Why historical migration matters for trade and tourism

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This paper identifies two mechanisms through which historical migration may influence current patterns of international trade and tourism. International trade and tourism patterns are potentially 1) highly persistent over time and 2) influenced by "cultural affinity", a shared group identity which can be traced historically. To test this, we use a "world migration matrix" which records the year-1500 origins of the current populations of nearly all countries. We find that these links explain a statistically significant proportion of international trade and tourism patterns today. The results remain robust even when controlling for other historical links, such as colonial legacy and regional trade agreements. We also show that historical migration exhibits a greater impact on tourism compared to trade, affecting both the size of outward and inward movements. Trade and tourism persistence, and cultural affinity are thus important – and neglected – constituents of trade and tourism patterns (and research), with important policy implications.

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1. Introduction

History matters for the international movement of goods and people. While the neoclassical framework offers no theoretical link between current trade and historical events, new trade theory has recognised the importance of path dependence in explaining the evolution of international trade patterns. For empirical evidence of such persistent impacts, the trade literature has turned to (relatively recent) shocks or periods of rapid change in international relations, notably 20th century wars and depressions. And while the impact of historical events is implicit in a number of tourism studies, few test explicitly for the long-run impact of historical events.

This paper provides one mechanism through which history – or, to be exact, historical migration – may influence current patterns of international trade and tourism. We posit that both international trade and tourism patterns are 1) persistent over time and 2) to some extent influenced by "cultural affinity", a shared group identity which can be traced historically. To test this, we use a "world migration matrix" which records the year-1500 origins of the current populations of nearly all countries. We find that these links explain a statistically significant proportion of international trade and tourism patterns today. The results remain robust even when controlling for other historical links, such as colonial legacy and regional trade agreements. We also show that historical migration exhibits a greater impact on tourism compared to trade, affecting both the size of outward and inward movements. Trade and tourism persistence, and cultural affinity are thus important – and neglected – constituents of trade and tourism patterns (and research), with important policy implications.

This paper proceeds as follows. Part 2 examines the literature of how history may impact current trade, tourism and development. Part 3 turns to migration and its links to current trade and tourism patterns. Part 4 investigates cultural affinity as a mechanism through which historical migration may influence trade and tourism patterns. Part 5 discusses the data and method of analysis, while Part 6 reports the results. Part 7 concludes.

2. Migration and trade

The reasons that firms trade across international borders are well-known. Technology differs resulting in Ricardian comparative advantage, factor endowments differ which form the basis of the Hecksher-Ohlin-Samuelson model, while the new trade theory has highlighted pro-competitive gains and consumers love of variety. In tourism, demand-side factors are cited as causes; per capita income (tourism is a luxury product), price differentials and the costs of transport are all contemporaneous correlates. And so these early theoretical explanations mostly ignore the historical context within which these exchanges occur.

Yet, trade is remarkably persistent. Using a 131-year trade database created by Jacks, Meissner and Novy (2011), Campbell (2010) show that trade patterns in 1870s predict 21% of international trade in 2000. Trade and tourism gravity equations, known for its closeness-of-fit with real-world data, often show that countries that share a common

language or colonial ties trade more, ceteris paribus. This suggests that, ultimately, countries (firms, people) trade more with those that share some historical affiliation. History matters because it carries strong explanatory power in current global trade and tourism patterns.

While neoclassical trade theories were static in their design and detached from inter-temporal changes, the early proponents of the new trade theory realised that historical events may permanently shape international trade patterns. Baldwin (1988), for example, shows that exchange rate shocks can have lasting real effects. As Baldwin and Krugman (1989) remark: A "long time series may show a stable relationship between (the) exchange rate and trade – yet that relationship may change abruptly when a large shock does hit". Moreover, geographical economics – emerging in the 1990s – show that, in the context of increasing returns to scale, initial conditions (or starting conditions) may play a significant role in a region's later development. In his famous contribution to the field, Krugman (1991) notes that the structure of a region's trade might depend on "possibly small accidents of early history".

