

# **Accessing Equity Internationally: How Entrepreneurial U.S. Firms Reach World Markets**

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# **Accessing Equity Internationally: How Entrepreneurial U.S. Firms Reach World Markets**

## **Abstract**

This study looks at the emergence of an entrepreneurial practice of corporate America – the simultaneous listing of firm stock on U.S. and foreign exchanges. Using ideas from institutional theory we develop arguments relating international stock listing by U.S. firms to the wider ideas of international business and entrepreneurship. Patterns of international listing by firm type, industry, and geography are presented. Results also suggest that firms may list internationally as part of a business extension strategy, as well as for access to capital.

## **Introduction**

Traditionally, equity markets were national in form and participants of any one exchange were the companies of that nation or region. For example, GM would list in the U.S., Cadbury Schweppes in England, and Toyota in Japan. With increased globalization (e.g., changes in technology, regulation, size and types of firms) this is no longer the case. World equity markets reflect not only their traditional roots (through nationally and internationally active parent companies) but also a new, small presence of firms headquartered elsewhere.

What firms are listing on foreign exchanges, and why? We take up these questions of entrepreneurial activity using the insights of institutional theory, a sociologically based perspective on inter-organizational relations. Institutional theory offers a set of expectations about how innovative patterns of activity emerge and diffuse in a social system. With this approach, it is possible to see relationships among system members and develop expectations about first, and later, movers.

## **Background**

### **Multinational Equity Markets**

Equity markets are government run or regulated forums where stock in public companies is bought and sold. There are more than 75 equity markets located throughout the world. Table 1 lists countries with total equity market capitalizations (in US\$) greater than 200 billion (Walsh 1996).

TABLE 1  
Market Capitalization in Leading World Stock Exchanges (US\$Billion)

Country	Market Capitalization
U.S.A.	4626
Japan	3624
U.K.	1145
Germany	477
France	444
Canada	288
Switzerland	284
Taiwan	247
Netherlands	244
Hong Kong	241
Australia	212

The dominant equity markets in the United States are the New York Stock Exchange, the American Stock Exchange, and NASDAQ. The New York Stock Exchange is the largest world exchange for market capitalization and in the value of trading, Tokyo is second, London is third. NASDAQ leads in the number of listed companies (N=5556 National Market and Small Cap). London leads in the number of foreign listed companies (N=532).

The study of access to capital through equity markets has been a primary concern of the finance discipline (Mizruchi & Stearns 1994). As international studies in finance have emerged however, the line between management and finance has blurred (Eiteman, et al 1997). Consideration of issues such as the multinational firm, culturally determined variations in the definition of risk and return, and the environment of market imperfections that allows international business to thrive has required international finance to question traditional assumptions in the field. One new area of investigation in this regard is global equity sourcing, a topic area that includes the phenomenon of international listing of firms on foreign exchanges.

The reasons that have been proposed for why firms list their stocks in foreign exchange markets are numerous. First, there is value creation through increased liquidity and a reduction in market segmentation. However, contradictory findings have been presented on the general impact of foreign exchange listing on share price. McGoun (1987) found a positive share price reaction to U.S. firm announcements of cross listings in Toronto, Tokyo, and London. Howe & Kelm (1987) however, reported a negative share price effect for U.S. firms listing in France and Germany. Two studies of non-U.S. firms found a positive performance outcome for listing on U.S. exchanges (Alexander, et al 1988; Sundaram & Logue 1992). No conclusions can be drawn categorically, but some question about country to country effects is suggested: Because exchanges vary so much from country to country there may be no across the board value to international listing.

In addition to providing increased liquidity for foreign and home country investors, cross-listing could also be valuable for firms headquartered in smaller, more illiquid markets or to

companies planning massive capital projects. Saudagaran (1988) found, for instance, that the more multinational the firm, and the larger the relative size of the company to the home market, the more likely a firm was to cross list its equity. Having equity shares trading in a country could also facilitate subsidiary purchases and enhance the value of stock compensation plans for local employees.

Finally, Eiteman, et al (1997) discuss the increased visibility and political acceptance a firm listing stock can win from local stakeholders. Multinationals can enhance their image and forge relationships with the local financial community. Objectives more political in nature could be to win government help or qualify for national economic programs or joint venture requirements. Whatever the reason, cross-listing would not be undertaken lightly. The costs are substantial and include the costs of listing, investor relations, and the long term financial and operating disclosure mandated by the securities laws of the foreign government.

