

Cultural Remittances and Diasporas

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2 December 2025

Abstract

Migrants export values to their new countries, and remit values back to their homelands. Distinguishing between these two effects is difficult because migration is non-random and cultural transmission is difficult to observe. I propose an approach to identify cultural remittances that exploits second-order links in the global migration network. Briefly, if the cultural values of countries with similar diasporas converge, then cultural remittances must exist. I find robust evidence of remittances across several cultural values, especially those related to the relationship between citizens and governments, which implies a role for migration in the global spread of secular and democratic values. *Keywords:* Migration Networks, Cultural Transmission, Remittances *JEL Codes:* F22, F24, O15

1 Introduction

In its earliest form, human migration consisted of a simple movement of genetic material. Over time, migration became a movement of goods and ideas. As civilization developed, migration eventually became a movement of culture, beliefs and values.¹ This export of culture is likely the first process by which cultural values spread across societies, and it is a unidirectional path by which the culture of a sending society might impact the culture of a recipient society.

As transportation and communication costs decreased, migrants were able to reestablish links with their origin countries. This yields the potential for *cultural remittances*, whereby migrants assimilate cultural values and associated products of their new societies and then send them back to their homelands through communication and trade. Perhaps the most famous early example of

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¹For example, the transfer of paleolithic pottery, a good, throughout Eurasia to Mesopotamia (Cooper (2000)) was succeeded by the likely transfer of writing, an idea, from Mesopotamia to Egypt (Fischer (2003)) and then the spread of ethical monotheism, a cultural belief, throughout the middle East and Mediterranean by the early Jewish diaspora (“Ethical Monotheism,” *Encyclopedia Britannica*).

a cultural remitter is Marco Polo in the 13th century who, after 23 years assimilating the culture of the Far East, returned to Venice to share, among other things, his newly shaped values. Marco Polo notwithstanding, migration was largely one-way for most of history, so cultural remittances were almost certainly dominated by cultural exports. However, as international communication costs have collapsed exponentially in recent decades, there is far greater scope for cultural remittances to affect the culture of emigrant societies.² Given that roughly one third of all international migration is from the global South to the global North³ and that a growing body research finds evidence of causal links between culture and growth (e.g., Spolaore and Wacziarg (2009), Gorodnichenko and Roland (2017)), such remittances could play an important role in the reduction of global poverty and inequality across countries in the coming decades.

Empirically distinguishing cultural remittances from cultural exports poses a substantial identification challenge. Migration flows are endogenous to cultural and institutional conditions in both origin and destination countries, and values evolve slowly, making it difficult to establish direction of causality. Even when one observes cultural convergence between two countries linked by migration, this convergence may reflect selection of migrants, vertical transmission of origin values, horizontal diffusion of values within destinations, or common shocks that affect both countries. As a result, regressions of values on bilateral migration stocks or flows inevitably conflate exports and remittances and suffer from the reflection problem Manski (1993).

This paper proposes a new empirical approach that exploits the second-order structure of global migration networks to isolate cultural remittances. Rather than examining how values change along bilateral migration links, I instead study how the similarity of diasporas across pairs of origin countries affects the evolution of their cultural values. The key insight is simple: if migrants absorb the cultural traits of the countries in which they reside, and if they transmit those traits back to their homelands, then countries with more similar diasporas should experience greater cultural convergence. Importantly, in the absence of remittances, diaspora similarity should have no effect on the similarity of values across origin countries. Diaspora similarity therefore provides a source of identifying variation that does not mechanically reflect bilateral cultural exports and that breaks

²For instance, a three minute telephone call from New York to London cost approximately \$350 in 1931, \$1.20 in 2001, \$0.30 in 2005 and \$0.05 in 2015, all in constant 2000 dollars (Rodrigue (2020) and author's calculations).

³Source: *Population Facts*, 2012, Department of Economic and Social Affairs, United Nations Population Division, no. 2012/13.

the symmetry inherent in the reflection problem.

To implement this approach, I combine global migrant stock data from the United Nations with detailed measures of cultural values from the World Values Survey (WVS) for more than one hundred countries over four decades. I first demonstrate why standard approaches—which relate values to migration-weighted foreign values or regress bilateral value differences on bilateral migration flows—cannot isolate remittances. I then show how a measure of diaspora dissimilarity between countries can be used to overcome these limitations once I condition on contemporaneous migration flows. This conditioning isolates the historical component of diaspora composition: the part driven by earlier migration shocks whose influence on current flows has dissipated. Under this structure, I show that convergence in cultural values across origin country pairs is informative about the presence and magnitude of cultural remittances.

Across thirty-four cultural indices, I find robust and consistent evidence of cultural remittances. Effects are strongest for values related to trust in public institutions, individual equality, personal autonomy, and political participation—the dimensions most closely associated with democratic norms. These results suggest that migration plays a meaningful role in the global diffusion of secular and emancipative values and highlight the importance of remittances of culture, not just remittances of money, in shaping the long-run trajectory of societies.

The informal framework offered to understand how migration shapes cultural transmission is inspired by Bisin and Verdier (2001)’s seminal model of cultural transmission. Rapoport et al. (2020) have expanded on this model precisely in the context of migration and carefully delineate multiple channels whereby migration allows for the cultural values of different nations to influence each others’. Their model makes clear predictions that allow them to identify the presence of cultural remittances, and indeed, they find evidence in favor of their existence. One of the empirical approaches that I describe is equivalent to theirs in practice, though it may suffer from endogeneity concerns that are mitigated when diasporas are used for identification. Moreover, by analyzing specific values separately, I am able to identify a specific pattern in cultural values that are related to the political process.