One such historical event which may influence a region's trade patterns is migration. Drawing on a vast literature, Egger, Von Ehrlich and Nelson (2011) suggest a number of mechanisms through migration may influence trade between the migrant origin and destination countries. The most natural link is for immigrants to have a preference for goods produced in their country-of-origin, which results in greater imports from the origin country. Where there are spill-over effects to the native population in the destination country, the effect on imports may be significantly larger. A second mechanism may exist through the creation of migrant networks. The gravity literature has identified trade costs as a serious constraint to facilitating trade, and social networks as a tool to reduce such costs (Rauch 2001; Anderson and Van Wincoop 2004). In particular, migrant networks may reduce two types of trade costs: uncertainty or incomplete information, and asymmetric information. In the absence of a domestic market for highly-specialised products, migrants, possessing the economic, cultural and institutional knowledge of both their origin and destination countries, may reduce the search costs that impede the development of a domestic market and facilitate trade. The contribution of the migrant networks can be especially important in countries that have very different social or political structures (Rauch and Casella 2003). Asymmetric information provides an even greater role for migrant networks. Transaction cost economics emphasise the role of non-market – or market-replacing – institutions to enable exchange (Williamson 1985). Such non-market institutions, like imperfect contract enforcement, are often created through ties of trust and social capital, with migrant networks perhaps the most familiar of these (Egger et al. 2011).[1] The institutions maintained through these migrant networks are also at the heart of work by historians examining ethnic networks and migrant diasporas in finding solutions to the asymmetric information problems (Polanyi 1968).

[1] Other social networks – like clubs and alumni networks – exist, but migrant networks receive possibly the most attention, both because of their size and identifiability in aggregate data (Egger et al 2011).

Due to its closeness-of-fit with real world data, the gravity model is widely preferred to test the theoretical links between immigration and trade. Since the seminal contribution by Gould (1994), a plethora of studies have investigated the impact of immigration on trade for the US and Canada (Co, Euzent et al. 2004; White 2007; Bandyopadhyay, Coughlin et al. 2008), Europe (Blanes-Cristobal 2008; Ghatak, Silaghi et al. 2009; Kandogan 2009; Murat and Pistoresi 2009) and, increasingly, at the sub-national level (Herander and Saavedra 2005; White 2009). These studies consistently find a strong positive effect of immigration on imports, with a smaller impact on exports, supporting the existence of both preference and network effects.

These studies primarily investigate the links between contemporaneous immigration and trade. One exception is Herander and Saavedra (2005), who test for whether the size of historical immigration reduces the effect of current immigrant on trade flows. While they find evidence to support this claim, they argue that this points to the important market creating contribution of new immigrants. The opposite may of course also be true: a large previous stock of immigrants may explain a considerable part of existing trade flows, leaving little for new immigrants to add. It is this long-term effect the current paper investigates.

3. Migration and tourism

While a wide body of theoretical and empirical work recognises the impact of migration on trade, tourism research has far less to offer. Examining the effect of migration on Australian tourism, Dwyer, Forsyth, King and Seetaram (2010:1-2) catalogue seven mechanisms through which migration may affect tourism patterns: 1) through greater visitations of friends and relatives in Australia, 2) friends and relatives may 'promote' Australia as a tourist destination, 3) migrants may increase the stock of accommodation (home settings) that make Australia accessible to friends and relatives, 4) permanent migrants enrich Australia's cultural life and add to the supply of tourist infrastructure (restaurants, 'China town') in Australian cities, 5) in the case of international tourists who do not have friends or relatives in Australia, "awareness that compatriots have settled in Australia and make up part of the population may be a contributing factor to visitation", 6) permanent migrants may retain or forge business links with their country of origin, 7) an increase in permanent immigrants may boost the demand for foreign exchange and travel related services, creating competition on the travel services industry and reducing prices. Six of these mechanisms suggest a close contemporaneous link between migration and tourism; in fact, although Dwyer et al. (2010) find "a strong link" between migration and tourism, they show empirically that the impact of past immigrants (from Italy and Greece) on tourism are declining and being replaced by later migrants, primarily China and India. This speaks to the large literature within tourism which investigates the links between migrant communities and visiting-friends-and-relatives (hereafter VFR) tourism (Young, Corsun et al. 2007; Uriely 2010; Backer 2011).

