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During the last decade of the 20th century, discussion regarding the "globalization" of the U. S. economy was common. The discussions ranged from the "unlimited potential of foreign markets" to "the disastrous loss of American jobs." Using a sample of approximately 100 of the largest U. S. multinational firms, the purpose of this research is to determine the extent of the relative growth of foreign to domestic operations conducted by these firms. Additionally, an important, highly correlated question is: As the U. S. economy and multinational firms become more global, are diversification benefits enhanced using multinational firms to internationalize domestic portfolios?

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That is, given significant growth in the international operations of U. S. multinational firms, one might conclude that investors could advance the goals of lower risk and higher returns by including these firms in their domestic portfolios. On the other hand, as more multinational firms increase their foreign operations, the integration of both real goods and financial foreign markets with domestic markets may lead to higher correlations among various market indices. Thus, incrementally, an increased portfolio allocation may be overshadowed by an increased correlation effect, thereby, reducing the desired benefits.

Both academicians (Michaud, Bergstrom, Frashure, & Wolahan, 1996; Iyer, 1998) and investment professionals (Schiffres, 1998; Lichtblua, 2001) have advocated the virtues of diversifying domestic portfolios with international assets. Unfortunately, according to Baxter and Jermann (1997), "despite the growing integration of international financial markets, investors do not diversify internationally to any significant extent" (p. 170). For those investors who do, according to articles in *The Wall Street Journal* and *The Banker*, global portfolio diversification via multinational holdings appears to be a foregone conclusion by many industry practitioners (Ip, 1999; Gruzin & Davidow, 2000).[1]

Multinational firms possess unique advantages for achieving the desired effects of international diversification (Mathur & Hanagan, 1983; Lichtblua, 2001). As a variety of constraints such as limited access to information, political and sovereign risk, host country regulations, taxes and legal system differences, cultural and language barriers, accounting and reporting differences, exchange rate risk, transactions costs, etc., exist that inhibit the use of various international diversification techniques, the inclusion of multinational firms in a domestic portfolio circumvents or reduces many of these constraints for U. S. investors, particularly the advantage of no additional transaction costs. Furthermore, the investors are less likely to be exposed to risk if multinational companies are duly knowledgeable about their particular lines of business in

foreign countries because of U. S. securities regulation. Hence, the motivation to examine the extent of the relative growth of foreign operations conducted by large, U. S. multinationals during the seven-year period 1992 through 1998.

Selected Literature

The conventional argument, known for more than a hundred years (Lofthouse, 1997), is that diversifying a domestic portfolio with international holdings increases expected returns or lowers the volatility of those returns, both of which are desirable results. These general benefits are valid even after estimation risks (the uncertainty inherent in *expected* returns, variances, and covariances) are considered (Tai, 1998). Because variances and covariances are more precisely estimated than expected returns, Jorion (1985) asserts that risk reduction is much more significant than an increase in portfolio returns. As for the allocation/correlation trade-off, Odier and Solnik (1993) conclude that the allocation decision determines the major contribution to portfolio risk and return performance. Further, they also note, along with Bookstaber (1997), that when volatility across markets increases significantly, correlations are compounded as well. This implies that when diversification is really needed during periods of market crises, the effect is limited.

Obviously, the hypothesis that large, U. S. multinationals held in the domestic portfolio to achieve the risk/return benefits of international diversification has received considerable attention; however, despite the implied acceptance of this portfolio diversification approach, the effectiveness of the technique is somewhat suspect since the question of whether U. S. multinational firms have significantly increased their international operations is yet to be conclusively answered. In an early study, Jacquillat and Solnik (1978) indicate that holding a multinational firm portfolio is a poor method of diversification. They find that only two percent of the variance of returns from U. S. multinational firms can be attributed to foreign market indices. This finding implies that U. S. multinational firm returns are virtually indistinguishable from the operating returns of non-multinational U. S. firms. Foreign multinational firm return variances attributed to foreign market indices are much greater (on average, approximately 11.5 percent). Alexander and Sharpe (1989) suggest that this difference occurs because foreign multinationals have more extensive foreign operations than U. S. multinational firms. If U. S. multinational firms have been increasing the international operations of their businesses, then it might be concluded that U. S. investors holding these equity assets in their portfolios are already experiencing increased benefits from this type of international diversification. Presumably, much more economic globalization has taken place over the past two decades.

