names in the eastern regions of Austria. Hence, this indicator has all the properties a good instrument variable should have. For an alternative approach to measuring cultural integration, see Grosjean, (2011A, 2011B).

3. Econometric Analysis and Findings

3.1 Data and Variables

To check the proposed hypothesis we use a sample consisting of a balanced panel of annual report data of 543 Austrian banks (unfortunately, access to quarterly or monthly data was not made possible). The bank data were extracted from non-consolidated income statement and balance sheet data ranging over 1995 to 2008. The data have been deflated by the GDP deflator (2005=100) and adjusted for inconsistent data-related outliers, respectively[4]). The dataset is unique in the sense that it provides almost full coverage of Austrian regional banking at the individual bank level. We will use this specific balanced dataset for all empirical tests conducted in this paper[5]).

Since the aim of the paper is to find causes for cross-border lending activities since 1995 we confine the dataset to small and regional banks that do not run subsidiaries abroad. Hence, the data set does not include the larger Austrian banks (with a strong foothold in Eastern Europe in the form of subsidiary companies). The exclusion of the larger Austrian banks from analysis does not lessen the scope of the findings drawn from our data set. Quite the contrary, since the larger banks, all of which all-finance groups, tend to provide financial services on site by setting up operating local units (that is, foreign subsidiaries or foreign branches), they have restrained from engaging in cross-border lending on a notable scale altogether.

In order to evaluate the differences in cross-border lending among various regional banks we classify the overall data set according to three regional sub-areas. That is, districts that are home to regional banks located along the border to the Czech Republic, Slovak Republic, Hungary, and Slovenia are pooled to a homogenous regional entity. Interior districts, that is, districts whose borders

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[4]) Since we were granted access to the balance sheet and income statement of all Austrian banks, we subjected the reported data at the company level to simple accounting-based consistency checks. If a bank failed this test (i.e., due to incomplete or inconsistent data reporting), it was excluded from the analysis. In order to check for remaining outliers, we consistently apply estimation techniques which are sensitive to outliers.

[5]) Descriptive statistics of the used balanced panel of Austrian banks are made available on request.

are not part of the state line of Austria, but are close to East border districts form a separate regional area. Districts that are home to regional banks located along the border to Italy, Liechtenstein, Switzerland, and Germany in the western part of Austria are grouped likewise. These geographical entities are represented by the time-invariant, binary variable $GREE1$ (eastern border districts), $GREE2$ (interior districts close to the eastern border), and $GREE3$ (western districts), respectively[6]).

The degree of cultural proximity between Austria and its eastern bordering countries is measured by the ratio of phone book entries of Austrian residents with the most common surnames of Czech, Slovakian, Hungarian, and Slovenian ancestry among the 150 most frequent surnames per district relative to the phone book entries of Austrian residents with the 100 most common surnames of Austro-German origin among the 150 most frequent surnames per district in 2003. This time-invariant culture indicator is labeled $NAMQ$ and meets all the requirements of a good instrument in the given context.

In order to capture the relatedness between geographical and cultural proximity, we construct interaction variables between $GREE$ – related indictors and the variable $NAMQ$.

The local market environment of the small-sized and medium-sized banks under study is proxied by the time-invariant, binary indicator $KONK\_04$, indicating whether a bank is operating under competitive local market conditions or not. The home market of a bank is assumed to be identical with the district where the bank headquarters. For the components used to identify competitive local market conditions, see Appendix.

Legal and institutional convergence of Eastern European countries to EU standards is captured by two binary time-variant variables. The dummy variable $EURO$ captures the period since the begin of the EU accession

6) In the econometric analysis to come, the time-invariant, binary variable $GREE1$ and $GREE2$ are used explicitly.

negotiations of 10 EU membership aspirants including the Czech Republic, Slovak Republic, Hungary, and Slovenia, in 1999 and the variable HUV marks the period since 2004 when these very countries have finally acquired the status of a full EU member.