The finance literature takes us so far in describing the practices of the average firm concerning multinational listing. We hope to enhance this picture by exposing entrepreneurial patterns of activity at the population level thereby providing more detail of firm level activity and more detail of population level variation.

## **THEORETICAL PERSPECTIVE**

One focus of organizational theory research analyses the effect *practices* have on industries, organizations, and people. Practices can be defined as reliable patterns of interaction and exchange (Nelson 1996). Understanding when and why they appear aids in the prediction of important organization activities involving performance, potential, and decision-making.

Arguments to explain the existence and change of different practices are diverse and prolific, including but not limited to the discussion of social networks (Barley, 1986), legitimacy (Kraatz & Szlyliowicz, 1996), technology (Anderson and Tushman, 1990), resource dependency (Pfeffer & Salancik, 1978), institutional forces (Meyer & Rowan, 1977), and population dynamics (Hannan & Freeman, 1992). Generally, organizational approaches posit that efficiency arguments are insufficient to explain organizational action: practices do not evolve as a “best” response to the problem, rather complex relationships exist between technical requirements and possible solutions. Within this paradigm, actors may be moved by formal task requirements, the myths and ceremonies of the organization, and/or by legitimated practices of other organizations. As a result, similar patterns of behavior across an organizational set can often be identified (DiMaggio & Powell, 1991).

Studies on the legal manner of incorporation in Silicon Valley (Suchman, 1995) and airline flight schedules (Jonsson, 1987) conclude that similarity in firm behavior is the result of institutionalized forces that orient businesses to certain industry or firm level practices. Other studies have built estimating models to examine the likelihood of organizations adopting certain practices, for example with predictive models (Mezias, 1990; Tolbert and Zucker, 1983).

Institutional theory has also been used to explain the adoption of a new technology or practice and the emergence of a dominant design (Tushman and Anderson, 1986; Rosenkopf and Tushman, 1994).

## **Practice Innovation with an Institutional Theory Lens**

Innovation is an important component of an institutional theory framework. Explaining the divergent drives for similarity and differentiation within the inter-organizational system falls within its purview. While isomorphic forces have historically gained the greatest share of research attention in the field, more recent work has focused on entrepreneurship and change as well (Nelson 1996; Dobbin, 1994). Understanding who innovates and why helps to explain the behavior of the organizational system as a whole.

By studying the introduction and diffusion of innovative *practices*, the theoretical areas of institutions, innovation, and entrepreneurship can be bridged. Studies reflecting this viewpoint include the work of Chandler (1962) on the M-form organizational structure and Teece (1980) and Fligstein's (1990) work on patterns of U.S. corporate diversification. Kirchoff's (1994) definition of the entrepreneur as a person who innovates, and Schumpeter's (1942) definition of innovation as new technologies, changes in production abilities, and/or an influx of new resources, can be interpreted from a practices perspective.

## **Research Questions**

We treat the phenomenon of international equity listing as an example of an entrepreneurial practice. Firms need capital and they can use different avenues to obtain it (Brophy and Shulman, 1992). To date, only a few firms use multinational listing. Ultimately our research goal is to answer the question, "Why are international equity listings used, or not used?" For this paper, as a preliminary effort, our research questions are:

**QUESTION 1: Are there identifiable patterns of international listing by U.S. firms?**

**QUESTION 2: Is there evidence of institutional effect in the international equity listing of U.S. firms?**

The traditional belief is that firms list on stock markets to access capital. We believe listing on foreign markets may deliver strategic and well as financial gains. In fact, NASDAQ advertises enhanced firm reputation as a benefit o

f participation (NASD 1995, 1996). We investigate this assertion by examining the tie between the capital access process and business activity in foreign countries.

**QUESTION 3: Is there evidence that international listing by U.S. firms is associated with business activity in the country of listing?**

# Methods

## Population

The population of interest is U.S. firms who are listed on a major U.S. exchange and at least one equity exchange outside the U.S. simultaneously. Excluded from consideration are U.S. incorporated firms controlled or owned by companies headquartered outside the U.S.

## Data

The data identifying U.S. firms with multinational listings was obtained from Who Owns Whom, a publication of National Register Publications (1997). This reference work includes U.S. firms with 1) revenue in excess of \$10 million, 2) substantial assets/net worth, or 3) a workforce of more than 300 people. The identity and characteristics of every U.S. firm with equity registered simultaneously on a major U.S. exchange and at least one non-U.S. exchange was taken to create the study database. The total number of qualifying firms was 139. Supplementary data on firm characteristics (e.g., year of founding) was derived from Ward's Directory of Public and Private Companies (1997).

