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NON-EXPORTING MANUFACTURERS

A DISSERTATION

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirements for the

degree of

DOCTOR OF PHILOSOPHY

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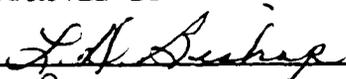
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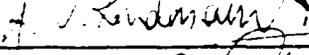
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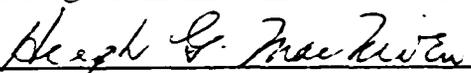
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DISSERTATION COMMITTEE

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AN ANALYSIS OF THE INTERNATIONAL ORIENTATION
OF CHIEF EXECUTIVES OF EXPORTING AND
NON-EXPORTING MANUFACTURERS

CHAPTER I

INTRODUCTION

The era of the new prosperity in the United States, coupled with the political, social and technological changes taking place in the world today, has brought Alvin Tofler's "global village" concept closer to reality as our globe shrinks and cultures, businesses and governments develop greater integration. The prime agent of change in the business community has been the increased multinationalization of business activities. Managerial and marketing activities are increasingly transcending traditional geographic, political and cultural boundaries.

This mushrooming of the international dimensions of business enterprises has been particularly rapid in recent years. Numerous statistics illustrate the growth of the involvement of U.S. companies in the global community. This growth is apparent in looking at the magnitude of U.S. direct investment abroad. The book value of the assets of

international subsidiaries and affiliates of business enterprises headquartered in the United States increased from \$31.9 billion in 1960 to \$71.0 billion by the end of 1969, representing a 123 percent increase during the decade of the 1960s.¹ By the beginning of 1975, the book value of American private direct foreign investment had grown to \$118.6 billion, a 67.0 percent increase during the first five years of this decade.² In addition, as Judd Polk first noted, the value of production abroad of American owned international subsidiaries and affiliates appears to be about twice the value of American direct investment abroad.³ By employing this 2:1 ratio of sales to book value, it can be estimated that the value of production abroad by American subsidiaries and affiliates exceeded \$237 billion in 1974.

The recent growth of direct overseas activities of American corporations is even more manifest in looking at the growth in total direct investment flows. During the 1960s annual flows doubled, increasing from \$2.9

¹U.S., Department of Commerce, Bureau of International Commerce, The Multinational Corporation: Studies on U.S. Foreign Investment, vol. 1, pt. 3, "Trends in Direct Investment Abroad by U.S. Multinational Corporations, 1960 to 1970," February 1972, p. 33.

²U.S., Department of Commerce, Bureau of Economic Analysis, Survey of Current Business, vol. 55, "U.S. Direct Investment Abroad in 1974," October 1975, p. 53.

³Judd Polk, "The New World Economy," Columbia Journal of World Business 3 (January-February 1968):8.

billion in 1960 to \$5.8 billion in 1969.⁴ During the first five years of the 1970s, the annual flows more than doubled again, as the flow in 1974 amounted to \$14.9 billion.⁵ Thus, investment flows have been increasing at a rapidly increasing rate.

The growth of internationalism is also apparent in looking at the magnitude and expansion of U.S. exports. The export sector, although traditionally considered a minor factor in the economic policy of the United States, is becoming increasingly important to the economic viability of the U.S. In recent years the rate of growth of exports has exceeded the rate of growth of domestic production.⁶ Table 1 reveals that for the decade of the 1960s, exports grew at an average rate of 7.1 percent annually. For the period from 1970 through 1974, exports grew at an average annual rate of 23.3 percent, more than three times as rapid as the growth rate of the 1960s. Whereas only 7.6 percent of total U.S. production was exported in 1967, by mid-1974 nearly 14 percent of all U.S. manufactured goods entered the export market.⁷

⁴"Trends in U.S. Direct Investment Abroad by U.S. Multinational Corporations, 1960 to 1970," p. 33.

⁵"U.S. Direct Investment Abroad in 1974," p. 46.

⁶Federal Reserve Bank of Chicago, "Trends in U.S. International Trade," Business Conditions (August 1974), p. 8.

⁷Ibid.

TABLE 1

COMPOUND ANNUAL RATES OF CHANGE OF
UNITED STATES EXPORTS

| Terminal Year | Initial Year | | | | | | | | | | | | | | | Millions of Dollars |
|------------------|--------------|------|------|------|------|------|------|------|------|------|------|------|------|------|--|------------------------|
| | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 | 1971 | 1972 | 1973 | | |
| 1961 | 2.3 | | | | | | | | | | | | | | | 20,108 |
| 1962 | 2.8 | 3.3 | | | | | | | | | | | | | | 20,781 |
| 1963 | 4.3 | 5.2 | 7.2 | | | | | | | | | | | | | 22,272 |
| 1964 | 6.7 | 8.2 | 10.8 | 14.5 | | | | | | | | | | | | 25,501 |
| 1965 | 6.1 | 7.1 | 8.4 | 9.0 | 3.8 | | | | | | | | | | | 26,461 |
| 1966 | 6.9 | 7.8 | 9.0 | 9.6 | 7.2 | 10.8 | | | | | | | | | | 29,310 |
| 1967 | 6.6 | 7.3 | 8.1 | 8.3 | 6.3 | 7.7 | 4.6 | | | | | | | | | 30,666 |
| 1968 | 6.9 | 7.6 | 8.4 | 8.6 | 7.2 | 8.3 | 7.1 | 9.7 | | | | | | | | 33,626 |
| 1969 | 7.1 | 7.7 | 8.3 | 8.5 | 7.4 | 8.3 | 7.5 | 9.0 | 8.3 | | | | | | | 36,414 |
| 1970 | 8.0 | 8.7 | 9.3 | 9.7 | 8.9 | 9.9 | 9.7 | 11.5 | 12.4 | 16.6 | | | | | | 42,469 |
| 1971 | 7.4 | 8.0 | 8.5 | 8.7 | 7.9 | 8.6 | 8.1 | 9.0 | 8.8 | 9.1 | 2.0 | | | | | 43,311 |
| 1972 | 8.0 | 8.5 | 9.0 | 9.3 | 8.6 | 9.3 | 9.1 | 10.0 | 10.1 | 10.7 | 7.8 | 14.0 | | | | 49,388 |
| 1973 | 10.4 | 11.1 | 11.9 | 12.4 | 12.1 | 13.2 | 13.6 | 15.1 | 16.2 | 18.3 | 18.9 | 28.4 | 44.5 | | | 71,379 |
| 1974 | 12.2 | 13.0 | 13.8 | 14.4 | 14.4 | 15.7 | 16.3 | 18.1 | 19.6 | 22.0 | 23.3 | 31.4 | 41.1 | 37.7 | | 98,269 |
| | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 | 1971 | 1972 | 1973 | | |

Source: Federal Reserve Bank of St. Louis, Rates of Change in Economic Data for Ten Industrial Countries (September 1975), p. 55.

These figures highlight the fact that the trend of extensive multinationalization of business activities has placed world markets in a position of major importance to U.S. corporations. In fact, the annual earnings from international activities account for a significant percentage of the total earnings of U.S. corporations. For 1970, for example, the overall average of foreign earnings to total earnings for all U.S. non-financial corporations was 29.3 percent.⁸ International sales provide the lifeblood for a number of American companies. Table 2 provides information on the extent of foreign activities of some large U.S. firms. As the table shows, these U.S. firms derive a major percentage of sales and revenues from overseas activities. As a result, for these firms and thousands of other U.S. firms devoting a major percentage of corporate resources to international activities, the importance of foreign sales is readily apparent. In some cases, the survival and growth of the firm depends on foreign sales and earnings.

Looking International

What has spurred this widening of the territorial domain of U.S. corporations? Why do firms "look

⁸Business International (18 June 1971), p. 196, cited by David K. Eiteman and Arthur I. Stonehill, Multinational Business Finance (Reading, Mass.: Addison-Wesley Publishing Co., 1973), p. 13.

TABLE 2
FOREIGN SALES AND PROFITS AS PERCENTAGE
OF CORPORATE TOTALS, FOR SELECTED
U.S. COMPANIES, 1970

| Company | Percent of Sales Abroad | Percent of Net Income Abroad |
|--------------------------|----------------------------|---------------------------------|
| Singer | 52.1 | 58.5 |
| Uniroyal | 27.0 | 74.6 |
| Ford Motor | 25.8 | 24.1 |
| ITT* | 42.0 | 35.0 |
| Dow Chemical | 40.4 | 44.5 |
| Sunbeam | 31.7 | 39.7 |
| National Cash Register | 45.2 | 50.9 |
| IBM | 39.1 | 50.4 |
| Avery Products | 37.2 | 59.2 |
| International Multifoods | 30.5 | 65.4 |
| Anderson, Clayton | 26.8 | 45.1 |
| Pfizer | 47.3 | 54.8 |
| Upjohn | 32.9 | 55.1 |
| Standard Oil (N.J.) | 68.0 | 60.0 |
| Colgate-Palmolive | 54.1 | 56.2 |
| United Shoe | 54.0 | 62.0 |
| Mobil | 49.1 | 52.3 |
| Foster Wheeler | 41.0 | 64.0 |
| Schering | 36.1 | 56.0 |
| American Radiator | 36.0 | 57.0 |
| Corn Products | 47.0 | 49.0 |
| Massey-Ferguson | 84.0 | 90.0 |
| U.S.M. Corporation | 54.0 | 57.0 |

SOURCE: Business International (18 June 1971), cited by David K. Eiteman and Arthur I. Stonehill, Multinational Business Finance (Reading, Mass.: Addison-Wesley Publishing Company, 1973), pp. 13-17.

*Canadian sales considered domestic sales.

international"? There are many reasons why a firm might decide to market its products internationally. This section will examine some of these reasons.

To Offset Diminishing Domestic Returns

A company may find that it is increasingly difficult and expensive to expand sales domestically, as promotional and other marketing efforts begin to experience diminishing returns. A firm operating in an oligopolistic industry, in particular, may experience difficulty in expanding its market. Faced with diminishing returns domestically, firms may seek opportunities for growth by looking to international markets.

This reason appears to have been a major factor in the recent international expansion of American business. The vast domestic market that had provided many U.S. business firms with opportunities for continued growth finally reached a point where the opportunities for expansion began to significantly level off.⁹ In addition, many U.S. markets were faced with increased competition from abroad. For many businesses, new market opportunities had to be sought beyond the domestic domain. For instance, the Crown Cork and Seal Company decided as early as 1957

⁹Philip R. Cateora and John M. Hess, International Marketing, rev. ed. (Homewood, Ill.: Richard D. Irwin, Inc., 1971), p. 4.

that international operations would provide the growth areas for the firm, while domestic sales would provide a stable operating base.¹⁰

To Blunt Cyclical Domestic Slumps

A company may find that its domestic market is unable or unwilling to absorb the output it is capable of producing or actually is producing in the short run. This is particularly prevalent during domestic recessionary periods. A domestic firm may look international to stabilize its earnings prospects and blunt the effects of domestic slumps. The rapid growth of overseas sales of U.S. corporations during the late 1950s, for example, can be partially attributed to the economic slowdown experienced in the United States during that period.

This factor appears to have contributed to the growth in exports during 1974 and 1975. An article in the Wall Street Journal noted that "as the recession has deepened in recent months, . . . American businessmen are taking a much greater interest in foreign markets."¹¹ The article further noted that many companies are now exporting for the first time.

¹⁰Edward P. Learned, et al., "Crown Cork and Seal Company" in Business Policy, 2nd ed. (Homewood, Ill.: Richard D. Irwin, Inc., 1969), pp. 353-374.

¹¹"More U.S. Companies Begin to Sell Abroad," Wall Street Journal, 4 April 1975, p. 1.

A study by Kizilbash also highlighted the importance of foreign markets as a "dumping ground" for excess production.¹² In a study of a sample of manufacturing firms engaged in exporting, Kizilbash found that finding a market for excess production was the most frequent reason given for entering export markets.

To Capitalize on Opportunities

The two preceding reasons for exporting may be termed reactive reasons in that firms initiated exports in reaction to competitive pressures and domestic problems. But not all firms enter the export market for reactive reasons: many enter for proactive reasons; that is, they enter foreign markets not to offset competition or declining sales, but to capitalize on the profit opportunities offered by foreign markets. In his study, Kizilbash found that over sixty percent of the firms entered foreign markets for proactive reasons, while less than forty percent entered foreign markets for reactive reasons.¹³

Since World War II, economic developments around the world have created opportunities for those U.S. companies willing to venture beyond the domestic domain.

¹²A. H. Kizilbash, "A Study of Export Marketing Objectives and Practices" (Ph.D. dissertation, University of Nebraska, 1971), p. 84.

¹³Ibid.

Formulation of the European Economic Community and emergence of Japan as a major economic power created prime markets for U.S. goods. In addition, several of the developing countries have experienced substantial increases in their economic well-being. Mexico and Brazil, for instance, are now strong markets for U.S. exports.

Export Profits

Underlying each of the preceding reasons for exporting is the assumption that exporting will enhance profits. As Sewell succinctly notes, "The real 'number one' reason for exporting is profits."¹⁴ Firms entering the international marketplace have become increasingly aware of the profitability of foreign sales. William Stanton reports on one study of the profitability of a sample of U.S. exporting firms. In 76.5 percent of the firms surveyed, the percentage of the firm's total profit accounted for by profits from foreign sales equalled or exceeded the percentage of total sales accounted for by foreign sales.¹⁵ Thus, in the majority of firms, foreign sales were more profitable than domestic sales.

¹⁴Norman M. Sewell, What Do I Do Now? An Export Primer (Ormand Beach, Fla.: N. M. Sewell, 1973), p. 10.

¹⁵William J. Stanton, Marketing, 3rd ed. (New York: McGraw-Hill Book Company, 1971), p. 585.

Operating Leverage

An examination of the cost structure of most firms reveals a factor contributing to this greater profitability. Since most firms have relatively large fixed costs, the percentage change in profits accompanying a change in sales is greater than the percentage change in sales. This occurrence is known as operating leverage.¹⁶ Thus, foreign sales are often more profitable than domestic sales because foreign sales allow firms to capitalize on operating leverage.

Exporting Incentives

In addition to the added profitability naturally resulting from operating leverage, export profitability is facilitated by the various governmental incentive programs which have been established for exporters. The United States government provides relatively low cost export financing and export credit guarantees and insurance through the Foreign Credit Insurance Association and the Export-Import Bank. The U.S. government, through the Bureau of International Commerce of the Department of Commerce, offers numerous financial and operational assistance programs to exporters.

¹⁶James C. Van Horne, Financial Management and Policy, 3rd ed. (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1974), p. 699.

One governmental incentive program, in particular, has resulted in increased profit potential for export sales. The Revenue Act of 1971 provided measures for tax relief for U.S. corporations engaged in exporting, corporations referred to in the Act as Domestic International Sales Corporations (DISCs). The provisions of the Revenue Act specify that one-half of the profit of a DISC is eligible for Federal income tax deferral as long as the DISC remains incorporated.¹⁷ As long as the DISC is not dissolved, the DISC is tantamount to a permanent tax exemption rather than a deferral.¹⁸ The Act, therefore, allows exporting corporations to place themselves in the position of being taxed only 24 percent on their export profits. As a result, the DISC further increases the profitability of export sales vis-a-vis domestic sales.

The Export Paradox

Even though exporting is potentially very profitable, the great majority of domestic businesses have chosen to stay out of the international marketplace. In fact,

¹⁷U.S., Department of the Treasury, DISC, Domestic International Sales Corporation: A Handbook for Exporters (Washington, D.C.: U.S. Government Printing Office, 1972), p. 3.

¹⁸Federal Reserve Bank of Richmond, "Domestic International Sales Corporations," Monthly Review (June 1972), p. 6.

only about eight percent of all U.S. manufacturers export at all.¹⁹ This small percentage of exporters contrasts with the percentage of firms that could export. In a study by Simpson, 69 percent of the non-exporters reported that they could export their products.²⁰ Considering the potential profitability of exporting, this paradox is giving renewed interest to examining and understanding why some firms do not export. Why do so few U.S. firms export? The chief body of explanation as to why some firms export while others do not resides in international trade theory. Yet, as will be shown in the literature review in chapter two of this research effort, international trade theory is inadequate to explain why some firms do not export. This inadequacy of theory is significant given the importance of the export dimension.

In addition to being of importance to individual firms, the export dimension is also of importance to the U.S., as exports are of great importance to the economic well-being of the U.S. Greater thrust in exporting is going to be needed to allow the U.S. to continue to offset secularly rising import bills, particularly given the

¹⁹"More U.S. Companies Begin to Sell Abroad," Wall Street Journal, 4 April 1975, p. 1.

²⁰Claude L. Simpson, Jr., "The Export Decision: An Interview Study of the Decision Processes in Tennessee Manufacturing Firms" (Ph.D. dissertation, Georgia State University, 1973), p. 45.

reliance of the United States on foreign sources to meet its energy needs. In 1974 alone, the U.S. incurred a \$25.1 billion trade deficit in its energy needs.²¹ The magnitude of this energy import deficit resulted in an overall deficit in the U.S. balance of trade for 1974 of \$5.8 billion.²² In 1975, the U.S. recession led to decreased demand in the United States for imported goods. As a result, the U.S. registered a trade surplus. As the economic recovery has progressed in the U.S. during 1976, the U.S. balance of trade has again increasingly moved into a deficit situation.²³

Exports from the United States will need to continue to increase in order to provide the U.S. with the foreign exchange needed to offset rising import bills, particularly as economic recovery progresses in the United

²¹U.S., Council of Economic Advisers, Economic Indicators (February 1975), p. 23.