In order to account for the relatedness between geographical and institutional proximity, we construct interaction variables between $GREE-$related indicators and the variable $EURO$ and HUV, respectively.

As to the bank-level variables used in this investigation, the variable to be explained is the degree of foreign lending activities of an individual bank. Thus, the left-hand-side variable in our regression analyses is defined by the ratio of nominal foreign assets creation of bank i at time t, $\Delta FA_{i,t}$, normalized by the total nominal assets of bank i at the beginning of period t, that is $A_{i,t-1}$, with $i = 1, 2, ..., 543$ and $t = 1996, 1997, ..., 2008$, respectively[7]). Depicting international bank lending based on this ratio has been predetermined by the fact that foreign lending activities of the banks investigated have only been made available to us in the given portmanteau form[8]).

The ratio "foreign assets divided by total assets" at the bank level lagged one period, denoted $AAQ_{i,t-1}$, with $i = 1, 2, ..., 543$ and $t = 1996, 1997, ..., 2008$, respectively, depicts the level of foreign lending of bank i accrued over the past years. This size indicator enters the regression analysis in log-form, denoted $laaq_{i,t-1}$, as do all idiosyncratic variables in this study.

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[7]) Since foreign assets as percent of total assets is bounded by zero and one we convert the dependent variable into this unbounded variable in order to circumvent cumbersome estimation hurdles that come with estimators for truncated dependent variables.

[8]) Due to legal data protection requirements Austrian Central Bank (OeNB) is only eligible to provide access to foreign lending data at the bank level when wrapped up in the sum of all foreign activities on the asset side. However, informal information provided by both bank managers and bank supervisory experts ensures us that the ratio of foreign assets over total assets at the bank level follows very closely the dynamics of foreign bank lending over total assets at the bank level. This particularly applies to the regionally operating banks that are at the center of this analysis.

To control for individual bank size, which is frequently associated with a bank's inclination to become international, we use total real assets $SPAS_{i,t}$, measuring the $i-th$ bank's total real assets at time t.

The ratio of bank lending over deposits, represented by $LDR_{i,t}$, reflects the degree to which a bank provides financial intermediation. We assume that banks with high intermediation power (that is, banks with high LDR-values) be more likely to engage in cross-border lending than banks with low intermediation performance.

Control variable $EKQ_{i,t}$ is designed to capture the influence of bank capital on a bank's desire to engage in international activities. The consideration of bank capital as measured by core bank capital over total bank assets is motivated by the presumption that both capital-rich banks and capital-poor banks have their reasons to promote cross-border operations[9]). The former, because well-capitalized banks are assumed to be capable of coping with the assumed higher risks in the foreign markets and, in so doing, to be rewarded with handsome profits. The latter, because undercapitalized banks may have an extra-strong incentive for playing in (riskier) foreign markets with the aim to improve the odds of raising capital (by reaping and retaining the 'wished-for-extra-profit').

The quality of a bank's personnel may also be a driving factor behind the tendency to lend cross-border. In the following, the skills level of a bank's employees, denoted by $PM_{i,t}$, is represented by staff costs per employee. The presumption is that staff costs per head and professional skills level are positively related.

As a measure of management efficiency we use the traditional cost-income ratio, denoted $CIR_{i,t}$. The reading of this indicator is that lower values signal that bank management does a good job et vice versa. Thus, if good bank

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9) We relate core capital to total assets rather than to risk-weighted assets, as suggested by the Basel Accords, since data on the latter have not been available for all regional banks under study.

management affects cross-border lending positively (negatively) then this variable is to enter into the regressions equations with a negative (positive) sign.

In addition, we checked the empirical relevance of various indicators designed to capture external demand and supply factors likely to affect cross-border bank lending activities. In controlling for these external demand and supply factors we primarily concentrated on growth rate spreads, as measured by the difference of real *GDP* per capita growth rates between Austria and its neighboring eastern countries, and interest rate spreads, as measured by the difference of nominal 3-month money market reference interest rates between Austria and its neighboring eastern countries, respectively. Since these indicators have proven to have no explanation power in the regressions, we refrain from introducing them altogether.