More broadly, this work also fits into a larger literature in the economics of culture. This literature has explored both its deep roots in prehistory (Ashraf and Galor (2013)) to its evolution over the past few millennia (Giuliano and Nunn (2021)) to its evolution over the past few centuries

(Bazzi et al. (2020)). Its effects on contemporary institutions has been widely studied and is well surveyed by Alesina and Giuliano (2015).

The remainder of the paper is organized as follows. In Section 2, I describe the data. In Section 3, I present a broad conceptual framework to think about how migration may shape cultural transmission, and then I outline three approaches to estimate cultural exports and remittances. I present empirical results in Section 4 before concluding in Section 5.

2 Data

In order to explore how values converge along migration networks, I combine data from two main sources that are related to values and migration respectively: The World Values Survey (WVS) and UN Migration Database. Because each of these data sources sample at different frequency over different sample periods, I merge them in a specific manner that is summarized in Table 1. This leaves me with an unbalanced panel of six time periods and 21 to 60 countries in each period. Finally, whenever I refer to variables at five-year lags in the empirical analysis, I treat the period from 2015-2019 to be a five year interval. I describe the datasets and variables in more detail.

World Values Survey

The World Values Survey (WVS) is an international survey that seeks to capture the intrinsic values and beliefs of residents of a wide variety of participating countries. I employ six longitudinal waves of the WVS that include 105 countries over 32 years.⁴

Each wave of the WVS asks several hundreds of questions to approximately 1500 residents of each country.⁵ These questions range concern individuals' views of family, neighbors, children, leaders and society more broadly. They cover topics such as trust, respect, goals, politics, religion, worries and aspirations. Given the large number of questions and the fact that specific questions are sometimes asked in specific countries, the WVS constructs several indices that encapsulate respondents views on secular values, defiance/authority, moral relativism, skepticism, and autonomy/choice.

The 34 cultural indices can be categorized into a three-level hierarchy. There are two primary measures of values: Secular Values and Emancipative Values. Secular values are contrasted with

⁴Although Taiwan is surveyed in four waves of the WVS, I must omit this country from the analysis as the UN does not report migration data to and from Taiwan.

⁵The number of respondents per country-wave varies from 240 to 6025. Roughly 75% of country-waves have 1000-2000 respondents.

traditional values which place an emphasis on the importance of religion, parent-child ties, deference to authority, and traditional family values. Secular values are further broken down into four secondary sub-indices: defiance, disbelief, relativism and skepticism. Each of these secondary indices is further broken down into three tertiary sub-indices. Defiance is composed of an inverse respect for authority, inverse national pride and inverse devoutness. Disbelief is composed of a lack of importance given to religion, religious people and religious practice. Relativism is composed of into three different (inverse) norms of conformity. Finally, skepticism is composed of distrust in the military, distrust in the police and distrust in the courts.

Emancipative values prioritize self-expression over survival. They emphasize environmental protection, tolerance of others, freedom in economic decisions and freedom in political participation. Emancipative values are further broken down into four secondary sub-indices: autonomy, equality, choice and voice, each of which is further broken down into three tertiary sub-indices. Autonomy is composed of independence, imagination and obedience. Equality refers to gender equality in the workplace, in politics and in education. Choice is composed of views on homosexuality, abortion and divorce. Finally voice is composed of beliefs on political and economic participation.

These indices were devised by Christian Welzel (Haerpfer et al. (2021)) and have been widely used by social science researchers. As my analysis only concerns relative values between countries, I normalize each of the 34 indices to have a mean of zero and a standard deviation of one. Greater values for each of the indices corresponds to more secular or emancipative values.

International Migration (UN)

The United Nations Statistics Division has produced estimates of the international migrant populations in 232 political jurisdictions disaggregated by their jurisdiction of origin. For each political jurisdiction in each year that the data is available, the UNSD estimates the total stocks of migrants who arrived from each other jurisdiction. Because residents of overseas territories (e.g., Aruba from the Netherlands and Guam from the United States) are unlikely to be surveyed in the WVS, I omit them, and I restrict my attention to only those migrants from 197 countries. International migration stocks are estimated at roughly 5 year intervals, from which it is straightforward to compute country-to-country flows.

3 Empirical Approach

I draw inspiration from the the seminal Bisin and Verdier (2001) model of cultural transmission to describe how values may propagate along migration networks. Rapoport et al. (2020) have extended this model to explicitly consider how migration and cultural transmission interact. As my focus is primarily empirical, I discuss mechanisms of cultural transmission more broadly and informally here. Moreover, as my main contribution leverages more distant links in a migration network, the specific formal results of Rapoport et al. (2020), which model only bilateral links between country pairs, are not as relevant.

In the simplified migration network shown in in Figure 1, country i sends immigrants to countries k and l , and country j sends immigrants to countries l and m . The various arrows indicate how values in one country may affect the values in another country. The solid arrows, which go in the same direction as migration flows, correspond to cultural *exports*, and they encapsulate three effects. One of these effects is mechanical, and two are formally modeled in Bisin and Verdier (2001). First, even if cultural values were completely fixed immigrants would directly change the average cultural values of the countries in which they settled. Second, even if cultural values were completely fixed, immigrants would indirectly change the average values of the countries in which they settle by having children and passing down their values. This corresponds to vertical cultural transmission. Third, immigrants might indirectly influence the values of their new countrymen through personal, professional and political contact. This corresponds to horizontal cultural transmission.

The dashed arrows, which go in the opposite direction as migration flows, correspond to cultural *remittances*, and they encapsulate two effects. First, because specific destination countries attract specific types of immigrants, the characteristics of destination countries will mechanically affect the values of origin countries purely by subtraction. Second, because immigrants may retain social and economic ties with their former countrymen, they may serve as a conduit through which values in destination countries are horizontally transmitted to origin countries.