It is, however, not only the contemporaneous relations between migration and tourism that we are interested in, where a direct linkage between the migrants to their country-of-origin remains in the form of family or friends in the home country. Dwyer et al. (2010) refer to

an "awareness that compatriots have settled in Australia and make up part of the population" as a factor which could explain tourism, or what we refer to here as cultural affinity.

A new strand of literature has also identified "ethnic reunion" as a source of tourism growth. "Ethnic reunion" refers to immigrants returning to their country-of-origin for visitations to family and friends or heritage and cultural pilgrimages, the reverse direction of movement implied by the large VFR-literature (Feng and Page 2000). We also investigate the extent to which cultural affinity spurs tourism in this 'opposite' direction.

4. Historical migration, persistence and cultural affinity

To be sure, the broader impact of historical migratory patterns on economic performance has not been lost on economists outside the field of international trade. In fact, since 2000, a wealth of quantitative research has appeared that investigate the links between historical migrations and current economic performance.[2] The most prominent of these were the contributions of Acemoglu, Johnson and Robinson (2001; 2002), which showed that economic development or underdevelopment today was as a result of the institutions that were created by the settlers that migrated from Europe. In areas where the disease environment were favourable for settlement, the settlers created growth-enabling institutions (property rights, the rule of law) while in unfavourable settings, settlers built extractive institutions that were bad for long-term growth. The link between historical migration and long-run economic performance is thus through institutions, not trade. Similarly, Nunn (2008) shows convincingly that African regions from which more slaves were traded, are today the less developed regions in Africa. Historical migration – forced, in this case – seems to have been detrimental to long-run growth, at least in the countries of origin. Most recently, Ashraf and Galor (2011) go back even further in history, proposing and empirically corroborating that the first human migration – when Homo sapiens spread from Africa across the globe – may explain long-run economic development through the variation in genetic diversity along the route. The authors posit an inverted U-curve, suggesting that genetic diversity at very low and high levels constrains growth, even when controlling for geographic, institutional and cultural factors. Historical migrations, through various linkages to the present, clearly have relevance for today's patterns of international trade and tourism. This paper attempts to shed more direct evidence on one of these mechanisms: cultural affinity.

To ascertain the impact of cultural affinity, we use a new dataset by Putterman and Weil (2010). They construct a "world migration matrix" that records the year-1500 origins of the current population of every country in the world. They find robust evidence that the origins of a country's population matter for economic outcomes today. While Putterman and Weil (2010) note that having ancestors from regions with early agricultural and political developments increases incomes today, ceteris paribus, but the reasons for this remains unclear. These early migrants brought with them human capital, cultures, genes, institutions, and languages, which could all act as vehicle through which effects of the

[2] See Nunn (2009) for a comprehensive overview.

origin region is transplanted in the destination region. Yet, Putterman and Weil (2010: 1677) concede that "future research will have to sort out which ones were the most significant". While this study cannot exclude mechanisms of transfer, it does provide evidence that link historical migration to current trade and tourism patterns. We posit that historical migration influenced past trade and tourism trends through two channels of causality: Firstly, historical migration may be correlated with historical trade and tourism. Because of the persistence of trade and tourism documented above, historical migration may affect current trade and tourism patterns only through its influence on past trade and tourism patterns. Secondly, historical migration may create a pool of ethnic or cultural similarities in the destination countries. These influence current trade and tourism patterns through the cultural affinity of traders and visitors, i.e. European visitors to South Africa feel a cultural affinity to the food, architecture and language brought by European migrants to South Africa since the 17th century. Any positive impact of historical migration on current trade and tourism might potentially be through either of these two channels.

5. Data and method of analysis

The empirical analysis undertaken here is based on a gravity model for trade and tourism flows. The origin of the model is found in Newton's Law of Universal Gravitation, and it was first proposed by Tinbergen (1962) to describe international bilateral trade. Since then the gravity model has been successfully applied to explain international trade, migration, foreign direct investment and tourism flows. The main reason for its extended use in empirical research is its goodness of fit.