For further data details, we refer the reader to the Appendix.

3.2 Model and Test

The base regression model used to check if institutional and legal convergence of Austria's eastern neighboring countries towards EU standards has had an impact on the dynamics of cross-border lending activities of Austrian regional banks has the following structure:

$$(1) \qquad \frac{\Delta FA_{i,t}}{A_{i,t-1}} = b_0 + b_1\, laaq_{i,t-1} + b_2\, CONV_{i,t} + \sum_{j=2}^{r} b_j Z_{ij,t} + \nu_t + \eta_i + \varepsilon_{i,t}\ ,$$

where $CONV$ represents those variables ($EURO$, HUV, $GREE$, $NAMQ$ and interactions among these variables) that reflect institutional and cultural convergence. The terms Z_{ij} stand for the logarithm of control variables $SPAS$, LDR, EKQ, PM, and CIR, respectively. The terms ν_t and η_i measure unobserved time-specific and bank-specific effects, with time period $t = 1996,1997,...,2008$ and banks $i = 1,2,...,543$, and $\varepsilon_{i,t}$ is the classical disturbance term with $E[\varepsilon_{it}] = 0$ and $Var[\varepsilon_{it}] = \sigma_\varepsilon^2$, respectively.

Since the standard panel-based (fixed-effects) estimators do not identify time-invariant regressors the impact of 'geographical and/or cultural closeness' as represented by time-invariant, binary variables $GREE$ (eastern border districts), and $NAMQ$ (Eastern European surname descent ratio)), respectively on foreign lending creation induced by regional banks cannot be accounted for when standard panel estimation techniques are applied to regression approach (1). Hence, in order to obtain consistent estimates of coefficients of time-invariant $GREE-$related and $NAMQ-$related variables, respectively we apply the Hausman-Taylor estimator. This estimator is an instrument-variable based approach and is built on the (somewhat) narrowing assumption that some specified regressors be uncorrelated with the fixed effects (see, *Cameron – Trivedi*, 2010, p. 290). The validity of the latter assumption will be tested by the Sargan-Hansen test.

3.3 Findings

The estimates for various versions of equation (1) gained from the Hausman-Taylor estimator are presented in Table 1. For all versions presented the chosen specification assumes that $EURO-$related and $HUV-$related variables be time-variant exogenous, $GREE-$related and $NAMQ-$related variables and $KONK\_04$ be time-invariant exogenous, and the idiosyncratic controls be time-variant endogenous, respectively. This specification is strongly supported by the Sargan-Hansen test as reported in Table 1.

First, the estimates show that the main findings drawn from our approach (1) support the view that geographical closeness to the eastern border has a big say when it comes to explaining higher foreign lending activities of regional banks in Austria from the mid 1990s to 2008. In almost all models presented the estimations reflect quite clearly that banks located in the eastern regions of the country, particularly in the eastern districts ($GREE1$) boosted foreign lending activities much stronger than the banks farther away from the eastern border.

That is, the coefficients of $GREE1$ and $GREE2$ are positive and highly significant, with the former significantly larger than the latter (model 1 to model 5).

Second, in all models presented, the begin of the EU accession negotiations of the Czech Republic, Slovak Republic, Hungary, and Slovenia, in 1999, represented by $EURO$, has been diagnosed as far more important for the dynamics of cross-border bank lending of Austrian banks than the historical event of these countries' acquiring the status of a full EU member in 2004, represented by HUV (the latter turns out to be insignificant in all models checked, with model 6 being somewhat different).

