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The USA and the UK (1970–2010): Ordinary Trading Partners?

Laurent Beauguitte and Yann Richard

1 Introduction

In a press conference held in September 2013, the US Secretary of State John Kerry declared: ‘... we are enormously tied together, obviously. And we are committed to making both the US–UK and the US–EU relationships even stronger drivers of our prosperity.’ Doing so, he referred to the ‘special relationship’, i.e., the close relations that have existed between the UK and the USA for decades in politics, diplomacy, culture, military affairs, and of course in the realm of trade and economics. Whether or not it is the result of a common cultural core or the outcome of common interests or a combination of the two, this longstanding relationship emerged during World War II and has often been based on strong

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personal relationships between British Prime Ministers and US, for instance Churchill-Roosevelt or Blair-Clinton.

And yet, behind the scenes, this 'special relationship' has not always been a bed of roses. In the last decade, it has frequently been raised as an issue and sometimes questioned more or less explicitly by top officials on both sides of the Atlantic Ocean. For example, let us remember how the British Prime Minister Gordon Brown decided to appoint ministers who had previously been very critical about the 'special relationship' or about various aspects of US policy, or the enormous protest in the UK against the war in Iraq. Actually, the 'special relationship' seems to have undergone substantial changes because of the major evolutions in the political and economic context at various levels: emergence of new major participants such as the BRIC (Brazil, Russia, India, and China), new orientations of US foreign policy (shift to Asia, relative disengagement in Europe notably during President Obama's administration), end of the Irish conflict, erratic progress of the European integration, global financial and economic crises, and so on.

Obviously, globalization is part of this equation. Consequently, one can ask whether it has had any consequences on the 'special relationship', namely from a commercial point of view. As stated in the introduction of this book, assessing what makes a relationship 'special' and quantifying it is not so easy. Nevertheless, in this chapter, we provide an empirical study of the evolution of commercial relations between the UK and the USA in a long-term perspective. This choice is based on the assumption that the evolution of this commercial bilateral relation is a partial but relevant marker of the 'special relationship', broadly speaking. Globalization has dramatically shortened distances between economies and allowed international exchanges to intensify. Thus, theoretically, the so-called 'special relationship' should benefit and emerge strengthened from this trend.¹ However, at the same time, globalization does not pave the way for a totally transparent world where space and geography have become less determinant. It is in fact a multifaceted process that combines the development of networks, the rapid growth of long-distance exchanges, the development of new economic specializations,

¹D. Reynolds (1985) 'A "special relationship"? America, Britain and the International Order Since the Second World War', *International Affairs*, 62, 20, pp. 1–20.

the evolution of economic geography and, in many parts of the world, regionalization if not regional integration (i.e., growing exchanges and interdependencies between neighboring countries).

Taking the general economic background into account (globalization, regionalization of the world economy, and emergence of BRIC), this chapter addresses several hypotheses from an interdisciplinary perspective (international economics and geography). Our main hypotheses are the following: (1) considering the regional integration of Europe, within the framework of the European Union (EU) and the European Economic Area, economic relations between the UK and the USA have been marked by a continuous weakening over the past 40 years; (2) two main reasons could explain this evolution: the rising Europeanization of UK international trade and the emergence of new economic powers that attract US external trade (the so-called BRIC); (3) the weakening of transatlantic trade relations does not involve only the UK, but all Western European economies.

In this context, have the commercial links between the UK and the USA proved resilient? Have trade Europeanization, in the case of the UK, and the rise of emerging/emerged powers (China and, to a lesser extent, India), in the case of the USA, had an impact on the intensity of this 'special relationship'? If these questions are simple to formulate, their answers are far from straightforward given the plethora of models and methods that can be used. Section 2 posits the starting hypotheses and points out the methodological choices made regarding data and data processing. Section 3 presents the main results obtained. The final section is dedicated to the interpretation and limits of these results.

2 Hypotheses, Data and Methodology

Currently, trade is mainly studied on a regional² and/or on a global level,³ and bilateral examination has become less frequent. This change of scale could easily be explained by the growing importance of regional markets:

²Y. Richard, C. Tobelem Zanin (2009) 'L'Europe dans la régionalisation de l'espace mondial', *Géocarrefour*, 84, 3, pp. 137–149.