²²It is interesting to note the disparities in the international trade data reported by various sources. The Department of Commerce reported the deficit to be \$5.8 billion [U.S., Council of Economic Advisers, Economic Indicators (February 1975), p. 24]; the Census Bureau reported the deficit to be \$3.1 billion [Ibid., p. 23]; whereas the International Monetary Fund reported the deficit to be \$2.3 billion [International Monetary Fund, International Financial Statistics (December 1975), p. 398]. To facilitate consistent comparisons, export figures throughout this study, unless otherwise noted, are those derived by the Department of Commerce.

²³U.S., Department of Commerce, Bureau of Economic Analysis, Survey of Current Business 56 (April 1976): 522-523.

States and consumers continue to increase their purchases of imported products. Exports are also important to the United States in that export industries provide domestic employment. In the state of Virginia, for example, one of every eight persons employed in the state holds a job that is directly related to international trade.²⁴ Dun and Bradstreet reports that every \$1 billion in U.S. exports provides jobs for 100,000 Americans.²⁵

Exports, therefore, in addition to being of importance to the profitability of many U.S. corporations, are vitally important to the economy of the U.S. The growing importance of exports to U.S. corporations and to the U.S. economy is giving impetus to a renewed examination of the foundations of international trade.

Organization of the Study

Since the primary body of explanation concerning why some firms export while others do not resides in international trade theory, relevant international trade theory will be reviewed and analyzed in chapter II of this research effort. After surveying the literature, the specific purpose of this research effort will be set forth.

²⁴Federal Reserve Bank of Richmond, "The Major Ports of the Fifth District," Monthly Review (August 1972), p. 2.

²⁵How to Get Started in Exporting, rev. ed. (New York: Dun & Bradstreet, 1970), p. 5.

The methodology used in this research effort will be examined in chapter III. The research questions and hypotheses will be stated, and then the data collection methodology used in this research will be presented. The statistical analysis methodology used to analyze the data resulting from this research effort will then be explored.

The statistical findings resulting from this research will be presented in chapter IV. The implications and contributions of the findings will be explored in chapter V. Suggestions for relevant further research revealed by this research will also be included in chapter V.

CHAPTER II

REVIEW OF THE LITERATURE

Explanations of why some firms export while others do not are chiefly based on international trade theory. Relevant international trade theory literature will, therefore, be surveyed and analyzed in this chapter. Classical international trade theory through David Ricardo will be explored, as will amendments to the Ricardian theory of international trade. The factor-proportions theory will then be presented and analyzed. Recent relevant research will then be reviewed. Finally, the specific purpose of this research effort will be presented and some factors possibly related to international orientation will be discussed.

Classical International Trade Theory Through Ricardo

The historical foundation of attempts to analyze the factors differentiating exporters from non-exporters can be found in the classical economic tradition. The contributions of Adam Smith, Robert Torrens, and David Ricardo to international trade theory will be examined in this section.

Adam Smith

In 1776, Adam Smith's An Inquiry into the Nature and Causes of the Wealth of Nations was published. The target of Smith in his well-known economic treatise was the "mercantile system" of protection.¹ Smith more than any other one man helped overthrow the maze of mercantilist's protectionistic policies by articulating the advantage of free trade.

Adam Smith saw clearly that a country could gain by trading with other countries. Smith felt that by foreign trade a country could expand its territorial division of labor, increase the size of the market, and increase specialization. Smith felt countries should specialize in the production of certain commodities because of the "natural advantages which one country has over another in producing particular commodities."² Smith does not, however, distinguish any difference between the condition for domestic trade and the conditions for foreign trade. He states:

What is prudence in the conduct of every private family, can scarce be folly in that of a great kingdom.³ If

¹John Parke Young, The International Economy, 4th ed. (New York: Ronald Press Co., 1963), p. 207.

²Adam Smith, Wealth of Nations, 2 vols. (London: W. Strahan and T. Cadell, 1776), 2:38.

³Blaug notes this fallacy of composition. See Mark Blaug, Economic Theory in Retrospect, rev. ed. (Homewood, Ill.: Richard D. Irwin, 1968), p. 58.

a foreign country can supply us with a commodity cheaper than we ourselves can make it, better buy it of them with some part of the produce of our own industry, employed in a way in which we have some advantage.⁴

Smith's statements provide a clear exposition of the benefits of international specialization and division of labor, and, consequently, of free trade. However, Smith's statements imply nothing more than international trade based on the concept of absolute advantage.⁵ A distinction needs to be made between comparative and absolute advantage. Absolute advantage refers to a situation where country X can produce commodity A at less cost than country Y, but country Y can produce commodity B at less cost than country X. Comparative advantage refers to a situation where country X can produce both commodities A and B at less cost than country Y. While Smith's analysis clearly illustrates the advantages of international trade based on absolute advantage, his analysis does not state, or even imply, that a country can gain by importing goods that can be produced at home with less cost.

Several writers before Adam Smith had presented arguments in support of the advantages of international trade based on international division and specialization

⁴Smith, pp. 36-37.

⁵William R. Allen, International Trade Theory (New York: Random House, 1965), p. 9.

of labor. Davenant, the unknown author of Considerations on the East-India Trade, Gervaise, and Lindsay had all previously discussed the international division of labor.⁶ Several eighteenth century economists before Adam Smith had based their arguments for free trade on the benefit a country derived from importing, in exchange for home-produced products, those commodities which could be produced at home only at costs absolutely greater than those at which they could be produced abroad. In fact, much of Smith's analysis of international trade was taken from his precursors, particularly the writings of David Hume.⁷ Although Adam Smith refined and clarified the concepts presented by his precursors, his exposition did not contribute new concepts to international trade theory. Development of a theory of international trade based on the general case of comparative advantage had to wait until the nineteenth century.

Robert Torrens

In 1807, William Spence published a widely read pamphlet, Britain Independent of Commerce, in which, among other things, he questioned the utility of international trade. In 1812, Robert Torrens published the book

⁶Jacob Viner, Studies in the Theory of International Trade (New York: Harper and Brothers, 1937), pp. 104-106.

⁷James W. Angell, The Theory of International Prices (Cambridge, Mass.: Harvard University Press, 1926), p. 33.

The Economists Refuted as a refutation of the protectionistic school of thought defended by Spence.⁸ In this book Torrens attempted to demonstrate the advantages derived from the territorial division of labor based on absolute advantages.

In 1815, Torrens restated and refined his theory of international trade in his second book, An Essay on the External Corn Trade. In this publication, Torrens expands his theory of trade to include comparative advantage. Torrens states that most people feel a country will produce at home the products which are more expensive to buy elsewhere. He points out that this need not be the case.

But the conclusion, however obvious and natural it may at first sight appear, might, on a closer examination, be found entirely erroneous. If England should have acquired such a degree of skill in manufacturers, that, with any given portion of her capital, she should prepare a quantity of cloth, for which the Polish cultivator would give a greater quantity of corn, than she could, with the same portion of capital, raise from her own soil, then, tracts of her territory, though they should be equal, nay, even though they should be superior, to the lands of Poland, will be neglected; and a part of her supply of corn will be imported from that country. For, though the capital employed in cultivating at home might bring an excess of profit over the capital employed in cultivating abroad, yet, under the supposition, the capital which should be employed in manufacturing would obtain a still greater excess

⁸Lionel Robbins, Robert Torrens and the Evolution of Classical Economics (London: Macmillan, 1958), p. 12.

of profit; and their greater excess of profit would determine the direction of our industry.⁹

In this statement, Torrens clearly states the concept of comparative advantage. Torrens, however, did not elaborate further on his statement. As a result, credit for being the first to give the concept of comparative advantage public expression is generally given to David Ricardo.

David Ricardo

David Ricardo's Principles of Political Economy appeared in 1817. In chapter VII of the Principles, Ricardo elaborated the concept of comparative advantage. Although he was not first to publish the doctrine, Ricardo was the first to give due emphasis to the doctrine, to place it in an appropriate setting and to obtain general acceptance of it by economists.¹⁰ Lionel Robbins has stated that with respect to full elaboration and subsequent influence, there can be no comparison between Torrens and Ricardo.¹¹

Ricardo utilized the concept of comparative advantage to explain the direction and structure of

⁹Robert Torrens, An Essay on the External Corn Trade (London: J. Hatchard, 1815), pp. 264-65, quoted in Edwin R. A. Seligman, "On Some Neglected British Economists," Economic Journal 13 (September 1903):344-45.

¹⁰Viner, p. 442.

¹¹Robbins, p. 33.

international trade. Ricardo explained the concept of comparative advantage by means of a simple illustration involving England and Portugal. His analysis was formulated in terms of two commodities, wine and cloth.¹² Suppose that in England it takes 100 men a year to produce a certain quantity of cloth and 120 men a year to produce a given unit of wine. In other words, the productivity of one man-year in England is $1/100$ unit of cloth and $1/120$ unit of wine. Also, suppose that the production of the same quantity of cloth in Portugal requires 90 men a year and production of the same unit of wine requires 80 men a year. In other words, the productivity of one man-year in Portugal is $1/90$ unit of cloth and $1/80$ unit of wine. England is absolutely less efficient than Portugal in the production of both wine and cloth. The ratio of man-year productivity in cloth production to that in wine production is, however, higher for England than for Portugal ($120/100$ vs. $80/90$). In this situation, if England sought to be self-sufficient in wine, the production of each unit of wine would reduce the amount of cloth that could be produced by $120/100$ units. As a result, the cost of each unit of wine in England is $120/100$ units of cloth, much higher than its cost of $80/90$ units

¹²Thomas M. Humphrey, "Changing Views of Comparative Advantage," Monthly Review of the Federal Reserve Bank of Richmond 58 (July 1972):10.

of cloth in Portugal. And in Portugal, the cost of a unit of cloth would be 90/80 units of wine, higher than its cost of 100/120 units of wine in England.

In Ricardo's example, England is absolutely less efficient than Portugal in the production of both wine and cloth; however, England has a comparative advantage in cloth. While Portugal is absolutely superior in the production of both commodities, its comparative advantage is in wine. As a result, England can obtain wine cheaper by producing cloth and trading it to Portugal, where a unit of wine costs less than one unit of cloth, than by producing it at home at a cost of more than one unit of cloth. Similarly, Portugal can get cloth cheaper by producing wine and trading it to England for cloth. Consequently, each nation can obtain by specialization and trade a greater amount of both wine and cloth from the same amount of labor than it would if it attempted to be self-sufficient.

In his example, Ricardo clearly demonstrated that specialization in the production and export of particular products can be beneficial to both trading countries, even if one country is absolutely less efficient than the other country in the production of all products. More importantly, Ricardo's concept of comparative advantage provided the conceptual basis for identification of the

products a country should specialize in producing and exporting.

Ricardo's explanation of why certain products are traded has had great impact on subsequent theories of international trade. Later classical and post-classical developments in international trade theory were to a considerable extent concerned with critically analyzing, refining and elaborating Ricardo's explanation of the basis of trade. These refinements and elaborations did not invalidate the theory, nor did they add essentially new elements of importance to the theory, although some economists (e.g., Mill, Taussig, Graham, Haberler, Heckscher and Ohlin) used different approaches to reach substantially similar results. As Gottfried Haberler states:

A very large part of classical, neo-classical and modern theory of international trade is based on the doctrine of Comparative Cost or Comparative Advantage as originally presented in Chapter VII of David Ricardo's Principles of Political Economy.¹³

In fact, almost every international business and international trade book quotes Ricardo's celebrated England-Portugal, wine-cloth example.

The Ricardian analysis of international trade is, however, based on several simplifying assumptions. Ricardo

¹³Gottfried Haberler, "The Current Relevance of the Theory of Comparative Advantage to Agricultural Production and Trade," International Journal of Agrarian Affairs 4 (May 1964):130.

assumes that "perfectly free commerce"¹⁴ exists within a country and that labor and capital will "speedily move" within a country in response to different rates of profit.¹⁵ He also assumes virtually no international mobility of capital because of the great "difficulty with which capital moves from one country to another."¹⁶ Even if profits were higher in other countries than they were in England, "it would not follow that capital would necessarily move from England."¹⁷ Ricardo's analysis is based on his labor theory of value. Thus, his comparative advantage analysis is based on only one factor of production, labor. He also assumes different resource endowments in the two countries, constant costs, and constant factor proportions in the production function. The concept of comparative advantage also assumes countries trade with other countries, not companies with other companies.

Amendments to the Ricardian Trade Theory

Post-Ricardian classical and neo-classical international trade theorists undertook the task of refining, elaborating, and critically analyzing Ricardo's theory of international trade. The bulk of the work was of the form of amendments to the Ricardian analysis.

¹⁴David Ricardo, Principles of Political Economy and Taxation (London: John Murray, 1817), p. 156.

¹⁵Ibid., p. 157. ¹⁶Ibid., p. 160.

¹⁷Ibid., p. 157.

Ricardo has been criticized for his failure to explain how the actual terms of trade are determined. As Young has noted:

In his illustration, Ricardo helped to explain the conditions under which specialization and trade would be profitable--that is, why trade would take place--but he did not explain how the actual terms of trade are determined--that is, why just so many yards of cloth trade for so many bottles of wine.¹⁸

Ricardo only implies that trade will take place within the limits set by comparative costs. His theory gives no indication of how the actual rate of exchange will be determined and how the gains from trade will be allocated. Recognizing this weakness, John Stuart Mill undertook an extensive analysis of the terms of trade. Mill attempted to formulate a more exact a priori means of ascertaining the ratios of international exchange by using his "Equation of International Demand."¹⁹ Whereas Ricardo assumed goods would trade on the basis of the labor costs of production, Mill argued goods would be traded on the strength and elasticity of each country's demand for the other country's product, or upon what is called reciprocal demand.²⁰ Mill's contribution thus was in his addition of the demand function to the analysis of the terms of trade.

¹⁸Young, pp. 213-14.

¹⁹John Fred Bell, A History of Economic Thought (New York: Ronald Press, 1953), p. 269.

²⁰P. T. Ellsworth, The International Economy, 3rd ed. (New York: Macmillan, 1964), p. 65.

The theory of comparative advantage set forth by Ricardo has also been criticized on several other accounts. Factors of production are more mobile internationally and less mobile domestically than Ricardo assumed.²¹ Caines argued that many of Ricardo's conclusions derive from his assumption of perfectly free competition within a country.²²

Ricardo's utilization of the labor theory of value has also been the target of criticism. Goods do not exchange solely on the basis of labor costs. However, Mark Blaug contends that the labor theory of value can be abandoned without affecting the results of Ricardo's theory.²³ The noted economist, Paul Samuelson, concurs with this contention.²⁴

The assumptions of constant costs and constant factor proportions in the production function have also been criticized. Blaug has shown that these assumptions may also be dropped without changing Ricardo's results. Through a series of graphs of production-possibility frontiers, Blaug shows that Ricardo's analysis can easily

²¹Hugh B. Killough and Lucy W. Killough, Economics of International Trade, 2nd ed. (New York: McGraw-Hill Book Company, 1948), pp. 116-17.

²²Young, pp. 218-19.

²³Blaug, p. 130.

²⁴Paul A. Samuelson, "Welfare Economics and International Trade," American Economic Review 28 (June 1938): 263.

encompass increasing and decreasing costs, as well as constant costs.²⁵ Schumpeter even says that "variable costs, increasing and decreasing, must no doubt be introduced into the 'classic' theory, but the critic who cannot do this should blame himself rather than the pioneers."²⁶

Ricardo's two-country, two-commodity assumption has also been critically analyzed. Frank Graham holds that the conclusions reached by the Ricardo model stem from a hypothetical two-country, two-commodity world.²⁷ In discussing the use of a two-country, two-commodity model, he states:

The classical theory of international values seems . . . to be open to grave objections, objections which, while they do not subvert its foundations, nevertheless call for a substantial modification of its conclusions.²⁸

Graham's analysis emphasizes the considerable complexity that must be introduced into the comparative advantage model when the theory is generalized to more than a hypothetical two-country, two-commodity situation. Few theorists have even attempted an analysis using more than

²⁵Blaug, pp. 128-130.

²⁶Joseph A. Schumpeter, History of Economic Analysis (New York: Oxford University Press, 1954), p. 613.

²⁷Frank D. Graham, Theory of International Values (Princeton, N.J.: Princeton University Press, 1948), p. 3.

²⁸Frank D. Graham, "The Theory of International Values Re-Examined," Quarterly Journal of Economics 38 (November 1923):54-55.

three countries and three commodities. When the theory is introduced into a multilateral context with a multi-product mix, hopes for application of the theory vanish.²⁹ Thus, the theory of comparative advantage cannot handle analyzation of international trade problems in a world of several hundred countries and thousands of diverse commodities.

It is evident that the theory of comparative advantage evades complex realities by the adoption of simplified assumptions. The theory follows logically from its assumptions, and as a piece of logic it is not without some intellectual beauty. As a theory purportedly descriptive of real world international trade, it is something else again. In summarizing his discussion of comparative advantage, the famed economist Paul Samuelson states:

If theories, like girls, could win beauty contests, comparative advantage would certainly rate high in that it is an elegantly logical structure. Indeed one must admit that it is a highly simplified theory. An oversimplified one, as far as rushing out to make immediate applications to real life is concerned.³⁰

While the theory of comparative advantage has general conceptual validity, in actuality it is only able to say that a country can benefit from exporting those products

²⁹Endel J. Kolde, International Business Enterprise, 2nd ed. (Englewood Cliffs, N.J.: Prentice-Hall, 1973), p. 68.