The standard empirical specification of the gravity equation takes the following form:

$$F_{ij} = \alpha \frac{(Y_i)^{\alpha_1}(Y_j)^{\alpha_2}}{(D_{ij})^{\alpha_3}} \qquad [1]$$

where i and j represents the destination and origin country respectively, F_{ij} is the flow between countries, Y_i and Y_j are their economic sizes commonly measured by population, GDP or GDP per capita and D_{ij} is the distance between the two countries. Gravity models used in international trade literature often also include other relevant dummy variables such as common language, islands or landlocked countries, countries that share colonial links or a common border.

Anderson and Van Wincoop (2003) provide a theoretical foundation for the gravity model, suggesting its broad use for a range of empirical applications. Gravity models, for example, are commonly used to investigate the impact of border effects (McCallum 1995; Fitzsimons, Hogan et al. 1999), regional trading blocs (Matyas, Konya et al. 2004; Cheng and Wall 2005) (Matyas 1997, Cheng and Wall, 2005) and currency unions (Rose 2000) on international trade. Moreover, under the assumption of tourism as a particular class of trade, a gravity equation can be used to study the main determinants of tourism volume (Durbarry 2000; Eilat and Einav 2004; Gil, Llorca et al. 2007). For this reason, the gravity equation is the

most suitable estimation method for the purposes of this study. Specifically, we consider exports from country i to country j and tourist arrivals to destination i from origin j as the dependent variables for trade and tourism gravity equation, respectively.

Reformulating equation [1] and applying logarithm, the gravity model recognizes that international trade defined by equation [2] and tourist arrivals defined in equation [3] are increasing in GDP per capita and decreasing in the distance between countries. The model is also augmented with a number of additional controls:

$$\begin{aligned}\ln Exp_{ijt} &= \beta_0 + \beta_1 \ln GDPpc_{it} + \beta_2 \ln GDPpc_{jt} + \beta_3 \ln Pop_{it} + \beta_4 \ln Pop_{jt} + \beta_5 \ln Dist_{ijt} \\ &+ \beta_6 \ln NRER_{ijt} + \beta_7 \ln Colony_{ij} + \beta_8 ComCol_{ij} + \beta_9 Lang_{ij} + \beta_{10} Border_{ij} + \beta_{11} Landl_{ij} \\ &+ \beta_{12} \ln RTA_{ijt} + \beta_{13} CC_{ij} + \beta_{14} Migr1_{ijt} + \beta_{15} Migr2_{ijt} + \alpha_i + \lambda_j + \gamma_t + u_{ijt}\end{aligned} \quad [2]$$

$$\begin{aligned}\ln Tou_{ijt} &= \beta_0^* + \beta_1^* \ln GDPpc_{it} + \beta_2^* \ln GDPpc_{jt} + \beta_3^* \ln Pop_{it} + \beta_4^* \ln Pop_{jt} + \beta_5^* \ln Dist_{ijt} \\ &+ \beta_6^* \ln NRER_{ijt} + \beta_7^* \ln Colony_{ij} + \beta_8^* ComCol_{ij} + \beta_9^* Lang_{ij} + \beta_{10}^* Border_{ij} + \beta_{11}^* Landl_{ij} \\ &+ \beta_{12}^* \ln RTA_{ijt} + \beta_{13}^* CC_{ij} + \beta_{14}^* Migr1_{ijt} + \beta_{15}^* Migr2_{ijt} + \alpha_i^* + \lambda_j^* + \gamma_t^* + u_{ijt}^*\end{aligned} \quad [3]$$

where ln denotes natural logs, i and j indicates exporter/destination and importer/origin countries respectively, t is time. β_0 and β_0^* are constants, α_i and α_i^* are country i fixed effects, λ_j and λ_j^* are country j fixed effects, γ_t and γ_t^* are year fixed effects and u_{ijt} and u_{ijt}^* are well-behaved disturbance term in equations [2] and [3] respectively. The variables included in the gravity specifications are defined in Table 1.