## Operationalization of Research Questions

Question 1. To identify patterns of international listing by U.S. firms, statistics on the breadth and frequency of listing per foreign country was examined. (Because some countries have multiple exchanges (e.g., Canada, Germany, Switzerland), country of origin in addition to exchange was used in analysis). A database of all foreign exchanges used by sample firms was also compiled and analyzed.

Question 2. Evidence of institutional effect in the population of U.S. firms using multinational listing was considered by comparing patterns of international listing to national equity market capitalization levels. If multinational listing was undertaken solely for capital access purposes, one could expect strong relationship between frequency of listing in a particular country and that country's relative market capitalization level.

Question 3. Evidence of international listing being related to business level activity in a foreign country was considered by comparing national locations for equity listing and presence of firm subsidiaries in that country.

## Analysis

### Descriptive Statistics of the Sample

Table 2 presents descriptive statistics for 1996 on the N=139 sample of U.S. firms using multinational listings.

TABLE 2  
Descriptive Statistics on U.S. Firms Using Multinational Listings

Variable	N	Mean	s.d.	Median	Range
Earnings (millions)	139	932	1328	385	7688
Revenue (millions)	139	13785	24267	7537	164,069
# of Employees	139	49787	91306	24100	693000
# Int'l Subsidiaries	139	23.6	32.0	8	154
# U.S. Subsidiaries	139	42.3	60.8	25.0	501
Years Old	139	78.4	45.2	78.0	254

These are large, well established firms. In fact, 95 or 68% of the sample were included on the Fortune Magazine Fortune 500 list in 1997.

The sample is grouped by industry in Table 3.

TABLE 3  
Sample by Industry

Industry	N	Percent
Natural Resource Extraction: oil, gas, mining	37	26.6
Computers and Electronic Components	15	10.8
Utility Companies	8	5.8
Chemicals, Pharmaceuticals, Plastics	10	7.2
Heavy Equip. Mnftg: Cars, Industrial, Farm	11	7.9
Other Mnftg	16	11.5
Telecommunications Service	6	4.3
Banks, Financial Services, Insurance	20	14.4
Retail Merchandisers: Stores, Restaurants	6	4.3
Other Services	10	7.2
TOTAL	139	100

Seventy-three percent of the sample is in natural resource extraction and manufacturing. Twenty-seven percent of the firms have a primary industry identification in services.

Ninety percent of the sample are listed in the U.S. on the New York Stock Exchange, 7% on the American Stock Exchange, 1% on NASDAQ and 2% use the regional Pacific Stock Exchange as their primary U.S. exchange. This information, taken together, suggests that the average firm listing multinationally from the U.S. is from the U.S. sector of large, established, manufacturing based firms.

A comparison of means test across manufacturing and service groupings does not reveal any striking differences. Manufacturing firms, on average are 76 years old, have 27 international

subsidiaries and registered \$877m in earnings in 1976. Service firms, on the other hand, are an average of 84 years old, have 16 international subsidiaries, with mean earnings of \$1080.

## International Listing Characteristics of the Sample

Each firm of the N=139 sample listed stock on a minimum of one, to a maximum of fifteen, different foreign exchanges. The total number of foreign listings for all firms was then 483. These listings occurred on 23 different exchanges. Thirty-nine percent of firms listed on only one exchange outside the U.S. while 32% of firms listed on five or more exchanges.

TABLE 4  
Number of Foreign Exchange Listings by Firm

# of Foreign Exchanges	# Firms	% of Sample
1	54	38.8
2	20	14.4
3	9	6.5
4	12	8.6
5	14	10.1
6	7	5.0
7	4	2.9
8	11	7.9
9	3	2.2
10	2	1.4
12	1	.7
13	1	.7
15	1	.7
TOTAL	139	100

The distribution of listing by exchange is given in Table 5. The most popular foreign exchange for listing was the London Stock Exchange. Ninety three of the 139 firms in the sample listed on the London Stock Exchange. This represents 19% of all the international listings.