³⁰Paul Samuelson, Economics, 5th ed. (New York: McGraw-Hill Book Company, 1961), p. 724.

which it has a comparative advantage in producing and from importing those products which it has a comparative disadvantage in producing.

The Factor-Proportions Theory

The theory of comparative advantage emphasizes that the direction and structure of trade is based on differences in comparative costs or comparative advantages. But what makes for differences in comparative costs?³¹ What determines comparative advantages? Dissatisfied with the lack of explanatory power afforded by the generalities of the theory of comparative advantage, modern international trade theorists have sought to explain the nature and sources of comparative advantages. Two Swedish economists, Eli Heckscher and Bertil Ohlin, have developed a theory of trade that is today the most widely accepted explanation of international trade.³² The Heckscher-Ohlin theory, commonly referred to as the factor-proportions theory, attempts to explain patterns of international specialization in production and trade by analyzing a nation's relative endowments of capital and labor. According to the factor-proportions theory, a

³¹Charles P. Kindleberger, International Economics, 4th ed. (Homewood, Ill.: Richard D. Irwin, Inc., 1968), p. 29.

³²Delbert A. Snider, Introduction to International Economics, 4th ed. (Homewood, Ill.: Richard D. Irwin, Inc., 1967), p. 35.

country tends to specialize in producing and exporting commodities which use in their production large amounts of the factors of production in relatively abundant supply in that country.³³ Conversely, the theory maintains that a country tends to import those commodities which use in their production relatively large amounts of factors in relatively scarce supply in that country.

In the factor-proportions theory, it is not the absolute amount of a factor available that is important, rather it is the endowment ratio. Accordingly, a country with a relatively high capital/labor ratio would be expected to export capital-intensive products and import labor-intensive products, whereas a country with a relatively low capital/labor ratio would be expected to export labor-intensive products and import capital-intensive products. Consequently, the theory would conclude that Hong Kong, a country with an abundance of labor relative to capital, would have a comparative advantage in labor-intensive products and as a result would export such labor intensive products as cloth. The theory would predict that a country where capital is as abundant as it is in the United States would export capital-intensive products and import labor-intensive products.

³³Bertil Ohlin, Interregional and International Trade (Cambridge, Mass.: Harvard University Press, 1933), p. 12.

Although the conclusions of the Heckscher-Ohlin theory have been widely accepted, the theory is based on a series of simplifying assumptions. Myrick Freeman details the full set of assumptions underlying the Heckscher-Ohlin theory. The assumptions he lists are as follows:

1. The model consists of two factors, two commodities, and two countries.
2. The production functions for each commodity are the same in both countries and constant returns to scale are exhibited.
3. The factor inputs are of identical quality in both countries.
4. The production functions for the two goods are different, that is, each has a different capital/labor ratio.
5. Factor intensity reversal does not occur in response to changes in relative factor prices.
6. Product and factor markets are perfectly competitive.
7. The free flow of goods in international trade without transportation costs is assumed; however, factors of production are assumed to not be mobile between countries.
8. Both countries produce some of each good: neither country specializes in the production of one good.³⁴

Some of these simplifying assumptions of the theory can be dropped and more realistic assumptions adopted without altering the conclusions of the theory. Increasing costs,

³⁴A. Myrick Freeman, International Trade (New York: Harper & Row, 1971), p. 69.

imperfect competition, changes in factor endowments, and capital movements can be incorporated into the theory without altering the basic conclusions of the theory.³⁵ Their introduction does, however, add considerable complexity to the theory.

While some of the assumptions of the theory can be modified without changing the outcome of the theory, departures from other assumptions raise questions about the validity of the theory. Economies of scale, technological innovations, and transportation costs change the character of the theory when they are introduced.³⁶ Economies of scale, by allowing average unit costs to decrease as output increases, can result in trade being beneficial even when there is no difference in factor endowments. The introduction of transportation costs results in situations where differences in factor endowments will not result in beneficial trade. Technological innovations allow factor-intensity reversals, the substitution in the production function of an abundant factor for a scarce factor, to occur and factor intensity reversals drastically change the conclusions of the theory.³⁷ Thus,

³⁵Franklin R. Root, Roland L. Kramer, and Maurice Y. d'Arlin, International Trade and Finance, 2nd ed. (Cincinnati, Ohio: Southwestern Publishing Company, 1966), p. 112.

³⁶Ibid.

³⁷Richard E. Caves and Ronald W. Jones, World Trade and Payments (Boston, Mass.: Little, Brown & Co., 1973), p. 201.

the introduction of technological innovations in the production function breaks down the foundations of the theory and changes its conclusions.

The real test of the factor-proportions theory is its predictive or explanatory power. Intuitively, the theory appears to score high on this criterion. The theory would predict the exports of the United States, one of the most capital rich countries in the world, would be capital-intensive. And it is widely acknowledged that the U.S. is a leader in capital-intensive products. Thus, casual empiricism argues in support of the theory. Yet, the only major empirical study of the factor proportions theory yielded conclusions which contradict the theory. Wassily Leontieff applied the input-output tables which he pioneered in developing to international trade statistics and found that U.S. exports were less capital-intensive than U.S. imports, a conclusion which directly contradicts the factor proportions theory.³⁸

Leontieff's study generated a great amount of controversy among international trade theorists, with numerous authors attempting to resolve the "Leontieff paradox." Another empirical study was undertaken by Robert Baldwin. Baldwin's results concurred with Leontieff's

³⁸W. W. Leontieff, "Factor Proportions and the Structure of American Trade," Review of Economics and Statistics 38 (November 1956):392.

for he also found that U.S. imports were more capital-intensive than U.S. exports.³⁹

In particular, the Leontieff study demonstrated one of the greatest weaknesses of the factor proportions theory--the vagueness of the theory. The theory says that a capital rich country will export capital-intensive products. The theory runs into conceptual and instrumental difficulty when one asks, "What is a capital-intensive product?" Products such as high technology computers are obviously capital-intensive. But, is wheat a capital-intensive product? In the U.S., where agricultural capital is abundant, wheat is probably capital-intensive, while in countries where agricultural capital is not abundant, wheat is probably appropriately considered labor-intensive. But when a good is not defined throughout the world as uniquely capital intensive or labor intensive, the factor-intensity reversal assumption of the theory is violated and the link between factor endowments and the specific products a country will trade in international markets is broken.⁴⁰

The Macro Focus

Both the theory of comparative advantage and the factor-proportions theory make an additional assumption.

³⁹Robert E. Baldwin, "Determinants of the Commodity Structure of U.S. Trade," American Economic Review 61 (March 1971):134.

⁴⁰Root, Kramer, and d'Arlin, p. 113.

Both assume that countries trade with other countries, not companies with other companies. This assumption reduces the usefulness of international trade theory. In this regard, David Leighton succinctly notes:

It is becoming increasingly evident that this traditional approach is entirely inadequate for the 1970s. The theory does not explain real-world trade flows very well, and in concentrating on nation-to-nation flows the theory deals with phenomena that are becoming less significant. In looking at trade from the country's point of view, we have lost sight of the fact that, except in certain special cases, countries do not trade with each other, companies do.⁴¹

Despite its limitations and its macro orientation, international trade theory has remained widely accepted.⁴² As Fayerweather has noted, "The comparative-advantage, resource-distribution approach has persisted to this day as the basic doctrine of the field. . . ."⁴³ International trade theory has been widely accepted as the conceptual base for understanding and predicting events in the world of international business. Public policy toward international trade has as its foundation the concepts of international

⁴¹David S. R. Leighton, "The Internationalization of American Business," Journal of Marketing 34 (July 1970):5.

⁴²Kreinin feels that trade theorists have remained wedded to the theory of international trade because it is a logically tight structure and because it lends itself readily to geometric and mathematical manipulations. See Mordechai E. Kreinin, International Economics (New York: Harcourt, Brace, Jovanovich, 1971), p. 222.

⁴³John Fayerweather, International Business Management (New York: McGraw-Hill Book Company, 1969), p. 17.

trade theory. Public policy based on international trade theory has resulted in public policy toward international trade being focused almost exclusively at the macro level.

Manifestation of this macro focus is particularly evident in examining the export promotional policies of the U.S. government. The U.S. has traditionally attempted to foster exports by creating export favoring conditions at the macro level. Measures aimed at creating conditions conducive to expansion of exports have included currency realignments and tax credits for exports. The main thrust of such measures has been aimed at reducing the relative prices of U.S. goods in order to increase their competitiveness in overseas markets.

These export promotion efforts have not been as successful as anticipated. A study by Rao and Weinrauch recognizes this problem. They state, "Although several macro-export-favoring developments have taken place during the last year [1973], the expected export growth is not taking place."⁴⁴ Rao and Weinrauch conclude that favorable macro level economic conditions are "a necessary but not a sufficient condition to achieve the country's export growth."⁴⁵ A study by Simpson supports Rao and Weinrauch's

⁴⁴C. P. Rao and Donald D. Weinrauch, "Internal Managerial Inhibitors to Export Expansion," paper presented at the annual meeting of the Southern Marketing Association, Houston, Texas, 9 November 1973, p. 6.

⁴⁵Ibid.

conclusions. After studying a sample of Tennessee exporting manufacturers and non-exporting manufacturers, Simpson concluded that factors at the macro level are significant but not sufficient in the positive export decision.⁴⁶ Simpson further concluded that even if conditions at the macro level are favorable to exporting, factors at the level of the firm may prohibit the actual exportation process.

As a result, in order to explain why some firms export while others do not, it is becoming increasingly apparent that one must look at factors at two levels, namely, factors at the macro level, which are external to the firm, and factors at the micro level, which are internal to the firm. To be sure, factors at the macro level are a fundamental element in explaining the direction and structure of international trade and their importance should, therefore, not be discounted.⁴⁷ Their importance, however, is generally overemphasized. A recent study by Fikret Ceyhun emphasizes this point. Ceyhun reviewed and analyzed traditional international trade theories and then

⁴⁶Claude L. Simpson, Jr., "The Export Decision: An Interview Study of the Decision Process in Tennessee Manufacturing Firms" (Ph.D. dissertation, Georgia State University, 1973), p. 110.

⁴⁷P. T. Ellsworth, The International Economy, 3rd ed. (New York: Macmillan, 1964), p. 157.

set forth to test the theories.⁴⁸ He developed a comprehensive econometric model to analyze certain macro factors influencing export and import patterns. The results of his principal components regression analysis question the emphasis trade theory has placed on macro-level factors. Ceyhun concludes his study by stating, "It would appear that trade theory to date has been characterized by a fairly general and unwarranted under-emphasis of non-price micro-level factors."⁴⁹ He concludes that concentration on macro-level factors only or even primarily is virtually untenable, and that there is much to be gained by transferring a large amount of attention to the micro level.

The Micro Level

International trade theorists are beginning to look at the micro level in search of factors which will provide information on why some firms export while others do not. David Leighton suggests that "if we wish to explain phenomena in the world of international economics, we must adopt a micro orientation, focusing on the decision

⁴⁸In concurrence with the Leontieff and Baldwin studies, Ceyhun's study found U.S. imports to be more capital intensive than U.S. exports. See Fikret Ceyhun, "Export-Performance of U.S. Manufacturing Industries: An Econometric Study" (Ph.D. dissertation, Wayne State University, 1972), p. 189.

⁴⁹Ibid., p. 193.

processes of individual firms."⁵⁰ In the decision process involving the geographical horizon of a business, the influence of a firm's chief executive has been suggested as a principal factor.⁵¹ Only within the last few years have studies noted the importance of the chief executive in the decision of a firm to internationalize. Studies by Aharoni, Pinney, Rao and Weinrauch, Simpson, and Hackett have pointed to the influence of the chief executive.

Aharoni's Study

In an intensive study of thirty-eight companies (twenty-seven of which conducted business overseas), Yair Aharoni found that the outlook of the chief executive was one of the most important determinants of a firm's decision to look abroad. Aharoni found that chief executives with an "international outlook" often pushed their companies into international business.⁵² He noted that in several cases the chief executive simply instructed one of his subordinates to conduct a foreign market study. Aharoni found that in some cases the market study was not actually undertaken with the intention of determining

⁵⁰Leighton, p. 6.

⁵¹Stefan H. Robock and Kenneth Simmonds, International Business and Multinational Enterprises (Homewood, Ill.: Richard D. Irwin, 1973), p. 29.

⁵²Yair Aharoni, The Foreign Investment Decision Process (Boston, Mass.: Division of Research, Graduate School of Business Administration, Harvard University, 1966), p. 58.

the feasibility of entering a foreign market but was rather conducted only as a formality. In these cases, Aharoni noted that "it was found that the executive's belief in foreign market possibilities was so strong that the . . . decision to invest had been made before the investigation even began."⁵³

In addition to noting the role a chief executive with an international outlook can play in the international geography of a company, Aharoni briefly examined some factors which may influence an executive's international outlook. Why did some chief executives have an international outlook and feel strongly that their companies should be internationally oriented, while others did not? Aharoni indicates that the international orientation of an executive may be influenced by some past experience, the executive's level of education, the circle of friends with whom the top executive frequently interacts and communicates, and the extent of travel abroad. However, he states that "in the research reported in this book, these variables could not be checked, and the writer readily admits he does not know" whether these variables are actually related to an executive's international orientation.⁵⁴

⁵³Ibid.

⁵⁴Ibid., p. 59.

Pinney's Study

Research by James Pinney lends support to Aharoni's contention. In a study of seven Indiana manufacturing firms engaged in exporting, Pinney documented the importance of the top executive in decisions concerning exporting. Pinney noted that in firms committed to exporting, the top executive was often interested in, committed to, and directly involved in foreign trade activities. When asked to identify "the necessary and sufficient set of conditions" which result in a firm being committed to foreign trade, the firms all mentioned the importance of interested and enthusiastic top management.⁵⁵ Pinney characterized top management of the firms committed to exporting as "cosmopolitan" in their frame of reference.

In examining some of the possible sources of the cosmopolitan frame of reference of top managers of exporting firms, Pinney noted that many of the chief executives in the firms actively engaged in exporting had been exposed to foreign cultures and languages at an early age. He concludes that these exposures "undoubtedly provided them with the broad sphere of reference required to include foreign markets in the search for market alternatives."⁵⁶ Chief executives with cosmopolitan

⁵⁵James Pinney, "The Process of Commitment to Foreign Trade" (D.B.A. dissertation, Indiana University, 1969), p. 321.

⁵⁶Ibid., p. 314.

orientations were also found to be relatively young (30s or early 40s). Pinney also found that most of the cosmopolitan chief executives possessed a college degree in a scientific field.

Pinney's use of a case study approach to analyze a small number of non-randomly selected firms limits the generality of his results. In addition, Pinney does not analyze the managerial characteristics of non-exporting firms. This lack of a control group of non-exporting firms for use as comparison further limits his ability to formulate substantive conclusions. Recognizing these methodological limitations, Pinney recommends that further investigation be conducted using adequate sampling techniques to provide substantive scientific evidence.

Rao and Weinrauch's Study

The objectives of a research study by Rao and Weinrauch were twofold: first, they sought to identify some of the problems exporters have encountered in the exportation process, and second, they set forth to identify some of the perceived obstacles which inhibit firms from initiating exporting. To examine problems which exporters have encountered, the researchers surveyed 129 Arkansas firms engaged in exporting.⁵⁷ Expense and difficulty of shipping, problems in determining appropriate

⁵⁷Rao and Weinrauch, p. 9.

export prices, and difficulties in estimating product demand overseas were found to be problems of importance to exporters.

To identify perceived obstacles to export initiation, mail questionnaires and personal interviews were utilized to gather information from a sample of 213 Arkansas firms which were identified as potential exporters. The researchers characterized potential exporters as non-exporting firms which had expressed an interest in exporting and whose products appeared to the researchers to be exportable.⁵⁸ Of the 213 potential exporters surveyed, 93 of the firms provided usable questionnaire responses, a return of 43.6 percent. To supplement the survey response, five personal interviews were held with potential exporters, increasing the response rate to 46 percent.

Rao and Weinrauch found that potential exporters listed "top management's attitude toward exporting" as a major inhibitor of their initiating exports. In fact, 41.6 percent of the potential exporters identified top management's general attitude toward exporting as a major obstacle to export initiation.⁵⁹

⁵⁸J. Donald Weinrauch and C. P. Rao, "The Export Marketing Mix: An Examination of Company Experiences and Perceptions," Journal of Business Research 2 (October 1974): 450.

⁵⁹Rao and Weinrauch, "Internal Managerial Inhibitors to Export Expansion," p. 23.

Simpson's Study

To analyze selected aspects of the exporting process, Simpson conducted a study of a random sample of Tennessee manufacturing firms which were exporting and Tennessee manufacturing firms which were not exporting. His sample consisted of seventy non-exporting firms and fifty exporting firms. To collect information about the firms and their involvement or lack of involvement with exporting, Simpson conducted personal interviews with the chief decision-maker in each of the firms.