Additionally, studies by Agmon and Lessard (1977) and Errunza and Senbet (1981) conclude that the market value of a firm's equity directly reflects the firm's international activities and diversification. Additionally, Fatemi (1984) finds that the higher the degree of international involvement, the lower the firm's beta relative to the domestic market portfolio. Further, Errunza, Hogan, and Hung (1999) purport in their study that the inclusion of multinational corporations in the diversified domestic portfolios, including industry indices, country funds, and ADRs, that they use to mimic foreign indices provides new evidence in support of the role of corporate diversification in providing international diversification benefits to U. S. investor portfolios.

Although the study by Errunza, Hogan, and Hung (1999) strongly supports the inclusion of multinational corporations in the domestic portfolio to enhance international diversification benefits, it concedes that this technique is not equivalent to the benefits obtained from including direct purchases of foreign securities. However, by including multinational firms with U. S. market indices, industry portfolios, country funds, and ADRs, Errunza and Senbet conclude that this homemade diversification portfolio is correlated sufficiently high enough with target foreign market indices to completely realize the benefits of international diversification. Further, the increasing number of domestically-traded assets representing claims on foreign assets makes it possible to exhaust the benefits of international diversification with this homemade portfolio. Finally, the ability to obtain international diversification benefits with a homemade

diversified portfolio has increased over time with new listings of domestically-traded assets having claims on foreign assets and reductions in the constraints to making international investments.

At least one aspect not considered in the research of Errunza and Senbet (1981) is the extent of the multinational firms' foreign operations. The remainder of this article attempts to address this issue as a portion of the completion process of the ongoing dialogue on the role of multinational firms in the domestic portfolio.

Data

The authors' measure of the size (i.e., allocation) of a U. S. multinational firm's foreign operations is determined from the percentage of international sales revenue (in U. S. dollars) to the total revenue (both domestic and foreign) of the firm.[2] The data for this study are from COMPUSTAT, which includes annual revenue by geographic area for the seven-year period, 1992 through 1998. Historical data for seven years is the current limit for these types of data. Firms reporting such figures have the option to use and define up to five geographic areas per fiscal year. For example, one firm may report annual revenue for an area defined as Asia while a second firm may report annual revenue for an area defined as Japan (*COMPUSTAT*, 1999). Firm data are self-reported and, to some extent, provided at the option of the firm. Despite these shortcomings, no attempt was made to modify the information.

Companies selected for this study are essentially those found in the Dow Jones Industrial Average and Standard & Poor's 100 indices. Of course, during the seven-year period, the indices' list of firms changes as a result of a few additions, deletions, and mergers. Furthermore, few financial institutions (i.e., banks) were included, as geographic source revenue information was not provided. Table 1 provides a list of the firms in this study and their corresponding SIC codes. Most firms provided the appropriate data to *COMPUSTAT* for all seven years. Additionally, not all firms have the same fiscal year. Thus, fiscal years beginning in March of a given year to January of the following year are grouped into the same reporting period. (No cases of a company closing its books in the month of February were found.) Finally, as noted in Table 1, 15 firms in the two indices were not multinational during the seven-year examination period.

Table 2 provides a summary of the aggregate percentage of international revenues for the firms in this study in terms of mean, standard deviation, and range over the seven-year period. Briefly, for the 1992-1998 period, foreign operations generated, on average, 28.45 percent of total revenue (equally weighted) and 32.39 percent of total revenue (revenue weighted). These numbers suggest that the firms with the largest revenues are generally the firms with the greatest percentage of foreign revenue.[3]

Methodology and Results

The analyses of the extent of international operations by large, U. S. firms reflects not only the percentage of aggregate foreign revenue, but it also reflects the creation of a relative international revenue concentration index (IRI) as well. Both of these are measures of foreign business operations during a given year, and both are necessary because they emphasize different aspects of international diversification. IRI measures the degree of diversity in foreign revenues and addresses the issue of how dependent a firm is on one or more foreign markets while aggregate foreign revenue measures the total foreign business exposure of the given firm.[4]