If there is positive assortative cultural matching between migrants and the residents of destination countries (e.g., the emigrants from country i whose values are most similar to country k are most likely to immigrate to k) then the two mechanical effects described above will generally lead greater migration to cause a divergence in values. However, these effects are limited by (1) the

size the migration flow, (2) the population of the sending country, and (3) the population of the receiving country. As country populations are at least an order of magnitude larger than migration flows for all country pairs surveyed by the WVS, these effects should be negligible.⁶ Meanwhile, all of the non-mechanical effects should likely lead greater migration to cause a convergence in values.

It remains then to distinguish cultural exports from remittances. I describe three potential approaches to do so below. The first approach, a country-level approach, is the most direct and yet also the most fraught with identification issues since (1) migration is non-random and likely correlated to country characteristics, and (2) the approach suffers from a fundamental issue of simultaneity. The second approach, at the level of country pairs, or dyads, looks at differences between countries to mitigate some of these endogeneity concerns. The third approach, which is the main contribution of this paper, is also done at the level of country dyads, but importantly it focuses on the effects of diasporas, a higher order network effect, on the convergence of values. The simple intuition for this approach is captured neatly in Figure 1: The values of countries i and j should be related to migration flows *only if* cultural remittances exist. If so, the cultural values in these two countries will be liked by countries in their common diaspora, which in this case, is country k . Without cultural remittances, there would be no link between the values in those two countries. Moreover, the strength of the relationship between the values of countries i and j and the commonality of the diaspora is informative as to the relative strength of cultural remittances.

For all approaches, I assume that cross-sectional data on V_i , some measure of values in country i , and I_{ik} , the stock of migrants from country i who live in country k , are observable. Where relevant, I explain how panel data could be leveraged to overcome identification problems. However, it is important to note that while I_{ik} is observed at consistent intervals over time, V_i is not observed consistently over time, hence a balanced panel is unavailable.

Approach 1: Baseline

The intuition of the basic framework can be summarized in a simple empirical model in which the solid arrows and dashed arrows in Figure are specified as coefficients β_k and γ_k , respectively, in the

⁶Indeed, Rapoport et al. (2020) rule out meaningful effects of these types.

following regression equation

$$V_i = \underbrace{\sum_{k \neq i} \beta_k I_{ki} V_k}_{\text{Export}} + \underbrace{\sum_{k \neq i} \gamma_k I_{ik} V_k}_{\text{Remittance}} + \epsilon_i \quad (1)$$

It would be unwise to interpret β_k and γ_k as the effects of migration on values in a least squares estimation of equation (1) because migration networks form endogenously and are undoubtedly influenced by the characteristics and values of both origin and destination countries. But even in the absence of this concern, the β_k and γ_k are not identified. To see this, we subtract equation (1) from itself and rearrange terms to write

$$V_i - V_j = \sum_{k \neq i, j} [\beta_k (I_{ki} - I_{kj}) + \gamma_k (I_{ik} - I_{jk})] V_k + ((\beta_j - \gamma_i) I_{ji} V_j - (\beta_i - \gamma_j) I_{ij} V_i) + (\epsilon_i - \epsilon_j) \quad (2)$$

Under the mild assumptions that $\text{Cov}(I_{ki} - I_{kj}, I_{ji})$ and $\text{Cov}(I_{ki} - I_{kj}, I_{ij})$ for all $k \neq i, j$, equation 2 can be rewritten as

$$V_i - V_j = (\beta_j - \gamma_i) I_{ji} V_j - (\beta_i - \gamma_j) I_{ij} V_i + \xi_{ij} \quad (3)$$

where $\xi_{ij} = (\epsilon_i - \epsilon_j) + \sum_{k \neq i, j} [\beta_k (I_{ki} - I_{kj}) + \gamma_k (I_{ik} - I_{jk})] V_k$. These assumptions require that immigration between countries is uncorrelated to the difference in immigration from third countries and can be understood as an independence of irrelevant alternatives (IIA) assumption for immigration. Equation 3 can further be rewritten as

$$V_i = \frac{1 + I_{ji} (\beta_j - \gamma_i)}{1 + I_{ij} (\beta_i - \gamma_j)} V_j + \xi_{ij} \quad (4)$$

This exercise reveals that either IIA is violated or the parameters $(\beta_i, \beta_j, \gamma_i, \gamma_j)$ are not identified, i.e., the direct approach suffers from the reflection problem (Manski (1993)) so the relationship between values in country pairs cannot be separately attributed to the effects of immigration in different directions. When immigration has bilateral effects (in the form of cultural remittances), this problem is doubled; though in the absence of cultural remittances, i.e., $\gamma_k = 0$ for all k , the direct effects are still unidentified (and vice-versa). There are two common approaches to circumventing the reflection problem. The first approach relies on instrumental variables (IVs) that generate

exogenous variation in the *values* of countries.⁷ Such IVs are difficult to conceive of. The second approach exploits the timing of these effects using panel data to break the reflection problem but is difficult to implement in practice because (1) the V_i are only sporadically measured in the World Values Survey, and (2) one would need to impose strong assumptions on the timing of these different effects, e.g., direct effects unfold at a 5-year lag whereas remittances unfold at a 10-year lag.