³J.M. Siroën (2000) *La régionalisation de l'économie mondiale* (Paris: La Découverte).

if globalization involves rising interdependencies between states on a worldwide scale, it also favors economic integration on a supra-national scale. As has been amply demonstrated previously, if the world is becoming one from an economic and financial perspective, distance still matters and geographical proximity remains a key factor to understanding international trade.⁴ In this context, how has the preferential link between the USA and the UK evolved?

Questioning the Commercial Link Between the USA and the UK

In the globalization era, isolating a couple of trading partners from the whole system would be of poor interest. However, a bilateral relationship may be examined if stress is put on its relative strength and dynamics within the global economic system. In other words, measuring the level of trade between two countries year after year is relevant only and if a comparative perspective is adopted. Therefore, the main issue does not involve the level of trade between the USA and the UK alone, but its relative evolution compared with the foreign trade of each of these two countries as a whole.

The authors contend that the US–UK trade relation has been declining for the past 40 years. Two main reasons could explain this hypothetical decline: the Europeanization of UK trade as the UK, like other European economic powers (France, Germany, Spain), is expected to trade more and more on a regional basis; US trade could be increasingly turned toward emerging and emerged economic powers, the so-called BRIC.

Our hypothesis does not aim to suggest that trade relations between the USA and the UK are weak—they are not—but rather to check if the intensity of exchange is greater or lower than what could be expected given their respective positions and weights in the world trade. In other

⁴D. Mok, B. Wellman, J. Carrasco (2010) 'Does Distance Matter in the Age of the Internet?', *Urban Studies*, 47, 13, pp. 2747–2783; A. Rodríguez-Pose (2011) 'Economists as Geographers and Geographers as Something Else: On the Changing Conception of Distance in Geography and Economics', *Journal of Economic Geography*, 11, 2, pp. 347–356; J. Poon, K. Pandit (1996) 'The Geographic structure of cross-national trade flows and region states', *Regional Studies*, 30, 3, pp. 273–285.

words, do they exchange a great deal because a special relation exists or do they trade a great deal simply because they are two important economic powers?

Data

Data about world trade are numerous and some methodological precautions must be kept in mind when using them. First of all, the more developed the country, the more reliable the data. Conversely, many countries suffer from weak administration—whatever the level of analysis—and a large amount of their trade escapes official statistics. Of course, illegal trade (drugs, weapons, contemporary slavery) is not taken into account.

To study UK–US trade relations, the CHELEM database⁵ was used because it is possible to cross volumes of exchanges with their composition regarding products or technological level. It must be noted that the CHELEM database at its finest level of analysis proposes matrices mixing states and aggregates of states (mainly small or/and weak countries). For instance, Benelux sums up the trade of Belgium, the Netherlands, and Luxembourg. As figures for the UK, the USA and other main economic powers are available at the state level, this limitation is not a problem for this part of the following demonstration.

The CHELEM database state to state matrices including total imports and exports (millions US\$) were used. To avoid temporary fluctuations, the average of $t-1$, t and $t+1$ years for each t date was calculated. Data from 1970 (average of 1969, 1970 and 1971) until 2009 (average of 2008–2009 and 2010) were processed and the situation was assessed at five-year intervals. Specific data about the composition of goods exchanged (low, medium-low, medium-high, and high levels of technology) between some specific pairs of countries (the USA and the UK notably) were singled out.

To set up a gravity model, the use of datasets where there is no aggregate of states was favoured. The COW⁶ and the Gleditsch datasets⁷ were

⁵CEPII (2011) *Comptes Harmonisés sur les Échanges et Économie Mondiale—CHELEM*.

⁶K. Barbieri, O.M.G. Keshk, B. Pollins (2009) 'Trading data: Evaluating our Assumptions and Coding Rules', *Conflict Management and Peace Science*, 26, 5, pp. 471–491; K. Barbieri, O. Keshk (2012) *Correlates of War Project Trade Data Set Codebook, Version 3.0*.

⁷K.S. Gleditsch (2002) 'Expanded Trade and GDP Data', *Journal of Conflict Resolution*, 46, pp. 712–24; K.S. Gleditsch (2013) 'Expanded trade and GDP data'.

thus selected. Each provides country to country global volume of exports and imports from 1970 until 2000. A three-year average was used to avoid cyclical variations. If there are slight differences between these two databases (sources used, methods of estimation for missing or incomplete data, etc.), they both give the same global trend and quite similar shares regarding countries. Therefore, even if we do not expect to get exactly the same results with both datasets, the main pattern should be similar.