Table 1. Variable definition

Variable	Definition
$LnExp_{ijt}$	Log of exports from the exporter country to the importer country
$LnTou_{ijt}$	Log of tourist arrivals to the destination country from the origin
$LnGDPpc_{it}$	Log of the GDP per capita of the exporter/tourist destination country
$LnGDPpc_{jt}$	Log of the GDP per capita of the importer/tourist origin country
$LnPop_{it}$	Log of the population of the exporter/tourist destination country
$LnPop_{jt}$	Log of the population of the importer/tourist origin country
$Lndist_{ij}$	Log of the distance between countries
$LnRNER_{ijt}$	Competitiveness variable defined as the log of relative nominal exchange rate
$Colony_{ij}$	Dummy variable that takes the value 1 if both countries in the pair have ever had a colonial link
$Comcol_{ij}$	Dummy variable that takes the value 1 if both countries in the pair have had a common colonizer after 1945
$Lang_{ij}$	Dummy variable that takes the value 1 if both countries in the pair spoke a common language (Official or national languages and languages spoken by at least 20% of the population of the country)
$Contig_{ij}$	Dummy variable that takes the value 1 if both countries in the pair share a common land border
$Island_{ij}$	Number of islands in the pair
$Landl_{ij}$	Number of landlocked countries in the pair

RTA_{ijt}	Dummy variable that takes the value 1 if both countries in the pair belong to the same Regional Trade Agreement
CC_{ij}	Dummy variable that takes the value 1 if both countries in the pair share a common currency[3]
$Migr1_{ijt}$	An estimate of the proportion of the ancestors in 1500 of importer/origin country's population today that were living within what are now the borders of that and each of the other countries (exporters/destinations)
$Migr2_{ijt}$	An estimate of the proportion of the ancestors in 1500 of destination/exporter country's population today that were living within what are now the borders of that and each of the other countries (importers/origins)

The dataset includes 159 countries modelled as both importer and exporter and tourist destination and origin for the period 1995-2008. The source of exports data is *Direction of Trade Statistics* of the *International Monetary Fund*. This variable is converted into real terms by using US GDP deflator. US GDP deflator, GDP per capita and population were obtained from the *World Development Indicators* of the World Bank and augmented with data from the *UNCTAD Handbook of Statistics*. The distance and common language, border, colonial ties and number of landlocked countries dummy variables were collected from the *Centre d'Etudes Prospectives et d'Informations Internationales (CEPII)* dataset. The number of island in the pair and common currency and membership to the same Regional Trade Agreement were obtained from Andrew K. Rose's website and the *CIA World Factbook.* The relative nominal exchange rate is calculated using nominal exchange rates obtained from the *International Monetary Fund Financial Statistics*. The source of the tourism data is the *United Nations World Tourism Organisation (UNWTO)* and considers annual international arrivals by country of origin. Finally, the proportion of the ancestors in 1500 is obtained from the new data set developed by Putterman and Weil (2010).

Classical panel estimation by fixed effect (FE) cannot be addressed since many observation of interest disappear due to the collinearity given that they are time-invariant in many country pair. A way to overcome this problem is the introduction of individual country fixed-effects for countries *i* and *j* and estimate by Ordinary Least Squares (OLS). Several papers have estimated trade models including individual country effects as Matyas et al. (2004), or more recently Cheng and Wall (2005) and Kandogan (2008). In any case, the inclusion of country fixed effects is proposed by Rose and Van Wincoop (2001), as a way to approximate the multilateral resistances defined in the well-founded approach of Anderson and Van Wincoop (2003). In other words, the estimation of country specific effects is suitable not only from an econometric point of view, but also attending to the theoretical foundations of the gravity specification.

