Title: The timing of foreign direct investment under uncertainty: Evidence from the Spanish banking sector.

Author: Josep García Blandón

Abstract:

This paper investigates the timing of foreign direct investment (FDI) in the banking sector. The importance of this issue would arise from the existence of differential benefits associated to be the first entrant in a foreign location. Nevertheless, when uncertainty is considered, the existence of some Ownership-Location-Internalization (OLI) advantages can make FDI less reversible and/or more delayable and therefore it may be optimal for the firm to delay the investment until the uncertainty is resolved. In this paper, the nature of OLI advantages in the banking sector has been examined in order to propose a prognostic model of the timing of foreign direct investment. The model is then tested for the Spanish case using duration analysis.

1. Introduction

The continuous increase in foreign banking activity is configuring the banking sector more and more as a global industry. As an example, while in 1994 there were only six banks[1] in the world with 60% or more of their assets booked abroad, in 1995 there were nine[2].

This increase in banking internationalization has lead to a growing interest in studying the responsible factors. Given its special importance for policy makers, our interest in this issue is not purely academic.

Grubel (1977) posed a main question in this subject: What are the sources of advantage that allow some banks to enter into foreign markets and to compete successfully with domestic firms that are more familiar with the environment? Since then, most of the work has been carried out from a descriptive perspective. Empirical studies on the other hand, have mainly adopted a "macro" approach, explaining banking expansion abroad through macroeconomic variables. These variables have in common that they are external to the bank that adopts the decision to expand its activities abroad. Therefore, taking such an approach makes impossible to assess the importance of bank's ownership advantages as the determinants of its foreign involvement. Only a few papers have overcome this limitation using in their analysis individual data.

The choice of the timing of foreign direct investment has received little attention in the literature of international banking. As an exception, Ursacki and Vertinsky (1992) made the hypothesis that it will be the banks with the strongest advantages the first to participate in foreign direct investment. The reason is that these banks can earn higher benefits than less competitive ones. However, when an environment with uncertainty is considered this conclusion becomes a simplification. According to Rivoli and Salorio (1996), high levels of some Ownership-Location-Internalization (OLI) advantages while creating a rationale for foreign direct investment, can make the investment more delayable or less reversible and therefore less likely to occur at a certain point in time. Considering these contradictory effects will contribute to increase our knowledge of the firm's behavior about foreign direct investment.

In this paper, the nature of OLI advantages in banking has been examined to propose a prognostic model of the timing of foreign direct investment. Afterwards the model has been tested for the Spanish case using duration analysis. This methodology has proven to be useful when we are interested in the likelihood that an event will occur in the next period given that it has not occur yet (Greene, 1993). It has been widely used in the field of medicine testing the effectiveness of certain treatments in the probability that the patient will recover (survive) in the next period. In this paper the event is the entry in Spain by foreign banks. Therefore, it will

allow us to test the importance of OLI advantages in the likelihood that the bank's entry in a foreign location will occur in the next period, given that it has not occurred yet.

The structure of the paper is the following: in the next section, we examine foreign direct investment in an environment with uncertainty. The proposed model is discussed in section 3. Methodology, data and variables are showed in section 4 and 5. Lastly, we present the empirical results and the conclusions that arise from them.

2. Foreign direct investment under uncertainty

According to Dixit and Pindyck (1994), most of investment projects share, at least to a certain degree, three important characteristics: Reversibility of the investment, uncertainty about the cash flows generated by the project, and a certain leeway for the firm about the exact time in which the investment will be carried out. The interaction between them will have important implications on the firm's choice of the timing of the investment.

Pindyck (1991) illustrates the effects of irreversibility and delayability upon the timing of the investment with an example in two periods. If there exists uncertainty about the cash-flows generated by the project, it may be better for the firm to wait until this uncertainty is resolved and then decide, rather than to invest today. Therefore the delay of the investment could be the optimal decision. There exists a "wait and see" option, whose value has to be taken into account in the investment decision analysis.

