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Explanatory Factors of
Country International Banking Networks

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In the Uruguay Round of Trade Negotiations the developing countries led by India and Brazil initially opposed the inclusion of services in the negotiations. The argument for this opposition rested on the presumed comparative advantage of the developed countries in the delivery of these services. Thus, the basic fear of the developing countries was to open their markets to the more developed countries without obtaining an equal benefit in return.

As presented, the position of the developing countries contradicted the basic policy prescriptions of the conventional theory of international trade which prescribes that trade benefits all the parties involved. This theory does not, unfortunately, take into account such real world phenomena as economies of scale, externalities or learning by doing effects. The newer theories that take such effects into account and that are generally labelled the monopolistic theories of international trade, were still very new when the Uruguay Round was started.

The free trade argument has been considerably mollified: a different policy may be necessary for industries that might benefit from externalities or that would exhibit economies of scale and that would permit the survival of only a limited number of enterprises. The large aircraft industries are a well known example put forward by Krugman (JEP).

The purpose of this paper is to examine whether the international banking industry may provide another example of an industry that might exhibit significant benefits from externalities or economies of scale and require a different type of policy. This interest is not only academic. The agreement signed at the conclusion of the Uruguay Round of Trade Negotiations did not contain an agreement on the issue of trade in financial services. Many policy makers in both developing and developed nations remain wary of not getting market access or losing market share in the delivery of these services.

The organization of this paper is the following: in the first Section of this paper the various theories are discussed and a model is set up to examine the relevance of the different theories. In the second Section a brief description of the data utilized to empirically estimate the model is presented. In the third Section the model is applied empirically to explain the export of banking services among 144 countries. The final Section briefly presents some conclusions and recommendations.

1   A Model to Infer the Determinants of International Banking

The purpose of this Section is to specify a model to investigate which of the principal trade theories best explains the actual pattern of trade in banking services. The trade theories considered are the Classical, the Heckscher-Ohlin, the Linder[1], the Product-

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[1.]   I refer to the Linder Hypothesis as the Linder theory to facilitate the exposition.

Cycle and the Economies of Scale or Monopolistic Competition theories, that deal with intra-industry trade and product differentiation. The emphasis in this Section is devoted to the identification of a measure whereby the industry centred Monopolistic Competition theories can be compared with the theories based on national characteristics.

Although the above mentioned theories have been carefully specified and provide clear policy recommendations, there is no generally agreed upon method to verify the relevance of the different theories in situations with many countries, many goods and many factors as made clear by Deardorff (1984). Nevertheless, although the theoretical justification may not be rigorous, a large body of literature that has contributed significantly to the understanding of the factors that explain the patterns of trade has been built by regressing trade on its proposed determinants. The majority of these studies concentrated on explaining the commodity composition of the trade of one country by regressing the trade performance of a cross section of industries on their input requirements. Relatively few studies have followed the approach pioneered by Leamer (1974) where the dependent variable, the trade of a particular good, is regressed on resource availability to "estimate (roughly speaking) industry input requirements..."[2]

To examine bilateral trade in banking the dependent variable, BX_{ij}, is regressed on the factors or characteristics suggested by the different theories of international trade. The Classical or Ricardian theory explains trade on the basis of the relative endowments of natural factors. The natural endowments that would be relevant to the banking industry might be of economic or regulatory nature. Exports and the overseas presence of multinational corporations could probably be considered the principal economic factors that would determine trade in banking services. With respect to regulatory factors that might be included under the Classical theory, two seem to be the most important: the restrictiveness of regulation regarding the establishment of foreign banks; and, the policies designed to attract banks by the overseas banking centers.

Because banking is a service industry concerned with the money flows of counterpart real international transactions, it might be expected that bilateral exports, X_{ij}, might also be an important determinant of trade in banking. This hypothesis would be supported by the results of Goldberg, Helsley and Levi (1989) who found that foreign banking presence among different states of the US is strongly related to state imports. Among nations the imports of country j from country i are equivalent to the bilateral exports X_{ij}. Therefore it is proposed to employ X_{ij} as an independent variable to explain banking exports, BX_{ij}.