6. Results

Table 1 provides the descriptive statistics for the variables used, while Table 2 shows the correlations between our variables of interest – Migration1 and Migration 2 – and trade

[3] The euro is an especial common currency case since it was create in 1999 and it involves big/rich countries. Following Glick and Rose (2002), we consider a strict definition of common currency that do not includes the eurozone.

and tourism, respectively. In the context of international trade, Migration 1 represents the proportion of the ancestors in 1500 of the importer country's population today that were living within what are now the borders of that and each of the other exporter countries, while Migration 2 represents an estimate of the proportion of the ancestors in 1500 of the exporter country's population today that were living within what are now the borders of that and each of the other importer countries. This is perhaps best illustrated through an example. The current Brazilian population is made up of 74,4% Europeans, 15.7% Africans, 9.1% Brazilians and 0.8% Japanese. The South African population is made up of 78.7% Africans, 18.0% Europeans and 3.4% Indian/South Asians. Using exports from South Africa to Brazil as example, Migration 1 would include the 15.7% African component of the current Brazilian population that lived in Africa in the year 1500, while Migration 2 would have a zero value, given that no current component of the South African population lived in Brazil in the year 1500. For tourists travelling from South Africa to Brazil (Mode-2 travel service exports, where South Africa is now the importer of travel service exports from Brazil), Migration 1 would have a zero value, while Migration 2 would include the 15.7% African component.

Table 1. Descriptive statistics

Variable	**Obs**	**Mean**	**Std. Dev.**	**Min**	**Max**
$LnExp_{ijt}$	214971	14.5408	3.8127	-5.3720	25.8276
$LnTou_{ijt}$	115477	7.1232	3.1909	0.0000	18.1767
$LnGDPpc_{jt}$	329560	8.4807	1.2187	5.1391	11.1739
$LnGDPpc_{it}$	333741	8.5261	1.1838	5.4980	11.1739
$LnPop_{jt}$	340340	10.1207	2.9633	4.5555	21.0044
$LnPop_{it}$	342486	10.0830	2.9935	4.3432	21.0044
$Lndist_{ij}$	342804	8.6668	0.8417	1.9459	9.8987
$LnRNER_{ijt}$	325289	-0.1083	3.8987	-15.2052	15.2052
$Colony_{ij}$	342804	0.0126	0.1114	0	1
$Comcol_{ij}$	342804	0.0850	0.2789	0	1
$Lang_{ij}$	342804	0.1280	0.3340	0	1
$Border_{ij}$	342804	0.0201	0.1403	0	1
$Island_{ij}$	342804	0.3430	0.5297	0	2
$Landl_{ij}$	342804	0.4080	0.5679	0	2
RTA_{ijt}	342794	0.1355	0.3422	0	1
CC_{ij}	342804	0.0051	0.0713	0	1
$Migr1_{ij}$	323106	0.0017	0.0222	0	0.9710
$Migr2_{ij}$	327852	0.0061	0.0661	0	1

Table 2. Correlation between Exports, Tourism and Migration

year	**lnTou-Migr1**	**lnTou-Migr2**	**lnExp-Migr1**	**lnExp-Migr2**

1995	0.1115	0.1162	0.0768	0.0544
1996	0.1124	0.1192	0.0763	0.0555
1997	0.1098	0.1238	0.0746	0.0663
1998	0.1064	0.1180	0.0785	0.0596
1999	0.1097	0.1210	0.0796	0.0609
2000	0.1101	0.1190	0.0794	0.0613
2001	0.1112	0.1187	0.0783	0.0692
2002	0.1076	0.1185	0.0787	0.0603
2003	0.1109	0.1218	0.0808	0.0680
2004	0.1098	0.1230	0.0774	0.0682
2005	0.1090	0.1176	0.0772	0.0680
2006	0.1099	0.1155	0.0787	0.0698
2007	0.1094	0.1145	0.0789	0.0711
2008	0.1080	0.1142	0.0775	0.0696

The correlations provided in Table 2 already points to a stronger correlation between our measures of migration and tourism (with an average of 0.11) compared to the correlation between migration and trade (with an average of 0.06). Both correlations are relatively weak, though, and any meaningful inference can only be provided through regression analysis.

Table 1 provides the gravity results for exports. The standard gravity variables yield the expected signs and sizes, suggesting that the model is correctly specified. Concerning our variables of interest, Migration 1 is positive and statistically significant while Migration 2 is negative and insignificant.