From a thematic point of view, it must be noted that these databases do not include exchanges of services—a relevant database on this subject does not exist on a worldwide scale to the best of the authors' knowledge. However, trade in goods still currently represents approximately 80 % of the total exchanges between states.⁸ This type of trade therefore remains relevant to study the economic interactions between states.

Methodology

Three main tools were used to test our hypotheses. They are ranked by level of complexity, from the simplest to the most elaborate.

The first and basic indicator used is the share of US trade in the export and import of the main economic powers. In order to avoid strong but cyclical variations, data have been smoothed on a three-year basis (e.g., data for 1980 are the mean of 1979, 1980, and 1981 data). Isolating the USA is a convenient way to present the general trend but does not give elements to explain it. If the starting hypothesis is correct, the share of European countries in US trade should have declined. Conversely, the BRIC share should have increased.

The second indicator measures the intensity trade relation (ITR) of bilateral exchanges and was proposed in the late 1990s by French economists.⁹ The formula itself is quite simple: for an *ij* pair of countries, the intensity of bilateral exchange is

⁸World Trade Organization (2013) International trade statistics.

⁹M. Freudenberg, G. Gaulier, D. Ünal-Kesenci (1998) *La régionalisation du commerce international: une évaluation par les intensités relatives bilatérales*, CEPII Working papers, 5, pp. 1–102; G. Gaulier, S. Jean, D. Ünal-Kesenci (2004) *Regionalism and the Regionalisation of International Trade*, CEPII Working Papers, p. 16.

$$I_{ij} = V_{ij} \times V_t / V_i \times V_j$$

where V_{ij} is the volume of trade between *i* and *j*, V_i , the volume of trade for country *i*, V_j the volume of trade for country *j* and V_t the total volume of world trade. If this indicator is above 1, it means that trade between these two partners is higher than expected considering their respective weight in the world trade; when it is below 1, conversely, it shows that exchange between these countries is lower than expected. If a 'special' trade relationship exists between the UK and the USA, the values obtained should be above 1. However, if the working hypothesis is correct, they should be below 1.

The third and final method used is a gravity model (i.e., multiple regression where the explained variable is a flow between two places) where the level of trade between pairs of countries is explained by the size of their population (the bigger the population, the higher the level of trade), the GDP per capita (the higher the gross domestic product [GDP], the higher the exchange level). Residuals are then examined to check whether UK–US exchanges are higher or lower than expected according to this model.¹⁰

Model 1 can be written as follow:

$$\text{Trade}_{ij} = \log(\text{GDPpci}) + \log(\text{GDPpcj}) + \log(\text{POPi}) + \log(\text{POPj})$$

If the starting hypotheses are valid, we should see positive and increasing residuals both for the UK–European couple, and for the US–BRIC pair but declining residuals for the UK–US duo. The structure of most significant residuals is then examined to characterize the main trade patterns of these two countries.

A second model introduces distance between countries,¹¹ based on the hypothesis that the higher the distance, the lower the volume of exchanges between countries.

¹⁰R Core Team (2013) 'R: A Language and Environment for Statistical Computing', R Foundation for Statistical Computing, Vienna, Austria.

¹¹K.S. Gleditsch, M.D. Ward (2001) Minimum Distance Data.

Model 2 can be written as follows:

$$\text{Trade}_{ij} = \text{Dist}_{ij} + \log(\text{GDP}_{pci}) + \log(\text{GDP}_{pcj}) + \log(\text{POP}_i) + \log(\text{POP}_j)$$

Why launch a second model? Model 1 should show clear economic regions. Model 2 is used to confirm that this regional effect still exists once the effect of distance is controlled.

3 The Main Results

First, when considering the share of imports and exports between the USA and the UK (Fig. 8.1), some trends clearly appear. Exports from the USA to the UK remained stable during most of the period, approximately 5 % of their total volume. A slight decrease occurred during the last decade. Conversely, US exports to the BRIC countries have been rising dramatically over the last 10 years (from 5 % to 12 %). For the UK, the USA remains an important partner as it absorbs more than 10 % of its exports and this percentage has remained stable during the period. However, UK trade became more and more European during the same period, rising from 35 % to 50 % of its exports.