Approach 2: Dyadic Differences

One of the implications of basic framework described above is that values in countries with stronger migration links will tend to be more similar, which gives rise to a more sophisticated approach that can be modeled in the following regression equation

$$|V_i - V_j| = \alpha (I_{ij} + I_{ji}) + \text{controls}_{ij} + \eta_{ij} \quad (5)$$

which is estimated over all (i, j) pairs of countries. The parameter α is intended to capture the effect of immigration on the difference in values between countries. There is much to like about this straightforward approach; however it suffers two drawbacks. First, η_{ij} is almost certainly correlated to migrant flows between i and j , thereby biasing an estimate of α upward. For example, countries with shared languages or colonial legacies are likely to have similar values and are also likely to have larger migrant flows between them. The standard way that researchers have dealt with this issue is by including a rich set of control variables and country fixed effects (Egger (2000)) or dyad fixed effects, and time fixed effects. However, this approach will still be vulnerable to transitory shocks in country dyads that affect immigration flows and contemporary cultural values. It is not difficult to conceive of such shocks, e.g., temporary political instability, campaigns for womens' or children's rights, or religious scandals. Second, this specification does not allow for cultural exports to be distinguished from cultural remittances since the dyadic specification of the dependent variable does not differentiate between sending and receiving countries.⁸

⁷Migration flows between countries are not exogenous for reasons described above, so in practice any candidate IVs would also need to be orthogonal to migration flows.

⁸Rapoport et al. (2020) partially deal with this issue by exploiting the predictions of a formal model of cultural transmission and migration. Under the assumptions of their model, exports would imply a more positive value of α whereas remittances would imply a more negative value of α , hence the sign of α is informative as to which effect dominates.

Approach 3: Common Diasporas

The limitations to the previous two approaches motivate a different strategy that is novel to this paper. Because any pair of countries represents only two nodes in a broader migration network, information in the migration flows to third countries that may be useful for identification. The basic idea is that if the fact that two countries have more similar diasporas causes a convergence in their values, then it must be the case that both cultural remittances exist. Put another way, if migrants in destination countries acquire local cultural traits and transmit them back to their homelands, then the cultural values in their homelands should converge if and only if their diasporas expose them to similar cultural environments.⁹ Operationalizing this key insight allows cultural remittances to be isolated from cultural exports under weaker assumptions that allow (well observed) longitudinal variation in migration to be leveraged for identification in the absence of (poorly observed) longitudinal variation in values.

Diaspora similarity between origin countries provides identifying variation that is intrinsically tied to cultural remittances rather than exports. We formalize this with a measure of the dissimilarity of diasporas for two countries. This is generally a function of \mathbf{I} , a matrix that represents the network of all migrant stocks between all countries for which the (i, j) entry is I_{ij} . I propose the following measure

$$D_{ij}(\mathbf{I}) = \sum_k \left| \frac{I_{ik}}{\sum_{k'} I_{ik'}} - \frac{I_{jk}}{\sum_{k'} I_{jk'}} \right| \quad (6)$$

which satisfies three intuitive conditions that any sensible measure of diaspora dissimilarity ought to satisfy: (1) the difference in diasporas is minimized when i and j send equal proportions of migrants to all other countries, (2) if country i sends more migrants to one country than j and less migrants to another country than j , then equalizing these two flows for countries i and j would reduce the difference in diaspora, and (3) the difference in diaspora is maximized when countries i and j have completely disjoint diasporas. that any sensible measure ought to satisfy and then propose a specific candidate measure $D_{ij}(\mathbf{I})$.

⁹This logic parallels results in the network-diffusion literature that show outcomes often depend not on direct bilateral relationships but on second-order similarities in exposure to common neighbors (Acemoglu et al. (2012); Golub and Jackson (2012)). Cultural or behavioral traits transmitted through a network can generate convergence among nodes that share similar neighborhoods even if they have no direct link. Diaspora similarity functions analogously since it captures the extent to which origin countries share exposure to destination-country cultural environments, which creates a higher-order channel of diffusion that cannot be reduced to bilateral migration flows.

In a regression of the form

$$|V_i - V_j| = \alpha D_{ij}(\mathbf{I}) + \epsilon_{ij} \quad (7)$$

The coefficient α might represent the causal effect of the difference in diasporas between country pairs and the difference in values. However, a major challenge to such an interpretation is that diaspora composition reflects both historical and contemporary migration dynamics. Moreover, contemporary migration flows may respond to shocks that also influence current cultural values, generating endogeneity. To address this, I decompose migration stocks as follows:

$$I_{ijt} = I_{ijt-5} + \Delta I_{ijt} \quad (8)$$

and estimate

$$|V_{it} - V_{jt}| = \delta D_{ij}(\mathbf{I}_t) + \lambda D(\Delta I_{ijt}) + \text{controls}_{ijt} + \epsilon_{ij} \quad (9)$$

where “controls” refers to a vector of time-varying characteristics of countries i and j along with country i , country j and time t fixed effects. The key identifying assumption is that, conditional on contemporaneous migration flows and fixed effects, the historical component of diaspora composition is orthogonal to contemporaneous shocks to cultural values.

The logic behind this assumption is as follows: contemporaneous diaspora flows ($D(\Delta I_{ijt})$) absorb shocks that influence current migration behavior and cultural change. As a result, earlier contributors to a country’s diaspora capture the legacy of earlier migration shocks whose impacts on current migration has dissipated. This structure isolates the part of diaspora similarity that is plausibly orthogonal to contemporary shocks, which is analogous to the “faded shock” logic that underlies shift–share designs. Because diaspora stocks persist mechanically even after the shocks that created them have faded, the historical component of diaspora similarity can be used to identify cultural transmission from destinations back to origins.¹⁰ That is, most contemporary shocks that affect values also affect contemporaneous flows, so conditioning on flows mechanically soaks these up, leaving behind the persistent component tied to historical migration decisions. Moreover, any global cultural shock emanating from destination countries (e.g., mass media, international institutions)

¹⁰This approach also circumvents the reflection problem. Bilateral migration data imply a two-way relationship between countries, whereas diaspora similarity reflects the exposure of both countries to the same external cultural environments. This breaks the bilateral symmetry that prevents separate identification of exports and remittances.

would affect origin values independently of diaspora similarity and is absorbed by time fixed effects.