As Rivoli and Salorio (1996) point, three factors make the wait and see option relatively more valuable than the investment today: its degree of reversibility, the ability of the firm for delaying the investment and the nature of uncertainty. When the investment is fully reversible the wait and see option has no value because the firm can change its mind without cost. On the other hand, if the investment is not delayable, it has obviously to be undertaken today, or it will not be possible to carry it out in the future. In such a case, the wait and see option does not exist. However, when the investment is delayable and not fully reversible, the wait and see option will have a value under two conditions: 1) that there exists uncertainty and, 2) the relevant information for the firm does not arrive when the investment is implemented, but only with time. Authors as Kogut (1983) and Casson (1994) consider uncertainty as an endogenous factor, which disappears when the firm invests. In this paper we deal with what is known as environmental uncertainty (Rivoli and Salorio, 1996), which can only be resolved with time. As it will be discussed next, we consider this treatment of uncertainty as particularly suitable for the banking sector.

2.1. The nature of uncertainty

The main source of uncertainty usually concerns the demand of the firm's products, mainly caused by changes in consumer's tastes. However, uncertainty can also exist concerning the firm's future productivity (technological uncertainty), as well as its costs[3]. Since all these forms of uncertainty will affect the firm's final cash flow, most papers measure the general level of uncertainty through the variance in the firm's cash flows[4]. Banks, as many other firms, face an uncertain demand. The demand of banking services will basically depend on the bank's ability to connect with its potential client needs. This ability should be lower for foreign banks, less familiar with the environment, than for domestic and well-established entities. Therefore, we conclude that foreign banks should face a higher degree of uncertainty than domestic banks, given that the later count with relatively stable clients and thus they are more familiar with their needs. The same reasoning can be applied regarding the uncertainty about the bank's future productivity, or its costs. Nevertheless, this gap between new entrants and established banks will decrease with time through learning.

Casual observation strongly supports this behavior, showing a higher variability in earnings in the first years after entry than later on.

Therefore, the banking sector would satisfy the critical assumption in the Rivoli and Salorio framework, that investment "per se" does not reduce uncertainty, but it is time that does.

2.2. Reversibility, Delayability and FDI in the Banking Sector

In this section we will analyze the effects of OLI advantages as the determinants of the timing of foreign direct investment. The analysis will be carried out by considering how these advantages affect the ability of the firm for delaying the investment, as well as the degree of reversibility that they confer to the investment decision. As we will discuss next, the ability of the bank for delaying the investment will depend on the nature of its ownership specific advantages (OSAs), as well as, on the importance of the timing of entry. On the other hand, the degree of reversibility will be determined by the importance of internalization advantages.

The ability of the firm for delaying the investment will depend on the nature of its advantages. Firms that enjoy advantages that are unique could more likely adopt the strategy of wait and see, because their advantages will not be eroded with time. On the contrary, for firms whose advantages are easy to duplicate by their competitors it will be difficult to delay the investment. A general agreement exists, that ownership advantages in banking are relatively easy to duplicate (e.g., Dufey and Giddy, 1981 and Casson, 1989). Therefore, regarding the nature of OSAs, the bank's ability for delaying the investment should be low.

The timing of foreign direct investment will be important when there exists differential benefits depending on the time of entry. This issue, usually known as "first mover" or "early mover" advantages, is receiving a growing attention in the literature. The results of a cross-sectional survey by Robinson, Kalyanaran and Urban (1994) show that market pioneers tend to maintain market share advantages over later entrants. The sources of these first mover advantages are varied but usually have to do with customer familiarity and brand loyalty. In banking, these advantages should be especially important because this sector is characterized by a firm-customer relationship where confidence is of great importance, and high transaction costs are associated to the change of bank. This would explain the high degree of stability of bank-customer relationships.

Empirical evidence in economics generally supports first entrant revenue gains[5]. Unfortunately, no evidence exists for the banking sector. Nevertheless, given the special nature of bank-customer relationship, already discussed, we should expect that first mover advantages were especially important in banking, and therefore the bank's ability for delaying the investment should be low.