The intensity trade relation (ITR) attempts to deepen and refine this first result (Fig. 8.2). First of all, it must be remembered that the threshold of 1 indicates if the trade between two countries is proportional to their share in global trade. The US–UK ITR is twice below what it ‘should’ be if they were exchanging as much as what can be expected. Second, the Europeanization of UK trade appears clearly, considering the shape of the curves for the UK–France, UK–Germany and, to a lesser extent, the UK–Spain and UK–Italy bilateral trade relationships.

During the period considered, the rising importance of China in US trade clearly appears as the ITR goes from 0.003 in 1970 (i.e., average of 1969 to 1971) to 0.8. The phenomenon is less obvious for the other BRIC countries, even the ITR for the Russia–USA duo rises from 0 to 0.23. However, the quality of trade data for Eastern socialist countries in the 1970s—and communist countries generally speaking—is question-

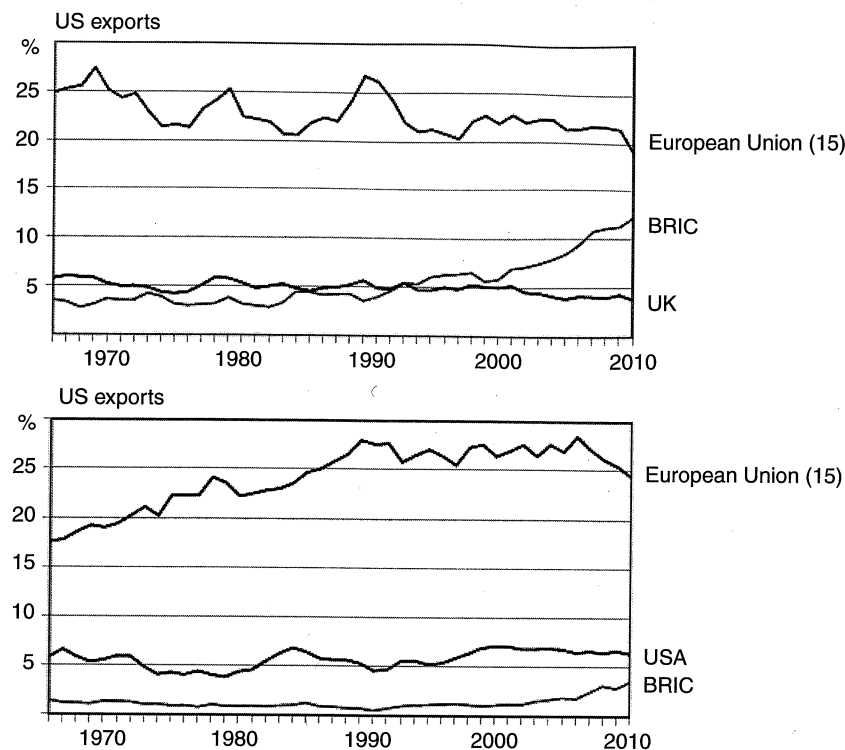


Fig. 8.1 US and UK exports (1970–2010) (Source: CEPII. Comptes Harmonisés sur les Échanges et l'Économie Mondiale—CHELEM, 2011. Figure by authors)

able. Table 8.1 shows the values obtained if only the last two decades are considered.

The BRIC hypothesis is not completely validated as the only pair of countries following the expected pattern is the US–China duo. Conversely, the ITR intensity decreases for the US–Brazil and US–India pairs. However, these results are not entirely surprising: if the BRIC can be considered, to a certain extent, as a cohesive group from a diplomatic and political point of view, their respective choices of economic strategies are quite different and their level of openness (external trade as a share of the GDP) regarding world trade is also different.

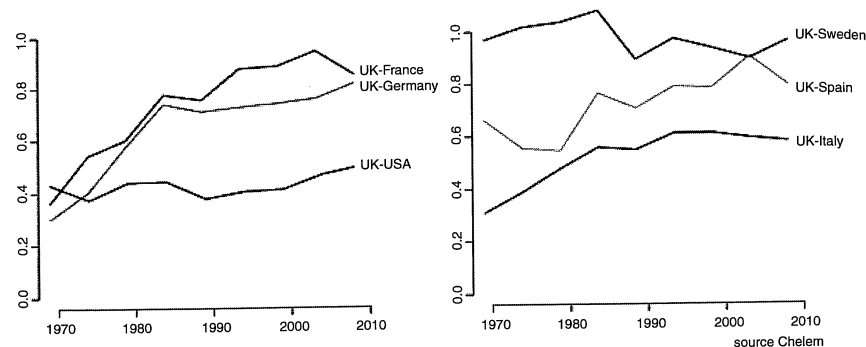


Fig. 8.2 UK Intensity trade relation (1970–2010) (Source: CEPII. Comptes Harmonisés sur les Échanges et l'Économie Mondiale—CHELEM, 2011. Figure by authors)