It has often been hypothesized that banks follow their multinational clients overseas. The location of multinational corporations from a particular country i in a host country j, MNC_{ij}, is also included as an independent variable supported by the Classical

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Leamer (1974), p.374.

theory. A positive coefficient for MNC_{ij} is anticipated.

Regulation has often been suggested as an important factor for trade in banking services. Therefore a variable denoting the restrictiveness of regulation with regard to the establishment of foreign banks by the host country j , $RESTRIC_j$, is included in the equation. The coefficient for the restrictiveness measure is expected to be negative.

On the other hand certain countries encourage the immigration of foreign banks to promote their position as overseas banking centers. Although such policies might be considered under the $RESTRIC_j$ variable described above, it is felt that an additional dummy variable, OBC_j, would be helpful in the explanation of international banking.

The Heckscher-Ohlin theory states that trade depends on the relative capital and labor endowments of countries. In the more sophisticated treatments of the theory attention is not limited to physical capital and human capital is given an important place. Moreover, labor is not taken to be homogeneous but is subdivided along skill categories. Although these refinements are extremely useful in the situation of one country with respect to the rest of the world, in the analysis of a large cross section of countries the availability of data becomes a limiting factor. Therefore in many empirical studies the capital labor ratio is proxied by income per capita. This example is followed here and the second independent variable to explain BX_{ij} is the ratio of the incomes per capita in the two countries: y_i/y_j. Assuming banking to be capital intensive a positive coefficient is expected for this ratio.

The Linder hypothesis proposes that trade takes place among countries with similar tastes and it is often assumed that these tastes are determined by their incomes per capita. An index of difference, denominated LIN_{ij}, was developed to test whether banking exports take place among countries with more similar or dissimilar tastes:

$$LIN_{ij} = \frac{ABS\ (\ y_i - y_j\ )}{(1/2)(\ y_i + y_j\ )}\ ,$$

where ABS stands for the absolute value of the difference in incomes per capita.

It is anticipated that the index of difference will reveal a negative coefficient because of the close association that is presumed to exist between the degree of development and the provision of financial services. That is, countries at different levels of development might exhibit very different needs with respect to banking services and therefore such trade might not be very important.

The Product-Cycle theory proposes that new products move from the richer to the poorer countries over time. Although international banking is not a new phenomenon, it's rapid development in the past few decades plus the possibilities generated by the revolutions in telecommunications and data processing, suggest that the new international

banking may be considered a new product. Thus the Product-Cycle theory would be suggested if the coefficient for the Heckscher-Ohlin test was positive and the Linder test were rejected by a positive coefficient for the index of difference term. A better test of the Product-Cycle theory would be obtained by breaking up the sample according to rich and poor countries and observing positive and negative coefficients for the income per capita ratios for the two subsamples, respectively.

The newer theories of international trade indicate that countries will tend to export the goods of industries that can internalize economies of scale. Because the literature on domestic banking has found little evidence for the proposition that there exist economies of scale to branching (Ferrufino, 1991; Nelson, 1985), the proposition of the Economies of Scale theory requires the formulation of a hypothesis with respect to the source of economies of scale at the international level.

In order to develop a simple intuitive model of the operation of economies of scale in the foreign exchange and capital markets it may be useful to imagine a world of isolated nations where there would be no need for a foreign exchange market. In this world, a trading scheme between two nations, A and B, would induce the creation of such a market between the currencies of A and B. Initially the currency exchange costs might be very high as the foreign exchange markets would be dominated by brokers that would limit themselves to the search and matching of buyers and sellers. With the growth of trade the foreign exchange market would expand and some brokers might become market makers and be willing to quote two-way prices, for buying and for selling, and to take open positions in any of the two currencies. With the expansion of trade and the growth of the foreign exchange market the costs per unit of currency converted would decline.

The suggestion of the existence of declining costs to currency conversion does not provide any clues as to the location of the foreign exchange market. Even if it were assumed that country A was much larger than country B there would be no clear motivation for the foreign exchange market to concentrate in either A or B. The addition of another small country C to the trading scheme could resolve the foreign exchange market location problem. If the volume of trade between A and B and A and C were sufficient to lead to low enough conversion costs, then the small volume of trade between B and C might make use of the B-A-C currency conversion channel and lead to the concentration of the foreign exchange market in country A.