Direct interpretation of the coefficients is tricky; suffice to say that an outflow of people since 1500 from the exporting country to the importing country (in the above example, from South Africa to Brazil), would increase exports from South Africa to Brazil by a coefficient of 0.41, ceteris paribus. Migration movement in the other direction – from the importing country to the exporting country (or, in our example, from Brazil to South Africa) – have an insignificant impact on exports from South Africa to Brazil.

Table 1: Gravity equation for exports

Vbles	**Ln(exp) Coef.**	**Ln(exp) Coef.**	**Ln(exp) Coef.**	**Ln(exp) Coef.**
$LnGDPpc_{it}$	0.3008*	0.3007*	0.3008*	0.3007*
	(9.68)	(9.68)	(9.68)	(9.68)
$LnGDPpc_{jt}$	0.3534*	0.3534*	0.3532*	0.3532*
	(9.35)	(9.35)	(9.34)	(9.35)
$LnPop_{it}$	0.4501*	0.4500*	0.4501*	0.4501*
	(6.32)	(6.32)	(6.32)	(6.32)
$LnPop_{jt}$	-0.1530	-0.1532	-0.1534	-0.1535
	(-1.59)	(-1.59)	(-1.59)	(-1.59)
$Lndist_{ij}$	-1.4885*	-1.4887*	-1.4884*	-1.4886*

	(-189.83)	(-189.77)	(-189.74)	(-189.68)
$LnRNER_{ijt}$	0.0017	0.0017	0.0017	0.0017
	(0.55)	(0.55)	(0.55)	(0.55)
$Colony_{ij}$	1.0515*	1.0350*	1.0603*	1.0434*
	(37.93)	(36.13)	(37.43)	(35.54)
$Comcol_{ij}$	0.5202*	0.5195*	0.5206*	0.5199*
	(22.53)	(22.50)	(22.55)	(22.51)
$Lang_{ij}$	0.7093*	0.7066*	0.7108*	0.7081*
	(42.33)	(41.91)	(42.23)	(41.78)
$Contig_{ij}$	0.6956*	0.6905*	0.6988*	0.6935*
	(22.27)	(22.07	(22.32)	(22.10)
$Island_{ij}$	0.9751*	0.9754*	0.9750*	0.9753*
	(4.84)	(4.84)	(4.84)	(4.84)
$Landl_{ij}$	4.0493*	4.0516*	4.0503*	4.0524*
	(8.77)	(8.77)	(8.77)	(8.77)
RTA_{ijt}	0.2656*	0.2656*	0.2657*	0.2657*
	(18.21)	(18.21)	(18.22)	(18.21)
CC_{ij}	0.4380*	0.4384*	0.4378*	0.4382*
	(5.81)	(5.82)	(5.81)	(5.81)
$Migr1_{ijt}$		0.4113*		0.3988*
		(2.76)		(2.67)
$Migr2_{ijt}$			-0.2249	-0.2012
			(-1.58)	(-1.41)
cons	6.8718*	6.8730*	6.8717*	6.8729*
	(7.10)	(7.10)	(7.10)	(7.10)
Obs	188636	188636	188636	188636
R2	0.7331	0.7331	0.7331	0.7331

Notes: Origin/importer, destination/exporter and year fixed effect are not reported.
Significance at 1% (*) and at 5%(**)
t-statistics appear between parenthesis

Table 2 provide the gravity results for tourist arrivals. Again, the rest of the variables have the expected signs. Both variables of interest – Migration 1 and Migration 2 – reveal large, positive coefficients of 1.21 and 2.81 respectively. The coefficient for Migration 1, for example, is three times greater in tourism than in trade. The large and positive coefficient for Migration 2 may suggest an alternative mechanism through which past migration influence present tourism patterns.