Figure 1, reproduced from Rivoli and Salorio (1996), shows the interaction between the strength of the firm's advantages and the extent of early mover advantages. According to our previous discussion, the banking sector would be set in quadrant IV, where the investment can not be delayed.

Figure 1. Delay under Uncertainty

		Importance of country Early-mover advantages	
		Low	High
Nature of the Ownership advantage	Monopolistic	I Easy to delay: wait for information to arrive	II Get toes wet or investigate alternative mode
	Non-Monopolistic	III Wait for competirors' moves and follow if they invest	IV Cannot delay: invest now

The degree of reversibility of the investment will depend on the ability of the firm for recovering its investment. Thus, a complete reversibility would mean that the firm is be able to fully recover its investment, not only in physical assets but also in intangibles. Within the eclectic paradigm, internalization advantages are responsible that the pre-existing ownership advantages would be exploited within the firm. According to Casson (1985) industries that are based on information can obtain the highest benefits from internalization. This is due to the non-existence of an appropriate external market where this information could be negotiated. Therefore, since information constitutes the most important intermediate input in the banking activity, the banking sector clearly belongs to this category of industries. In consequence, foreign direct investment in banking can not be considered as completely reversible.

In order to understand the firm's behavior concerning foreign direct investment under uncertainty, OLI advantages have to be evaluated in a wider context than the one adopted by most researchers. Summarizing from our previous discussion, foreign direct investment by financial institutions would be characterized by partial irreversibility and high costs associated to the delay of the investment. In such a situation, banks should not delay the entry in foreign locations. Therefore, we may adopt the hypothesis posed by Ursacki and Vertinsky (1992) that banks with the strongest advantages will be the first to participate in foreign direct investment, since these are the entities that can earn the highest benefits from their multinational expansion.

3. Factors affecting an early entry

Dunning's eclectic paradigm consitutes the theoretical framework in our investigation. A prognostic model of the entry has been proposed where banks with the strongest advantages will be the first to enter the market. The election of the variables in the model as the determinants of the time of entry is discussed next.

Ownership advantages are crucial in the eclectic paradigm, since it is the possession of these advantages that allow the multinational firm to overcome the disadvantages over domestic firms due to incumbency. Product differentiation has been considered as a main source of ownership advantage. Yannopoulos (1983) differentiates between apparent and perceived differentiation. He argues that while apparent differentiation provides short-term advantages, the multinational bank can generate long-term advantages through perceived product differentiation, related to the risk investors attach to the deposits held in banks with different endowments. The author points that this form of differentiation is determined by factors as the size of the bank and the parent's capital asset ratio. Therefore, the importance of size would rely more on its contribution to the bank's prestige that on the existence of economies of scale.

Empirical evidence in banking supports this conclusion, showing that economies of scale are exhausted at a size below the size attained by most banks prior to their multinationality (Benston, Haweck and Humphrey, 1982). On the other hand, the importance of the bank's capital-asset ratio usually relies on the existence of signaling-related advantages, in terms of the degree of risk aversion. Thus, banks with a higher capital asset ratio would show a superior degree of risk aversion because the strong commitment with their own funds. Therefore, large and well-capitalized banks would be perceived by the market as more secure entities. The size of the bank and its capital asset ratio have been introduced in the model as proxies of the bank's advantages due to product differentiation.

The experience of the bank operating in a multinational environment is usually considered as an important source of ownership advantage (e.g., Cho, 1985 and 1986 and Yannopoulos, 1983). This experience will provide the bank with a skill to adapt operations in different environments with relatively low cost. The internalization of this advantage should encourage the bank to increase its activity abroad. In addition, as Ursacki and Vertinsky (1992) suggest, banks with a large and geographically diverse customer base, will be able to reduce transaction costs by bringing together customers with offsetting needs. Therefore, the experience of the bank operating in a multinational environment has been introduced in the model, as a determinant of an early entry.

