



Human Barriers to International Trade



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Abstract

This paper investigates the impact of human barriers to international trade using ancestral distance as a measure of the relatedness between populations. In a new data set covering the universe of global trade, our findings document that country pairs with a high ancestral distance are less likely to trade with each other (extensive margin) and if they do trade, ancestral distance negatively affects the volume and number of goods traded (intensive margin). These results are robust to including a vast array of micro-geographic controls as well as linguistic and religious distance variables. We provide evidence suggesting that the inverse relationship between bilateral trade flows and ancestral distance arises from differences in values, preferences, and technology, as well as network effects.

Ancestral Distance

Ancestral distance captures intergenerationally transmitted traits including norms, habits, and trust across populations. Previous research has documented that

- ancestral distance negatively affects the spread of technological innovations (Spolaore and Wacziarg, QJE 2009)
- bilateral trust is related to economic exchange even in the sample of relatively homogeneous European countries (Guiso, Sapienza, Zingales, QJE 2009).

We use genetic distance as a measure of ancestral distance. While all people in the world share the same gene variants, their frequencies are different across populations. When populations split apart, genes start to change due to either random drift or natural selection. Assuming drifts are constant, measured genetic distance represents a molecular clock. Genetic distance then acts as a summary statistic for the divergence in traits such as implicit beliefs, customs, habits, values, or conventions (Desmet et al., JEG 2011).