During the study Simpson asked the executives of the non-exporting firms: "Why, in your opinion, could you not export your product?"⁶⁰ Only 31 percent of the non-exporters responded that they could not export; 69 percent of the non-exporting decision-makers reported that they could export their products. Simpson subsequently asked these non-exporters why, given their ability to export, they did not export. In analyzing the reasons given by these non-exporters for not exporting, he found that in seventy percent of the cases, apathy on the part of the chief executive was the primary reason for firms not exporting when they felt they could. Simpson emphasizes this finding:

An analysis of the responses given to the reasons why the decision-makers do not export when they feel

⁶⁰Simpson, pp. 44-45.

they can tends to indicate that apathy, on the part of the decision-maker, is the prime reason for lack of export activity.⁶¹

Hackett's Study

In a study of Oklahoma exporters and non-exporters, Hackett found that many of the exporting companies manufactured products of a standard nature. In noting the conflict between his research finding and the emphasis of traditional international trade theory on capital-intensive, technologically-complex products, Hackett stated:

It is highly probable that current studies in this area have placed much too stringent qualifications on potential exportable products. In fact, it seems that the current literature suffers from a "product myopia" in that it places too much emphasis on the type and complexity of the product.⁶²

Hackett contends that more attention needs to be placed on non-product dimensions. The results of his study support his contention in that he found that the attitude of top management regarding foreign marketing is an important determinant of a firm's commitment to international trade. In fact, Hackett concludes that management's attitude regarding foreign markets is probably the most important determinant of the success of an exporting firm.⁶³

⁶¹Ibid., p. 46.

⁶²Donald Wayne Hackett, "A Comparison of Small Export and Domestic Oriented Manufacturers Attitudes Regarding the National, International, and Ideal Market-places" (D.B.A. dissertation, University of Oklahoma, 1973), p. 132.

⁶³Ibid.

Hackett's study consisted of interviewing top executives of eighteen Oklahoma manufacturing firms engaged in exporting and top executives of eighteen Oklahoma manufacturing firms not involved in exporting. Using semantic differentials, Hackett examined the attitudes of the two groups of top executives toward several international marketing concepts. The two groups of executives were found to have significantly different views of four such concepts: (1) channels-of-distribution for international marketing, (2) international marketing profitability, (3) financing for international marketing, and (4) documentation for international marketing.

In relation to channels-of-distribution, non-exporters viewed international channels significantly more negatively than domestic channels. Non-exporters appeared to mistrust international channels. Exporters, on the other hand, saw no significant difference between channels-of-distribution domestically and channels-of-distribution internationally.

In the case of marketing profitability, non-exporters viewed international marketing as less profitable than domestic marketing. Exporters, on the other hand, considered international marketing to be more profitable than domestic marketing.

Executives of non-exporting firms felt financing for international marketing was more difficult than

financing for domestic marketing. Executives of exporting firms, however, felt domestic financing and international financing were of a similar nature. The exporting executives did not feel international financing was more difficult than domestic financing.

Finally, executives of companies not involved in exporting viewed documentation for international marketing more negatively than documentation for domestic marketing. Hackett found that executives of companies engaged in exporting also viewed international documentation more negatively than domestic documentation. While both groups of executives held negative views of international documentation vis-a-vis domestic documentation, the view of non-exporters was found to be significantly more negative than was the view of exporters.

In analyzing the negative views of non-exporters, Hackett found only one of the negative views to have a substantive base. Since exporters viewed international documentation more negatively than domestic documentation, Hackett concluded that the non-exporters' fear of international documentation was founded, and that attempts should be made to ease international documentation procedures. Since experienced exporters did not view the international aspects of financing, channels-of-distribution, or profitability more negatively than the respective domestic aspects, Hackett concluded that the non-exporters'

negative views of export financing, international channels-of-distribution, and export profitability were not based upon fact and were, therefore, unfounded.

Hackett then proceeded to analyze the research findings. He noted that the non-exporters' negative view of exporting was possibly due to ethnocentrism. He stated:

A certain amount of ethnocentrism was noted among the domestic-oriented respondents. This was evidenced by subtle racial and ethnic slurs. Although not often shown openly it appears that some participants view the world outside the continental United States as dishonest, poverty ridden countries who have no need for their products.⁶⁴

Purpose of the Study

But what is the level of ethnocentrism of chief executives of non-exporting manufacturing firms? Does the level of ethnocentrism of chief executives of non-exporting manufacturing firms differ from the level of ethnocentrism of chief executives of manufacturing firms involved in exporting? Review of the literature reveals that several researchers have indicated that the international orientation of a firm's chief executive is important in stimulating or inhibiting initiation and sustenance of the exportation process; however, none of the research studies have directly examined the international orientation of chief

⁶⁴Ibid., p. 121.

executives. Most of the research findings have been of an ancillary nature. Furthermore, most of these findings have neither directly resulted from nor are they amenable to direct statistical analysis and testing. The purpose of this research was, therefore, to directly analyze the international orientation of chief executives. Specifically, the purpose of this study was to determine whether the international orientation of chief executives of non-exporting manufacturing firms located in Virginia differed significantly from the international orientation of chief executives of Virginia exporting manufacturing firms.⁶⁵

It was also the purpose of this research to identify some of the factors related to the development of an international orientation. Aharoni and Pinney, for example, identified some factors which they felt might be related to an international orientation. Their research, however, did not indicate whether the factors were actually

⁶⁵International orientation is here being defined as the ability of an individual to transcend attitudes and feelings of superiority about his own group. Ethnocentrism, on the other hand, refers to the opposite of international orientation in that it is defined as the attitude on the part of the individual that his own group is of inherent superiority. Since the terms international orientation, multicultural orientation, worldmindedness, and internationalism are generally used interchangeably throughout the literature of the field, they will be used interchangeably in this research effort. In addition, since the terms ethnocentrism, xenophobia, and nationalistic orientation are all used synonymously throughout the literature, they will be used synonymously in this research paper.

significantly related to the development of an international orientation. It was, therefore, a purpose of this study to analyze, using statistically reliable techniques, some of the factors which have been suggested as being related to international orientation.

Factors Related to International Orientation

The factors which previous researchers have suggested as possibly being related to international orientation appear to fall into four broad categories. These four categories are: (1) age, (2) education, (3) foreign language capability, and (4) overseas experience.

Age

Pinney observed that younger executives seem to be more internationally oriented than older executives.⁶⁶ Hays has indicated that age appears to be strongly and inversely related to international orientation: younger executives generally tend to be more internationally oriented than older executives.⁶⁷ On the other hand, a study by Graham found no definitive relationship between age and the orientation of one's attitudes.⁶⁸

⁶⁶Pinney, p. 313.

⁶⁷Richard D. Hays, "Expatriate Selection: Insuring Success and Avoiding Failure," paper presented at the annual meeting of the Academy of International Business, 28 December 1973.

⁶⁸David Graham, "State Department Rigidity," International Studies Quarterly 18 (March 1974):37.

While some researchers appear to believe that an inverse relationship exists between age and international orientation, little research evidence exists to support such a hypothesis. This research, therefore, examined age in relation to international orientation.⁶⁹

Education

Several studies have indicated that the type and amount of an executive's education are related to his international orientation. Aharoni suggested that the "executive's level of education" might be related to the level of his international orientation.⁷⁰ Levinson reported finding a slight relationship between amount of education and international orientation.

It is likely, though far from a demonstrated fact, that college graduates are less ethnocentric than high school graduates, who are in turn less ethnocentric than those who did not complete high school.⁷¹

The executive's type of educational background has also been suggested as a factor related to the level of his international orientation. As early as 1925, Hough discussed the need for executives to be internationally

⁶⁹As Erdos suggests, in gathering the information about age, the age categories used by the Census Bureau were used. Paul L. Erdos, Professional Mail Surveys (New York: McGraw-Hill Book Company, 1970), p. 53.

⁷⁰Aharoni, p. 59.

⁷¹T. W. Adorno, et al., The Authoritarian Personality (New York: Harper and Row, 1950), p. 287.

oriented, and he emphasized the importance of a liberal arts educational background.

The young man whose ambition it is to become a successful export executive must possess, or acquire, certain qualities. He must be of wide and liberal sympathies, tolerant of other men's ideas, realizing that there are other high civilizations than our own. . . . Whether college trained or not, his general education should be broad and include what are termed the liberal branches, rather than, or in addition to, the science of business administration.⁷²

Pinney, on the other hand, noted in his study that most of the internationally oriented executives were holders of scientific degrees.⁷³

Since little evidence exists as to whether the amount or type of educational background of the executive is actually related to the level of his international orientation, this research effort examined these factors.

Foreign Language Capability

Cultural shock has often been in part attributed to the expatriate's inability to communicate in the language of a foreign culture. Even though American executives may be able to function and communicate commercially in a foreign environment since English is almost universally the language of commercial activities, foreign language inadequacy may limit the extent of the executive's cultural

⁷²B. Olney Hough, The Export Executive (Scranton, Penn.: International Textbook Company, 1925), p. 41.

⁷³Pinney, p. 313.

understanding and assimilation. Terpstra states: "Learning a language well means learning the culture, because the words and phrases of the language are merely concepts and ideas reflecting and describing the culture from which it was formed."⁷⁴ Terpstra stresses that language is not only the chief means of communicating within a foreign culture; it is the key to understanding the foreign culture.

It would appear, therefore, that foreign language capability might be related to the level of an executive's multicultural, or international, orientation. Consequently, this study examined the executive's language capability in relation to the level of his international orientation.

Overseas Experience

In discussing internationally oriented executives, Pinney noted that ". . . more than half of the executives had been exposed to foreign cultures and languages while they were young--either in college, the military, or on vacations abroad."⁷⁵ Hays also noted a positive relationship between having lived abroad and the internationalization of one's ideas. He noted, however, a fairly high degree of variability in the nature of this relationship.⁷⁶ He says that traveling abroad is not always a force toward

⁷⁴Vern Terpstra, International Marketing (New York: Holt, Rinehart and Winston, 1972), p. 92.

⁷⁵Ibid.

⁷⁶Hays, p. 14.

internationalization of one's attitudes. Hays notes that the relationship may depend on the amount of time one has spent abroad at any one time, for he indicates that at least one year abroad may be needed to allow one time to overcome the phenomenon of cultural shock. He indicates that executives that have spent only a short period of time overseas often report that they had great "adjustment difficulties."⁷⁷ Returning to the United States after having encountered such adjustment difficulties may result in the executive becoming more ethnocentric.

Fayerweather also notes that the nature of the overseas experience may be related to its influence on the individual's international orientation.⁷⁸ Persons deployed overseas during a military action, for example, may well develop a general dislike for foreign people, whereas people going overseas under more friendly circumstances may be influenced differently.

Little evidence exists concerning the nature of the relationship, if any, between the extent and type of the executive's overseas experience and the level of his international orientation. As a result, this research

⁷⁷Ibid.

⁷⁸John Fayerweather, Jean Boddewyn, and Holger Engberg, International Business Education (New York: New York University, 1966), p. 24.

effort examined overseas experience in relation to international orientation.

In addition to an analysis of overseas experience in relation to international orientation, this study examined the amount of foreign experience of non-exporting executives in relation to the foreign experience of exporting executives before the exporting executives became involved in exporting. Pinney noted that a significant percentage of exporting executives had had overseas experience before they became involved in exporting.⁷⁹ In his study of Tennessee manufacturers, Simpson, on the other hand, found that the exporting executives had not had a greater number of trips to foreign countries prior to commencement of exporting than had non-exporting executives.⁸⁰ Since the existing research evidence is inconclusive, this study examined this aspect of foreign experience.

Summary

In this chapter, international trade theory based on the concept of comparative advantage and the theory of factor-proportions has been examined, as has its inability to explain why some firms export while others do not. Focusing almost exclusively on macro-level economic factors has limited the explanatory power of international

⁷⁹Pinney, p. 313. ⁸⁰Simpson, p. 59.

trade theory, for macro-level factors have been found to be significant but not sufficient in explaining the positive export decision. In order to explain the dynamics of export initiation and sustenance, it has become increasingly apparent that one must look at factors at both the macro and the micro level. Review of recent literature which has focused on the micro level reveals that several studies have pointed to the importance of the international orientation of a firm's chief executive. Yet, most of the findings of these studies concerning international orientation have been of an ancillary nature. The purpose of this research effort was, therefore, the direct analyzation of the international orientation of the chief executives of Virginia manufacturing firms. It was also the purpose of this study to examine age, education, language capability, and overseas experience in relation to international orientation.

CHAPTER III

RESEARCH METHODOLOGY

The methodology used in this research effort will be explored in this chapter. First, the research questions and hypotheses will be stated. The data collection methodology used in this research will then be presented. Lastly, the statistical analysis used in analyzing the data will be examined.

Research Questions

The research questions addressed by this study are as follows:

1. Does the international orientation of chief executives of Virginia manufacturers which are exporting differ significantly from the international orientation of chief executives of Virginia manufacturers which are not exporting?
2. Is the extent of export involvement of the exporting manufacturer significantly related to the level of international orientation of the exporting manufacturer's chief executive?

3. Is the age of the executive significantly related to the level of his international orientation?
4. Is the extent of education of the executive significantly related to the level of his international orientation?
5. Is the type of educational background of the executive significantly related to the level of his international orientation?
6. Is the foreign language capability of the executive significantly related to the level of his international orientation?
7. Is the extent of overseas travel of the executive significantly related to the level of his international orientation?
8. Prior to the commencement of their involvement with exporting, had the chief executives of Virginia exporting manufacturing firms spent significantly more time overseas than the chief executives of Virginia manufacturing firms which are not exporting?
9. Is the recency of foreign travel of the executive significantly related to the level of his international orientation?
10. Is the extent of time spent overseas before age fifteen by the executive significantly related to the level of his international orientation?

11. Is the length of the longest time spent overseas by the executive significantly related to the level of his international orientation?
12. Is overseas military duty by the executive significantly related to the level of his international orientation?
13. Is the type of overseas military duty by the executive significantly related to the level of his international orientation?

Hypotheses--Narrative Form

The following hypotheses stated in narrative form correspond to the preceding research questions:

1. There is no significant difference between the international orientation of chief executives of Virginia manufacturing firms which are exporting and the international orientation of chief executives of Virginia manufacturing firms which are not exporting.
2. Extent of export involvement of the exporting manufacturer is not significantly related to the level of international orientation of the exporting manufacturer's chief executive.
3. Age of the executive is not significantly related to the level of his international orientation.
4. Extent of education of the executive is not significantly related to the level of his international orientation.

5. Type of educational background of the executive is not significantly related to the level of his international orientation.
6. Foreign language capability of the executive is not significantly related to the level of his international orientation.
7. Extent of overseas travel of the executive is not significantly related to the level of his international orientation.
8. Prior to the commencement of their involvement with exporting, chief executives of Virginia exporting manufacturing firms had not spent significantly more time overseas than the chief executives of Virginia manufacturing firms which are not exporting.
9. Recency of foreign travel of the executive is not significantly related to the level of his international orientation.
10. Extent of time spent overseas before age fifteen by the executive is not significantly related to the level of his international orientation.
11. Length of the longest time spent overseas by the executive is not significantly related to the level of his international orientation.
12. Overseas military duty by the executive is not significantly related to the level of his international orientation.

13. Type of overseas military duty by the executive is not significantly related to the level of his international orientation.

/ Hypotheses--Notational Form

The research hypotheses in notational form are as follows:

| | |
|---|---|
| $H_0: a_{m1} = a_{m2}$ | $H_1: a_{m1} \neq a_{m2}$ |
| $H_0: a_{n1} = a_{n2} = a_{n3}$ | $H_1: \text{not all } a_{ni} \text{ are equal}$ |
| $H_0: a_{o1} = a_{o2} = a_{o3} = a_{o4} = a_{o5}$ | $H_1: \text{not all } a_{oi} \text{ are equal}$ |
| $H_0: a_{p1} = a_{p2} = a_{p3} = a_{p4} = a_{p5}$ | $H_1: \text{not all } a_{pi} \text{ are equal}$ |
| $H_0: a_{q1} = a_{q2} = a_{q3} = a_{q4} = a_{q5} = a_{q6} = a_{q7}$ | $H_1: \text{not all } a_{qi} \text{ are equal}$ |
| $H_0: a_{r1} = a_{r2} = a_{r3}$ | $H_1: \text{not all } a_{ri} \text{ are equal}$ |
| $H_0: a_{s1} = a_{s2} = a_{s3} = a_{s4} = a_{s5} = a_{s6}$ | $H_1: \text{not all } a_{si} \text{ are equal}$ |
| $H_0: a_{t1} < a_{t2}$ | $H_1: a_{t1} > a_{t2}$ |
| $H_0: a_{u1} = a_{u2} = a_{u3} = a_{u4} = a_{u5}$ | $H_1: \text{not all } a_{ui} \text{ are equal}$ |
| $H_0: a_{v1} = a_{v2} = a_{v3} = a_{v4} = a_{v5}$ | $H_1: \text{not all } a_{vi} \text{ are equal}$ |
| $H_0: a_{w1} = a_{w2} = a_{w3} = a_{w4} = a_{w5} = a_{w6} = a_{w7}$ | $H_1: \text{not all } a_{wi} \text{ are equal}$ |
| $H_0: a_{x1} = a_{x2}$ | $H_1: a_{x1} \neq a_{x2}$ |
| $H_0: a_{y1} = a_{y2} = a_{y3}$ | $H_1: \text{not all } a_{yi} \text{ are equal}$ |

where:

a_{m1} = mean score of exporters

a_{m2} = mean score of non-exporters

a_{ni} = mean scores for various levels of export involvement

a_{oi} = mean scores for various levels of factor O (age)

a_{pi} = mean scores for various levels of factor P (extent of education)

- a_{qi} = mean scores for various levels of factor Q
(type of educational background)
- a_{ri} = mean scores for various levels of factor R
(foreign language capability)
- a_{si} = mean scores for various levels of factor S
(extent of overseas travel)
- a_{t1} = amount of time spent overseas by exporting
executives before commencement of exporting
- a_{t2} = amount of time spent overseas by non-exporting
executives
- a_{ui} = mean scores for various levels of factor U
(recency of foreign travel)
- a_{vi} = mean scores for various levels of factor V
(extent of time spent overseas before age
fifteen)
- a_{wi} = mean scores for various levels of factor W
(length of longest time spent overseas)
- a_{x1} = mean score of executives without overseas
military experience
- a_{x2} = mean score of executives with overseas military
experience
- a_{y1} = mean score of executives without overseas
military experience
- a_{y2} = mean score of executives with overseas military
experience involving a military combatant
role during a war or police action
- a_{y3} = mean score of executives with overseas
military experience not involving a military
combatant role during a war or police action

Data Collection Methodology

Definition of the Population

The scope of this study is limited to an analysis of the international orientation of two groups of chief

executives, namely, chief executives of Virginia manufacturing firms which are exporting and chief executives of Virginia manufacturing firms which are not exporting.¹ Both groups of executives were identified by examining the Directory of Virginia Manufacturers, 1975.² Non-exporting manufacturers were identified by examining the Geographical Section of the Directory. The Geographical Section of the Directory is a listing of all the non-exporting manufacturing firms located in Virginia; therefore, this section of the Directory was an appropriate source for defining and identifying the population of non-exporting manufacturers. The Directory also listed the name of the chief executive of each of the non-exporting firms.