The IRI of this study is similar to the Herfindahl-Hirschman Index (Hirschman, 1964; Adelman, 1969; Stigler, 1968; Scherer, 1970). The Herfindahl-Hirschman Index considers both the number of firms within an industry and the size of each firm's respective market share. Similarly, the IRI considers the number of markets (both domestic and foreign) in which each firm participates and the respective revenue portion of the firm in each market. An IRI value for each year is calculated by dividing the sum of the percentages into the number 10,000 during the given year. Then these scores are averaged across all firms for each year to produce an IRI score for the year. Two versions of this calculation are made. The first is made with

TABLE 1
SELECTED FIRMS

Firm Name	SIC Code	Firm Name	SIC Code
1. Alcoa, Inc.	3350	52. Hewlett-Packard Co.	3570
2. Allegheny Teledyne, Inc.	3312	53. The Home Depot, Inc.*	5211
3. American Electric Power*	4911	54. Homestake Mining	1040
4. American Express	6199	55. Honeywell, Inc.	3822
5. American General Corp.*	6331	56. IBM Corp.	7370
6. American International Gp.	6331	57. Intel Corp.	3674
7. Ameritech Corp.*	4813	58. International Paper Co.	2600
8. AT&T	4813	59. International Flavors & Fragrances	2860
9. Atlantic Richfield Co.	2911	60. Johnson & Johnson	2834
10. Avon Products	2844	61. Kmart Corp.	5331
11. Baker-Hughes, Inc.	3533	62. Limited, Inc.*	5621
12. Baxter International, Inc.	3841	63. Lucent	3661
13. Bell Atlantic Corp.	4813	64. Mallinckrodt, Inc.	2835
14. Bethlehem Steel Corp.*	3312	65. May Department Stores*	5311
15. Black and Decker Corp.	3540	66. McDonald's Corp.	5812
16. Boeing Company	3721	67. Merck & Company	2834
17. Boise Cascade Corp.	5110	68. Merrill Lynch & Company	6211
18. Bristol Myers Squibb	2834	69. Microsoft Corp.	7372
19. Burlington Northern Santa Fe*	4011	70. Minnesota Mining & Manufacturing	2670
20. Brunswick Corp.	3510	71. Mobil Corporation	2911
21. Campbell Soup Company	2030	72. Monsanto Company	2800
22. Caterpillar, Inc.	3531	73. National Semiconductor	3674
23. CBS Corp.	4833	74. NCR Corp.	3578
24. Ceridan Corp.	8721	75. Norfolk Southern Corp.*	4011
25. Champion International	2621	76. Nortel Networks Corp.	3661
26. Cigna Corp.	6324	77. Occidental Petroleum	1311
27. Cisco Systems, Inc.	3576	78. Oracle Corp.	7372
28. Citigroup, Inc.*	6199	79. Pepsico, Inc.	2080
29. Coastal Corp.	4922	80. Pharmacia & UpJohn	2834
30. The Coca-Cola Company	2080	81. Philip Morris Cos., Inc.	2111
31. Colgate-Palmolive Co.	2844	82. Polaroid Corp.	3861
32. Columbia/HCA HLTHCR*	8062	83. Procter & Gamble Co.	2840
33. Computer Sciences Corp.	7370	84. Ralston Purina Co.	2040
34. Delta Air Lines, Inc.	4512	85. Raytheon Company	3812
35. Disney (Walt) Co.	7812	86. Rockwell International Corp.	3620
36. Dow Chemical	2821	87. SBC Communications*	4813
37. DuPont de Nemours	2820	88. Schlumberger, Ltd.	1389
38. Eastman Kodak Co.	3861	89. Sears Roebuck & Company	5311
39. Entergy Corp.	4911	90. Southern Company	4911
40. Exxon Corp.	2911	91. Tandy Corp.	5731
41. FDX Corp.	4513	92. Tektronix, Inc.	3825
42. Fluor Corp.	1600	93. Texas Instruments, Inc.	3674
43. Ford Motor Co.	3711	94. Toys R Us, Inc.	5945
44. General Dynamics Corp.*	3730	95. Unicom Corp.*	4911
45. General Electric Company	3600	96. Unisys Corp.	7373
46. General Motors Corp.	3711	97. United Technologies	3724
47. Halliburton Company	1389	98. Wal-Mart Stores	5331
48. Harrahs Entertainment*	7990	99. Weyerhaeuser Company	2400
49. Harris Corp.	3663	100. Williams Companies, Inc.	4922
50. Hartford Financial Services Group	6331	101. Xerox Corporation	3577
51. Heinz (HJ) Company	2030	* Domestic revenue reported only.	

equal weights while the second is made using a revenue weighted scheme for each firm.