The tendency for the foreign exchange market to locate in country A would be reinforced by any learning effects in the foreign exchange markets. Thus, if by chance the exchange market had already been established in A when country C joined the trading scheme, it would require A less of an initial investment than C to set up an A-C foreign exchange market. Like the liberalization of trade, the relaxation of restrictions on foreign investment would also promote the concentration of the foreign exchange market in the

large country.

The very simple model delineated above suggests a tendency for the foreign exchange and capital markets to concentrate in the larger countries due to externalities and economies of scale. Therefore country GNPs, denoted as Y_i for the exporting country and as Y_j for the importing country, could be selected as the size variables relevant for the examination of the existence of economies of scale. The size variables are included as absolute variables rather than a relative variable because a ratio would hide the relevance of sheer size. The hypothesis of economies of scale would be supported by a positive coefficient for the economic size of the exporting country and a nul or negative coefficient for the size of the importing country.

An assumption that has implicitly crept in to this simple model of the working of the foreign exchange market is that of the concentration at the national level of the foreign exchange market. Thus, if a large number of agents in a large country A were trying to become market makers in competition with single agents in the smaller countries, B and C, then the question of the location of the foreign exchange market would remain unresolved. Therefore, before proceding to set up a model to test among the alternate theories of international trade using country GNPs to test for the newer theories, it is necessary to examine whether the assumption of concentration may be sustainable.

In order to assess the degree of concentration of international banking activities at the country level two related measures may be suggested: first, the number of countries served by a particular bank from a particular country, that is, the number of primary connections; and second, the number of pairs of countries that may be linked by a particular bank, the number of secondary connections. If the number of primary connections is given by n, then the number of secondary connections can be computed as $(n^2 - n)/2$. With these measures of concentration, in the analysis of national concentration it appears to be sufficient to focus on the concentration of the large bank exporting countries. The smaller export countries, which are numerically the majority, have either no branches abroad or merely one or two held by the same bank. In the large countries the example provided by the early banks and the creation of the necesary human and physiscal infrastructure may have led to the imitation by other competitors. Table 1.1 provides some data with respect to the national concentration of the banking networks in the ten largest exporting countries.

Table 1.1

**The concentration of international networks by the
principal branch exporting banks at the national level**

country	nr. of connections held by country	nr. of primary connections by principal banks		nr. of secondary connections by principal banks		relative size of bank 1 to bank 2 according to connections		% of country primary conn. served by bank 1
		1st	2nd	1st	2nd	primary	secondary	
U.S.A.	73	63	38	1953	703	1.65	2.78	86
U.K.	55	31	30	465	435	1.03	1.08	56
France	48	26	23	325	253	1.13	1.28	54
Netherl.	35	23	11	253	55	2.09	4.60	65
Canada	30	21	14	210	91	1.50	2.30	70
Germany	29	21	8	210	28	2.62	7.50	72
India	26	14	12	91	66	1.17	1.38	54
Pakistan	26	19	10	171	45	1.90	3.80	73
H. Kong	23	23	5	253	10	4.60	25.30	100
Japan	23	22	11	231	55	2.00	4.20	96

Source: Data described in Section 3.

The data presented in Table 1.1 indicate that in seven of the ten largest countries, the largest bank has at least fifty percent more primary connections than the second bank. With respect to secondary connections, the main bank in seven of the ten countries is at least twice as large as its closest competitor. Moreover, in nine of the ten cases the largest bank serves fifty percent or more of the total country connections. Although the evidence presented in Table 1.1 does not support the assumption of a single trader per country, the degree of concentration appears to be significant, allowing for the utilization of GNP as a proxy for the economies of scale enjoyed by the foreign exchange markets in different countries.

The equation to be estimated to determine the relevance of the different theories of international trade is the following:

$$BX_{ij} = b_0 \, X_{ij}^{b_1} \, MNC_{ij}^{b_2} \, RESTRIC_j^{b_3} \, OBC_j^{b_4}$$

$$(\frac{y_i}{y_j})^{b_5} (LIN_{ij})^{b_6} Y_i^{b_7} Y_j^{b_8}$$

Where the variables have been defined in the preceding paragraphs.