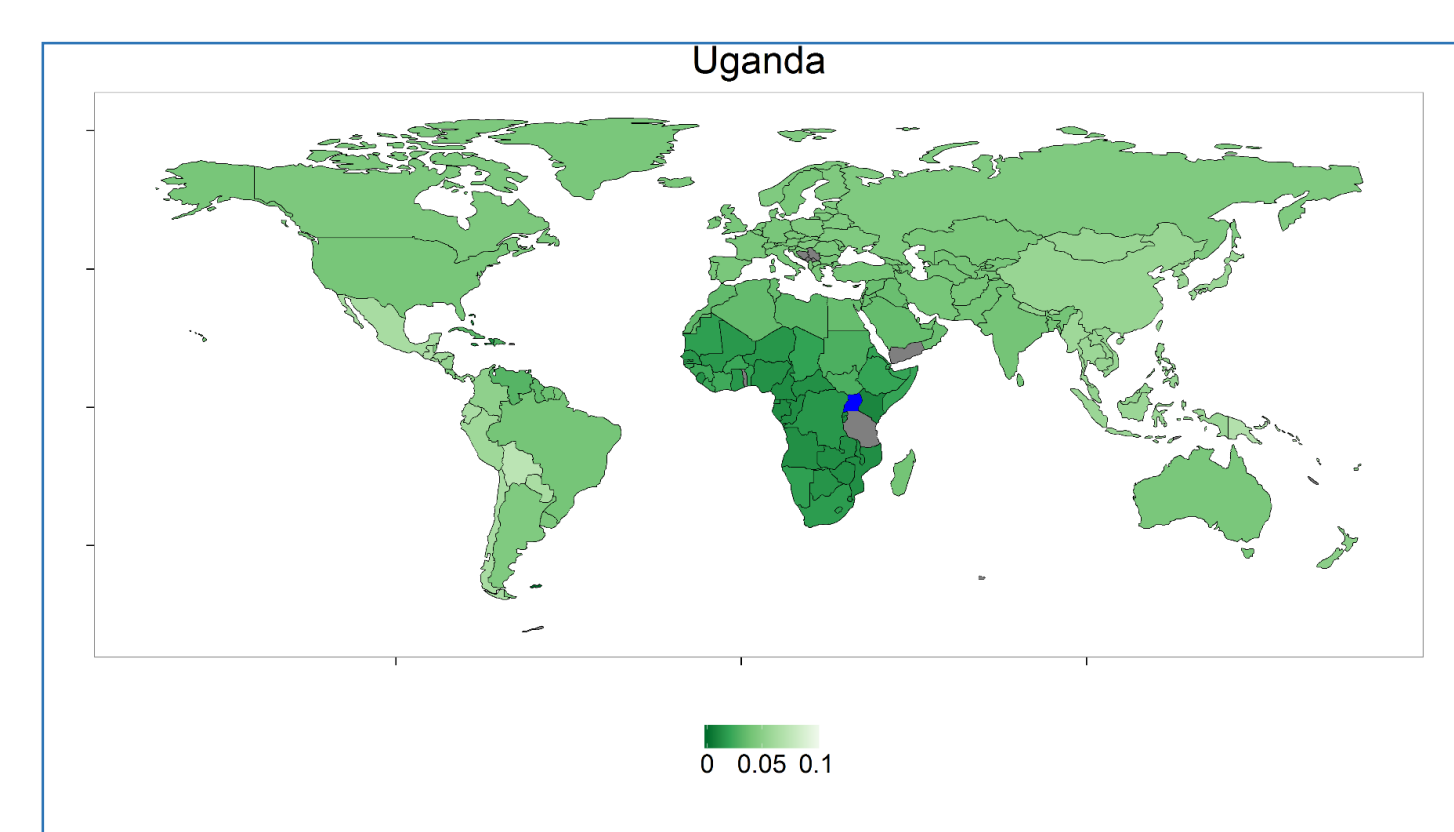