A positive estimate of δ indicates that countries with more similar diasporas exhibit more similar values over time. Because diaspora similarity does not operate through bilateral value exchange, this pattern is consistent only with cultural remittances. In the absence of remittances, diaspora similarity should have no effect on the alignment of cultural values between origin countries.

4 Results

I estimate the empirical specifications outlined in Section 3 for each of the thirty-four cultural indices derived from the World Values Survey. Given the conceptual limitations of Approaches 1 and 2, I present their results briefly to illustrate how standard methods confound cultural exports and remittances before focusing on Approach 3. Due to the large numbers of estimated parameters, I present results in graphical form from preferred specifications that feature a full set of control variables. Results obtained without the inclusion of controls are presented in the appendix. Standard errors computed using Approach 1 are clustered at the country i level, and standard errors using Approaches 2 and 3 are computed using two-way clustering at the country i and country j level; 95% confidence intervals are shown in all figures.

4.1 Preliminary Approaches

I adapt approach 1 with the following regression:

$$V_{it} = \beta \sum_{k \neq i} I_{kit-5} V_{kt} + \gamma \sum_{k \neq i} I_{ikt-5} V_k + \text{controls}_{it} + \epsilon_{it} \quad (10)$$

This is similar to equation (1) with three modifications: the β_k and γ_k are respectively restricted to be equal for all k , the immigration weights are lagged by five years to mitigate simultaneity, and a vector of controls is included. β represents cultural export of immigrants on country i 's values, and γ represents the cultural remittance to country i that is returned by immigrants from i who now reside around the world. Control variables include the population of country i , the total stock of migrants sent by country i to other countries, country i fixed effects, and year fixed effects.

Estimation results are presented in Figure 2. Estimates of both direct effects and cultural remittances are overwhelmingly statistically insignificant; however, because identification is funda-

mentally impossible in this approach, we include these results only to mirror prior work and to motivate the dyadic and diaspora-based approaches.

I adapt approach 2 with the following regression:

$$|V_{it} - V_{jt}| = \alpha (I_{ijt-5} + I_{jit-5}) + \text{controls}_{ijt} + \epsilon_{ijt} \quad (11)$$

This is similar to equation (5) with two modifications: the immigration stocks are lagged by five years to allow for the effects of interest to take hold, a vector of controls is included. α represents the effect of bilateral immigration on the difference in values between countries i and j . Control variables include the populations of i and j , the total stock of immigrants originating from countries i and j , country i fixed effects, country j fixed effects, and year fixed effects. These controls are intended to partially address endogeneity concerns. I further address this by restricting the estimation subsample to those country pairs in which both countries are immigration sources. This makes it more likely that any estimate of α reflects effects due to migration as opposed to a spurious correlation. I define an immigration source as a country for whom the total stock of immigrants sent abroad is at least 5% of the current population. Results are qualitatively similar when this threshold is chosen to be 1% and are presented in the appendix.

Estimates of α are mostly negative and statistically significant. This is consistent with the idea that migration links facilitate a convergence of values between countries. The effects of migration on both primary indices, secular values and emancipation, are negative and highly statistically significant. With the exception of skepticism, the effects of migration on all eight secondary indices are negative and statistically significant as well. These robust findings are consistent with the findings of Rapoport et al. (2020) who interpret negative values of α as evidence of cultural remittances.

4.2 Identifying Cultural Remittances with Diasporas

Following Approach 3, I estimate the following regression:

$$|V_{it} - V_{jt}| = \delta D_{ij}(\mathbf{I}_t) + f(D(\Delta I_{ijt})) + \text{controls}_{ijt} + \epsilon_{ij} \quad (12)$$

where $f(\cdot)$ is a flexible control function that includes fifth order polynomials in $D(\Delta I_{ijt})$ and $D(\Delta I_{ijt})^{-1}$, and the vector of controls includes the populations of i and j , the total stock of immigrants originating from i and j , total bilateral immigration between i and j , country i fixed effects, country j fixed effects, and year fixed effects. Once again, I restrict the estimation subsample to country pairs in which both countries are immigration sources.

Figure 4 shows that estimates of δ are positive for nearly all cultural indices, and statistically significant for both primary dimensions—secular values and emancipative values—and for most secondary indices. A positive coefficient implies that origin-country pairs with more similar diasporas exhibit more similar cultural values, consistent with migrants remitting destination-country values homeward. The strongest effects appear in the emancipative dimensions of equality, choice, and voice, and in the secular dimension of relativism. These value dimensions correspond closely to attitudes about political participation, institutional trust, equality under the law, tolerance, and individual autonomy—precisely the domains through which democratic norms are expressed. Their prominence suggests that migrants disproportionately transmit political and civic values acquired abroad.

To assess the direction of convergence more explicitly, I modifying the dependent variable in equation (12) as follows

$$\min(V_{it}, V_{jt}) = \delta^{min} D_{ij}(\mathbf{I}_t) + f(D(\Delta I_{ijt})) + \text{controls}_{ijt} + \epsilon_{ij} \quad (13)$$

Negative values of δ^{min} indicate that diaspora similarity predicts increases in secular (emancipative) values in the less secular (emancipative) country. Figure 5 shows that δ^{min} is negative and statistically significant for both primary indices and for the key secondary indices related to political institutions (relativism, equality, choice, and voice), which is consistent with less democratic or less secular countries becoming more aligned with the political and civic values prevalent in the destinations where their migrants reside.