TABLE 5  
Multinational Listing by Foreign Exchange

Exchange	Number of Firms	% of Listings (x/483)	% of Firms (x/139)
London	93	19.3	66.9
Zurich	63	13.9	45.3
Basel	50	10.4	36.0
Geneva	50	10.4	36.0
Amsterdam	38	7.9	27.3
Frankfurt	35	7.2	25.1
Tokyo	30	6.2	21.6
Toronto	28	5.6	20.1
Paris	28	5.8	20.1
Brussels	17	3.5	12.2
Dusseldorf	8	1.7	5.8
Montreal	7	1.4	5.0
Lausanne	7	1.4	5.0
Antwerp	7	1.4	5.0
Hamburg	6	1.2	4.3
Berlin	3	.6	2.2
Luxembourg	2	.4	1.4
Copenhagen	2	.4	1.4
Sydney	2	.2	1.4
Vienna	1	.2	.7
Lucerne	1	.2	.7
Munich	1	.2	.7
Helsinki	1	.2	.7
TOTAL	483	100	-

A somewhat different picture emerges when the distribution is considered by country. Thirty-six percent of multinational listing by U.S. firms occurred on Swiss exchanges. However, a substantial proportion of the firms listing in Switzerland listed on more than one exchange. A total of 67 firms had one or more listings on a Swiss exchange. Of that number 15 firms had one listing, 7 had two listings, 37 had three listings, and 8 had 4 listings on different Swiss exchanges. In second place for number of listings by country was the U.K. with 19%.

TABLE 6  
Multinational Listings by U.S. Firms by Country

Country of Exchange(s)	Number of Listings	% of Listings (x/483)
Switzerland	175	36.2
U.K.	93	19.3
Germany	53	11.0
Netherlands	38	7.9
Canada	34	7.0
Japan	30	6.2
France	28	5.8
Belgium	24	5.0
Denmark	2	.4
Luxembourg	2	.4
Australia	2	.4
Finland	1	.2
Austria	1	.2
TOTAL	483	100

A third analysis of listing considers world regions. Europe is the clear choice for U.S. firms listings internationally.

TABLE 7  
Multinational Listing by World Region

World Region	Number of Listings	% of Listing (x/483)
Europe	419	86.7
North America (Canada)	34	7.0
Asia/Far East	30	6.2
Latin America	0	0
Africa and Middle East	0	0
TOTAL	483	100

Distribution of listing by industry was also investigated. An ANOVA found there to be a statistically significant difference between industry groups for *Number of Countries Listed*.

TABLE 8  
ANOVA for *Number of Countries Listed by Industry Group*

Variable	Sum of Squares	df	F	Sig.
# of Countries Listed				
Between	64.03	9		
(Combined)	445.28	129	2.061	.038
Within Groups	509.31	138		
Total				

A comparison of means shows the rank ordering for mean *Number of Countries Listed*.

TABLE 9  
Breadth of Countries Where Listed, By *Industry Group*

Industry	N	Mean # of Countries Listed (s.d.)
Natural Resource Extraction: oil, gas, mining	37	2.5 (1.7)
Computers and Electronic Components	15	3.1 (2.1)
Utility Companies	8	1.0 (0.0)
Chemicals, Pharmaceuticals, Plastics	10	4.3 (2.1)
Heavy Equip. Mnftg: Cars, Industrial, Farm	11	2.8 (2.6)
Other Mnftg	16	2.7 (1.8)
Telecommunications Service	6	3.7 (1.6)
Banks, Financial Services, Insurance	20	2.6 (2.0)
Retail Merchandisers: Stores, Restaurants	6	3.0 (2.0)
Other Services	10	2.0 (1.5)
TOTAL	139	2.7 (1.9)

The ‘Chemicals, Pharmaceutical, and Plastics’ industry group returns the highest mean average of countries for multinational listing (4.3). The ‘Utility’ industry group returns the lowest mean average (1.0). Nine of the ten industry groups were represented in the group of highest quartile value of the variable *# of Countries Listed*. Industry is not a good discriminator when considering which firms will list in the most international locations.

## Multinational Listing and Business Activity

As discussed earlier, the finance literature considers the potential of multinational equity listings for strategic (e.g., reputation enhancement) purposes. Porter’s value chain analysis in an international business context (Porter, 1990) supports this idea as it includes finance activities as support actions in the firm’s value creation process. We test this idea by looking for a correlation

between the national location of an equity listing and the presence of a firm subsidiary in that country.

Firms in the sample were listed in a nation's equity system a total of 358 times. This count removes multiple listings within exchanges of one country.

TABLE 10  
Comparison of International Location of Equity Listing and Subsidiary, by Firm

Count	Percentage (count/358)
213 listings in countries with subsidiaries	59.5%

Given that the average number of subsidiaries for the sample was 24 (s.d. 32), more investigation would be needed to assess the likelihood that international listings relate to business activity.