2 The data requirements

The purpose of this paper is to estimate the model presented in the last Section on the basis of bilateral data on trade flows in banking services among 141 countries in order to establish the determinants of international banking exports. The data set employed to achieve this task is described in this Section.

In the analysis of trade in banking services among 141 countries attention is limited to the number of branches from a given country i in another country j. Although data on numbers, just like data on assets, represent stocks, they are used as a proxy for banking service flows because there is no adequte body of data on trade in banking services, partly because "banks do not charge their customers directly but recoup themselves in the form of factor income."[3] Data on assets is not used as an alternative because it is also unavailable.

The attention is focused on branches because a branch is defined as an integral part of the banking organization and constitutes the highest level of foreign representation a bank may attain: foreign branches may accept deposits, make loans and provide a full line of banking services in the host market on an equal footing with domestic banks. At the other extreme, although representatives are also an integral part of the parent bank, representatives are barred from taking deposits or making loans and in theory have little more than a public relations function. In contrast to branches, subsidiaries are incorporated in their respective countries and form no integral part of the parent bank.

The availability of data from *The Bankers' Almanac* (1990) determined the examination of trade in banking among 141 countries, listed in Table A.1[4], that have or host foreign bank representatives. *The Bankers' Almanac* provides information on more

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[3] Arndt (1988), p. 63.

[4] The following islands were aggregated as the Windward and Leeward Islands: Anguilla, Bequia, Carriacou, Nevis, Montserrat, Antigua and Barbuda, Dominica, St. Kitts, St. Lucia, Grenada, St. Vincent, St. Pierre and Miquelon, Martinique, Guadeloupe, Barbados, Turks and Caicos and the Virgin Islads. Similarly, Kiribati, Fiji, Solomon Islands, Vanuatu, Tonga, American and Western Samoa, Guam, French Polynesia, Nauru, New Caledonia, Mariana Islands and Tuvalu were aggregated into the Pacific Ocean Islands.

than 3600 major banks which operate internationally. Banks that do not operate internationally to any great extent or do not offer a complete line of banking services are generally not included. Given the data on the locations of branches a 141 by 141 bilateral trade matrix was constructed.

The data on GNP were derived from: World Bank, *World Tables*; and International Monetary Fund, *International Financial Statistics*. The data on GNP refer to GNP in current prices and valued in U.S. dollars at the current exchange rate. The year 1989 was chosen for data reasons and to allow a lag between the attainment of a particular threshold level of GNP and the decision to establish any form of bank representation. The same World Bank and IMF sources were used to obtain 1989 data on population.

Bilateral trade data for 1989 was obtained from the International Monetary Fund, *Direction of Trade Statistics: Yearbook 1990*. The data on foreign subsidiaries of multi-national corporations (MNCs) was derived from: John M. Stopford, *The World Directory of Multinational Enterprises: 1982-1983*. Unfortunately the data refer to the 500 largest MNCs only and therefore leave out many bilateral connec-tions that might be important. However, it proved impossible to find a more extensive and up to date data source.

The data on bilateral regulation posed another almost insurmountable problem. The measure of regulatory restrictiveness for the foreign establishment of US banks developed by Tshoegl (1981) was used as a proxy for bilateral restrictiveness.[5] The offshore banking centers (OBCs) were taken to be the following: Bahamas, Bahrain, Windward and Leeward Islands, Hong Kong, Cayman Islands, Channel Islands, Netherlands Antilles, Panama, Singapore and the Pacific Ocean Islands.

A general evaluation of the data indicates that there would be much room for improvement. It would be especially desirable to get more up-to-date data on regulatory restrictiveness and the bilateral establishment pattern of MNCs.

3 The determinants of trade in banking services

A review of the matrix constructed to depict the international flows of banking services show that these services are not universally traded but that trade in these services is limited to a modest number of trade links for the majority of countries. If all countries traded with each other we would find 19,740 bilateral trade relationships among the 141 countries considered. An examination of the trade matrix constructed for branches indicates that of the possible 19,740 links only 740 indicate positive trade flows: the remaining 19,000 cells are empty.