Third, and most importantly, the regression results indicate quite clearly that, as to cross-border bank lending activities, cultural closeness matters. The coefficients of instrument variable $NAMQ$ and related interaction variables $(GREE1\ x\ NAMQ)_i$ and $(GREE2\ x\ NAMQ)_i$, respectively are positive and highly significant even when for institutional and geographical factors (i.e., EU convergence, closeness to eastern border) are controlled for. This is strongly underlined in structure-rich model 6 where the positive and significant coefficients of both interaction term $(GREE1\ x\ NAMQ)_i$ and $(GREE2\ x\ NAMQ)_i$ signal that cross-border bank lending activities of banks located in the eastern region of Austria have additionally been boosted by cultural closeness to the neighboring country, as measured by the Eastern European surname descent ratio.

Table 1: Hausman-Taylor Estimates with Bootstrap Standard Errors based on 150 Resamples

Dependent variable $\frac{\Delta FA_{i,t}}{A_{i,t-1}}$

	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value
Time variant exogenous												
$EURO_t$	0.1909	*0.022*	0.2114	*0.004*	0.2037	*0.010*	0.2032	*0.009*	0.1990	*0.005*	0.0109	*0.943*
HUV_t			0.0192	*0.852*	0.0113	*0.930*	0.0107	*0.928*	0.0062	*0.954*	-0.1106	*0.531*
$(GREE1 \times EURO)_t$											0.1785	*0.359*
$(GREE1 \times HUV)_t$											0.4436	*0.015*
$(GREE2 \times EURO)_t$											0.3697	*0.037*
$(GREE2 \times HUV)_t$											0.1417	*0.401*
Time variant endogenous												
$laaq_{t-1}$	-0.0826	*0.007*	-0.0817	*0.009*	-0.0807	*0.013*	-0.0804	*0.011*	-0.0804	*0.008*	-0.0858	*0.004*
$lspas_t$	0.7408	*0.007*	0.6278	*0.033*	0.6662	*0.064*	0.6680	*0.026*	0.6920	*0.009*	0.5515	*0.060*
ldr_t	0.5802	*0.055*	0.5790	*0.106*	0.5869	*0.057*	0.5879	*0.064*	0.5878	*0.084*	0.6945	*0.034*
$lekq_t$	0.1380	*0.227*	0.1420	*0.243*	0.1452	*0.269*	0.1457	*0.315*	0.1459	*0.275*	0.0289	*0.835*
lpm_t	-0.7198	*0.067*	-0.7079	*0.039*	-0.7162	*0.046*	-0.7174	*0.043*	-0.7205	*0.043*	-0.6257	*0.064*
$lcir_t$	0.4888	*0.102*	0.4829	*0.126*	0.4894	*0.117*	0.4904	*0.118*	0.4927	*0.129*	0.5242	*0.085*
Time invariant exogenous												
$KONK\_04_i$	0.4418	*0.069*	0.3519	*0.187*	0.5090	*0.151*	0.5178	*0.072*	0.5532	*0.047*	0.4387	*0.127*
$GREE1_i$					0.8892	*0.001*	0.7017	*0.004*	0.4924	*0.067*	0.2036	*0.427*
$GREE2_i$					0.3402	*0.054*	0.3470	*0.034*	0.1282	*0.540*	-0.1904	*0.294*
$NAMQ_i$							1.0367	*0.002*	-4.2815	*0.022*	-3.9215	*0.028*
$(GREE1 \times NAMQ)_i$									5.3854	*0.004*	4.9301	*0.009*
$(GREE2 \times NAMQ)_i$									5.9160	*0.007*	5.4912	*0.015*
constant	-0.0846	*0.960*	0.3831	*0.824*	-0.2101	*0.914*	-0.2613	*0.877*	-0.1709	*0.923*	0.5857	*0.745*
Sargan-Hansen test		*0.658*		*0.453*		*0.304*		*0.230*		*0.257*		*0.165*

Number of observations: 7,020; number of banks:543; time period: 1996 to 2008; all models individual fixed effects, no time fixed effects.

Model 6 also reveals the subtle difference in influence of the Eastern European opening on the cross-border lending activities of banks located in border districts ($GREE1$) and banks located in districts next to border districts ($GREE2$), respectively. Cross-border lending dynamics of the former has been more affected by EU accession of the eastern neighboring countries (in 2004) while that of the latter has been more affected by the start of the EU accession negotiations (in 1999). These findings are in line with the dynamics of foreign banks lending of Austrian regional banks depicted in Figure 2.