Virginia manufacturing firms engaged in exporting were identified by examining the World Trade Section of the Directory. The World Trade Section was appropriate for defining the exporting population since this section contained a list of all the manufacturing firms in Virginia engaged in exporting, as well as a listing of the top executive in each of these firms.

¹Affiliates, divisions, subsidiaries, and plants of parent firms headquartered outside the state of Virginia were excluded from the research analysis since the chief executive of the firm itself was located outside of the state of Virginia.

²Directory of Virginia Manufacturers, 1975-1976 (Richmond, Va.: Virginia State Chamber of Commerce, 1975).

Restricting the population definition to a particular geographical domain places limitations on the generality of the research results.³ Restricting the survey population of this research effort to the state of Virginia limits the generality of the research results. Virginia is an export-oriented state due to the presence of the port of Hampton Roads, one of the leading ports in the nation in terms of international trade.⁴ Virginia has a broad base of industries involved in exporting. As previously noted, one of every eight persons employed in Virginia holds a job that is directly related to export activities.⁵ While these figures suggest representativeness of the Virginia export industry and thus argue for a broader base for generalizing the research results, they are not definitive; therefore, caution must be exercised in using the research results of this survey to generalize to populations other than those populations defined within the state of Virginia.

³In addition, restricting the research effort to manufacturing firms limits generality of the research results to that group of firms.

⁴The port of Hampton Roads accounted for over \$6 billion in international trade in 1975. Virginian-Pilot, 25 January 1976, p. H6.

⁵Federal Reserve Bank of Richmond, "The Major Ports of the Fifth District," Monthly Review (August 1972), p. 2.

Sampling Procedures

Of the 3,022 non-exporting manufacturing firms headquartered in Virginia, 917 non-exporting manufacturers were randomly selected. Of the 1,296 exporting manufacturing firms in Virginia, 393 were selected at random. (An analysis of the procedures and calculations used in determining the sample sizes is given in Appendix A). To select the two groups of firms at random, each firm was assigned an index number. A table of random numbers was then used to identify the firms to be included in the sample.

The top executive in each of the selected firms was surveyed via mail questionnaire. Each survey questionnaire was coded so that follow-up letters could be utilized in order to maximize the response rate.

The Mail Survey and the Non-Response Study

Surveys relying on direct mail questionnaires possess some advantages and incur some limitations. Paul Erdos discusses some of the advantages of mail questionnaires.⁶ Some of the major advantages of mail surveys over surveys using other methods of collecting data are as follows:

⁶Paul L. Erdos, Professional Mail Surveys (New York: McGraw-Hill Book Co., 1970), pp. 5-10.

1. Wider distribution
2. Less distribution error
3. No interviewer bias
4. Better probability of a truthful reply
5. Better probability of a thoughtful reply
6. Time-saving
7. Cost-saving

Of particular importance in relation to this research effort is the increased probability of a truthful response that mail surveys afford. Erdos notes that as many as five times as many people will refuse to provide an interviewer answers to questions of a personal or controversial nature as will refuse to answer the same questions by mail.⁷ This factor is of particular relevance since measures of internationally-oriented attitudes solicit personal opinions about issues of a controversial nature.

Oppenheim, a noted authority on the design and use of questionnaires to measure attitudes, also emphasizes the advantages of mail questionnaires in measuring attitudes about controversial issues. He notes that mail questionnaires dealing with socially controversial issues generally produce a greater percentage of frank and

⁷Ibid., p. 9.

truthful responses than face-to-face interviews.⁸ This greater response results in part from the fact that anonymity of the respondent can be guaranteed in the introductory letter accompanying the mail questionnaires, whereas such anonymity cannot be guaranteed by a personal interviewer. Because such anonymity cannot be guaranteed in face-to-face situations, interviews introduce bias when asking questions of a controversial nature, for respondents tend to give only socially acceptable answers.

Mail surveys also incur limitations. As Erdos emphasizes, questions about the desirability of using mail questionnaires arise if no mailing list is available, the questionnaire cannot be structured, the questionnaire is too long, or the questionnaire is too difficult.⁹ None of these concerns are of particular importance to this study since a complete and unbiased list of the population exists, the questionnaire is structured, the questionnaire is relatively short, and the questionnaire is not particularly difficult.

One of the problems of mail questionnaires is of importance to this study, and that is the problem of nonresponse. This problem is probably the largest disadvantage of mail questionnaires. Yet, as Oppenheim

⁸A. N. Oppenheim, Questionnaire Design and Attitude Measurement (New York: Basic Books, 1966), p. 37.

⁹Erdos, p. 11.

stresses, it must be noted that in relation to the measurement of attitudes, ". . . surveys using face-to-face interviewers . . . also have a considerable nonsuccess rate."¹⁰

To minimize the nonresponse problem in this study, every effort was made to increase the number of usable returns. Table 3 shows the mail survey events and their associated dates. (Appendix B contains a copy of the initial cover letter and appendix C contains a copy of the second cover letter.) The survey was open for responses

TABLE 3
MAIL SURVEY EVENTS

| Event Number | Event | Date |
|--------------|--|----------------|
| 1. | Mail first wave of cover letter, questionnaire, and return envelope | April 16, 1976 |
| 2. | Mail reminder postcard | April 23, 1976 |
| 3. | Mail second wave of cover letter, questionnaire, and return envelope | April 30, 1976 |
| 4. | Close survey | May 14, 1976 |

¹⁰Oppenheim, p. 34.

for four weeks after the initial mailing. Erdos indicates that most surveys can be closed after three weeks. He reports on several studies of response patterns and indicates that the additional response after three weeks totaled less than three percent.¹¹ The pattern of responses received during this study roughly corresponds to the expected pattern Erdos reports.¹² The fourth week of this study produced only a small percentage return. The response patterns, by week, are shown in Table 4. The survey produced 768 responses, 755 of which were usable. The 755 usable responses represent a 57.6 percent response rate, a rate greater than the 50 percent response rate set as the goal for this study (see appendix A).

Even when the response rate for a survey is considered more than adequate, as it is in this study, the problem of nonresponse should, nonetheless, not be ignored, as it so often is. It was decided, therefore, to conduct an analysis of response patterns to determine if the survey results need to be altered to correct for nonresponse bias. Records were kept of the return dates of all questionnaires. To conduct the nonresponse analysis, scores of early respondents will be compared with the scores of late respondents to determine whether a significant difference between the scores exists. The study

¹¹Erdos, p. 262. ¹²Ibid.

TABLE 4

SURVEY RESPONSE PATTERNS BY WEEK

| Week Num- ber | Week Ending | Non- Exporter Responses | Non- Exporter Response Rate (Weekly %) | Exporter Responses | Exporter Response Rate (Weekly %) | Total Responses | Total Response Rate (Weekly %) |
|---------------------|------------------|-------------------------------|--|-----------------------|--|--------------------|---|
| 1 | April 23, 1976 | 340 | 37.1% | 158 | 40.2% | 498 | 38.0% |
| 2 | April 30, 1976 | 120 | 13.1 | 51 | 13.0 | 171 | 13.1 |
| 3 | May 7, 1976 | 42 | 4.6 | 16 | 4.1 | 58 | 4.4 |
| 4 | May 14, 1976 | 21 | 2.3 | 7 | 1.8 | 28 | 2.1 |
| | Cumulative Total | 523 | 57.1% | 232 | 59.1% | 755 | 57.6% |

will be conducted for each executive group, that is, the scores of the early respondents from the exporting group will be compared with the scores of the late respondents from the exporting group, and the scores of the early respondents from the non-exporting group will be compared with the scores of the late respondents from the non-exporting group. If no significant difference exists between the scores of the early respondents and the scores of the late respondents, the assumption will be made that nonrespondents do not differ significantly from respondents. This procedure is based on the assumption that late respondents are comparable to nonrespondents. Such an assumption appears to be founded, for as Oppenheim notes, ". . . it has been found that respondents who send in their questionnaire very late are roughly similar to nonrespondents."¹³

If, however, a difference exists between the scores of early respondents and the scores of late respondents, the survey results will be adjusted to allow for the difference. Since, as previously noted, it has been found that the scores of late respondents are roughly equivalent to the scores of nonrespondents, the adjustment will be made by weighting the nonresponse by the scores of the late respondents.¹⁴

¹³Oppenheim, p. 34.

¹⁴The results of the nonresponse study are presented in chapter IV.

The Questionnaire

The questionnaire was divided into two sections. The first section primarily contained questions about the chief executive and his background. The second section contained a scale designed to measure the chief executive's international orientation.

The First Section

In the first section, the respondent was asked to answer a series of questions concerning himself and his firm. In preparing the questionnaire, the principles of effective questionnaire design set forth by Erdos were consulted.¹⁵ Guidelines Erdos discusses in relation to questionnaire content and questionnaire format were consulted and followed.

After an initial questionnaire was constructed, a pilot study was conducted in order to obtain feedback about the questionnaire's clarity and content. Interviews were conducted with six top executives in non-exporting firms and four top executives in exporting firms. The primary purpose of the pilot survey was to determine the clarity of the instructions and to examine the questions contained in the first section of the questionnaire. Each executive was given the introductory letter and both sections of the questionnaire. The executives were then

¹⁵Erdos, pp. 37-74.

asked to comment on the introductory letter, the questionnaire instructions, the questionnaire design and format, the terminology, and the types of factors which they felt might be related to international orientation. Information gained during these interviews was used to revise the original form and construct a final form of the questionnaire. Section one of the questionnaire is contained in appendix D.

The pilot study was particularly useful in identifying factors possibly related to international orientation. Additional questions concerning military experience and language capability were added to the first section of the questionnaire due to ideas and suggestions received during the pilot study.

The International Orientation Section

The second section of the questionnaire consisted of a scale to measure international orientation. Several scales have been used by various researchers to measure international orientation. The major internationalism/ethnocentrism scales will be examined in this section.

The California Ethnocentrism Scale

The Ethnocentrism Scale (E Scale) of the California Public Opinion Scale was developed by Daniel J. Levinson

and published in 1950.¹⁶ The complete original E Scale consisted of 34 items, which were constructed so as to measure ethnocentrism through use of three subscales: the Negro Subscale consisted of 12 items, the Minority Subscale consisted of 12 items, and the Patriotism Subscale consisted of 10 items.

The E Scale was constructed as a summation scale, commonly referred to as a Likert-scale. All of the items were negative, that is, responses agreeing with the statements were considered ethnocentric responses. The odd-even reliability of the scale was shown to be .91 (corrected). Appendix E contains a copy of the original E Scale.

The original E Scale was specifically designed to measure the ethnocentrism of select California groups in the post-World War II period. As a result, the E Scale contained items which had geographic and temporal relevance. Item 21, for example, asked a question about the number of "Okies" moving to California, item 23 referred to the "warminded" Germans and Japanese, while item 17 referred to the Japanese leaving internment camp. Apparently recognizing that the original E Scale was geographically and temporally bound, Levinson subsequently developed revised

¹⁶T. W. Adorno et al., The Authoritarian Personality (New York: Harper & Row, 1950), pp. 102-150.

and shortened versions of the E Scale. The shortened versions consisted of items selected from the original E Scale, plus a select number of new items. Levinson analyzed the shortened versions of the E Scale and found that shortened versions of the E Scale had odd-even reliabilities ranging from .69 to .91 (corrected). After analyzing several shortened versions of the E Scale, Levinson suggested use of a twenty-item scale. The revised E Scale contained a subscale dealing with Jews, a subscale dealing with Negroes, and a subscale dealing with other minorities and patriotism. The revised "ethnic" scale was scored in the same manner as the original E Scale. All of the items were again constructed in the negative sense. Appendix F contains a copy of the revised E Scale.

The Internationalism-Nationalism Scale

In 1951, Levinson developed a second scale to measure international orientation.¹⁷ Levinson stated that the E Scale, which was originally developed during World War II, dealt with issues relevant to the years immediately following World War II. In order to conduct research on ethnocentrism during the 1950s, Levinson felt the need for

¹⁷Daniel J. Levinson, "Authoritarian Personality and Foreign Policy," Journal of Conflict Resolution 1 (March 1957):37-47. Levinson's second scale to measure international orientation was originally presented to the 1951 annual convention of the American Psychological Association.

an updated scale. He, therefore, developed a second ethnocentrism scale, which he referred to as the Internationalism-Nationalism Scale (IN Scale), to deal with issues which were then controversial.

The IN Scale consisted of twelve items. Nine of the items were negative, in that responses agreeing with the statements were considered nationalistic responses. The respondents were allowed three degrees of agreement and three degrees of disagreement with each item. Scores on each item ranged from 1 through 7: the high score was given for agreement with nationalistic items and disagreement with internationalistic items. The split-half reliability of the IN Scale was found to be .86 and the IN Scale correlated .77 with a sixteen-item E Scale which Levinson prepared from the original E Scale. Appendix G contains a copy of the IN Scale.

The California Fascism Scale

The California Fascism Scale, commonly referred to as the F Scale, was developed as an indirect measure of prejudice.¹⁸ Several versions of the F Scale were developed and analyzed in The Authoritarian Personality before a final form was selected. The final form of the F Scale consisted of 29 items. As with the E Scale and the IN Scale, respondents were allowed three degrees of

¹⁸Adorno, pp. 222-279.

agreement and three degrees of disagreement with each item. The reliability of the F Scale was shown to be .90. Appendix H contains a copy of the F Scale.

Since it has been observed that individuals scoring high on the F Scale also tend to score high on measures of ethnocentrism, the F Scale could potentially be considered as an indirect measure of ethnocentrism.¹⁹ Indeed, research reported in The Authoritarian Personality indicated that the average correlation between the F scale and the E Scale was about .73.²⁰ Adorno, however, notes that the correlation between the F Scale and the E Scale varied widely from one group of individuals to another. Furthermore, Adorno notes that although the two scales roughly correlate, they do not for all practical purposes measure the same thing.²¹ And a further research study found the F Scale to lack sensitivity in measurement of ethnocentrism, particularly when compared with the Worldmindedness Scale.²²

¹⁹Milton Rokeach, The Open and Closed Mind (New York: Basic Books, Inc., 1960), p. 12.

²⁰Adorno, p. 263.

²¹Ibid., p. 264.

²²Howard P. Smith and Ellen Weber Rosen, "Some Psychological Correlates of Worldmindedness and Authoritarianism," Journal of Personality 26 (June 1958): 180.

The Worldmindedness Scale

After weighing the strengths and weaknesses of the alternative measures of international orientation (see table 5), the Worldmindedness Scale was found to be the most appropriate for use in this study. The Worldmindedness Scale, commonly referred to as the W Scale, was developed by Sampson and Smith.²³ In developing the W Scale, Sampson and Smith noted that the existing ethnocentrism scales frequently included factual and topical statements about international affairs. This inclusion of factual and topical statements resulted in the existing measures of ethnocentrism having only a limited period of usefulness. Sampson and Smith designed the W Scale to measure an individual's international orientation, or frame of reference toward international affairs, apart from the individual's knowledge about factual and topical statements about international affairs. Sampson and Smith, therefore, selected items for inclusion in the scale ". . . that were not statements of fact and that were not topical in reference."²⁴

The W Scale originally consisted of 60 items. Analysis of each item was then undertaken to determine the

²³Donald L. Sampson and Howard P. Smith, "A Scale to Measure Worldminded Attitudes," Journal of Social Psychology 45 (February 1957):99-106.

²⁴Ibid., p. 100.