Table 8.1 Intensity of trade relations between the USA and the BRIC

ITR	1990	2000	2009
USA–Russia	NA	0.19	0.23
USA–China	0.74	0.8	0.8
USA–Brazil	0.91	0.83	0.72
USA–India	0.5	0.46	0.42

NA: missing values

Source: CEPII. Comptes Harmonisés sur les Échanges et l'Économie Mondiale—CHELEM, 2011. Table by authors

Table 8.2 Percentage of explained deviance by the gravity model

Years	COW dataset	Gleditsch dataset
1970	75	73
1975	76	75
1980	76	76
1985	79	80
1990	79	82
1995	82	83
2000	82	82

Source: COW and Gleditsch datasets. Table by authors

The gravity model confirms these results. Table 8.2 provides the respective explanatory power found with both datasets used and Table 8.3 gives the residuals for the US–UK duo. The high value of explained deviance is not a surprise, even if this model is parsimonious: many previous studies¹² showed

¹²K.S. Gleditsch, M.D. Ward (2001) Minimum Distance Data.

Table 8.3 Residuals from the gravity model for the UK–US duo

Years	COW dataset	Gleditsch dataset
1970	-0.08	-0.16
1975	-0.23	-0.31
1980	-0.08	-0.13
1985	-0.11	-0.14
1990	-0.24	-0.26
1995	-0.92	-0.37
2000	-0.88	-0.38

Source: COW and Gleditsch datasets. Table by authors

that population and GDP per capita are among the main determinants of trade volume. Even if the two datasets are different, the percentage of explained deviance and its general trend are quite similar.

The importance of crossing sources and datasets clearly appears in Table 8.3: even if raw residuals are quite different between the COW and the Gleditsch datasets, similar patterns can be found. During the first decade examined (1970–1980), residuals remained negative but on a low level. From 1980 to 2000, the residuals kept increasing but remained negative. This means that, according to their respective population size and GDP per inhabitant, they traded much less in 2000 than they 'should have'.

In the case of the USA, Canada, Mexico, and Nigeria had the highest residuals during the whole period. As far as the UK is concerned, Ireland is one of the countries which has always had the highest positive residuals, followed by former colonies (Kenya, Tanzania) and European countries (Belgium, the Netherlands, France, etc.)

4 Interpretation of Results and Discussion

If the US–UK relationship is 'special' in many areas, this is not the case for trade relations. Whatever the dataset and methods used, the result clearly shows that, according to their importance in world trade, their population, or their wealth, they exchange less than expected. Introducing distance does not change the structure of their bilateral relations but allows us to highlight some structural changes regarding world trade.

The residuals from model 1 (population and GDP per capita—Fig. 8.3) show the regional structure of world trade in 1970. The socialist bloc is clearly apart, an Asian bloc is structured around Japan and a Nordic one around Sweden. This structure is to be expected because distance is not taken into consideration, its residuals show the effect of spatial proximity. However, it is interesting to note that the UK, like other former European colonisers (France, Belgium), presents high residuals with some of its former colonial territories (Nigeria, Zambia, Kenya).

Comparing Figs. 8.3 and 8.4 (the latter presents the residuals of model 2, population, GDP per capita and distance) allows deepening of our understanding of the structure of world trade in 1970. Despite the introduction of distance, the socialist bloc remains cohesive and some European countries present exactly the same pattern mixing preferential relations with neighbors and former colonies (France, Belgium). The situation is quite different for the USA and the UK, even if they are still not linked (which confirms the results presented above). This time, the British preferential trade relations involve more countries, particularly from the Commonwealth (Australia, New Zealand, Canada) and some Asian countries. In regard to the USA, the situation is also quite different as geopolitical allies appear (Israel, Taiwan, South Korea) as well as the main Asian economic powers (Japan, Singapore).