The analysis of the connections between countries and the great number of zeroes

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[5]. The inverse of Tschoegl's ease of regulation index was used.

in the bilateral trade matrix indicate the need to use a Logit or a Probit regression to estimate Equation 2 rather than Ordinary Least Squares. The case for the utilization of a Logit or a Probit procedure is further supported by the fact that the majority of bilateral connections represent the activities of one or two branches. As can be seen from Table 3.1, 274 of the 740 connections are established with a single branch. That is, 37 percent of the connections are established with only one bank and an additional 17 percent is completed with just two branches.

Table 3.1
The Reduced Number of Bank Offices
that Establish Many Country Connections

number of branches	frequency	percent	cumulative frequency	cumulative percent
1	274	37.0	274	37.0
2	128	17.3	402	54.3
3	78	10.5	480	64.9
4	59	8.0	539	72.8
5	23	3.1	562	75.9

Table 3.2 presents the results of the Logit estimation of Equation 2. Most of the coefficients present the expected signs but there are also some surprises. We find that the coefficients of the "endowments" variables show the anticipated signs and are highly significant. Thus the exports of country i to country j proves an important incentive for a bank from country i to open a branch in country j. Presumably, the interest of the bank would be to finance the imports in the host country, statrting with those originating from the home country. A similar conclusion might be drawn with respect to the influence of the presence of multinational corporations of country i in country j.

The restrictiveness variable relating to the regulatory impediments imposed by the host country showed the anticipated negative coefficient at a high level of significance. The coefficient for the overseas banking centres variable is positive and significant.

With respect to the economic and regulatory characteristics of countries the coefficients proved to have the correct sign at a high level of significance as might have been expected. It suggests that the "natural" factors suggested by the Ricardian or Neoclassical theory are of primary importance in the determination of international trade in banking services. Unfortunately, however, these results can not easily be transformed into policy prescriptions: it would hardly make sense to foster the foreign establishment of foreign manufacturing subsidiaries in the hope of establishing foreign branches; on the other hand, for any one country it is extremely hard to persuade its trading partners to change their foreign banking regulations.

Table 3.2

**Logit estimation of the factors that determine
the export of banking services**

variable	coefficient	standard error	Wald chi-sq.	significance level
constant	-7.77	0.55	198.6	***
X_{ij}	0.27	0.02	208.1	***
MNC_{ij}	0.30	0.05	31.5	***
$RESTRIC_j$	-1.29	0.13	94.7	***
OBC_j	2.76	0.19	200.0	***
y_i/y_j	-0.10	0.03	12.2	**
LIN_{ij}	0.07	0.06	1.3	-
Y_i	0.40	0.03	141.0	***
Y_j	0.08	0.03	7.78	*
sensitivity	27.4			
specificity	99.5			
correct rate	96.8			
number of 1s	740			
number of 0s	19,000			
level of significance based on Chi-Square distribution: *** at the 0.01% level; ** at the 0.1% level; and * at the 1% level.				

The coefficients that provide surprising results are those related to the variables meant to test for the the relevance of the Heckscher-Ohlin, Linder, Product Cycle and Monopolistic Competition theories of international trade. The coefficient of the relative incomes per capita variable, y_i/y_j, designed to test the Heckscher-Ohlin theory and expected to be positive is negative and significant at the 0.1% level. This signifies that, contrary to expectations, the bank exporting countries are not necessarily only the rich countries.

The obtention of the "wrong" sign for the Heckscher-Ohlin variable also dispenses us from further attention to the Product Cycle theory. This theroy proposed that new industries, banking in our case, would be developed in the rich countries and export to the developing countries. Gradually, the new industries would move to the developing countries and the pattern of trade would be reversed. What the coefficient for the Heckscher-Ohlin variable would imply would be that the banking cycle had been completed.

The coefficient for the Linder theory proved not to be significantly different from zero. This indicates that trade in banking services is not concentrated around countries with similar incomes per capita. This implies that the services offered or required from banks do not differ substantially with the degree of development.