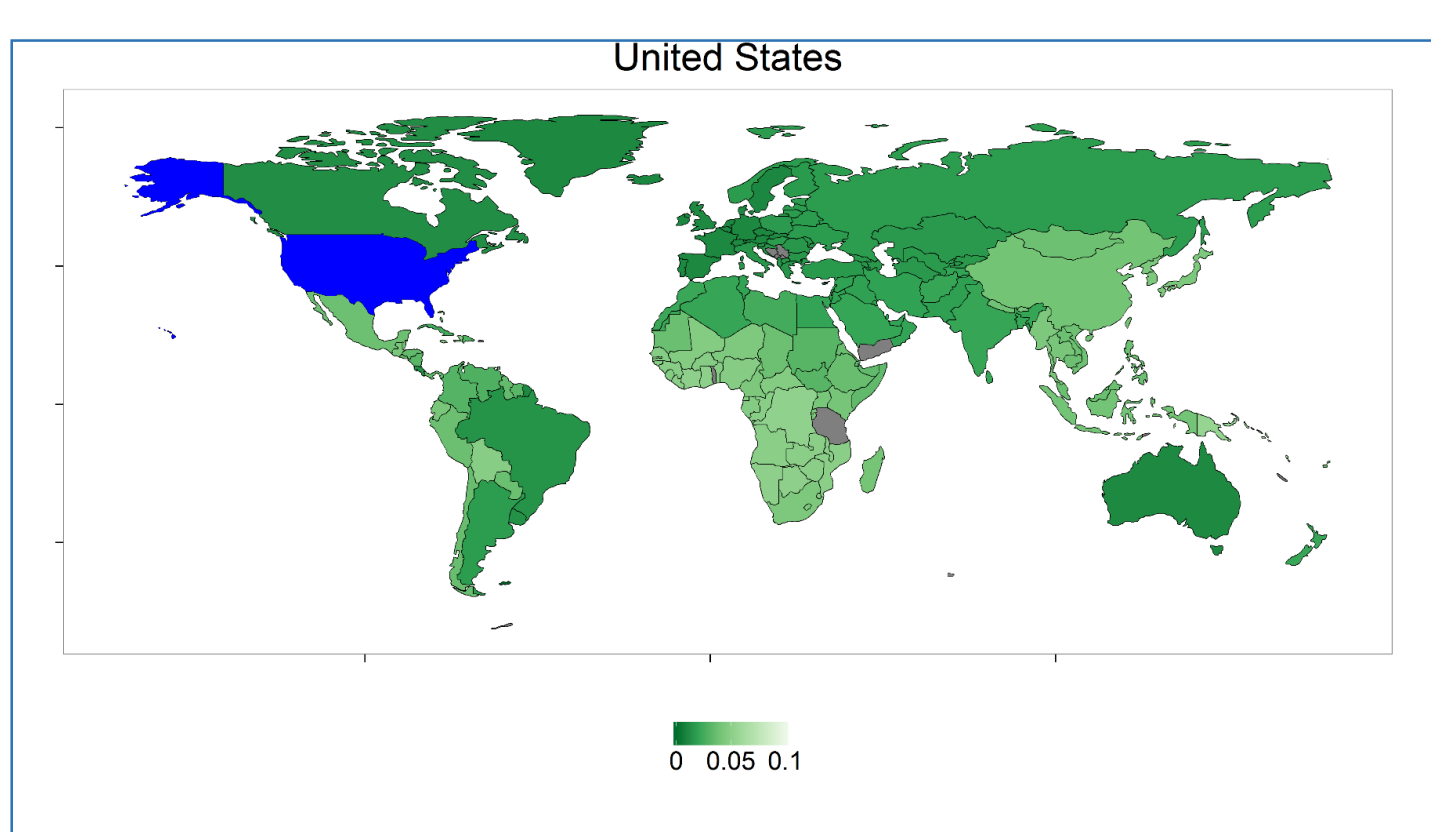
Data Set