As an example, in any given year, if a firm has 100 percent of its revenue in only one market (i.e., the domestic market), the second factor would equal one. This value, of course, means that the firm is not internationally diversified. At the other end of the IRI scale, the maximum possible IRI value for a firm is five. This value can occur only when a firm reports 20 percent of its yearly revenue in each of five geographic markets. (The COMPUSTAT data set allows firms to report a maximum of five geographic markets.) Inclusion of 15 non-multinational firms lowers the aggregate IRI mean, sets the lower limit of the range (i.e., one), and increases the standard deviation.

Tables 2 and 3 provide aggregate summary statistics for both measures of international business exposure for each year during the examination period. Of particular interest in the observation of these results is the apparent stability of both the foreign percentage of revenue and IRI concentration values over the seven-year period. The average percentage of foreign sales revenues for the companies of this study remains within four percentage points (a little more than 26 percent vs. a little more than 30 percent) while the difference in IRI concentration values is only 0.174 (1.795 vs. 1.969).

Given that our yearly measures of foreign business exposure are considered to be separate samples, and in order to more

TABLE 2
AGGREGATE INTERNATIONAL REVENUE PERCENTAGES BY YEAR

EQUALLY WEIGHTED

Year	Number of Firms	Aggregate Average Firm Revenue (%)*	Standard Deviation (%)**	Range (%)
1992	92	26.29	22.37	0-84
1993	98	27.05	22.04	0-79
1994	100	27.58	22.15	0-79
1995	101	29.45	23.20	0-80
1996	100	30.20	23.46	0-79
1997	101	29.52	23.18	0-79
1998	100	29.08	22.75	0-80

* Mean and standard deviation over seven-year period 28.45% and 1.36%.
** Mean and standard deviation over seven-year period 22.74% and 0.52%.

REVENUE WEIGHTED

Year	Number of Firms	Aggregate Average Firm Revenue (%)*	Standard Deviation (%)**	Range (%)
1992	92	32.48	23.78	0-84
1993	98	31.39	23.30	0-79
1994	100	31.51	23.15	0-79
1995	101	33.69	23.21	0-80
1996	100	34.76	23.26	0-79
1997	101	32.19	22.82	0-79
1998	100	30.74	22.74	0-80

* Mean and standard deviation over seven-year period 32.39% and 1.30%.
** Mean and standard deviation over seven-year period 23.18% and 0.32%.

rigorously search for changes between or among years, this study employed Kruskal-Wallis (K-W) one-way ANOVA tests across years. This test is a non-parametric procedure to determine if *k* independent samples are from the same population. Cases were ranked and compared with the mean ranks from each sample (Kruskal & Wallis, 1952, 1953; Neter, Wasserman, & Kutner, 1985). Essentially, the null hypothesis is that all of the samples (by year in this situation, six degrees of freedom) were taken from the same population. As a consequence, if a significant difference between any two years occurred, the chi-square value would be large enough to reject the null. If the null were rejected, the years in which the difference occurred could not be determined. Then, pair-wise tests to determine the significantly different time periods were conducted. As presented in Table 4, the results indicated, very strongly, that no significant changes occurred from year to year for either of the diversification measures. With significance levels of .78 and .85, the additional pair-wise analysis was not required.

Conclusions

These findings were somewhat surprising given the abundance of media discussion over the period of analysis regarding increased globalization of the U. S. economy. Further, average total revenue growth for the 86 multinational firms, which remained in this study over the seven-year period, was 36.55 percent (annually 5.22 percent, arithmetically, or 4.55 percent, geometrically). The results

suggested that for the large, U. S. firm sample examined, no relative change or growth in international business operations occurred during the 1992-98 period. Thus, the authors suspect that the level of the international diversification benefit obtained by including these large, U. S. multinational firms in a domestic portfolio is unchanged (at least in the aggregate) during a period of supposedly significant global economic expansion. Additionally, these results may provide insight into recent divergent evidence in some of the literature regarding either increasing return correlations among the various international financial markets (Kasa, 1992) or continued exhibition of low or negative correlations in world capital markets (DeFusco, Geppert, & Tsetsekos, 1996).