Since Grubel (1977) and Gray and Gray (1981) pointed out, banks following their clients' international expansion, has been considered as a main motivation in multinational banking. The rationale of such a behavior would rely on the special role of information in the banking sector. The high costs of learning the banking requirements of a particular corporation jointly with the non-existence of an appropriate external market where this information could be negotiated, make that this information advantage has to be exploited internally. Therefore, the presence in a foreign location of home country client's subsidiaries would lead to a situation of information asymmetries regarding domestic banks. This information advantage could allow the multinational bank to overcome the advantages of local entities. The consequence would be a following-the-client behavior.

Some authors have emphasized the importance of country-specific advantages in multinational banking. The national origin, could provide the bank with advantages in product differentiation (Swoboda, 1990), and in its cost of capital (Aliber, 1984). In this paper country-specific advantages have been introduced through the degree of competitiveness in the domestic banking sector. Although it has been widely suggested in the literature that firms proceeding from more competitive countries will be better able to compete abroad, empirical evidence in the banking sector is lacking.

The distance to a foreign location is usually considered in the eclectic framework as a main locational specific advantage, in explaining foreign direct investment. Although this effect is

usually justified in terms of monitoring costs that are considered to grow with distance, the important improvements achieved in the different forms of communication, should make monitoring costs less and less dependent on distance. In this paper we have dealt with distance in cultural terms. Cultural differences among consumers across the world are expected to constitute a barrier of entry in multinational banking. Although banking services are typically considered as highly standardized products, the bank's ability to connect with its potential client needs, will be lower, the higher the existing cultural differences between them. This would explain what casual observation suggests: firms tend to initiate foreign involvement in those locations that are relatively similar to their country of origin. Therefore we will expect that a higher cultural distance between any two countries will act as a deterrent of cross border banking movements.

4. Methodology

The statistical study of duration models, also called survival analysis, has become a methodology used by numerous researchers from different fields. These models are useful in situations where the timing of a certain event is important in the investigation. Although their initial applications were in the fields of medicine and engineering, more recently, they have also been used in economic research, basically in the investigation of the determinants of corporate failure[6] (e.g., Woo, Jeffrey and Lange, 1995, and Mata, Portugal and Guimaraes, 1995). In this paper we use survival analysis to assess the importance of OLI advantages as the determinants of an early entry in Spain by foreign banks.

Let T be the time of survival, measured as the period in years between the time when foreign banking entry in Spain is liberalized, and the time when the entry happens. This survival time is considered to be a random variable where f(t) denotes the density function of T, and let the distribution function be

$$F(t) = \Pr(T \leq t) = \int_0^t f(x)dx \qquad (1)$$

The probability that a foreign bank has not entered into Spain in the interval (0, t), will be given by the survivor function

$$S(t) = \Pr(T \geq t) = \int_t^\infty f(x)dx \qquad (2)$$

The hazard function h(t) is defined as

$$h(t) = \lim_{\Delta t \to 0} \frac{\Pr(t \leq T < t + \Delta t \setminus T \geq t)}{\Delta t} = \frac{f(t)}{S(t)} \qquad (3)$$

where $\Pr(t \leq T \leq t + \Delta t \setminus T \geq t)$, indicates the probability that the entry happens in $(t, \Delta t)$. Therefore, h(t) denotes the instantaneous rate of entry at time t, given that the bank has not entered yet.

Within survival analysis, proportional hazard models have the property that the individuals in the sample present hazard functions that are proportional. Therefore, the hazard function of T given x can be written as:

$$h(t/x) = h_0(t)g(x) \qquad (4)$$

since the ratio $h(t/x_1)/h(t/x_2)$ of two individuals x_1 and x_2 will not depend on t.

The introduction of regression models allows, when a heterogeneous population is considered, to include the relationship of the survival time with other factors. In these models, a dependent relationship with the covariates is explicitly admitted through a distribution function of the survival time that depends on them.

In this paper we have used the Cox proportional hazard model. This approach has the advantage that does not make any assumption about the function *h(t)*, with little cost in terms of efficiency (Lawless, 1982).