Table 2: Gravity equation for tourist arrivals

Variables	**Ln(tou) Coef.**	**Ln(tou) Coef.**	**Ln(tou) Coef.**	**Ln(tou) Coef.**
$LnGDPpc_{it}$	0.3144*	0.3143*	0.3143*	0.3142*
	(11.16)	(11.16)	(11.18)	(11.18)
$LnGDPpc_{jt}$	0.1740*	0.1741*	0.1737*	0.1739*
	(5.66)	(5.67)	(5.66)	(5.67)
$LnPop_{it}$	-0.0082	-0.0080	-0.0094	-0.0092
	(-0.12)	(-0.12)	(-0.14)	(-0.14)
$LnPop_{jt}$	-0.0538	-0.0537	-0.0560	-0.0560

	(-0.68)	(-0.68)	(-0.71)	(-0.71)
$Lndist_{ij}$	-1.5405*	-1.5409*	-1.5409*	-1.5414*
	(-205.48)	(-205.05)	(-205.26)	(-204.79)
$LnRNER_{ijt}$	0.0039	0.0039	0.0039	0.0039
	(1.44)	(1.43)	(1.46)	(1.45)
$Colony_{ij}$	0.8365*	0.7771*	0.7639*	0.6962*
	(24.92)	(22.23)	(22.59)	(19.75)
$Comcol_{ij}$	0.6070*	0.6045*	0.6018*	0.5988*
	(26.47)	(26.34)	(26.31)	(26.17)
$Lang_{ij}$	1.1361*	1.1251*	1.1192*	1.1065*
	(74.43)	(73.06)	(72.99)	(71.47)
$Contig_{ij}$	1.1694*	1.1574*	1.1340*	1.1198*
	(36.06)	(35.62)	(35.17)	34.67)
$Island_{ij}$	0.7246*	0.7239*	0.7260*	0.7252*
	(4.26)	(4.25)	(4.25)	(4.23)
$Landl_{ij}$	-0.2302	-0.2232	-0.2185	-0.2104
	(-0.48)	(-0.47)	(-0.46)	(-0.44)
RTA_{ijt}	0.2062*	0.2052*	0.2101*	0.2091*
	(14.65)	(14.56)	(14.97)	(14.89)
CC_{ij}	1.1180*	1.1204*	1.1275*	1.1305*
	(12.20)	(12.24)	(12.35)	(12.40)
$Migr1_{ijt}$		1.0928*		1.2108*
		(9.15)		(10.10)
$Migr2_{ijt}$			2.7432*	2.8134*
			(15.95)	(16.38)
cons	15.1149*	15.1217*	15.1677*	15.1766*
	(8.71)	(8.71)	(8.76)	(8.769)
Obs	102032	102032	102032	102032
R2	0.8349	0.835	0.8355	0.8356

Notes: Origin/importer, destination/exporter and year fixed effect are not reported.
Significance at 1% (*) and at 5%(**)
t-statistics appear between parenthesis

Assuming that trade and tourism persistence are similar across time, the differential effects of historical migration points to two mechanisms through which the past matters for the present. Trade persistence may explain the positive coefficient on Migration 1 in Table 1, but cannot explain the large and statistically significant coefficient on both the Migration 1 and Migration 2 variables in the gravity equation for tourism (Table 2). This points to some a different mechanism of transfer, what we label "cultural affinity". The large coefficient of the Migration 2-variable, specifically, shows that tourists are attracted to an environment where they can witness and experience similar cultural traits. What exactly these are, is open for future research.

7. Conclusions

Accounting for current country characteristics and historical relationships, this paper shows that, in addition, historical migration patterns explain a significant component of current world trade patterns. We posit two mechanisms through which historical

migration may influence current trade and tourism. Firstly, past migration may influence past trade through the various theoretical links in the trade-migration literature. Because past trade is persistent to the present, this offers one mechanism through which historical migration may impact today's trade and tourism patterns. Secondly, past migration may create an ethnic or cultural group which foreign traders and visitors have some cultural affinity for. The gravity results points to a strong link between historical migration and current tourism patterns and in both directions of historical migration. Historical migration explains less of current international trade flows, and also only in one direction. We argue that the impact on trade explains the trade persistence, but that the greater impact on tourism is evidence of an ethnic or cultural affinity effect. The reasons why tourists might exhibit such cultural affinity is an invitation for future research.

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