Clearly, international revenues of U. S. multinationals did increase over the examination period, but apparently U. S. revenues matched the pace. Although increased revenue diversification was not evident, U. S. firms may have increased their purchases of foreign raw materials and intermediate parts. Further, the period of analyses experienced several factors, which may have contributed to the results. The detected, but insignificant, increases in internationalization from 1992 through 1996 may reflect increased efforts by U. S. management teams to penetrate foreign markets. However, macroeconomic events, over which management had little control, may have significantly hampered these efforts. The booming U. S. economy, coupled with an overall strengthening of

TABLE 3
INTERNATIONAL REVENUE INDEX (CONCENTRATION) BY YEAR

EQUALLY WEIGHTED

Year	Number of Firms	Aggregate Average IRI*	Standard Deviation**	Range
1992	92	1.795	0.741	1-3.734
1993	98	1.841	0.765	1-3.817
1994	100	1.873	0.784	1-3.873
1995	101	1.932	0.814	1-3.928
1996	100	1.969	0.836	1-3.931
1997	101	1.949	0.826	1-3.915
1998	100	1.958	0.750	1-3.631

* Mean and standard deviation over seven-year period 1.888 and 0.059.
** Mean and standard deviation over seven-year period 0.788 and 0.035.

REVENUE WEIGHTED

Year	Number of Firms	Aggregate Average IRI*	Standard Deviation**	Range
1992	92	1.890	0.675	1-3.734
1993	98	1.899	0.725	1-3.817
1994	100	1.915	0.737	1-3.873
1995	101	1.977	0.741	1-3.928
1996	100	2.047	0.760	1-3.931
1997	101	1.955	0.735	1-3.915
1998	100	1.911	0.734	1-3.631

* Mean and standard deviation over seven-year period 1.942 and 0.520.
** Mean and standard deviation over seven-year period 0.730 and 0.024.

TABLE 4
KRUSKAL-WALLIS ONE-WAY ANOVA RESULTS (CORRECTED FOR TIES)*

Year	Number of Firms	International Revenue Percentage Mean Ranks	IRI Mean Ranks
1992	92	325.49	323.54
1993	98	334.15	334.86
1994	100	338.65	342.44
1995	101	355.02	356.71
1996	100	361.98	364.73
1997	101	356.11	359.20
1998	100	351.99	341.72
Chi-Square		3.1776	2.6612
Significance Level		.7863	.8500

* With either measure (international revenue percentage or IRI), the null hypothesis that no significant changes occurred in aggregate international business operations of these firms during the seven-year examination period cannot be rejected.

the U. S. dollar against other world currencies and the subsequent financial crises in Asia, Russia, and, to some extent, Latin America, may explain the minor, but discernable, decline in international business operations after 1996. Presumably, these events impacted U. S. multinationals twice: lost international sales revenues and unfavorable exchange rates for the translation of foreign profits.

Finally, although no relative change in the international business activities of large, U. S. multinational firms was found, changes in the foreign operations of small or mid-cap firms possibly merit further investigation. However, the micro-international activities of individual firms may have been overshadowed by the macro activities of global financial markets in terms of either the integration of various country financial markets or the sheer growth of the size of monetary flows among these markets. These are topics for future investigative research, which might possibly better support media reports of globalization of the U. S. economy.

Endnotes

1. Unfortunately, the authors do not attempt to quantify recent trends relative to this form of diversification.

2. The use of sales revenue to measure business operations in foreign markets has the appeal of avoiding issues such as where the goods were produced vs. where they were sold, where the firm placed its resources, and the proportion of foreign raw materials and intermediate parts. Unlike foreign trade balances and exports, which measure cross-border transactions for the most part, foreign sales include goods produced and sold overseas by U. S. multinational firms as well as goods produced in the U. S. and sold overseas.

3. Inclusion of large, non-multinational (i.e., domestic only) firms lowered the mean revenue percentage for foreign operations and lowered the limit on the range; however, the standard deviation was increased.

4. In some cases, firms report the majority of their revenues concentrated in one or more foreign markets. Such firms may have more international business operations (as measured by a higher percentage of foreign revenue) than companies reporting a minority of their revenue spread across several foreign markets (as measured by the

IRI measure). For example, if Firm A reports 60 percent of its revenue in the U. S. and 40 percent of its revenue in a foreign market while Firm B reports 40 percent of its revenue in the U. S. and 60 percent of its revenue in a foreign market, both firms have the same IRI value, but Firm B obviously has more international business operations and, hence, more international exposure.