TABLE 5

STRENGTHS AND WEAKNESSES OF ALTERNATIVE INTERNATIONAL
ORIENTATION SCALES

| Scale | Strengths | Weaknesses |
|----------|--|--|
| E Scale | <ol style="list-style-type: none"> 1. Reliability of .91 for complete scale 2. Research indicating internal validity 3. Relevant studies by Levinson, Adorno, et al., using the scale | <ol style="list-style-type: none"> 1. Questions relate specifically to World War II period 2. Varying reliability (.69-.91) of shortened versions of the scale 3. All items constructed in the negative sense |
| IN Scale | <ol style="list-style-type: none"> 1. Reliability of .86 2. High correlation with E Scale | <ol style="list-style-type: none"> 1. Questions relate specifically to early 1950s 2. Uneven number of negative-positive statements: nine negative statements and three positive statements |
| F Scale | <ol style="list-style-type: none"> 1. Reliability of .90 2. Research indicating internal validity 3. Relevant studies by Adorno and others using the scale | <ol style="list-style-type: none"> 1. Widely varied correlation with E Scale 2. All items constructed in the negative sense 3. Not designed as a measure of ethnocentrism: Adorno warns it doesn't really measure ethnocentrism 4. Lacks sensitivity as a measure of ethnocentrism |

TABLE 5--Continued.

| Scale | Strengths | Weaknesses |
|---------|---|------------|
| W Scale | <ol style="list-style-type: none"> 1. Reliability of .93 2. Research indicating internal validity 3. High correlation with E Scale 4. Studies indicating scale validity and sensitivity as a measure of ethnocentrism 5. Equal number of negative statements and positive statements | |

Discriminatory Power (D.P.) of each item.²⁵ Items with D.P. scores of less than 2.0 were excluded. The forty remaining items comprised the second form of the W Scale. Further refinement of the W Scale resulted in eight more items being excluded, so that the final form of the W Scale contained thirty-two items. The thirty-two item W Scale measured international orientation through use of the following eight subscales: religion, immigration, government, economics, patriotism, race, education, and war. Each subscale consisted of four questions.

The W Scale was constructed as a Likert-type summation scale. For each item, respondents were asked to indicate their agreement or disagreement by underlining one of the following six degrees of agreement or disagreement: strongly agree, agree, mildly agree, mildly disagree, disagree, strongly disagree. Sixteen of the items were constructed as proworldminded statements; the other sixteen items were antiworldminded statements. Scores on each item ranged from zero to six. The score of six was given for strong agreement with the internationally-oriented items and strong disagreement with the ethnocentric items. Therefore, the possible range of scores on the W Scale

²⁵The Discriminatory Power of an item is the difference between the mean score of the highest ten percent of the scores for the item and the mean score of the lowest ten percent of the scores for the item. For a discussion of this technique of item analysis, see Gardner Murphy and Rensis Likert, Public Opinion and the Individual (New York: Harper & Brothers, 1938), pp. 283-291, and Adorno, The Authoritarian Personality, p. 77.

is from zero, for extreme ethnocentrism, to 192, for extreme international orientation.²⁶ A copy of Sampson and Smith's W Scale is given in appendix I.

The W Scale was found to score high on reliability. The odd-even reliability of the W Scale was found to be .93 (corrected) and the test-retest reliability was also found to be .93.²⁷ These scores indicate the scale can be reliably used for measuring international orientation.

Sampson and Smith also analyzed the validity of the W Scale. They argued for the scale's validity based on its internal consistency and on its correlation with an independent measure of ethnocentrism. Using an eleven-item form of the E Scale, Sampson and Smith found a high negative association between the W Scale and the E Scale. In a separate study, Smith also analyzed the validity of the W Scale by employing the "known group" technique to demonstrate the ability of the scale to distinguish between the international orientation of individuals in groups known to differ in their level of international orientation.²⁸ Additional analysis of the W Scale by Smith and Rosen further indicated the sensitivity of the

²⁶Sampson and Smith, p. 102.

²⁷Ibid.

²⁸This and other evidence on the validity of the W Scale was reported in Howard P. Smith, "Changes in Attitude Resulting from Experiences in Foreign Countries" (Ph.D. dissertation, Harvard University, 1954).

W Scale in measuring international orientation.²⁹

Subsequent research in applying the scale has further demonstrated its sensitivity.³⁰

International Orientation Data Analysis

The choice of a proper statistical testing procedure is an important methodological consideration in data analysis. The nature of the questionnaire to be used in this research effort and the resultant survey data must be considered in determining the appropriateness of parametric or nonparametric statistical analysis. In addition, the alternative statistical tests of significance must be considered in determining the appropriate statistical analysis.

The Alternative Tests

If a parametric test of significance were to be used to analyze the international orientation data

²⁹Smith and Rosen, pp. 170-183.

³⁰See Bernard Mennis and Karl P. Sauvart, "Multi-national Corporations, Managers, and the Development of Regional Identifications in Western Europe," Annals of the American Academy of Political and Social Science 403 (September 1972):22-33; Richard D. Hays, "Expatriate Selection: Insuring Success and Avoiding Failure," Journal of International Business Studies 5 (Spring 1974):25-37; and Charles M. Langston and Donald W. Hackett, "Cultural Inflexibility in International Management Education," paper presented at the 34th annual meeting of the Academy of Management, Seattle, Washington, 20 August 1974, pp. 1-12.

generated by this study, the appropriate test procedure would be the analysis of variance (the F test) with a randomized group design. This one-way analysis of variance would be used to ascertain whether the international orientation of chief executives of exporting manufacturers differs significantly from the international orientation of chief executives of non-exporting manufacturers. This method of analysis of variance would also be used to determine if any of the factors (age, extent of education, type of educational background, extent of overseas travel, recency of foreign travel, extent of time spent overseas before age fifteen, length of longest time spent overseas, and military duty overseas during wartime) are significantly related to the level of the international orientation of the executives. If, on the other hand, a nonparametric test of significance were to be used to analyze the survey data resulting from this research, the Kruskal-Wallis one-way analysis of variance would be appropriate.³¹ This rank-order test would be the appropriate nonparametric analysis of variance.

While the parametric one-way analysis of variance (F-test) or the nonparametric one-way analysis of variance (Kruskal-Wallis test) would indicate whether a factor

³¹Sidney Siegel, *Nonparametric Statistics for the Behavioral Sciences* (New York: McGraw-Hill, 1956), pp. 184-193.

(age, extent of foreign travel, etc.) is significantly related to international orientation, neither would indicate the nature of the relationship. For example, analysis of variance might indicate that not all age groups have the same level of international orientation; however, analysis of variance would not reveal how the age groups differ: it would not reveal which of the age groups was significantly more (or less) internationally oriented than the other age groups. Edwards has succinctly noted this lack of specificity provided by the results of the analysis of variance.

Suppose we have tested a set of k means by the analysis of variance and have concluded that the means differ significantly. This, alone, . . . is not very satisfactory. What we usually want to know is how the means differ. Is every mean significantly different from every other? Are there significant differences between some of the means and not between others?³²

To analyze the nature of the individual differences among the groups, a multiple comparison test of significance would be needed.

A parametric test which has been commonly used to make multiple comparisons is Duncan's New Multiple Range Test.³³ Duncan's multiple comparison test has been shown

³²Allen L. Edwards, Experimental Design in Psychological Research, 4th ed. (New York: Holt, Rinehart, & Winston, 1972), p. 130.

³³David B. Duncan, "Multiple Range and Multiple F Tests," Biometrics 11 (March 1955):1-42. Also see Edwards, Experimental Design in Psychological Research, pp. 131-136.

to be broadly applicable in the analysis of problems in the social sciences.³⁴ There is, unfortunately, nothing like a Duncan's New Multiple Range Test to perform non-parametric multiple comparison.³⁵ Since no nonparametric test has been specifically designed to perform multiple comparisons, some researchers have tried to get around this deficiency by employing the Kruskal-Wallis test to analyze individual groups of samples. Conover notes, however, that use of the Kruskal-Wallis test to perform such multiple comparisons encounters problems.

If analysis of the data leads to rejection of the null hypothesis, then any group of two or more samples may be further analyzed using the Kruskal-Wallis test, until the differences between populations have been satisfactorily detected. However, the level of significance in all but the first test is distorted and almost completely devoid of meaning.³⁶

³⁴See, for example, Maurice F. Villere and G. Kent Stearns, "The Readability of Organizational Behavior Textbooks," Academy of Management Journal 19 (March 1976): 133-137; Frank Harrison, "The Management of Scientists," Academy of Management Journal 17 (June 1974):234-241; Wayne A. Burroughs, Jack B. Rollins, and John J. Hopkins, "The Effect of Age, Departmental Experience and Prior Rater Experience on Performance in Assessment Center Exercises," Academy of Management Journal 16 (June 1973): 335-339; and Rolph E. Anderson, "Consumer Dissatisfaction: The Effect of Disconfirmed Expectancy on Perceived Product Performance," Journal of Marketing Research 10 (February 1973):38-44.

³⁵Seymour Banks, Experimentation in Marketing (New York: McGraw-Hill, 1965), p. 104.

³⁶W. J. Conover, Practical Nonparametric Statistics (New York: John Wiley and Sons, 1971), p. 259.

The Assumptions

The assumptions underlying the testing procedure must also be considered in determining the appropriateness of a parametric or nonparametric test of significance. Kerlinger suggests that three major assumptions underlie the use of parametric tests.³⁷ These assumptions are: (1) interval measurements, (2) homogeneity of variance, and (3) normality.

Interval Measurements

An assumption of parametric tests of significance is that the dependent measures to be analyzed are continuous measures with equal intervals.³⁸ Continuous interval measures are necessary before the mathematical operations (addition, subtraction, multiplication, and division) required by the F test can be performed.

Siegel notes, "Frequently the grossness of our measuring devices obscures the underlying continuity . . ." that actually exists.³⁹ This appears to be the case of the traditional Likert-type summation scales, such as used in construction of the W-Scale. These six-point rating scales result in data that are in actuality discrete.

³⁷Fred N. Kerlinger, Foundations of Behavioral Research, 2nd ed. (New York: Holt, Rinehart, & Winston, 1973), pp. 286-88.

³⁸Ibid., p. 288.

³⁹Siegel, p. 25.

Likert developed the convention of using five- or six-point scales in order to facilitate ease of construction and computation, and he has contended that these scales give results comparable to interval scales.⁴⁰ Jacoby and Matell conducted research on the use of six-point scales in order to examine Likert's contention.⁴¹ They concluded that both the reliability and the validity of a scale are independent of the number of scale points used. Their research, therefore, tends to support Likert's contention that the five- or six-point scales give results equivalent to the results obtained by interval scales.

Nevertheless, it does appear that the Likert six-point scales result in discrete data. This need not be the case for all summation scales. To provide data of a continuous nature, summation scales can be constructed using a series of interval scales rather than a series of six-point scales.

Appendix J contains a copy of a W Scale that has been converted from a series of six-point scales to a series of sixty-millimeter scales and appendix K contains an explanation of how to score the converted W Scale. The converted W Scale appears to offer two major advantages

⁴⁰Murphy and Likert, pp. 54-56.

⁴¹Jacob Jacoby and Michael S. Matell, "Three-Point Likert Scales Are Good Enough," Journal of Marketing Research 8 (November 1971):495-500.

in comparison to the six-point W Scale designed by Sampson and Smith. Conversion of the W Scale to a series of interval scales will allow the W Scale to provide data of a continuous nature. In addition, the converted W Scale has the advantage of offering the respondent a midpoint for neutral responses. The absence of a midpoint for neutral responses introduces bias into the survey results for it forces a respondent to agree or disagree with a statement even if his attitude is really one of indifference.⁴²

Homogeneity of Variance

Parametric tests of significance also assume homogeneity of variance of the subject populations. In parametric analysis of variance, the within-groups sum-of-squares will be increased if the actual variances of the populations differ. This inflation of the within-groups sum-of-squares could result in the parametric analysis of variance test not being significant even though there might in fact be significant differences between the means.⁴³ The greater the differences between the variances of the populations, the greater will be the chance that the parametric analysis of variance will not detect significant differences between the means.

⁴²G. David Hughes, "Some Confounding Effects of Forced-Choice Scales," Journal of Marketing Research 6 (May 1969):223-226.

⁴³Kerlinger, p. 287.

Table 6 presents the results of the F test for homogeneity of variance.⁴⁴ As the table indicates, no significant difference was found to exist between the variances of the two groups on the international orientation scores; therefore, it can be concluded that the variances of the exporting and non-exporting populations are homogeneous.

TABLE 6

HOMOGENEITY OF VARIANCE TEST FOR THE
INTERNATIONAL ORIENTATION SCORES OF
THE EXPORTING EXECUTIVES AND THE
NON-EXPORTING EXECUTIVES

| Group | Variance | d.f. | F |
|---------------|----------|------|-------|
| Non-exporters | 321.812 | 231 | 1.009 |
| Exporters | 318.110 | 522 | |

F is not significant at the .05 level.

Normality

Parametric tests also assume that the populations under study are normally distributed, or at least that samples drawn from each of the populations would have normally distributed means.⁴⁵

⁴⁴For an explanation of the use of the F test for homogeneity of two variances, see Edwards, Experimental Design in Psychological Research, pp. 97-99.

⁴⁵Edward C. Bryant, Statistical Analysis, 2nd ed. (New York: McGraw-Hill, 1966), p. 119.

As Gaither has noted, some researchers maintain that if the assumptions of normality and homogeneity of variance are not strictly met, parametric statistics should not be used.⁴⁶ On the other hand, other researchers maintain that nonparametric tests of significance should be used only in cases involving extreme violations of the assumptions of normality and homogeneity of variance.

Several research studies have examined the impact of heterogeneity of variance and lack of normality on the parametric F test. Edwards has noted that the F test ". . . is a robust test in that it is relatively insensitive to violations of the assumptions of normality of distribution and homogeneity of variance."⁴⁷ Boneau notes that when the sample sizes are equal, heterogeneity of variance and lack of normality have little effect on the research results, even if the sample sizes are very small.

. . . no matter what the variance differences may be, samples of as small as five will produce results for which the true probability of rejecting the null hypothesis at the .05 level will more than likely be within .03 of that level. If the sample size is as large as 15, the true probabilities are quite likely within .01 of the nominal level.⁴⁸

⁴⁶Norman Gaither, "The Adoption of Operations Research Techniques by Manufacturing Organizations" (Ph.D. dissertation, University of Oklahoma, 1974), p. 190.

⁴⁷Allen L. Edwards, Experimental Design in Psychological Research, 4th ed. (New York: Holt, Rinehart, & Winston, 1972), p. 118.

⁴⁸C. Alan Boneau, "The Effects of Violations of Assumptions Underlying the t Test," Psychological Bulletin, 57 (January 1960):62.

Furthermore, Boneau notes that due to the Central Limit Theorem and other theorems, increasing the sample sizes further reduces the effects of heterogeneity of variance and lack of normality. He notes:

By the time the sample sizes reach 25 or 30, the approach should be close enough that one can, in effect, ignore the effects of violations of assumptions except for extremes.⁴⁹

Boneau states that since violations of the assumptions have little or no impact on the F and t tests, these tests can be regarded as ". . . functionally nonparametric or distribution free."⁵⁰

Kerlinger concludes that the impact of lack of normality and heterogeneity of variance has been overrated.⁵¹ After reviewing the results of several research studies, Gaither concluded, "The inability to assume normality and homogeneity of variance is no barrier to the use of parametric tests."⁵² After analyzing the results of a comprehensive study of the effects of non-normality and heterogeneity of variance, Lindquist concluded that unless the departure from normality and the heterogeneity of variance is so extreme as to be readily apparent upon mere inspection of the data, there would be no appreciable effect upon the F test. In summarizing the research evidence, he concluded that the F test was so insensitive

⁴⁹Ibid., p. 63.

⁵⁰Ibid.

⁵¹Kerlinger, p. 287.

⁵²Gaither, p. 195.

to non-normality and heterogeneity ". . . that it hardly seems worthwhile to apply any statistical test to the data" to detect non-normality or heterogeneity.⁵³

Despite Lindquist's conclusion, the international orientation data were tested for normality of distribution. Table 7 contains the results of the chi-square test of normality of the international orientation scores of the exporting executives, while Table 8 presents the results of the chi-square test of normality for the non-exporting executives.⁵⁴ As the tables show, the difference between the expected normal curve frequencies and the observed frequencies is not significant for either the exporting or the non-exporting group. (For further analysis of the normality of the international orientation data, see appendix L). It can, therefore, be concluded that the normal curve provides a reasonably good fit to both original distributions.

The Test Selection

The robustness of the parametric F test argues for the use of parametric analysis, particularly given the large

⁵³E. F. Lindquist, Design and Analysis of Experiments in Psychology and Education (Boston: Houghton Mifflin Company, 1953), p. 86.

⁵⁴Use of the chi-square test to test for normality of distribution is described in Benjamin Perles and Charles Sullivan, Modern Business Statistics, 2nd ed. (Englewood Cliffs, N.J.: Prentice-Hall, 1969), pp. 257-260, and Stephen P. Shao, Statistics for Business and Economics, 3rd ed. (Columbus, Ohio: Charles E. Merrill Publishing, 1976), pp. 425-426.

TABLE 7
 CHI-SQUARE TEST OF NORMALITY OF DISTRIBUTION OF THE
 INTERNATIONAL ORIENTATION SCORES OF THE
 EXPORTING EXECUTIVES

| International Orientation Scores | Observed Frequencies (f_o) | Expected Normal Curve Frequencies (f_e) | $\frac{(f_o - f_e)^2}{f_e}$ | χ^2 |
|--|--------------------------------------|---|-----------------------------|----------|
| 149 or over | 10 | 6 | 2.667 | 12.769 |
| 140-148 | 11 | 10 | .10 | |
| 131-139 | 20 | 21 | .048 | |
| 122-130 | 32 | 35 | .257 | |
| 113-121 | 38 | 44 | .818 | |
| 104-112 | 52 | 44 | 1.455 | |
| 95-103 | 25 | 35 | 2.857 | |
| 86-94 | 21 | 21 | 0 | |
| 77-85 | 12 | 10 | .40 | |
| 76 or less | 11 | 6 | 4.167 | |

χ^2 is not significant for 7 degrees of freedom (k-3) at the .05 level since 12.769 is less than 14.067.

