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The resurgence of cultural borders during the financial crisis: The changing geography of Eurozone cross-border depositing

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ABSTRACT

We investigate the impact of cultural borders on the geography of international finance during stable and crises times. We employ a unique data set that focuses on Eurozone cross-border depositing during the 1999–2011 period in a gravity-model framework. We find that cultural distance limits international financial integration over and above what can be expected from economic trade and transaction costs. While we provide evidence that cultural borders lost influence during a "Europhoria" phase after the introduction of Euro notes in 2002, our findings indicate that cultural borders resurge during the 2007/2008 financial crisis and severely limit financial integration.

1. Introduction: the importance of culture and crises for the geography of international finance

In this paper, we demonstrate that cultural distances between countries constitute important trade costs in cross-border finance. These cultural differences act as invisible borders that limit financial integration more than could be expected from purely economic reasoning. We also show that this limiting effect is more severe during financial crises than during tranquil periods. In other words, financial crises heighten the cultural barriers to financial integration and thereby reshape the geography of international finance.[1] To scrutinize the transmission channels from culture to financial integration, we focus on cross-border depositing in the Eurozone during the 1999–2011 period. The existence of a single currency and homogenized single banking market legislation provide us with a unique setting in which the channels of cultural influences on banking market geography during tranquil and crisis periods can be isolated.[2]

The resistance of banking markets to integration has perplexed European policymakers over the past decade (see Barros et al., 2005; Dermine, 2006; Kleimeier and Sander, 2007; Walkner and Raes, 2005). As in merchandize trade, the law of one price was and is the benchmark for an integrated market (Adam et al., 2002; Baele et al., 2004; Kleimeier and Sander, 2006). However, the retail banking market remains far from this goal, as interest rate

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[1] For a similar argument in the housing market during the 2007/2008 crisis see Martin (2011).

[2] The Second Banking Directive of 1989 (Directive 89/646/EEC) laid the foundation for a homogenized single banking market regulation in Europe. It relies on three fundamental principles of harmonization, mutual recognition, and home country control and supervision. Harmonization should lead to a system where banks operating in several countries face a common set of EU regulations. Mutual recognition implies that the banking charter of the home country is sufficient to operate in all EU countries. Home country rule stipulates that foreign owned banks are regulated by their home country and not by the host country (Kleimeier and Sander, 2002).

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differences persist across countries: The average deposit interest rate difference (measured in absolute terms) across all 12 initial Eurozone countries over the sample period 1999–2011 is 0.85 percentage points, with a standard deviation of 1.0. Interest differences declined from nearly 2.0 percentage points in 1999 to under 0.5 percentage points in 2004–2008. However, since the onset of the crisis, interest rate differences have again risen to nearly 1.0 percentage point. Furthermore, given the variety of deposit products offered within and across countries, the actual differences and thus the arbitrage opportunities may be even higher than simple price differences suggest. Despite these arbitrage opportunities, cross-border deposits from Eurozone depositors account for only 5.0% of total deposits held in Eurozone banks in 2011, compared to 5.5% in 1999. Trade costs in the broadest sense are the prime candidates for explaining the low level of cross-border depositing and the absence of arbitrage, i.e. explaining the existence of geography.

Our analysis builds on studies that estimate trade cost effects in gravity models of international trade. We hence argue **firstly** that over and above the well-established determinants of cross-border depositing – such as interest rate differentials, regulatory arbitrage with respect to taxation, or legal system heritage – cultural differences across countries constitute important trade costs. By adopting a broad view on trade costs and their influence on cross-border depositing, we contribute to an emerging literature that highlights the importance of culture and cultural differences in international economic exchange (see e.g., Ekinci et al., 2007; Grosjean, 2011a,b; Guiso et al., 2009; Heuchemer et al., 2009; Siegel et al., 2011; Stulz and Williamson, 2003).

Secondly and following Grosjean (2011a), we reason that *differences in trust levels* are a theoretically appealing proxy for cultural heterogeneity and demonstrate that these differences constitute empirically relevant cultural borders in cross-border depositing. We concur with Guiso et al. (2006: 23), who define culture as "those customary beliefs and values that ethnic, religious, and social groups transmit fairly unchanged from generation to generation." In a similar vein, Grosjean (2011a: 504) argues that "cultural persistence and cultural heterogeneity are two sides of the same coin" and shows that cultural change is very slow. Thus, very distant major historical events still matter for present cultural differences, which in turn influence today's economic structures, transactions, and financial development in Europe (Grosjean, 2011b). Moreover, such a slowly-changing cultural variable can be taken as an exogenous variable in economic studies of a somewhat shorter horizon.