We use the most recent measures of ancestral distance for 267 worldwide populations provided by Spolaore and Wacziarg (2016). This data uses DNA that tend to vary only through random mutation and drift, not as the result of natural selection. We combine this genetic distance data with detailed COMTRADE data on international trade flows:

- 172 countries
- Including zero trade flows
- Large set of country-specific and bilateral variables
- More than 99% of world trade covered

Ancestral and Geographic Distance

While the population of the United States shares close ancestors with European and South-American countries, the population of Uganda is closest to other countries in Sub-Saharan Africa. Ancestral distance is strongly positively correlated with geographic distance but there is a lot of variation in genetic distance for a given geographic distance. For example, think of Argentina that, due to a large wave of immigration from Europe in the 19th and 20th century, shares more common ancestry with European countries than with neighboring Bolivia.



Results

The descriptive analysis reveals that ancestral distance and trade flows are negatively related even after netting out geographic distance. This pattern is confirmed in the regression analysis in which we control for the standard gravity covariates (GDP and geographic distance), many micro-geographic factors, colonial ties, policy barriers, as well as measures for linguistic and religious distance.

Country pairs with a higher genetic distance are less likely to trade and if they do have positive trade flows, the volume and number of goods traded is lower.

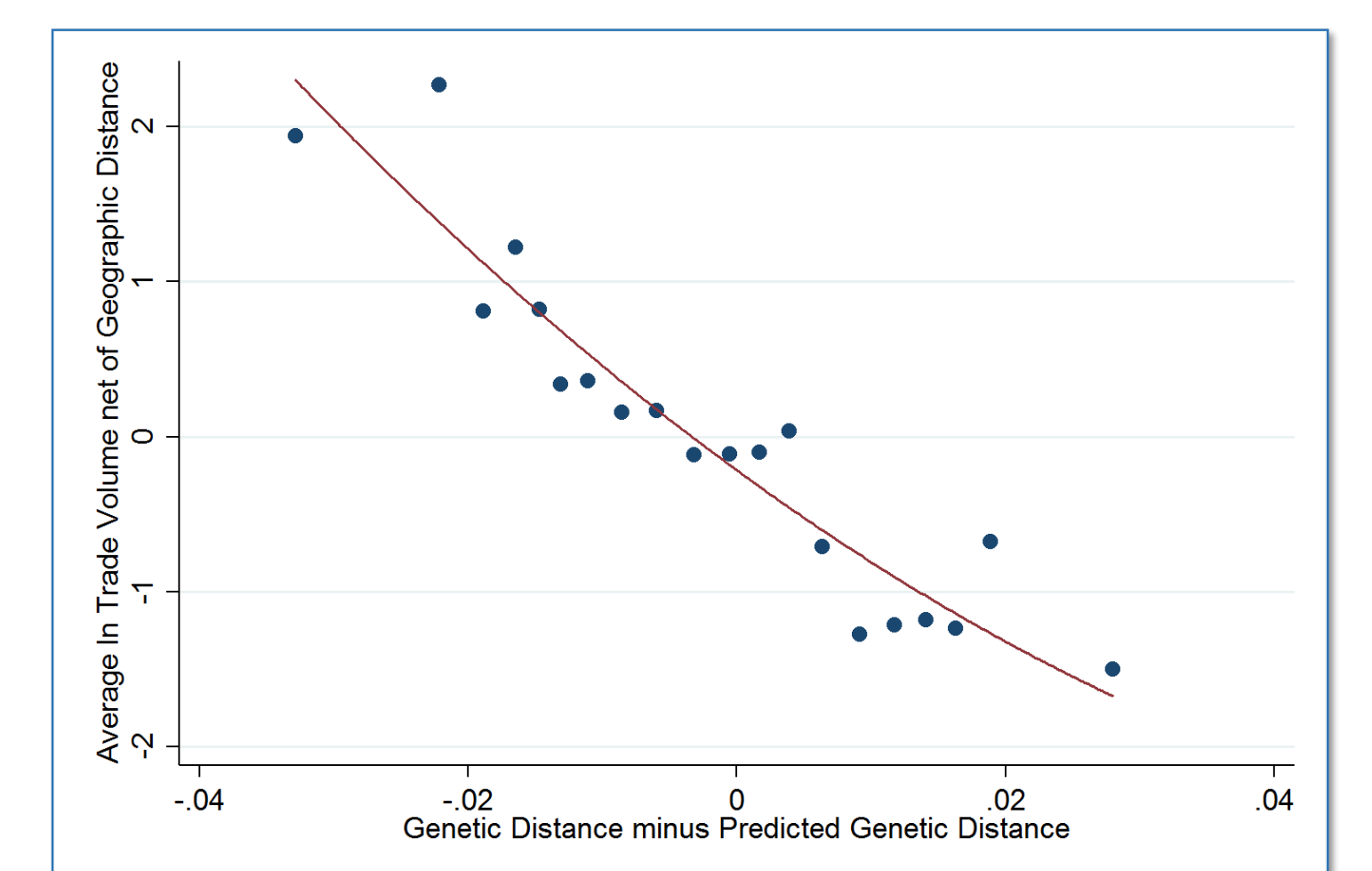
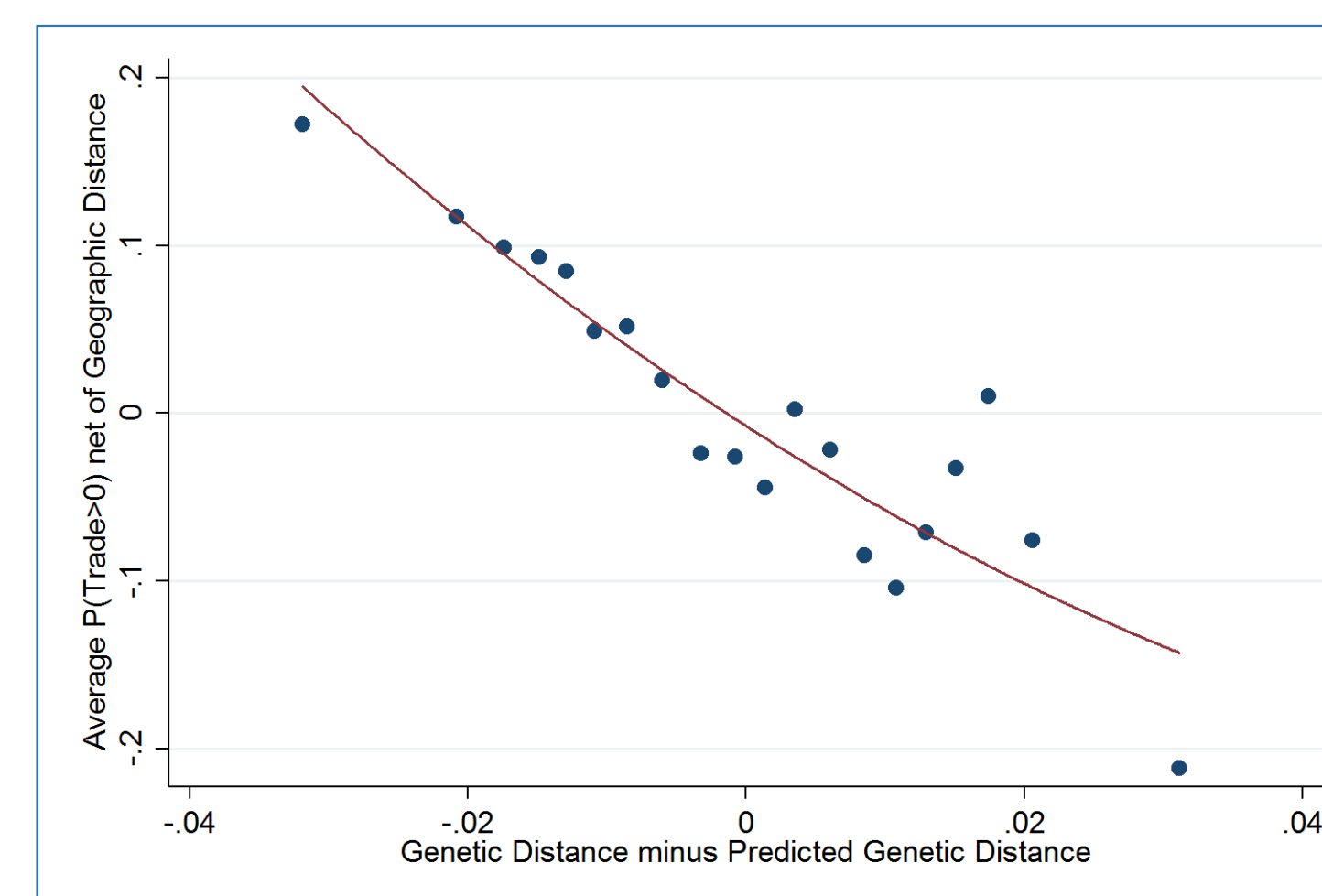