Let be $X_i = (x_1, x_2, ..., x_n)$ a representative vector of the specific advantages of bank *i*. Under the proportional hazard assumptions, the hazard function of T, given x is of the form

$$h(t \setminus x) = h_0(t)g(x\mathrm{b}) \qquad (5)$$

where $b = (b_1, b_2, b_3, ..., b_n)$ is a vector of unknown parameters. Under the Cox proportional hazard model, the hazard function of T is:

$$h(t \setminus x) = h_0(t)\exp(x\mathrm{b}) \qquad (6)$$

5. Data and variables

The year 1978 is the base year in the investigation. This choice is because it is throughout the Real Decreto 1388 of 23 of June of this year that the entry in Spain by foreign banks is allowed. Therefore, the analysis relates the advantages of the bank in 1978 with the time when the entry happens.

The sample is formed by the foreign banks included in the Banker's top 300 of each year since 1988 to 1992. This restriction has been adopted to eliminate minor banks present in the sample because foreign exchange fluctuations[4]. Information was available for 192 of the 244 entities that complied with this condition. We eliminated from the sample those banks whose main dedication was not commercial banking, as development banks, and investment banks. Therefore, we ended up with 173 entities. However, from 1978 we had full information only for 115 of these entities. These are the banks we have finally used in the analysis. They represent almost 70% of the whole entries during the period 1978/92. Table 1 shows the number of entries occurred each year by country of origin.

Table 1. Entries occurred each year by country of origin.

Country	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92
Italy	1			1		1						1	2		
France	2	1				1									
Switz.														1	
UK	3														
Netherl.			1												
Germany		2	1											1	
Canada										1					
USA	1	3	1												
Japan			1			1			2			1	2		2

Source: Consejo Superior Bancario.

The covariates chosen as the proxies of the OLI advantages are the following:

AS: bank's total assets, in thousands of $US, as a measure of its size. Source: The Banker.

CAP: capital asset ratio as a measure of the soundness of the bank. Source: The Banker.

FOE: number of countries where the bank has branches or fully owned subsidiaries, as a measure of its foreign experience. Source: The Banker's Almanac.

MNC: number of subsidiaries in Spain from home country based multinationals. It indicates the market share in which the foreign bank has an advantage in terms of information costs. Source: The Directory of Multinational Corporations.

IM: interest margin as a percentage of total assets in the bank's country of origin, as an indicator of the degree of banking competitiveness. Source: Bank Profitability.

CP: Cultural proximity between Spain and the bank's country of origin. It has been introduced as a dicotomic variable that takes the score 1 when the bank's country of origin and Spain belong to the same cultural group and 0 otherwise. Source: Hofstede (1983).

Table 2 shows some statistical information for the covariates.

Table 2. Descriptive statistics

Variable	Mean	Std. Dev.	Minimum	Maximum
AS	18986.00	7473.00	2166.00	81900.00
CAP	0.04	0.02	0.01	0.09
FOE	8.92	6.26	1.00	37.00
MNC	24.43	17.48	0.00	74.00
IM	2.45	1.36	1.23	5.63
CP	0.27	0.45	0.00	1.00

According to the hypotheses posed in section 3, the expected signs for the covariates are showed in table 3.

Table 3. Expected signs for the covariates

Variable	Expected sign
AS	-

CAP	-
FOE	-
MNC	-
IM	+
CP	-

A negative sign indicates that the higher the value of the covariate, the lower the value of the survivor function will be. Therefore, according to the definition of the survivor function (see (2)), it would indicate a higher probability of an early entry. Obviously, a positive sign indicates the opposite effect.

6. Results

Empirical results, reported in table 4, show the validity of the proposed model to explain the timing of foreing direct investment in the banking sector. The model is statistically significant at the required levels. According to the hypotheses set, the size of the bank as well as its experience operating in a multinational environment positively affect an early entry in Spain. Both variables show a negative associated coefficient. In the first case it is significant at a 0.01 level while in the second case the significance level is 0.05. Therefore, the results support the importance of firm's specific advantages as the determinants of the time of entry in a foreign location. The largest and most experienced banks have been the first to enter the Spanish markets when the entry to foreign entities was allowed. However, as it has been discussed in section 3, the importance of size is expected to be based more on the possibilities of product differentiation that it confers to the bank, that on the existence of economies of scale.