NOTE: The Kolmogorov-Smirnov test of normality yields similar results. For the Kolmogorov-Smirnov test, D is not significant since the maximum D of .03233 is less than .08929 (the critical value of D for n=232).

TABLE 8

CHI-SQUARE TEST OF NORMALITY OF DISTRIBUTION OF THE
INTERNATIONAL ORIENTATION SCORES OF THE
NON-EXPORTING EXECUTIVES

| International Orientation Scores | Observed Frequencies (f_o) | Expected Normal Curve Frequencies (f_e) | $\frac{(f_o - f_e)^2}{f_e}$ | χ^2 |
|--|--------------------------------------|---|-----------------------------|----------|
| 136 or over | 18 | 12 | 3.0 | 13.198 |
| 127-135 | 29 | 23 | 1.565 | |
| 118-126 | 51 | 48 | .188 | |
| 109-117 | 70 | 78 | .821 | |
| 100-108 | 92 | 100 | .640 | |
| 91-99 | 93 | 100 | .490 | |
| 82-90 | 71 | 78 | .628 | |
| 73-81 | 50 | 48 | .083 | |
| 64-72 | 31 | 23 | 2.783 | |
| 63 or less | 18 | 12 | 3.0 | |

χ^2 is not significant for 7 degrees of freedom (k-3) at the .05 level since 13.198 is less than 14.067.

NOTE: The Kolmogorov-Smirnov test of normality yields similar results. For the Kolmogorov-Smirnov test, D is not significant at the .05 level since the maximum D of .03063 is less than .05947 (the critical value for D for n=523).

size of samples surveyed, the normality of the distributions and the homogeneity of the data's variances. The lack of a nonparametric multiple comparison test comparable to Duncan's New Multiple Range Test also favors use of parametric analysis. A third factor that argues for use of parametric analysis is that almost all of the previous research studies (with the exception of studies employing small samples) which have analyzed international orientation (such as the studies by Levinson, Smith and Sampson, Hays, and Hackett) have used parametric analysis. As a result, it was decided parametric analysis of variance would be used to analyze the international orientation data generated by this research effort.

Analysis of Overseas Experience Prior to Exporting

The hypothesis concerning the amount of overseas experience prior to involvement with exporting does not involve a comparison of levels of international orientation; rather, this hypothesis involves a comparison of the "amounts" of overseas experience. Whereas the other hypotheses involve analyzing a factor in relation to international orientation, this hypothesis involves analyzing the factor itself. As a result, this hypothesis requires a statistical method of analysis different from the other hypotheses.

The questions used to gather information about the amount of overseas travel prior to involvement with exporting result in categorical data with unequal cell intervals. As a consequence, these data do not meet the parametric assumption of equal and continuous units of measure; therefore, a nonparametric test of significance will be used to analyze the hypothesis concerning amount of overseas experience prior to exporting.

When examining two samples, each of which has several levels, the Kolmogorov-Smirnov two-sample test is an appropriate nonparametric statistical test.⁵⁵ Siegel states that the one-tailed Kolmogorov-Smirnov two-sample test is used to

. . . test the null hypothesis that the two samples have been drawn from the same population against the alternative hypothesis that the values of the population from which one of the samples was drawn are stochastically larger than the values of the population from which the other sample was drawn.⁵⁶

Since the question being examined is whether the amount of time spent overseas by exporting executives, prior to their becoming involved in exporting, is greater than the amount of time spent overseas by non-exporting executives,

⁵⁵Siegel, pp. 127-136; Jaroslav Hajek, Nonparametric Statistics (San Francisco: Holden-Day, 1969), pp. 62-71; and Robert D. Mason, Statistical Techniques in Business and Economics, 3rd ed. (Homewood, Ill.: Richard D. Irwin, 1974), pp. 391-400.

⁵⁶Siegel, p. 131.

the appropriate Kolmogorov-Smirnov test is the one-tailed test.⁵⁷

Summary

The data collection and analysis methodology used in this research effort has been examined in this chapter. Thirteen research questions have been addressed by this study. The hypotheses tested by this study were formulated and set forth in this chapter in both narrative and notational form.

A sample of chief executives of Virginia manufacturing firms was surveyed via mail questionnaire. In conducting the mail survey, nonresponse appears to deserve special attention. As a result, it was decided to conduct a nonresponse study to determine if the survey results need to be adjusted to correct for nonresponse bias.

The questionnaire used in this research consisted of two sections. The first section primarily contained questions about the chief executive and his background. The second section contained a scale designed to measure the chief executive's international orientation. After reviewing alternative measures of international orientation, the Worldmindedness Scale was selected for use in this survey.

⁵⁷An example application of the one-tailed Kolmogorov-Smirnov test can be found in Simpson, pp. 140-141.

Before selecting a statistical testing procedure, the alternative parametric and nonparametric tests of significance were considered. In addition, the assumptions underlying parametric statistical analysis were examined. Research evidence indicates that the parametric F test is extremely insensitive to violations of the assumptions of normality of distribution and homogeneity of variance. Due to this robustness, the normality of the data, the homogeneity of the data's variance, and the lack of a nonparametric multiple comparison test comparable to the parametric Duncan's Multiple Range Test, parametric statistical analysis will be used to analyze the international orientation data. Since the hypothesis concerning amount of time spent overseas prior to exporting involves intervals of unequal size, the one-tailed Kolmogorov-Smirnov non-parametric test will be used to test this hypothesis.

CHAPTER IV

STATISTICAL ANALYSIS AND THE RESEARCH FINDINGS

The statistical results and survey findings will be presented in this chapter. Specifically, the results of the analysis of the survey response patterns will be presented, as will the results of the tests of the hypotheses set forth in the preceding chapter. This chapter will conclude with a summary of the statistical research results.

The Response Pattern Study

An analysis of response patterns was conducted to determine if the survey results needed to be altered to correct for nonresponse bias. During the four weeks in which survey responses were received, records were kept of the international orientation scores for each week's responses. Table 9 gives the number of weekly responses for each group and the mean international orientation score for each group of weekly responses. To analyze the

TABLE 9

WEEKLY INTERNATIONAL ORIENTATION SCORES
FOR EACH EXECUTIVE GROUP

| Exporters | | | Non-Exporters | | |
|-----------|---------------------|--------------------------------------|---------------|---------------------|--------------------------------------|
| Week | Number of Responses | Mean International Orientation Score | Week | Number of Responses | Mean International Orientation Score |
| 1 | 158 | 113.14 | 1 | 340 | 98.99 |
| 2 | 51 | 110.49 | 2 | 120 | 99.63 |
| 3 | 16 | 112.00 | 3 | 42 | 102.14 |
| 4 | 7 | 114.86 | 4 | 21 | 100.95 |

response scores, the weekly response scores for each executive group were compared using a one-way analysis of variance (ANOVA) test for randomized groups to determine whether a significant difference between the scores existed. The study was conducted for each executive group, that is, the four weekly scores of the exporting group were compared with each other, and the four weekly scores of the non-exporting group were compared with each other. Table 10 presents the results of the response pattern test for the exporting group, while table 11 presents the results for the non-exporting group. As the tables indicate, no significant difference was found to exist between the scores of the weekly responses for either group. The assumption was therefore made that nonrespondents did not differ significantly from respondents.

As was previously indicated, this procedure for analyzing nonresponse is based on the assumption that late respondents are comparable to nonrespondents. Such an assumption appears warranted since it has been found that respondents who send in their questionnaire very late are roughly similar to nonrespondents.¹ Therefore, since late respondents in this study were found not to differ from other respondents, it can be assumed that respondents do not differ from nonrespondents.

¹A. N. Oppenheim, Questionnaire Design and Attitude Measurement (New York: Basic Books, 1966), p. 34.

TABLE 10

ANALYSIS OF VARIANCE OF THE WEEKLY INTERNATIONAL
ORIENTATION SCORES OF THE EXPORTING EXECUTIVES

| Source of Variation | Sum of Squares | d.f. | Mean Square | F |
|---------------------------|------------------|------------|-------------|------|
| Treatments: Weekly Scores | 306.19 | 3 | 102.06 | .316 |
| Error: Within Treatments | <u>73,574.61</u> | <u>228</u> | 322.70 | |
| Total | 73,880.80 | 231 | | |

F is not significant at the .05 level.

TABLE 11

ANALYSIS OF VARIANCE OF THE WEEKLY INTERNATIONAL ORIENTATION
SCORES OF THE NON-EXPORTING EXECUTIVES

| Source of Variation | Sum of Squares | d.f. | Mean Square | F |
|---------------------------|------------------|------------|-------------|------|
| Treatments: Weekly Scores | 427.3 | 3 | 142.43 | .440 |
| Error: Within Treatments | <u>167,880.0</u> | <u>519</u> | 343.01 | |
| Total | 168,307.3 | 522 | | |

F is not significant at the .05 level.

Test of Hypothesis Concerning the
International Orientation
of Chief Executives

The international orientation of the chief executives of Virginia non-exporting manufacturers was analyzed in relation to the international orientation of the chief executives of Virginia exporting manufacturers. The average score of the 232 exporting executives was 112.53, while the average score of the 523 non-exporting executives was 99.47. The statistical significance of this difference was analyzed using the analysis of variance with a randomized group design. The results of the analysis of variance are presented in table 12. As the table shows, the difference between the international orientation scores of the two groups of executives is significant. The null hypothesis that no significant difference between the two scores exists can, therefore, be rejected. The chief executives of Virginia exporting manufacturers are significantly more internationally oriented than chief executives of Virginia non-exporting manufacturers.

Test of Hypothesis Concerning Extent
of Export Involvement and
International Orientation

Examination of the information provided by the exporters concerning the extent of their overseas involvement reveals that a majority of the firms derive only a small percentage of total sales from export sales.

TABLE 12

ANALYSIS OF VARIANCE OF THE INTERNATIONAL ORIENTATION OF
EXPORTING AND NON-EXPORTING EXECUTIVES

| Source of Variation | Sum of Squares | d.f. | Mean Square | F |
|---|----------------|------|-------------|-------|
| Between Groups: Exporters/ Non-Exporters | 27,508.6 | 1 | 27,508.6 | 85.56 |
| Error: Within Groups | 242,090.0 | 753 | 321.5 | |
| Total | 269,598.6 | 754 | | |

F is significant at the .05 level since 85.56 is greater than 3.85.

Table 13 provides information concerning the percentage of total sales accounted for by export sales. As the table reveals, 63.4 percent of the exporters derive ten percent or less of total sales from export sales. Since less than three percent of the companies reported export sales of over thirty percent of total sales, these degrees of export involvement were consolidated into the category of "greater than 20 percent of sales." In order to analyze statistically the executive's international orientation in relation to extent of foreign involvement, the few number of responses in the "greater than 30 percent of sales" categories mandated this consolidation.²

The results of the analysis of variance (see table 14) indicate that a significant difference exists between the international orientation of the three groups of exporters. To analyze the nature of this difference, Duncan's Multiple Range Test was used to analyze the means of the individual groups. As table 15 shows, the significant difference is between the first group (firms

²Other researchers have used similar trichotomies (1%-10%, 11%-20%, and greater than 20%). See Claus C. Sinai, "An Investigation of Selected Characteristics of Export-Participating Manufacturing Firms" (D.B.A. dissertation, University of Washington, 1970), p. 49; George Tesar, "Empirical Study of Export Operations Among Small and Medium-Sized Manufacturing Firms" (Ph.D. dissertation, University of Wisconsin, 1975), p. 35; George Tesar, "Classification of Exporters and Nonexporters Based on Their Perception of Exports," paper presented at the annual meeting of the Academy of International Business, Dallas, Texas, 29 December 1975, p. 2.

TABLE 13

EXTENT OF EXPORT INVOLVEMENT OF EXPORTING FIRMS
AND INTERNATIONAL ORIENTATION

| Export Sales as a Percentage of Total Sales | Number of Firms | Percent of Total | Mean International Orientation Score |
|--|--------------------|------------------|---|
| Greater than 0% to 10% | 147 | 63.4% | $a_{n1} = 108.42$ |
| Greater than 10% to 20% | 51 | 22.0 | $a_{n2} = 117.57$ |
| Greater than 20% | 34 | 14.6 | $a_{n3} = 122.74$ |
| Total | 232 | 100.0% | 112.53 |

TABLE 14

ANALYSIS OF VARIANCE OF EXTENT OF OVERSEAS EXPORT INVOLVEMENT IN
RELATION TO INTERNATIONAL ORIENTATION

| Source of Variation | Sum of Squares | d.f. | Mean Square | F |
|----------------------|----------------|------|-------------|-------|
| Between Groups | 7316.8 | 2 | 3658.4 | 12.59 |
| Error: Within Groups | 66,540.0 | 229 | 290.67 | |
| Total | 73,880.8 | 231 | | |

F is significant at the .05 level since 12.59 is greater than 3.04.

TABLE 15

DUNCAN'S MULTIPLE RANGE TEST OF EXTENT OF OVERSEAS EXPORT INVOLVEMENT
IN RELATION TO INTERNATIONAL ORIENTATION

| | a_{n1} | a_{n2} | a_{n3} | Shortest Significant Range |
|-----------------|----------|----------|----------|----------------------------------|
| Means | 108.42 | 117.57 | 122.74 | |
| a_{n1} 108.42 | | 9.15 | 14.32 | $R_2 = 6.45$ |
| a_{n2} 117.57 | | | 5.17 | $R_3 = 6.79$ |
| | a_{n1} | a_{n2} | a_{n3} | |

Any two of the above means not underscored by the same line are significantly different.

Any two of the above means underscored by the same line are not significantly different.

in which export sales account for ten percent or less of total sales) and the other groups (firms with greater than ten percent of total sales accounted for by export sales); chief executives of exporters exporting ten percent or less of total sales are significantly less internationally oriented than chief executives of exporters exporting more than ten percent of their total sales. No significant difference was found to exist between the second group (greater than 10% to 20%) and the third group (greater than 20%).

Test of Hypothesis Concerning Age
and International Orientation

The first section of the questionnaire contained a question concerning the executive's age. The information provided by the executives is summarized in table 16. Almost sixty percent of the executives were between the ages of 35 and 54, whereas only six percent of the chief executives were under 25 years of age.

Age of the executive was analyzed in relation to international orientation since Hays and others had noted a negative relationship between age and international orientation.³ The results of the analysis of variance test are given in table 17. The test reveals that there is no

³Richard D. Hays, "Expatriate Selection: Insuring Success and Avoiding Failure," paper presented at the annual meeting of the Academy of International Business, New York, 28 December 1973.

TABLE 16

EXECUTIVE AGE GROUPS AND INTERNATIONAL ORIENTATION

| Age Group | Number of Executives | Percent of Total in Group | Mean International Orientation Score |
|------------|----------------------|---------------------------|--------------------------------------|
| Under 25 | 45 | 6.0% | $a_{01} = 105.18$ |
| 25-34 | 138 | 18.3 | $a_{02} = 104.53$ |
| 35-44 | 204 | 27.0 | $a_{03} = 104.13$ |
| 45-54 | 241 | 31.9 | $a_{04} = 104.26$ |
| 55 or over | 127 | 16.8 | $a_{05} = 99.24$ |
| Total | 755 | 100.0% | 103.48 |

TABLE 17

ANALYSIS OF VARIANCE OF AGE IN RELATION
TO INTERNATIONAL ORIENTATION

| Source of Variation | Sum of Squares | d.f. | Mean Square | F |
|----------------------|----------------|------|-------------|------|
| Between Groups | 2,801.1 | 4 | 700.275 | 1.97 |
| Error: Within Groups | 266,797.5 | 750 | 355.73 | |
| Total | 269,598.6 | 754 | | |

F is not significant at the .05 level since 1.97 is less than 2.38.

significant difference between the international orientation scores of the age groups. Although executives 55 years of age or older appear to be somewhat less internationally oriented than executives under 55 years of age, the differences between the means are not significant. It cannot, therefore, be concluded that there is a significant relationship between age and international orientation.

Test of Hypothesis Concerning Extent of
Formal Education and International
Orientation

Aharoni suggested that the extent of the executive's education might be related to the level of his international orientation.⁴ The executives surveyed by this study were, therefore, asked to indicate the extent of their formal education. The information provided by the executives concerning the extent of their formal education is summarized in table 18. The chief executives were, in general, relatively well educated. Almost 78 percent of the executives had some college education, and over 52 percent had received a college degree. Less than eight percent of the executives had less than a high school degree.

Table 19 presents the results of the analysis of variance of the extent of education in relation to

⁴Yair Aharoni, The Foreign Investment Decision Process (Boston, Mass.: Division of Research, Graduate School of Business Administration, Harvard University, 1966), p. 59.