In contrast to the unanticipated and insignificant coefficients for the Heckscher-Ohlin, Product Cycle and Linder theories, the coefficients for the Monopolistic

Competition variables have the correct signs. The principal bank exporting countries are the large countries in terms of GNP. These large countries not only include the rich countries but also large developing countries like India and Pakistan.

In view of the results, it is also useful to dwell on the fit of the equation. In Table 3.2 the standard errors are presented next to the corresponding coefficients. In addition to the standard errors the Wald Chi-Square statistic was computed for each parameter estimate. The levels of significance of this statistic are presented in the right-hand column by three, two and one asterisks corresponding to the 0.01, 0.1 and 1 percent levels of significance, respectively.

At the bottom of Table 3.2 the sensitivity, specificity and correct rate for each test are presented. The sensitivity measure reflects the number of times that the model correctly predicts the occurrence of an event and is given by the ratio of predicted events to total events. In the three tests presented in Table 3 the sensitivity statistic indicates the ratio of the predicted bank connections to the actual bank connections. The specificity rate presents the ratio of accurately forecast zeroes to the observed lack of banking connections. Finally, the correct rate statistic is the ratio of the number of correct predictions to the total number of observations.

Unfortunately there is no single statistic like the coefficient of determination, R^2, to judge the fit of a Logit regression. Therefore the fit has to be judged on a more qualitative basis depending on the objectives of the estimation. Since the purpose of the investigation is to determine the factors that explain trade in banking services among nations, it is apparent that the correct explanation of trade and no trade should be taken to be the objective of the estimation and the high correct rates obtained would indicate a good fit.

Nevertheless, it should be recognized that the model presents a rather low sensitivity rate: 27.6 per cent. Although the ideal would be that this number should be close to 100 per cent, I do not consider the results discouraging: the model correctly pinpoints 205 of the 740 bank branches in a field that presents 19740 possibilities. If the 740 branches had been randomly assigned only 28 of the actual connections would be identified.

Having analyzed model fit, it also seems appropriate to dwell on the question of any possible biases that might have been introduced by the utilization of banking presence as a proxy for the delivery of banking services. There are two sources of possible bias: the number of foreign banking offices may not be a good proxy for the flow of banking services; and, the bias resulting from the simplification of the analysis of presence to a one-zero exercize. The interaction of the two sources of bias is such that unless a relationship between flow of services and number of establishments is considered completely untenable, the working with a dichotomous variable for banking representation makes unnecessary any further concern over the relationship or posible bias between service flows and banking

presence. With regard to the second source of bias, resulting from our aggregation of one or more banking offices into a single category, it is possible to test for this bias by estimating an ordered response model. Such a model was estimated with five categories: no offices, one office, two or three ofices, four or five offices, between five and ten offices and more than ten offices. The results are presented in Table 3.3 and indicate no substantial change in the value of the estimated coefficients. This result is not surprising given the significant number of connections that are established with only one branch.

It may also be feared that the OBC dummy or the restrictiveness variable, which might be somewhat outdated, might either bias the estimation coefficients or account for the good fit of the model. A look at the variance-covariance matrix (not reproduced here) does not indicate serious multicollinearity problems that might lead to biased coefficients. Moreover, the high level of significance of all but one of the coefficients also suggests that there is no multicollinearity problem. Finally, runs without the explanatory dummies and the restrictiveness variable, presented in Table 3.4, show only moderate changes that could only lend further support to the arguments put forth in the analysis of Table 3.1.

Table 3.3

Multilevel logit to examine possible bias of simple logit

variable	coefficient	standard error	Wald chi-sq.	significance level
constant	-10.89	0.56	366.3	***
X_{ij}	0.28	0.02	210.1	***
MNC_{ij}	0.32	0.05	42.3	***
$RESTRIC_j$	-1.33	0.13	102.1	***
OBC_j	2.82	0.18	232.4	***
y_i/y_j	-0.10	0.03	13.8	**
LIN_{ij}	0.09	0.06	2.1	-
Y_i	0.41	0.03	151.9	***
Y_j	0.11	0.03	12.7	**
additional inter.			nr. of offices	count
inter.2	0.77		1	274
inter.3	1.28		2-3	206
inter.4	2.09		4-5	82
inter.5	2.77		5-10	81
			# > 10	97
level of significance based on Chi-Square distribution: *** at the 0.01% level; ** at the 0.1% level; and * at the 1% level.				