The estimates for the coefficient of $KONK\_04$ signals that banks facing strong local competition are more inclined to lend cross-border than banks operating in less competitive local environments. However, this effect is only weakly significant in a statistical sense.

Fourth, the role of the idiosyncratic variables in explaining the foreign lending orientation of the regional banks is such that those banks with high levels of cross-border lending ($AAQ_{i,t-1}$) intend to restrict their relative cross-border activities, larger banks ($SPAS_{i,t}$) intend to increase their cross-border lending activities, and banks with high intermediation power (that is, banks with high LDR-values) are indeed, as expected, be more likely to engage in cross-border lending than banks with low intermediation performance. However, quality of personnel as indicated by the sign of the estimate of the coefficient $PM_{i,t}$ seems to hamper rather than foster foreign lending activities.

The coefficient of control variable $EKQ_{i,t}$ capturing the influence of bank capital on a bank's cross-border activities is positive, but highly insignificant. The same applies to management efficiency as measured by the cost-income ratio $CIR_{i,t}$. However, the latter coefficient estimates are far closer to standard significance levels, with estimates in model 3 and model 6 being significant at the critical p-value of 10 percent. Thus, these estimates indicate that it is rather

the inefficiently managed regional bank that is more likely to venture across border.

These findings prove to be rather robust as results for the various models show. Finally, as mentioned above, it is worth reminding that the inclusion of additional domestic and foreign real demand and real supply factors has not significantly increased the explanatory value of the regression models presented.

4. Conclusion

With the fall of the 'Iron Curtain' in the late 1980s and the swift transformation of former communist command economies to full-fledged market economies (Westernization of Eastern Europe) history has provided applied economics with the unique opportunity to test core economic propositions within the frame of a quasi-natural experiment. Against this background an attempt is made to explore a core question in international banking, namely, to what extent geography, culture and institutions matter as prime mover of cross-border bank lending. Theory suggests that cross-border bank lending flow from rich countries to poor countries is facilitated when lending-related legal and social norms are shared and valued equally by both lenders and borrowers. Accordingly, the fast adoption of Western-style democracy and market economy principles as established by European Union (EU) standards by many of the Eastern European 'transformation countries' since the early 1990s should have raised cross-border lending by banks based in 'old' EU member states to clients resident in new Eastern European EU member states. By taking this hypothesis to the data covering cross-border lending activities of Austrian small-sized to medium-sized regional banks over the period from 1996 to 2008 this paper shows that foreign lending of Austrian small-sized to medium-sized banks has indeed been strongly positively affected by the swift alignment particularly of Austria's eastern neighboring countries (Czech Republic, Slovak Republic, Hungary, and Slovenia) to EU norms. In addition, we found

evidence that cultural closeness between Austria and its Eastern European neighboring countries, as measured by a ‘common culture indicator’ built on the relative prevalence of Slavonic names in Austria at the district level, has also contributed to elevate cross-border lending of small-sized to medium-sized Austrian banks, located along the eastern border, to residents of the neighboring countries in the East. We consider this outcome as a piece of evidence that is strongly in line with the view that geographical closeness, common culture and common institutions matter when it comes down to making economic laws work.

References

Abiad, A., Leigh, D., Mody, A., "Financial Integration, Capital Mobility, and Income Convergence", Economic Policy, 2009, (April), 241-305.

Acemoglu, D., Introduction to Modern Economic Growth, Princeton University Press, Princeton, NJ, 2009.

Acemoglu, D., Johnson, S., "Unbundling Institutions", Journal of Political Economy, 2005, 113(5), 949-995.

Acemoglu, D., Johnson, S., Robinson, J. A., "Reversal of Fortune: Geography and Institutions in the Making of the Modern World Income Distribution", Quarterly Journal of Economics, 2002, 117, (November), 1231-1294.