Thirty years later, the situation has changed much with the rise of Asian economies and their importance for world trade. Fig. 8.5 does not present the entire network of residuals because it is too dense to be understandable. It shows the ego-network of the UK and the USA in 1970 and in 2000 for both models (an ego-network represents one node—here the UK or the USA with its relations and the relations between its relations).

If distance is not considered (model 1), the preferential trade relations of the UK are exclusively European and the ego-network is close to being a clique (a figure where all possible links are present). The 1970 versus 2000 comparison based on model 1 confirms the hypothesis of the regionalization of world trade. The UK's external trade has become more Europeanized. Nevertheless, and not surprisingly, the commercial

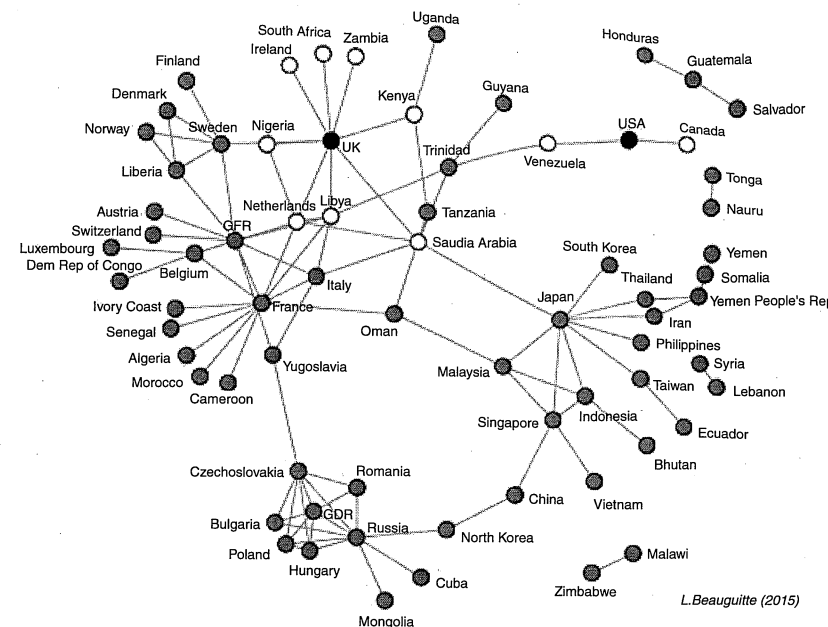


Fig. 8.3 Most positive residuals in 1970- model 1 (distance out). *Note:* This figure and the following one represent the most significant residuals from the gravity models 1 and 2 (see above). To make it easier to read, the USA and the UK appear in black and their preferential partners appear in white (*Source:* Authors)

relations remain strong with members of the Commonwealth, in spite of the distance between them and the UK.

In the case of the USA, the residuals from model 1 in 2000 mix neighbors (Canada, Mexico), energy suppliers (Nigeria, Venezuela) and some of the main Asian exporters (China especially). If we include distance in the model, the ego-network of the USA is much bigger and denser. Neighbors remain—which might be seen as a consequence of the NAFTA (North American Free Trade Agreement) signed in 1994—but the most impressive fact is the importance of Asian countries, as if a transpacific regional integration were taking place.