Table 3.4

**Analysis of the contribution of the OBC_j and $RESTRIC_j$
to the explanation of trade in banking**

variable	coefficient	sign. level	coefficient	sign. level
constant	-5.85	***	-6.68	***
X_{ij}	0.30	***	0.32	***
MNC_{ij}	0.33	***	0.33	***
$RESTRIC_j$	-1.45	***	excluded	
OBC_j	excluded		excluded	
y_i/y_j	-0.18	***	-0.23	***
LIN_{ij}	0.04		0.14	
Y_i	0.39	***	0.35	***
Y_j	-0.04		-0.07	*
sensitivity	23.4		18.8	
specificity	99.6		99.6	
correct rate	96.7		99.6	
number of 1s	740		740	
number of 0s	19,000		19,000	
level of significance based on Chi-Square distribution: *** at the 0.01% level; ** at the 0.1% level; and * at the 1% level.				

4   Conclusions

The worldwide analysis of international trade in banking confirmed the importance of the economies of scale hypothesis as a determinant of international trade in banking. Thus, the economic size of the exporting country turned out to be an important and highly significant explanatory variable for bank representation.

This result suggests different policy alternatives for diferent size countries. A large country might wish to internalize the possibility of economies of scale and restrict access to its market by foreign banks. Small countries at the other end of the spectrum might opt for a free entry policy to reduce the costs associated with the exchange of currencies.

Thus, for a large country, like India, with extensive banking activities abroad, a de facto currency area that extends to neighboring countries such as Bhutan and Nepal, and extensive possibilities for diversification as evidenced by the large number of companies listed on the stock exchanges, it might be appropriate to implement a cautiously protective outward looking policy that would grant its banks the possibility to gain control of the foreign exchange and capital markets before allowing foreign competitors to vie for the same markets.

Appendix
Table 1. List of the Countries Studied[6]

Afghanistan	Gibraltar	Norway
Algeria	Greece	Oman
Andorra	Guatemala	Pakistan
Angola	Guinea	Panama
Argentina	Equatorial Guinea	Papua New Guinea
Australia	Guinea-Bissau	Paraguay
Austria	Guyana	Peru
Bahamas	Haiti	Philippines
Bahrain	Honduras	Portugal
Bangladesh	Hong Kong	Puerto Rico
Belgium	India	Qatar
Belize	Indonesia	Reunion
Bermuda	Iran	Rwanda
Bhutan	Iraq	Saudi-Arabia
Bolivia	Ireland	Senegal
Botswana	Israel	Seychelles
Brazil	Italy	Sierra Leone
Brunei	Jamaica	Singapore
Burkina Faso	Japan	Somalia
Burundi	Jordan	South-Africa
Windward Leew Isl.	Kenya	Spain
Cameroun	Korea	Sri Lanka
Canada	Kuwait	Pacific Ocean Isl.
Cayman Islands	Lebanon	Sudan
Central African Rep.	Lesotho	Surinam
Channel Islands	Liberia	Swaziland
Chile	Libya	Sweden
Colombia	Liechtenstein	Switzerland
Comores Archipelago	Luxembourg	Syria
Congo	Macao	Taiwan
Costa Rica	Malaysia	Tanzania
Cote d'Ivoire	Maldives	Thailand
Cyprus	Mali	Togo
Denmark	Malta	Trinidad and Tobago
Djibouti	Morocco	Tsjaad
Dominican Republic	Mauritania	Tunisia
Ecuador	Mauritius	Turkey
Egypt	Mexico	United Arab Republic
El Salvador	Monaco	Uganda
Ethiopia	Namibia	United Kingdom
Falklands	Nepal	Uruguay
Finland	Netherlands	United States
France	Netherlands Antilles	Venezuela
Gabon	New Zealand	Yemen
Gambia	Nicaragua	Zaire
Germany	Niger	Zambia
Ghana	Nigeria	Zimbabwe

[6.]   Please refer to note number 7 for further details.

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