No evidence has been achieved about the importance of bank's soundness as a determinant of an early entry. This advantage has been measured through the bank's capital asset ratio. The election of this variable was due to the signaling related advantages, in terms of the degree of risk aversion, that it should provide to the bank. Nevertheless, the bank's capital asset ratio, the chosen proxy for measuring this advantage, shows a non-significant coefficient. This result, however, needs to be taken with caution because the limitations of the capital asset ratio as a measure of the solvency of the bank. The recent experience provided by the Japanese financial sector would introduce important doubts about the ability of this indicator for capturing the bank's solvency.

Table 4. Survival time results

13

	Coefficient	Stand. Error	T-ratio
AS	-0.334E-04[a]	0.973E-05	-3.438
CAP	0.215	0.129	0.166
FOE	-0.715[b]	0.365	-1.960
MNC	-0.026[b]	0.010	-2.493
IM	-10.396	11.950	-0.870
CP	-1.619[a]	0.449	-3.609

N	115
X^2	80.162

Significance level   0.00000

[a]Significant at a 0.01 level.

[b]Significant at a 0.05 level.

Home country related advantages do not have a significant influence as a determinant of bank's early entry. In this paper, interest margins in the bank's domestic sector have been used as a proxy of these advantages. We expected that banks proceeding from more competitive banking sectors would be willing to be the first entrants in a foreign location. As in the previous case the shortcomings of the chosen proxy for measuring banking competitiveness have to be taken into account. The fact that the structure of gross interest margins varies significantly across countries depending on the different dedication to retail activities by the domestic banking sector, would constitute a main limitation for international comparisons. In addition, the existence of cross-subsidization among different types of banking operations would also affect the comparability of interest margins across countries.

The presence in Spain of home country based multinationals positively affects, as expected a bank's early entry. The variable MNC shows a negative associated coefficient, statistically significant at a 0.05 level. This result supports a following-the-client behavior in the banking sector, suggesting that foreign banks would benefit from the existence of information asymmetries about the client's financial needs compared with local entities.

Finally, cultural proximity between Spain and the bank's country of origin positively affects, as expected, the timing of entry. This variable shows a negative associated coefficient, statistically

significant at a 0.01 level. It suggests that cross-border banking movements tend to occur first between countries with cultural similarities, revealing the importance of national culture as a locational advantage in multinational banking.

7. Conclusions

Papers that investigate foreign direct investment in the banking sector usually focus the attention on explaining its rationality, without considering questions involving its timing. The importance of this issue would arise from the differential benefits associated to be the first to enter in a foreign location. As an exception, Ursacki and Vertinsky (1992) investigated the choice of entry timing by foreign banks in Japan and Korea. They did not consider, however, the interaction among reversibility, uncertainty and the ability of the firm for delaying the entry and its implications for the analysis. In this paper, the nature of OLI advantages in banking has been examined, to assess the possibilities that they provide to the bank for delaying the investment decision. Empirical results support, for the most part, that banks with the strongest advantages were the first to enter in Spain when the Spanish banking liberalization started. They also show a following-the-client behavior in multinational banking expansion. Nevertheless, no evidence has been achieved about the importance of country-specific advantages. The results also confirm the importance of cultural issues in the timing of entry, revealing cultural distance as an important deterrent of multinational banking expansion.

NOTES

1. Standard Chartered, Union Bank of Switzerland, Credit Suisse Holdings, HSBC Holding, Swiss Bank Corporation and Banque Indosuez.

2. In addition to the previous ones: Bank of China, Paribas and Sociètè Gènèrale.

3. For example the future evolution of wages and energy cost.

4. However, since uncertainty concerns not what actually happens but what might occur, important difficulties arise in measuring this general uncertainty.