Cameron, A. C., Trivedi, P. K., Microeconometrics Using Stata, Revised Edition, Stata Press, 2010.

Ferguson, N., Empire: The Rise and Demise of the British World Order and the Lessons for Global Power, Basic Books, New York, 2003.

Freixas, X., Rochet, J. C., Microeconomics of Banking, Second Edition, MIT Press, Cambridge, MA, 2008.

Grosjean, P., (2011A), "The Weight of History on European Cultural Integration: A Gravity Approach", American Economic Review: Papers & Proceedings, 2011, 101(3), 1-7.

Grosjean, P., (2011B), "Long Term Institutional Persistence: Ottoman Rule and Financial Development in the Regions of Europe", Journal of Comparative Economics, March 2011, Vol. 39, 1-16.

Lucas, R. E., "Why Doesn't Capital Flow from Rich to Poor Countries?", American Economic Review, 1990, 80(May), 92-96.

Maechler, A. M., Ong, L. L., "Foreign Banks in the CESE Countries: In for a Penny, in for a Pound?", IMF Working Paper, 2009, (54).

Obstfeld, M., Taylor, A. M., Global Capital Markets: Integration, Crisis, and Growth, Cambridge University Press, New York, 2005.

Prasad, E., Rajan, R., Subramanian, A., Patterns of International Capital Flows and Their Implications for Economic Development, Research Department, IMF, September, 2006.

Appendix

Variables

$FA_{i,t}$	Foreign assets of bank i at time t
$A_{i,t}$	Total assets of bank i at time t
$laaq_{i,t}$	Total foreign assets in percent of total assets of bank i at time t, in logarithm
$lspas_{i,t}$	Total assets in mio € of bank i at time t deflated by GDP deflator, 2000=100, in logarithm
$lldr_{i,t}$	Loans in relation to deposits of bank i at time t, in logarithm
$lekq_{i,t}$	Core capital in percent of total assets of bank i at time t, in logarithm
$lpm_{i,t}$	Staff costs in €, deflated by GDP deflator, 2000=100, per employee borne by bank i at time t, in logarithm
$lcir_{i,t}$	Costs in relation to income of bank i at time t, in logarithm
$EURO_t$	Time-variant binary variable coding the period since the start of EU accession talks of Czech Republic, Hungary, Slovak Republic, and Slovenia
HUV_t	Time-variant binary variable coding the period of EU membership of Czech Republic, Hungary, Slovak Republic, and Slovenia
$GREE1_i$	Time-invariant binary variable coding Austrian districts sharing the border line with Czech Republic, Hungary, Slovak Republic, and Slovenia
$GREE2_i$	Time-invariant binary variable coding Austrian interior districts close to districts sharing the border line with Czech Republic, Hungary, Slovak Republic, and Slovenia
$NAMQ_i$	Time-invariant variable, defined as the ratio of phone book entries of Austrian residents with the most common surnames of Czech, Slovakian, Hungarian, and Slovenian ancestry among the 150 most frequent surnames per district relative to the phone book entries of Austrian residents with the 100 most common surnames of Austro-German origin among the 150 most frequent surnames per district, in 2003
$KONK\_04_i$	Time invariant, binary variable, measuring the market share of each bank (as measured by number of its branches) being smaller than 10% of its local market (as measured by the total number of branches in its home district) in 2004

Table A1: Descriptive statistics

Variable	Mean	Standard deviation	Minimum	Maximum
AAQ	3.687	7.070	0.000	99.378
SPAS	119,159	155,874	7,556	2,018,648
LDR	0.731	0.271	0.094	2.582
EKQ	7.387	2.644	1.700	22.079
CIR	0.689	0.099	0.306	1.704
PM	59,269	9,251	19,382	203,248
FA	66.195	944.312	-57,290.47	35,050.58
NAMQ	0.082	0.184	0.000	1.443

Number of observations	7,602
Number of banks	543
Time period	1995 to 2008