## Discussion

Our first and second research questions asked whether identifiable patterns of listing by U.S. firms on international exchanges could be discerned. According to our analysis, several patterns emerged. First, U.S. firms participating in international listings are, on average, large, established, manufacturing based firms. The mean age is 78 years with a wide range in earnings (range = 7688 on mean of 932). Ninety percent list on the New York Stock Exchange which has the most challenging listing requirements of the U.S. exchanges. Seventy-three percent are primarily engaged in manufacturing with strong representation from natural resource exploration, transportation, and marketing (27%). Sixty-eight percent of the firms were on the Fortune 500 list in 1997.

Second, Table 7 amply demonstrates that the preponderance of firms in the sample participate in European exchanges. In fact, 87% of all international listings by U.S. sample firms can be credited to exchanges in that region. Comparing those statistics to leading world equity market capitalization values in Table 1 suggests more than access to capital may be at work in a firms' decision to list internationally. With Japan, Taiwan, Hong Kong, and Australia exceeding market capitalizations of \$200billion, it is somewhat surprising more firms are not listing in those locations. Japan, second in the world in equity market capitalization with \$3624 billion attracted listings from only 22% of U.S. sample firms. International listings on the Tokyo exchange have been accepted since 1980 (Eiteman, 1997).

U.S. firms listed internationally on as few as one, and as many as fifteen exchanges. When a firm lists on more than one foreign exchange, some patterns emerge. Clearly, multiple listing on

Swiss exchanges is an identifiable practice. Of the 67 firms listed in Switzerland, 78% were listed on more than one Swiss exchange simultaneously. Second, outliers appear. Listings occur on exchanges that are not, in general, particularly active on an international scale – the Canadian exchanges, for instance, had 8% of all sample international listings by country. Finally, statistically significant results were returned for an ANOVA of number of listings and industry group. High tech electronics and telecommunications service firms list multinationally more than other groups.

As for our third research question, strong evidence for a relationship between foreign listing and subsidiary activity in a particular country was not found. Though 60% of firms had subsidiaries in the countries where they were listed, the size and level of international activity of the firms considered makes it difficult to support the link given only the data examined. Further research is warranted here.

Our analysis supports the theoretical argument that practice innovation is occurring in international listing. The geographic representation of international firms does not reflect the comparative position of international equity markets. Following a portfolio view of country level risk (Calderon-Rossel, 1993), one might expect somewhat proportional representation from major world equity markets/industrial nations. This is not the case here.

As thoughtfully presented by Orru, Biggart, & Hamilton (1991), patterns of behavior are shaped by country level forces. Practices within a firm's option set will often be constrained or favored by country level and polity conditions (Jepperson and Meyer, 1991). In bringing these strong environmental effects into view, the study of institutionalization and, more specifically, practice adoption, increases understanding of international commerce. The findings of this study suggest that these forces are at work.

We would also like to briefly discuss the implications of these findings for entrepreneurship research. Both access to capital and new practice innovation are relevant topics in this field. We found evidence to support the expectation that patterns of entrepreneurial behavior in international equity listings exist. Further, interesting and useful information about access to equity in international markets was collected and analyzed.

## **Future Research**

This paper is an exploratory effort to examine the phenomenon of U.S. companies listing on foreign exchanges. Now that we have established that the practice exists, and patterns do occur, future research is indicated. Clearly, this is an emerging, and exciting topic at the practical and research level.

This research has the potential to move in several directions. First, we would like to expand our study to other major stock exchanges, particularly Tokyo and London. Do Asian patterns of international equity listing emerge? Does the London exchange, with the highest

number of foreign firms listed, present different patterns than our research indicates to date. Second, we would like to trace the roots of this practice's existence. We would like a broader picture of how the practice of foreign listing by U.S. firms has emerged, diffused, and changed over time. For this we will need longitudinal data including the original listing dates for U.S. firms on foreign exchanges.

Two other paths address the connection between equity and other strategic action on an international scale. Since we argue that equity listing is more than a way for companies to obtain capital, we would like to explore the motivations for listing on foreign exchanges more fully. One way to do this would be with a series of interviews or surveys with CEOs, CFOs and other critical decision-makers of international companies who are listed on NASDAQ. Such a study would explore the reasons behind their decision to list. Specifically, we would be interested in the behavioral as well as financial reasons behind any equity listing decision. Finally, we would like to deepen our findings as regards the relationship of equity and product market overlap. In particular we would like to test the hypothesis that equity market activity leads to operational activity.

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