Robustness

I conduct several additional exercises in support of the proposed identification strategy that, in the interest of brevity, are summarized here:

- I re-estimate the main equation

$$|V_{it} - V_{jt}| = \delta D_{ij}(\mathbf{I}_{t-5}) + f(D(\Delta I_{ijt})) + \text{controls}_{ijt} + \epsilon_{ij} \quad (14)$$

with lagged diaspora similarity ($D_{ij}(\mathbf{I}_{t-5})$) in place of diaspora similarity ($D_{ij}(\mathbf{I}_t)$) and obtain similar results as before. Given that contemporary diaspora similarity is mechanically a function only of lagged diaspora similarity and contemporaneous migration flows, this is evidence that $f(D(\Delta I_{ijt}))$ successfully controls for these flows.

- Consistent with the logic of the identification strategy, diaspora similarity is strongly predicted by migration flows 10 years earlier, but only weakly predicted by recent flows once I condition on contemporaneous migration flows.¹¹ This pattern supports the claim that variation in the diaspora difference reflects historical migration shocks whose impact on current flows has dissipated.
- Placebo regressions of

$$|V_{it-5} - V_{jt-5}| = \delta D_{ij}(\mathbf{I}_t) + f(D(\Delta I_{ijt})) + \text{controls}_{ijt} + \epsilon_{ij} \quad (15)$$

yield estimates of δ that are small and statistically insignificant. This is consistent with the claim that that the variation in diaspora similarity that is exploited in this identification strategy does not proxy for historical cultural proximity or other temporally stable dyadic characteristics.¹²

- An alternative specification that omits all controls (except year and country fixed effects) yield similar estimates of δ , which supports the claim that controlling for contemporaneous migration flows ($f(D(\Delta I_{ijt}))$) can successfully absorb potential confounders.
- Estimates of δ obtained on a sample to dyads that obey the same rule of law based on the World Bank's Worldwide Governance Indicators tend to be positive and statistically significant

¹¹Specifically, in a regression of $D_{ij}(\mathbf{I}_t)$ on $D_{ij}(\Delta \mathbf{I}_{t-5})$ and $D_{ij}(\Delta \mathbf{I}_{t-10})$ controlling for $f(D(\Delta I_{ijt}))$, the coefficient on $D_{ij}(\Delta \mathbf{I}_{t-10})$ is statistically significant at the 90% level and over twice the magnitude of the coefficient on $D_{ij}(\Delta \mathbf{I}_{t-5})$, which is statistically insignificant at the 85% level.

¹²Because WVS surveys are not available annually, the placebo tests use the nearest available prior wave. Although sample size is reduced, the absence of predictive power reinforces that historical diaspora similarity does not simply proxy for long-run cultural affinity.

for emancipatory values (but statistically insignificant for secular values), which is consistent with political cultural remittance.

5 Conclusion

Migration is one of the central forces that has shaped societies. It is perhaps no surprise then that culture, one of the hallmarks of civilization, has been shaped by migration. In the past, costly transportation and communication made for unilateral migration links: the vast majority of people who would travel from one society to another would never again impact their homelands. One of the many effects of the exponential decline in these costs is that migration links are now bilateral. This facilitates the exchange of some of the most valuable assets of countries – their values.

Determining whether similarities between two countries that are linked by migration are due to exports, remittances or simply a common context is a difficult identification problem, and this is the case whether one is studying culture, trade, or any other form of exchange. This paper proposes a new empirical strategy for identifying cultural remittances—the transmission of destination-country cultural values back to migrants’ countries of origin. Traditional approaches that rely on bilateral migration flows cannot disentangle remittances from cultural exports, and they suffer from fundamental simultaneity and reflection problems. By contrast, the approach developed here exploits variation in the similarity of diasporas across origin countries, a feature of the global migration network that affects origins symmetrically and only through the cultural environments in which their migrants reside.

Using nearly four decades of global data from the World Values Survey and the United Nations Migration Database, I find consistent evidence that diaspora similarity predicts cultural convergence across migrant-sending countries. The strongest remitted dimensions include trust in public institutions, tolerance, support for legal and political equality, and attitudes toward civic and political participation. These are precisely the value dimensions most closely linked to democratic norms. Robustness checks support the interpretation that these effects reflect backward cultural transmission rather than common shocks or bilateral cultural exports.

Taken together, the results imply that migration plays a meaningful role not only in the movement of people, capital, and ideas, but also in the diffusion of cultural and civic values. Because the bulk of global migration continues to flow from less secular and less democratic societies to

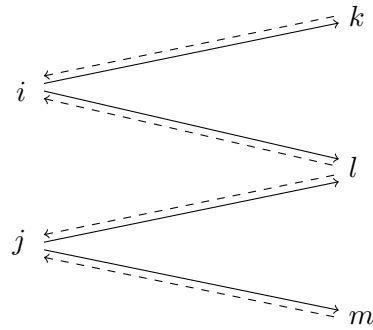
more secular and more democratic ones, cultural remittances may facilitate the spread of institutional norms associated with economic development, political accountability, and social equality. A growing body of research finds that certain cultural values such as trust (Bjørnskov (2017)) and individualism (Gorodnichenko and Roland (2017)) are engines of economic growth. Moreover, it has been noted that countries with similar political systems (particularly democracies) rarely go to war with one another (Babst (1964)). With these facts in mind, strengthening migration links can be a valuable tool for reducing poverty and promoting peace.