References

Adelman, M. A. (1969, February). Comment on the "H" concentration measure as a numbers-equivalent. *Review of Economics and Statistics*: 99-101.

Agmon, T. & Lessard, D. (1977). Investor recognition of corporate international diversification. *Journal of Finance* 32: 1049-1055.

Alexander, G. J. & Sharpe, W. F. (1989). *Fundamentals of Investment*. Englewood Cliffs, NJ: Prentice-Hall.

Baxter, M. & Jermann, U. J. (1997, March). The international diversification puzzle is worse than you think. *The American Economic Review* 87(1): 170-180.

Bookstaber, R. (1997, Spring). Global risk management: Are we missing the point? *The Journal of Portfolio Management* 23(3): 102-107.

COMPUSTAT (North America). (1999). COMPUSTAT data items. Standard & Poor's (a division of McGraw-Hill Companies).

DeFusco, R. A., Geppert, J. M., & Tsetsekos, G. P. (1996, May). Long-run diversification potential in emerging stock markets. *The Financial Review* 31(2): 343-363.

Errunza, V., Hogan, K., & Hung, M-W. (1999). Can the gains from international diversification be achieved without trading abroad? *Journal of Finance* 54: 2075-2107.

Errunza, V., & Senbet, L. (1981). The effects of international operations on the market value of the firm: Theory and evidence. *Journal of Finance* 36: 401-417.

Fatemi, A. (1984). Shareholder benefits from corporate international diversification. *Journal of Finance* 39: 1325-1344.

Gruzin, T. & Davidow, R. (2000, April 1). Go global, think local–Whatever a company's territorial reach, it can learn much from financial institutions that have fully embraced globalization. *The Banker* 150: 890.

Hirschman, A. O. (1964, September). The paternity of an index. *American Economic Review*: 761.

Ip, G. (1999, April 26). The easy way: How to go global without buying foreign stocks. *The Wall Street Journal*: R13.

Iyer, B. S. (1998, December). The case for international diversification. *Employee Benefits Journal* 23(4): 17-18.

Jacquillat, B. & Solnik, B. (1978, Winter). Multinationals are poor tools for diversification. *Journal of Portfolio Management* 4(2): 8-12.

Jorion, P. (1985). International portfolio diversification with estimation risk. *Journal of Business* 58(3): 259-278.

Kasa, K. (1992). Common stochastic trends in international stock markets. *Journal of Monetary Economics* 29: 95-124.

Kruskal, W. H. & Wallis, W. A. (1953). Errata. *Journal of the American Statistics Association* 48: 910.

Kruskal, W. H. & Wallis, W. A. (1952). Use of ranks in one-criterion variance analysis. *Journal of the American Statistics Association* 47: 583-621.

Lichtblua, J. (2001, September 10). Don't turn your back on overseas stock. *Business Week*: 128.

Lofthouse, S. (1997, Fall). International diversification. *Journal of Portfolio Management* 24(1): 53-56.

Mathur, I., & Hanagan, K. (1983). Are multinational corporations superior investment vehicles for achieving international diversification? *Journal of International Business Studies* 14: 135-147.

Michaud, P. O., Bergstrom, G. L., Frashure, R. D., & Wolahan, B. K. (1996, Fall). Twenty years of international equity investing. *Journal of Portfolio Management* 23: 9-22.

Neter, J., Wasserman, W., & Kutner, M. H. (1985). *Applied Linear Statistical Models* (2nd ed.). Richard D. Irwin, Inc.

Odier, P. & Solnik, B. (1993, March-April). Lessons for international asset allocation. *Financial Analysts Journal*: 63-77.

Scherer, F. M. (1970). *Industrial Market Structure and Economic Performance*. Rand McNally College Publishing Company.

Schiffres, M. (1998, January). Smart Investing. *Kiplinger's Personal Finance Magazine* 52(1): 27.

Stigler, G. J. (1968). *The Organization of Industry*. Richard D. Irwin, Inc.

Tai, L. S. (1998, Summer). International diversification and estimation risk: Evidence from Latin American and Asian emerging stock markets. *7* 3(2). 27-39.