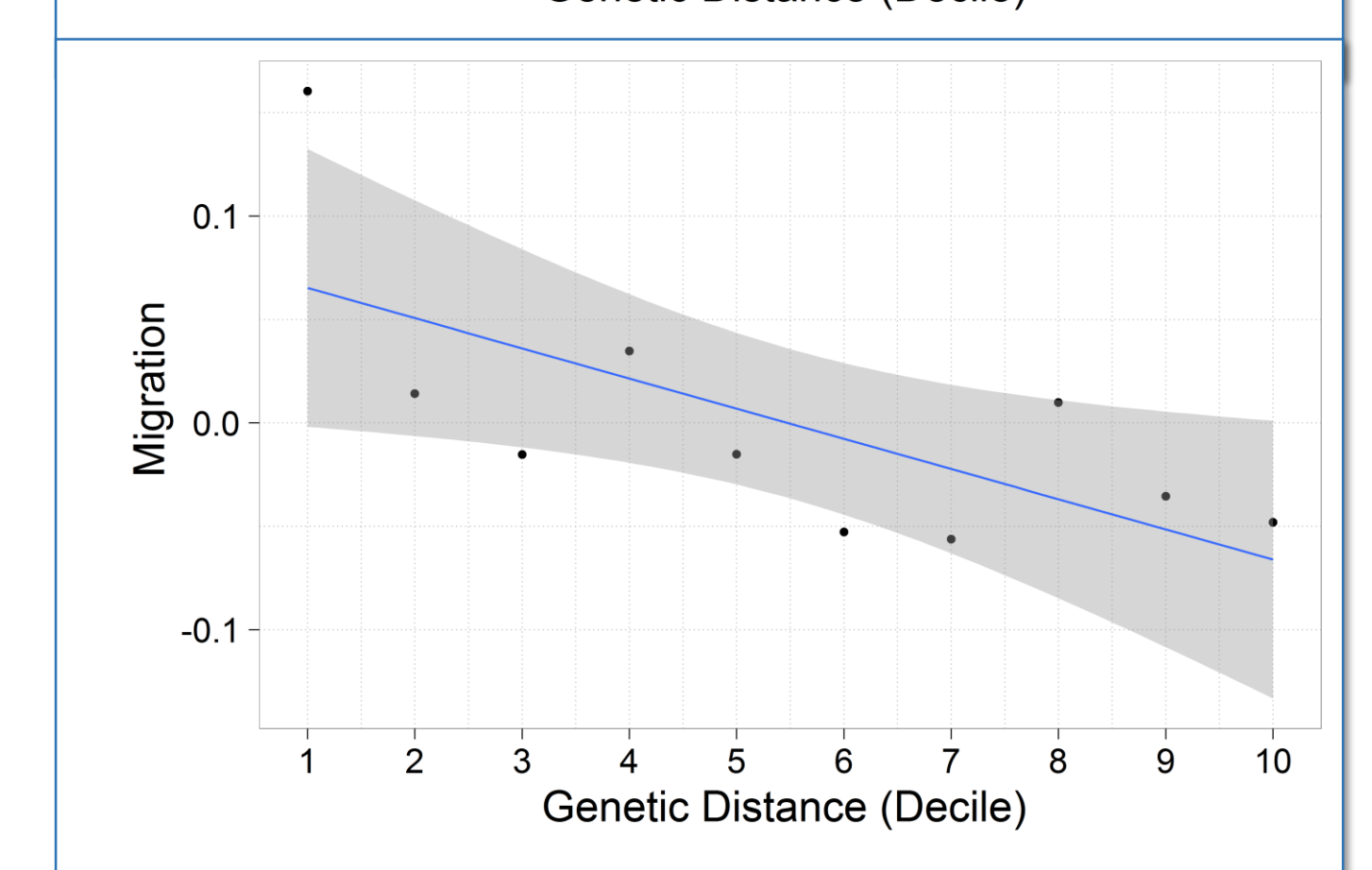
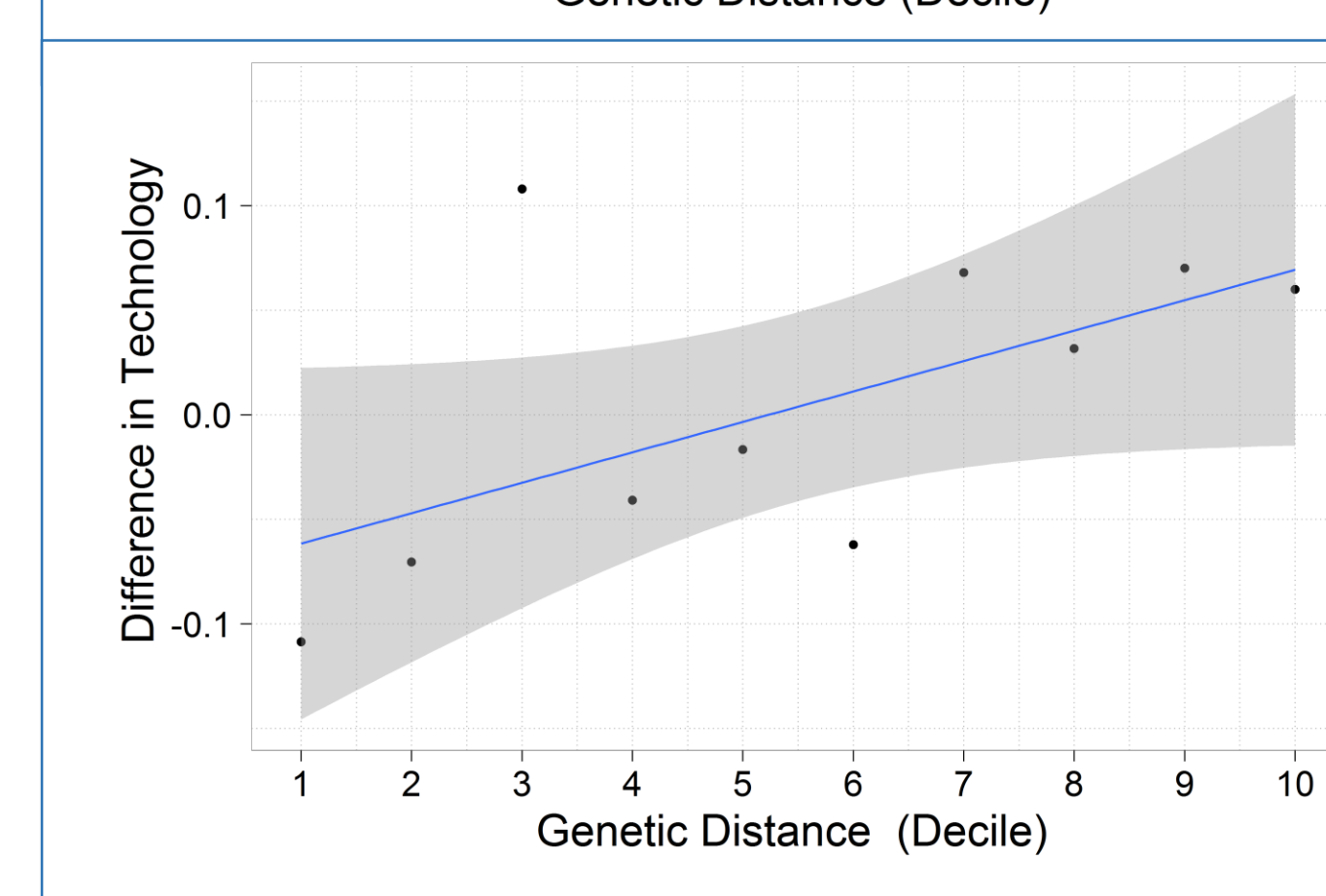
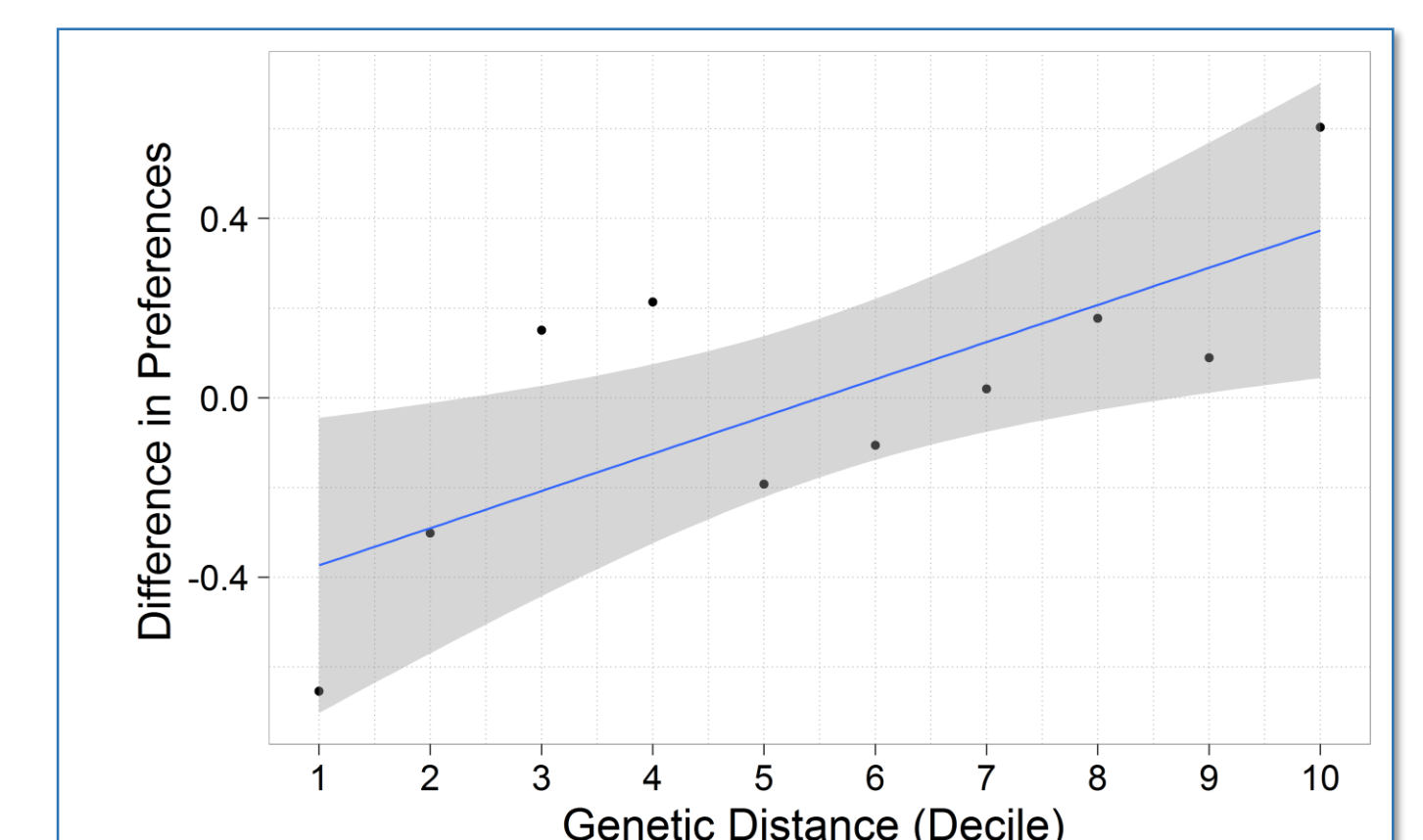
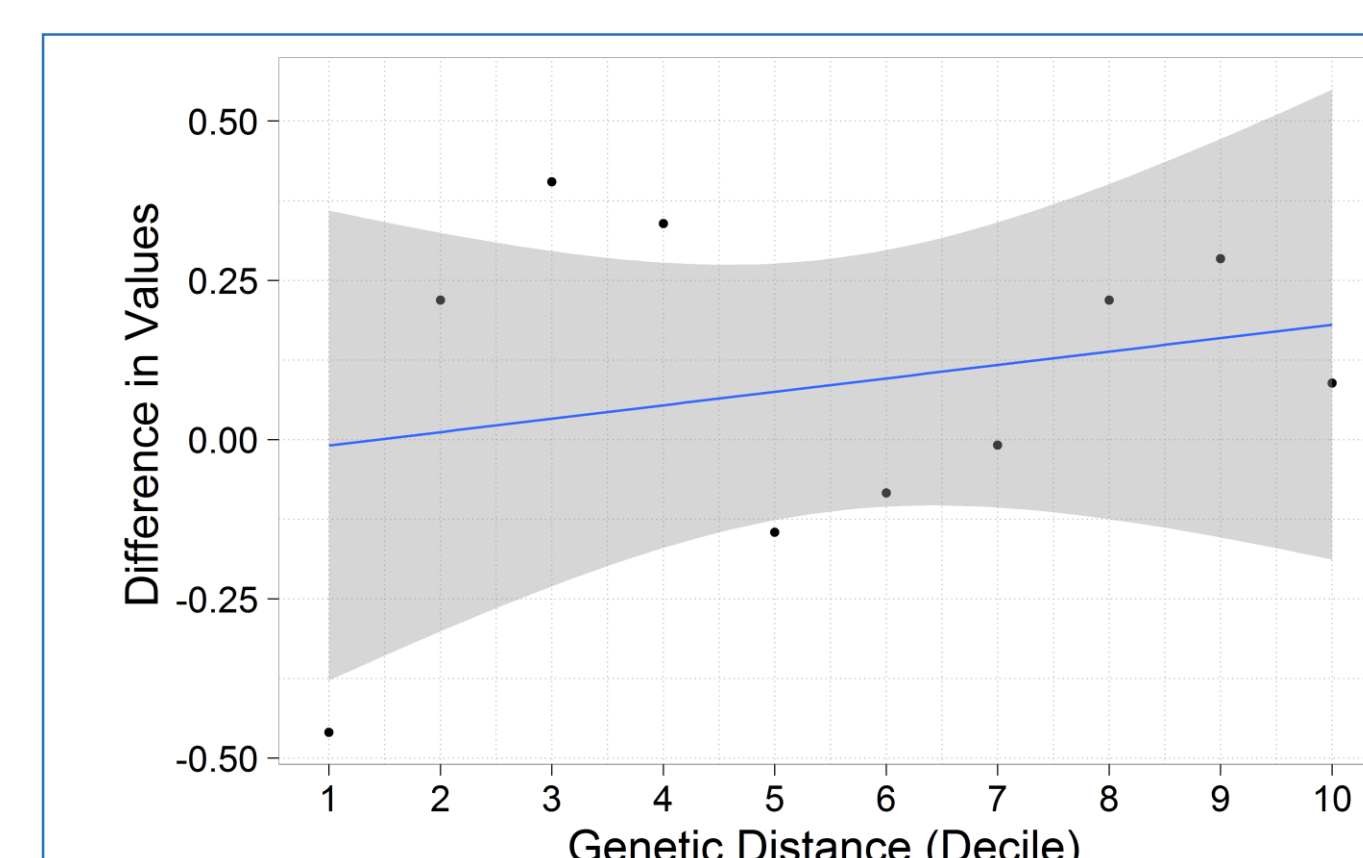
Chart 1. Relationship between Ancestral Distance and the Extensive and Intensive Margin of Trade.

Robustness Tests

The main results are robust to specification tests using alternative data, samples, time periods as well as different dependent and independent variables. Our analysis of data at the 2- or 4-digit SITC level confirms the main findings.

Channels

We explore several potential channels for the negative relationship between ancestral distance and bilateral trade flows. Our findings indicate that differences in values, preferences, and technology play a key role. Furthermore, we find evidence on the significant impact of migration networks, a result that is consistent with Rauch (1999). The correlation between trade and ancestral distance is largest for differentiated products and smaller for homogeneous goods.



Conclusions

Ancestral distance is negatively correlated with the extensive and intensive margin of international trade flows. Our findings are robust to a multitude of alternative specifications. We show that several channels account for this relationship, including preferences, values, technology, and migration networks.

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