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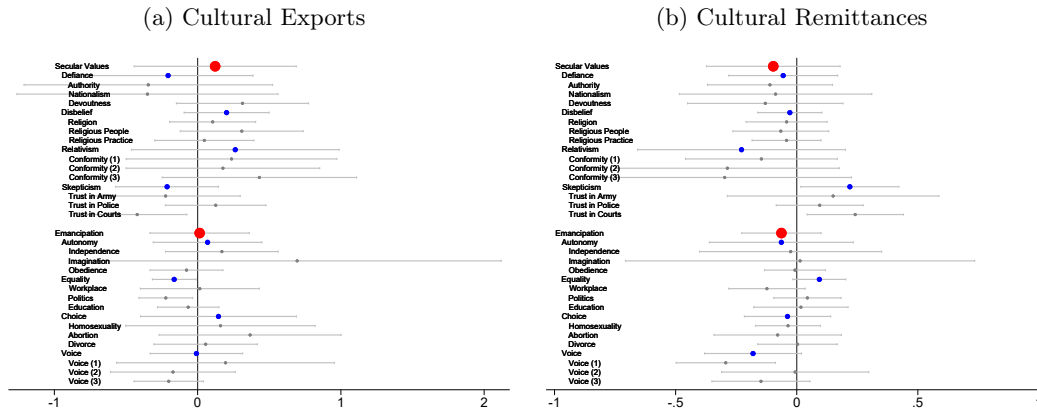
Figure 1: Value Transmission on a Migration Network



Origin Countries Destination Countries

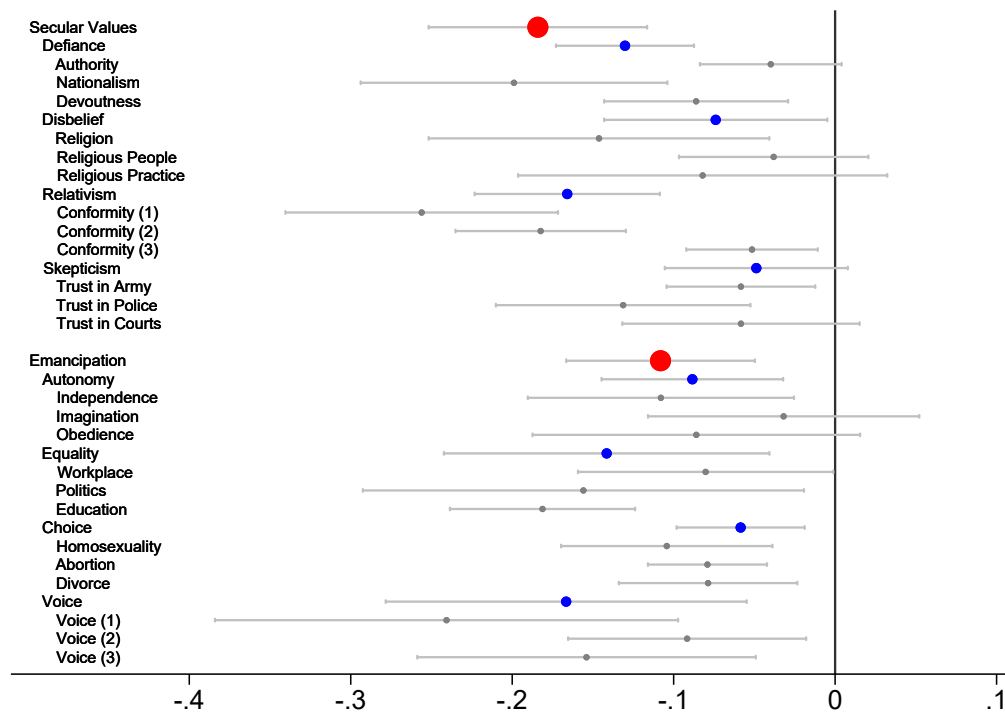
Notes: In this migration network, country i sends immigrants to countries k and l , and country j sends immigrants to countries l and m . Solid arrows represent channels whereby values in origin countries affect values in destination countries. Dashed arrows represent channels whereby values in destination countries affect values in origin countries.

Figure 2: Effects of Migration-weighted Values on Values (Approach 1)



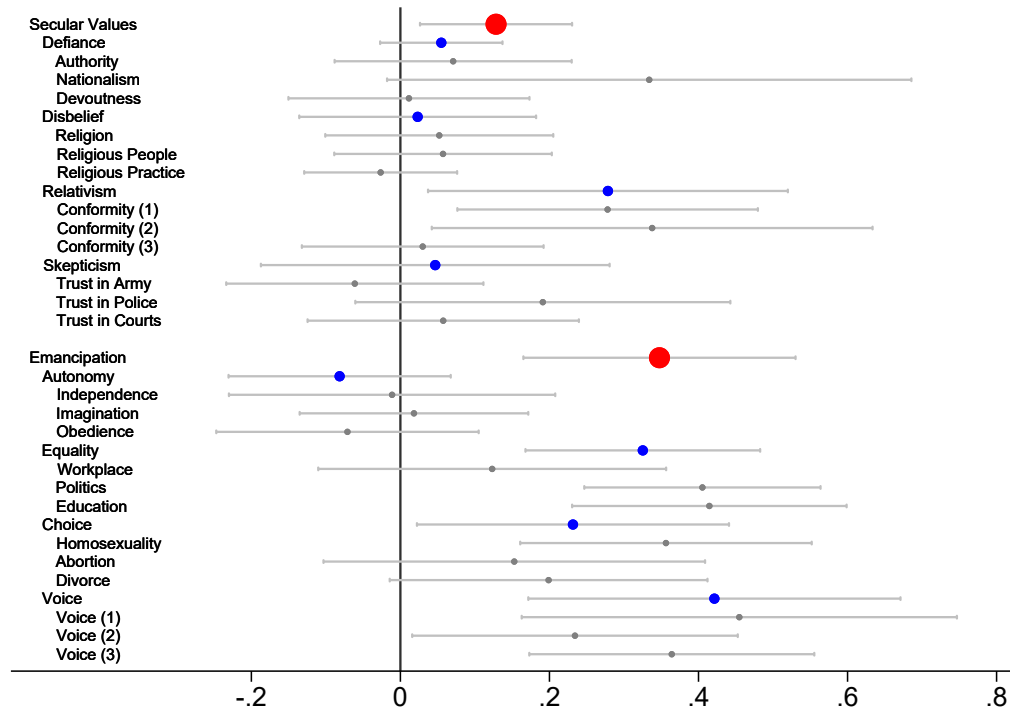
Notes: Estimates of β and γ respectively from a regression of country i values on migration-weighted values controlling for the total stocks of immigrants originating from country i , the population of country i , and country i and year fixed effects. Estimates for primary value indices are shown in red, estimates for secondary value indices are shown in blue, and estimates for tertiary value indices are shown in gray. 95% confidence intervals shown. Robust standard errors are clustered by country i .