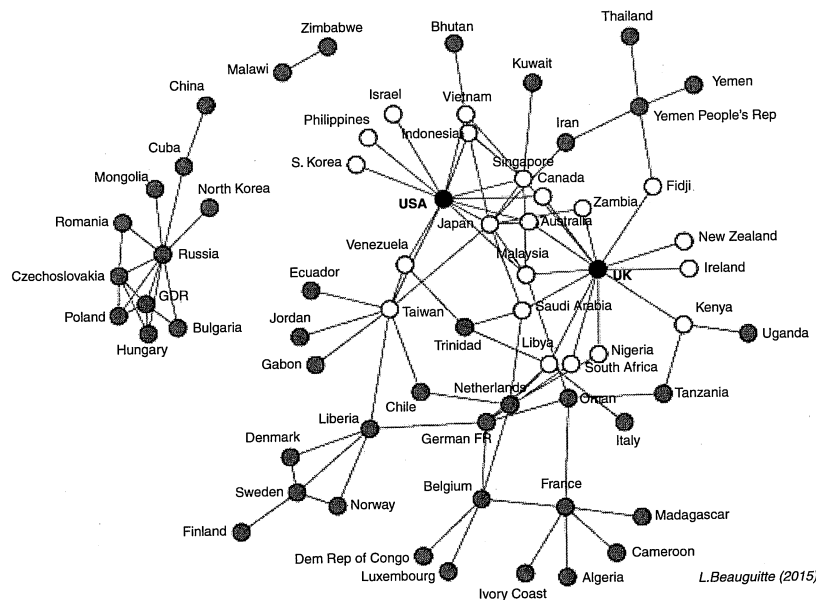


Fig. 8.4 Most significant residuals in 1970- model 2 (distance in) (Source: Authors)

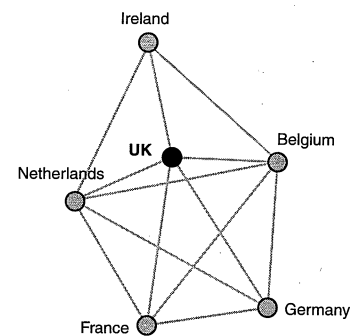
5 Conclusion

Economic globalization has been characterized by two converging processes: lower trade barriers among partners and the rise of regional trade. In order to loom large in the economic competition that has turned global, integration on a supranational basis has become a necessity for all participants. In parallel to the deep regional integration of Europe, which has taken place within the framework of the EU and of the European Economic Area, trade relations between the UK and the USA have been weakening continuously over the past 40 years. This decline is part of a global process that has seen the emergence of new economic powers but in which distance still matters when interactions between economies take place.

Not surprisingly, the intensity of trade relations between the UK and the USA appears lower than expected according to their respective

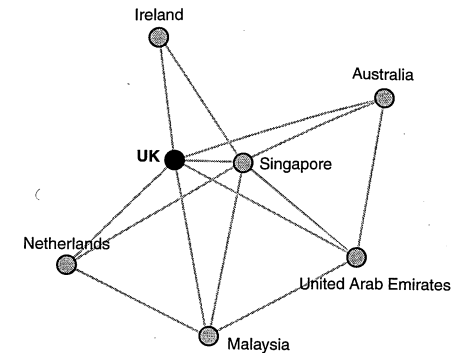
Most significant residuals

Ego of UK, 2000
Model 1 (distance out)



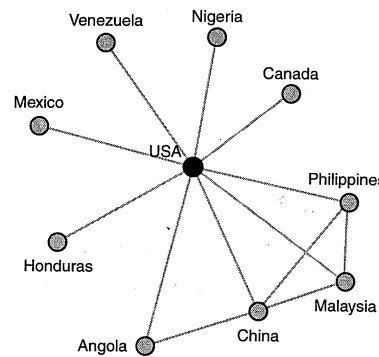
Most significant residuals

Ego of UK, 2000
Model 2 (distance in)



Most significant residuals

Ego of US, 2000
Model 1 (distance out)



Most significant residuals

Ego of US, 2000
Model 2 (distance in)

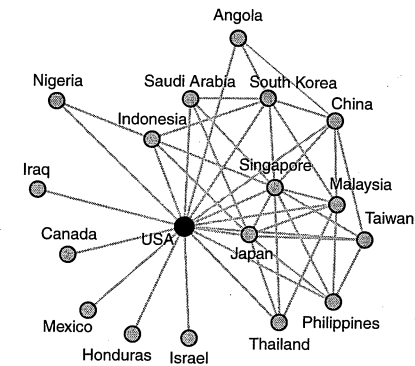


Fig. 8.5 (a) and (b) Most significant residuals in 2000 for US and UK trade (Source: Authors)

importance. Two main reasons could explain this evolution. The UK is getting more and more Europeanized from a commercial point of view, while keeping strong relations with former colonies. At the same time the US economy has become more focused on Asia than it had been previously. The emergence of new economic powers has partially reshuffled the geography of the US external trade (mainly to the so-called BRIC).

Actually, the weakening of transatlantic trade relations does not involve only the UK, but all Western European economies. The relative decline of the UK–US trade relation is then in line with the decline of the US–EU relation, compensated for by the emergence of BRIC countries as major partners. Over the last decades, if the relationship between the UK and the USA has been ‘special’ in the realm of politics and military cooperation or in finance, it has not been so in the sphere of trade.

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