5. See e.g., Gorecki (1986) for the pharmaceutics industry, and Whitten (1979) for the cigarettes industry.

6. Audretsch (1995) and Ursacki and Vertisnky (1992) have also used this methodology in the fields of economic and business.

REFERENCES

Aliber, R.Z., 1984, International banking: A survey, Journal of Money, Credit and Banking, 16, (4), 661-78.

Audretsch, D., 1995, Innovation, growth and survival, International Journal of Industrial Organization, 13, (4), 413-419.

Benston, G.J., Hanweck, G.A., and D.B. Humphrey, 1982 Scale economies in banking: A restructuring and reassessment, Journal of Money, Credit and Banking, 14, 435-56.

Casson, M., 1985, Multinational and intermediate product trade, in P. Buckley and M. Casson, eds., The Economic Theory of the Multinational Enterprise. (MacMillan).

Casson, M., 1989, The economic theory of multinational banking: An internalization approach, University of Reading Discussion Papers in International Investment and Business Studies, 133.

Casson, M., 1994, Internationalization as a learning process: A model for the corporate growth and geographical diversification, in V.N. Balasubramanyam, and D. Sapsford, eds., The Economics of International Investment, (Aldershot, U. K. Edward Elgar).

Cho, K.R., 1985, Multinational banks: Their identities and determinants, (UMI Research Press).

Cho, K.R., 1986, Determinants of international banks, Management International Review, 26, 10-23.

Dixit, A.K. and R.S. Pindyck, 1994, Investment under uncertainty, (Princeton University Press).

Dufey, G. and I.H. Giddy, 1981, Innovation in the international financial markets, Journal of International Business Studies, Fall, 33-51.

Gorecki, P.K., 1986, The importance of being the first: The case of prescription drugs in Canada, International Journal of Industrial Organization, 4, 371-95.

Gray, J.M. and H.P. Gray, 1981, The multinational bank: A financial MNC?, Journal of Banking and Finance, 5, 33-66.

Greene, W.H., 1993, Econometric Analysis, (Macmillan Publishing Company).

Grubel, H.G., 1977, A theory of multinational banking, Banca Nazionale del Lavoro Quarterly Review, 30, 349-64.

Hofstede, G., 1983, The cultural relativity of organizational practices and theories, Journal of International Business Studies, Fall, 75-89.

Kogut, B., 1983, Foreign direct investment as a sequential process, in C. P. Kindleberger and D. Audretsch, eds., The Multinational Corporations in the 1980s, (Cambridge, Mass: MIT Press).

Lawless, J.F., 1982, Statistical models and methods for lifetime data, (John Wiley and Sons).

Mata, J., Portugal, P. and P. Guimaraes, 1995, The survival of new plants: Start-up conditions and post entry evolution, International Journal of Industrial Organization, 13, 459-81.

Pindyck, R.S., 1991, Irreversibility, uncertainty and investment, Journal of economic Literature, 28 (3), 1119-48.

Rivoli, P. and E. Salorio, 1996, Foreign direct investment under uncertainty, Journal of International Business Studies, Second Quarter, 335-57.
Robinson, W., Kalyanaram, G. and G. Urban, 1994, Fist-mover advantages from pioneering new markets: A survey of empirical evidence, Review of Industrial Organization, 9 (1), 1-23.

Swoboda, A., 1990, Swiss banking after 1992, in J. Dermine, ed., European banking in the 1990s, (Basil Blackwell).

Ursacki, T. and I. Vertinsky, 1992, Choice of entry timing and scale by foreign banks in Japan and Korea, Journal of Banking and Finance, 16, 405-21.

Whitten, I.T., 1979, Brand performance in the cigarette industry and the advantage to early entry, 1913-74, Staff Report to the Federal Trade Commission, June.

Woo, L., Jeffrey, A. and H. Lange, 1995, An examination of survival rates of newly listed firms in Australia, Research in Finance, 12, 217-29.

Yannopoulos, G.N., 1983, The growth of transnational banking, in M. Casson, ed., The Growth of International Business, (George Allen and Unwin, London).