Figure 3: Effects of Total Immigration Flows on Values Differences (Approach 2)



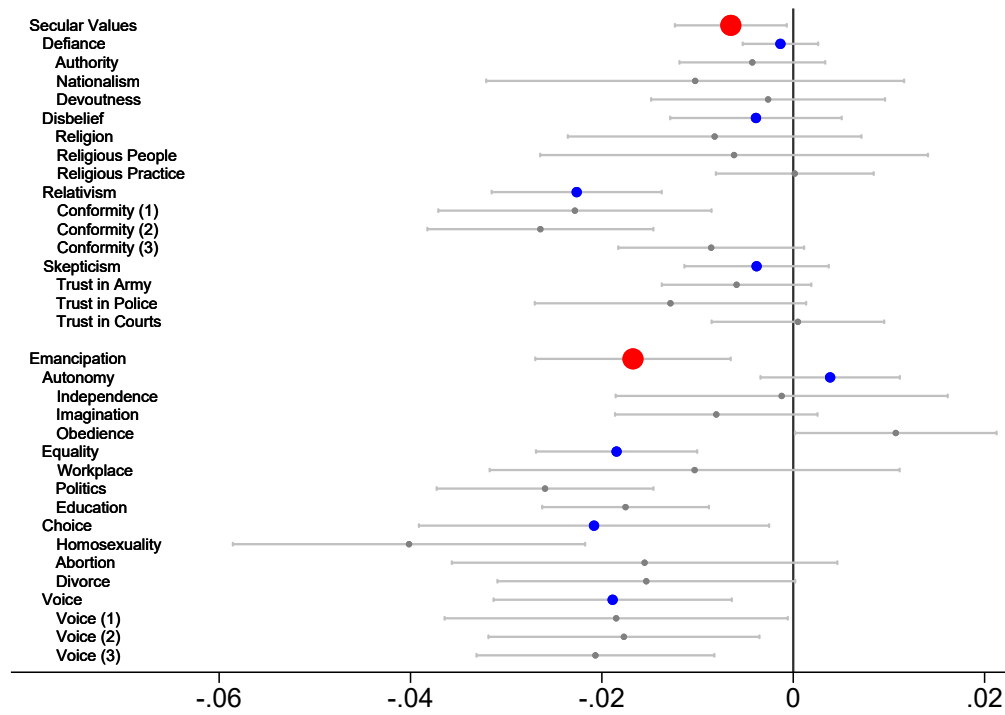
Notes: Estimate of α from a country pairs regression of value differences on total immigration flows between countries i and j controlling for total stocks of immigrants originating from countries i and j and country i , country j and year fixed effects. Estimates for primary value indices are shown in red, estimates for secondary value indices are shown in blue, and estimates for tertiary value indices are shown in gray. 95% confidence intervals shown. Robust standard errors are computed using two-way clustering on country i and country j .

Figure 4: Effects of Diaspora Difference on Values Differences (Approach 3)



Notes: Estimate of δ from a country pairs regression of value differences on lagged diaspora difference controlling for the difference in diaspora flows over the past five years, population of each country, total immigration flows between countries i and j , total stocks of immigrants originating from countries i and j and country i , country j and year fixed effects. Estimates for primary value indices are shown in red, estimates for secondary value indices are shown in blue, and estimates for tertiary value indices are shown in gray. 95% confidence intervals shown. Robust standard errors are computed using two-way clustering on country i and country j .

Figure 5: Effects of Diaspora Difference on Values in Less Secular/Emancipative Countries(Approach 3)



Notes: Estimate of δ^{min} from a country pairs regression of the smaller value within a country pair on lagged diaspora difference controlling for the difference in diaspora flows over the past five years, population of each country, total immigration flows between countries i and j , total stocks of immigrants originating from countries i and j and country i , country j and year fixed effects. Estimates for primary value indices are shown in red, estimates for secondary value indices are shown in blue, and estimates for tertiary value indices are shown in gray. 95% confidence intervals shown. Robust standard errors are computed using two-way clustering on country i and country j .

A Summary of Data Availability

Table 1: Primary Data Sources

World Values Survey			UN Migration Data
Wave	Years of Survey	Number of Countries	Year
1	1981-1983	11	
2	1990-1992	21	1990
3	1995-1998	55	1995
4	2000-2004	41	2000
5	2005-2008	58	2005
6	2010-2014	60	2010
			2015
7	2017-2022	57	2019

Note: Availability of data on values and migration.