Thirdly, we treat cultural differences as *relative* concepts and argue that controlling for remoteness is crucial in addressing the impact of culture on economic exchange. Empirical trade analysts have controlled for remoteness to arrive at reliable estimates for the role of physical distance (e.g. Frankel, 1997; Wei, 1996). The argument is that the impact of physical distance as a barrier to trade is relative: for a remote country the closest trading partner is so far away that this distance, which other countries would consider as far, appears to the remote country as "close". Consequently, the consensus in the empirical trade literature is that these relative trade costs have to be estimated in gravity models that account for *multilateral resistance* (Anderson and van Wincoop, 2003, 2004) by utilizing country-specific fixed effects. These fixed effects put the absolute distance in relation to measures of the overall remoteness of the exporting country and the importing country, the so-called inward and outward multilateral resistance. The concept of multilateral resistance does not only apply to physical distance but also to all trade costs, With respect to culture, this means that being culturally very different from one trading partner will matter the less the more culturally different one is from all other countries. On the other hand, small cultural differences will matter more for countries which are culturally close to most of their trading partners.

Fourthly, we investigate the transmission channels from culture to international finance using a set of otherwise confidential, bilateral Eurozone cross-border depositing data obtained from the Bank of International Settlements (BIS) covering the period from 1999 to 2011. To uncover the impact of culture on the international retail deposit market during the financial crisis, we disaggregate our data into sub-periods before and after 2007 and furthermore estimate gravity models for three-year moving average periods. We thus contribute to the ongoing discussion of the effects of crises on financial (dis-) integration. Financial crises are often associated with a retrenchment of cross-border finance and thus a shift toward a more domestically-centered geography. However, most studies focus on international lending and document a nationalistic turn or flight home effect (Giannetti and Laeven, 2012; Hildebrand et al., 2012; Minoiu and Reyes, 2013; Rose and Wieladek, 2014).[3] Corresponding evidence for the international retail deposit market is limited, except for the study by Kleimeier et al. (2013), who show that retail customers move deposits abroad in response to a crisis in their home country, thus exhibiting a flight to quality behavior that, according to Giannetti and Laeven (2012), is absent in bank behavior. To the best of our knowledge, we are therefore the first to link financial geography in retail deposit markets to both crises and cultural differences.

Our findings demonstrate that cultural heterogeneity in the Eurozone limits cross-border depositing in the region. However, we also show that over time, this limiting effect has become weaker, most likely indicating some "Europhoria", i.e. growing confidence in the new currency during the first few years after the introduction of Euro notes. Confidence in the stability of the new common currency may have helped to reduce the impact of cultural borders. The financial crisis, however, leads to a strong resurgence of the role of cultural differences.

The paper proceeds as follows: in Section 2 we introduce our theoretically based empirical gravity model, Section 3 provides a brief description of the data, Section 4 presents our results, and in Section 5, we examine their robustness to a variety of alternative specifications. Section 6 concludes.

2. A gravity analysis of cultural trade costs

Cultural differences impose bilateral trade costs because differences in languages, customs, traditions, law systems, or business practices raise information and communication costs. To analyze the influence of cultural trade costs on cross-border depositing, we employ a gravity-model approach. Gravity models were long considered pure physical analogs to Newton's law of gravity because they had no theoretical foundation. Due to the work of, for example, Anderson (1979), Anderson and van Wincoop (2003, 2004), Bergstrand (1985, 1989), and Deardorff (1998), the theoretical foundation of gravity models has steadily improved such that the gravity approach is now widely accepted as a theoretical and econometrical framework for studying transactions over space. Most recently, the gravity approach has been applied to analyze international financial transactions (e.g., Aviat and Coeurdacier, 2007; Buch, 2005; Buch and Lipponer, 2007; Coeurdacier and Martin, 2009; Heuchemer et al., 2009; Lane and Milesi-Feretti, 2004; Martin and Rey, 2004; Okawa and van Wincoop, 2012; Portes and Rey, 2005). This rapidly evolving literature sheds light on the "distance puzzle" found in cross-border finance and international banking,

[3] Cetorelli and Goldberg (2011), Herrmann and Mihaljek (2013), Milesi-Ferretti and Tille (2011), and Takats (2010) analyze cross-border lending, whereas Cetorelli and Goldberg (2011, 2012), Milesi-Ferretti and Tille (2011), Peek and Rosengren (2000), Popov and Udell (2012), and Rose and Wieladek (2014) focus on local lending by foreign offices.