TABLE 18

FORMAL EDUCATION AND INTERNATIONAL ORIENTATION

| Educational Level | Number of Executives | Percent of Total in the Group | Mean International Orientation Score |
|--------------------------------|----------------------|-------------------------------|--------------------------------------|
| Less Than a High School Degree | 60 | 7.9% | a _{p1} = 97.92 |
| High School Degree | 107 | 14.2 | a _{p2} = 99.08 |
| Some College | 195 | 25.8 | a _{p3} = 103.15 |
| College Graduate | 317 | 42.0 | a _{p4} = 104.98 |
| Some Graduate Work | 76 | 10.1 | a _{p5} = 108.67 |
| Total | 755 | 100.0% | 103.48 |

TABLE 19

ANALYSIS OF VARIANCE OF EXTENT OF EDUCATION IN RELATION
TO INTERNATIONAL ORIENTATION

| Source of Variation | Sum of Squares | d.f. | Mean Square | F |
|----------------------|----------------|------|-------------|------|
| Between Groups | 6,711.3 | 4 | 1677.825 | 4.79 |
| Error: Within Groups | 262,887.3 | 750 | 350.516 | |
| Total | 269,598.6 | 754 | | |

F is significant at the .05 level since 4.79 is greater than 2.38.

international orientation. The extent of the executive's education was found to be significantly related to the level of his international orientation. The results of Duncan's Multiple Range Test (see table 20) indicate that the relationship between education and international orientation is positive and consistent. While the relationship appears positive and consistent, it does not appear to be strong, for adjacent education levels are not significantly different in terms of their international orientation. The scores of executives having had some college, for example, were not significantly different from the scores of executives who had only a high school degree. Thus, extent of education of the executives appears to be significant in its relationship with international orientation only when the education levels of the executives differ considerably. This conclusion reinforces Levinson's results, for he reported finding a significant, but slight, relationship between amount of education and international orientation.⁵

Test of Hypothesis Concerning Type
of Educational Background and
International Orientation

The chief executives were asked to indicate the type of educational background which they had received.

⁵T. W. Adorno, et al., The Authoritarian Personality (New York: Harper and Row, 1950), p. 287.

TABLE 20

DUNCAN'S MULTIPLE RANGE TEST OF EXTENT OF EDUCATION IN RELATION
TO INTERNATIONAL ORIENTATION

| | a_{p1} | a_{p2} | a_{p3} | a_{p4} | a_{p5} | Shortest Significant Range |
|----------|----------|----------|----------|----------|----------|----------------------------------|
| Means | 97.92 | 99.08 | 103.15 | 104.98 | 108.67 | |
| a_{p1} | 97.92 | 1.16 | 5.23 | 7.06 | 10.75 | $R_2 = 4.38$ |
| a_{p2} | 99.08 | | 4.07 | 5.90 | 9.59 | $R_3 = 4.61$ |
| a_{p3} | 103.15 | | | 1.83 | 5.32 | $R_4 = 4.77$ |
| a_{p4} | 104.98 | | | | 3.69 | $R_5 = 4.88$ |

| | a_{p1} | a_{p2} | a_{p3} | a_{p4} | a_{p5} |
|--|----------|----------|----------|----------|----------|
| | | | | | |
| | | | | | |
| | | | | | |

Any two of the above means not underscored by the same line are significantly different.

Any two of the above means underscored by the same line are not significantly different.

As table 21 reveals, a business background was most common, accounting for over 32 percent of the cases. A background in engineering, mathematics, or one of the other sciences was found to be the second most common type of educational background.

Table 21 also reveals that executives having had a general academic background scored the lowest on the international orientation measure, while executives having had an educational background in a social science scored highest on the international orientation scale. Employing analysis of variance to analyze the differences produced the results shown in table 22. The differences between the groups were not found to be statistically significant at the .05 level. Type of educational background of the executive is not significantly related to the level of his international orientation.

Test of Hypothesis Concerning Foreign
Language Capability and International
Orientation

Relatively few of the chief executives indicated that they could speak a foreign language even somewhat fluently. In fact, over 75 percent of the executives (see table 23) indicated they were not even somewhat fluent in any foreign language. The percentage of exporting executives somewhat fluent in a foreign language was, however, considerably greater than the percentage of

TABLE 21

TYPE OF EDUCATIONAL BACKGROUND AND INTERNATIONAL ORIENTATION

| Type of Background | Number of Executives | Percent of Total | Mean International Orientation Score |
|--|----------------------|------------------|--------------------------------------|
| General Academic Education | 112 | 14.8% | $a_{q6} = 99.54$ |
| Other (Law, Vocational, Miscellaneous) | 46 | 6.1 | $a_{q7} = 101.72$ |
| English, Other Arts and Letters | 60 | 7.9 | $a_{q5} = 102.98$ |
| Engineering, Other Sciences | 166 | 22.0 | $a_{q1} = 103.59$ |
| Business | 242 | 32.1 | $a_{q3} = 105.50$ |
| Other Social Sciences | 76 | 10.1 | $a_{q4} = 105.67$ |
| Total | 755 | 100.0% | 103.48 |

TABLE 22

ANALYSIS OF VARIANCE OF TYPE OF EDUCATIONAL BACKGROUND IN RELATION
TO INTERNATIONAL ORIENTATION

| Source of Variation | Sum of Squares | d.f. | Mean Square | F |
|----------------------|----------------|------|-------------|------|
| Between Groups | 3,527.8 | 6 | 587.967 | 1.65 |
| Error: Within Groups | 266,070.8 | 748 | 355.710 | |
| Total | 269,598.6 | 754 | | |

F is not significant at the .05 level since 1.65 is less than 2.10.

TABLE 23

FOREIGN LANGUAGE CAPABILITY AND INTERNATIONAL ORIENTATION

| Number of Foreign Languages | Number of Exporting Executives | Percent of Total | Number of Non-Exporting Executives | Percent of Total | Total Number of Executives | Percent of Total | Mean International Orientation Score |
|-----------------------------|--------------------------------|------------------|------------------------------------|------------------|----------------------------|------------------|--------------------------------------|
| 0 | 125 | 53.9% | 455 | 87.0% | 580 | 76.8% | $a_{r1} = 99.8$ |
| 1 | 70 | 30.2 | 52 | 9.9 | 122 | 16.2 | $a_{r2} = 113.84$ |
| 2 or more | 37 | 15.9 | 16 | 3.1 | 53 | 7.0 | $a_{r3} = 119.96$ |
| Total | 232 | 100.0% | 523 | 100.0% | 755 | 100.0% | 103.48 |

non-exporting executives who were somewhat fluent in a foreign language. Of the exporting executives, 46.1 percent indicated foreign language capability, whereas only 13 percent of the non-exporting executives indicated such capability.

The analysis of variance (table 24) reveals that the executive's foreign language capability is significantly related to the level of his international orientation. The results of Duncan's Multiple Range Test, which are exhibited in table 25, indicate the nature of this significant relationship. Executives speaking two or more foreign languages are significantly more internationally oriented than executives speaking fewer than two foreign languages, while executives speaking one foreign language are significantly more internationally oriented than executives with no foreign language capabilities. These results indicate that the relationship between the number of foreign languages an executive speaks somewhat fluently and the level of his international orientation is both positive and significant.

Test of Hypothesis Concerning Total Time
Overseas and International Orientation

The executives were asked to respond to several questions concerning the extent of their overseas experience. One of the questions asked the executives to indicate the total amount of time they had spent

TABLE 24

ANALYSIS OF VARIANCE OF FOREIGN LANGUAGE CAPABILITY IN RELATION
TO INTERNATIONAL ORIENTATION

| Source of Variation | Sum of Squares | d.f. | Mean Square | F |
|----------------------|----------------|------|-------------|------|
| Between Groups | 35,337.4 | 2 | 17,668.7 | 56.7 |
| Error: Within Groups | 234,261.2 | 752 | 311.518 | |
| Total | 269,598.6 | 754 | | |

F is significant at the .05 level since 56.7 is greater than 3.0.

TABLE 25

DUNCAN'S MULTIPLE RANGE TEST OF FOREIGN LANGUAGE CAPABILITY IN RELATION
TO INTERNATIONAL ORIENTATION

| | a_{r1} | a_{r2} | a_{r3} | Shortest Significant Range |
|-----------------|----------|----------|----------|----------------------------------|
| Means | 99.80 | 113.84 | 119.96 | |
| a_{r1} 99.80 | | 14.04 | 20.16 | $R_2 = 4.79$ |
| a_{r2} 113.84 | | | 6.12 | $R_3 = 5.05$ |
| | a_{r1} | a_{r2} | a_{r3} | |

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Any two of the above means not underscored by the same line are significantly different.

Any two of the above means underscored by the same line are not significantly different.

overseas. Overall, a relatively large number of the executives indicated that they had spent some time overseas. As table 26 reveals, 64.2 percent of the executives indicated that they had spent some time overseas. Of the executives that had spent time overseas, those indicating that they had spent between one and two years overseas constituted the modal group. The frequency of executives having had one to two years overseas experience appears to result from the large number of executives who indicated they had had overseas military assignments, assignments which in many instances involve an overseas deployment of 13 to 24 months. In fact, 93.2 percent of the 177 executives having had from one to two years overseas experience indicated they had had overseas military experience.

Analysis of variance was used to determine if a significant relationship exists between the total time the executive has spent overseas and the level of his international orientation. The results of this analysis are presented in table 27. The total time the executive has spent overseas was found to be significantly related to the level of his international orientation. Table 28, which presents the results of Duncan's Multiple Range Test, reveals that while total time overseas and international orientation are significantly related, the relationship is not a consistent one, that is, it is not linear. While

TABLE 26

TOTAL TIME OVERSEAS AND INTERNATIONAL ORIENTATION

| Time Overseas | Number of Executives | Percent of Total | Mean International Orientation Score |
|--------------------|----------------------|------------------|--------------------------------------|
| None | 270 | 35.8% | $a_{s1} = 99.5$ |
| Less than 6 months | 63 | 8.3 | $a_{s2} = 100.65$ |
| Less than 1 year | 64 | 8.5 | $a_{s3} = 106.22$ |
| Less than 2 years | 177 | 23.5 | $a_{s4} = 100.03$ |
| Less than 5 years | 97 | 12.8 | $a_{s5} = 109.68$ |
| 5 years or over | 84 | 11.1 | $a_{s6} = 117.26$ |
| Total | 755 | 100.0% | 103.48 |

TABLE 27

ANALYSIS OF VARIANCE OF TOTAL TIME OVERSEAS IN RELATION
TO INTERNATIONAL ORIENTATION

| Source of Variation | Sum of Squares | d.f. | Mean Square | F |
|----------------------|----------------|------|-------------|-------|
| Between Groups | 27,612.6 | 5 | 5,522.52 | 17.09 |
| Error: Within Groups | 241,986.0 | 749 | 323.079 | |
| Total | 269,598.6 | 754 | | |

F is significant at the .05 level since 17.09 is greater than 2.22.

TABLE 28

DUNCAN'S MULTIPLE RANGE TEST OF TOTAL TIME OVERSEAS IN RELATION TO INTERNATIONAL EXPERIENCE

| | a _{s1} | a _{s4} | a _{s2} | a _{s3} | a _{s5} | a _{s6} | Shortest Significant Range |
|------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|----------------------------|
| Means | 99.25 | 100.03 | 100.65 | 106.22 | 109.68 | 117.26 | |
| a _{s1} 99.25 | | .78 | 1.40 | 6.97 | 10.43 | 18.01 | R ₂ = 5.09 |
| a _{s4} 100.03 | | | .62 | 6.19 | 9.65 | 17.23 | R ₃ = 5.36 |
| a _{s2} 100.65 | | | | 5.57 | 9.03 | 16.61 | R ₄ = 5.55 |
| a _{s3} 106.22 | | | | | 3.46 | 11.04 | R ₅ = 5.68 |
| a _{s5} 109.68 | | | | | | 7.58 | R ₆ = 5.78 |
| | a _{s1} | a _{s4} | a _{s2} | a _{s3} | a _{s5} | a _{s6} | |

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Any two of the above means not underscored by the same line are significantly different.

Any two of the above means underscored by the same line are not significantly different.

table 28 shows that executives with more than five years overseas are more internationally oriented than executives with less than five years overseas, it also shows that executives with one to two years overseas experience are significantly less internationally oriented than executives with only six months to one year total overseas experience. The results also show that the international orientation of executives having spent less than six months overseas is not significantly different from the international orientation of executives who have not been overseas. It cannot, therefore, be concluded that greater total time overseas is directly and consistently related to higher levels of international orientation.

Test of Hypothesis Concerning Total Time
Overseas Prior to Exporting

The exporting executives were asked to indicate the amount of time they had spent overseas prior to their involvement with exporting. The exporting executives' responses to this question were then compared with the responses of the non-exporting executives to the question concerning total time overseas. Table 29 reveals that almost sixty percent of the exporting executives had spent more than one year overseas prior to commencement of exporting activities, whereas only forty percent of the non-exporting executives had spent over one year overseas. Also, 75 percent of the exporting executives had had

TABLE 29

TOTAL TIME OVERSEAS PRIOR TO COMMENCEMENT OF EXPORTING

| Time Overseas Before Exporting | Number of Exporting Executives | Percent of Total | Number of Non-Exporting Executives | Percent of Total |
|--------------------------------------|--------------------------------------|------------------------|--|------------------------|
| None | 59 | 25.4% | 219 | 41.9% |
| Less than 6 months | 16 | 6.9 | 46 | 8.8 |
| Less than 1 year | 19 | 8.2 | 44 | 8.4 |
| Less than 2 years | 49 | 21.1 | 126 | 24.1 |
| Less than 5 years | 41 | 17.7 | 54 | 10.3 |
| 5 years or over | 48 | 20.7 | 34 | 6.5 |
| Total | 232 | 100.0% | 523 | 100.0% |

overseas experience prior to their commencement of export-related activities.

The Kolmogorov-Smirnov test was used to statistically test the null hypothesis that the exporting executives, prior to their involvement with exporting, had not spent more time overseas than the non-exporting executives. Table 30 shows the results of the one-tailed Kolmogorov-Smirnov test. The test results reveal that the difference in time overseas is significant at the .05 level of significance. The null hypothesis can, therefore, be rejected and the alternative hypothesis accepted; the exporting executives had spent significantly more time overseas prior to their involvement with exporting than had the non-exporting executives.

Test of Hypothesis Concerning Recency of
Overseas Travel and International
Orientation

The chief executives were asked to indicate how long it had been since their last overseas trip. As table 31 shows, over fifty percent of the executives who had traveled overseas indicated that they had not been outside the United States in over five years. On the other hand, a relatively large number of the executives (16.5 percent) had been outside the United States within the last year. The number of executives having traveled overseas within the last year, however, varied considerably between

TABLE 30

KOLMOGOROV-SMIRNOV TEST OF TOTAL TIME SPENT OVERSEAS BY EXPORTING EXECUTIVES
PRIOR TO EXPORTING IN RELATION TO TOTAL TIME SPENT OVERSEAS
BY NON-EXPORTING EXECUTIVES

| | Cumulative Percentage of Executives Having Spent the Specified Amount of Time Overseas | | | | | | χ^2 |
|----------------|---|-----------------------|---------------------|----------------------|----------------------|--------------------|---|
| | None | Less than 6 months | Less than 1 year | Less than 2 years | Less than 5 years | 5 years or over | |
| Non-Exporters | .419 | .507 | .591 | .832 | .935 | 1.0 | $\chi^2 = 4 \max D^2 \frac{n_1 n_2}{n_1 + n_2}$ |
| Exporters | .254 | .323 | .405 | .616 | .793 | 1.0 | $\chi^2 = 4 (.216)^2 \frac{(232)(523)}{755}$ |
| Difference (D) | .165 | .184 | .186 | .216 | .142 | .0 | $\chi^2 = 29.99$ |

χ^2 is significant for 2 degrees of freedom at the .05 level since 29.99 is greater than 5.99.

TABLE 31
 REGENCY OF OVERSEAS TRAVEL AND
 INTERNATIONAL ORIENTATION

| Most Recent Trip | Number of Executives | Percent of Total | Mean International Orientation Score |
|--------------------------|----------------------|------------------|--------------------------------------|
| Within the last 6 months | 36 | 7.4% | $a_{u1} = 108.69$ |
| Within the last year | 44 | 9.1 | $a_{u2} = 106.32$ |
| Within the last 2 years | 49 | 10.1 | $a_{u3} = 105.90$ |
| Within the last 5 years | 82 | 16.9 | $a_{u4} = 106.09$ |
| Over 5 years ago | 274 | 56.5 | $a_{u5} = 105.31$ |
| Total | 485 | 100.0% | 105.84 |

the exporting group and the non-exporting group. Of the exporting executives, 24.6 percent had been outside the U.S. within the last year, whereas only 3.0 percent of the non-exporting executives had been outside the U.S. within the last year.

Is the recency of the executive's overseas experience significantly related to the level of his international orientation? Analysis of variance was used to analyze this research question. The results of the analysis of variance given in table 32 indicate that no significant relationship was found to exist between recency of foreign travel and international orientation. Executives having been outside the United States within the last six months were somewhat more internationally oriented than executives who had not traveled overseas within the last six months; however, the probability that this difference was due to chance was not greater than one in twenty. The alternative hypothesis can, as a result, be rejected and the null hypothesis can be accepted; recency of the executive's foreign travel is not significantly related to the level of his international orientation.

Test of Hypothesis Concerning Overseas Time
Before Age Fifteen and International
Orientation

More than 29 percent of the executives (see table 33) had been overseas before age fifteen. Almost eight

TABLE 32

ANALYSIS OF VARIANCE OF RECENCY OF OVERSEAS TRAVEL IN RELATION
TO INTERNATIONAL ORIENTATION

| Source of Variation | Sum of Squares | d.f. | Mean Square | F |
|----------------------|----------------|------|-------------|-----|
| Between Groups | 386.5 | 4 | 96.625 | .24 |
| Error: Within Groups | 190,265.3 | 480 | 396.386 | |
| Total | 190,651.8 | 484 | | |

F is not significant at the .05 level since .24 is less than 2.39.

TABLE 33

OVERSEAS TIME BEFORE AGE FIFTEEN AND INTERNATIONAL ORIENTATION

| Overseas Time Before Age 15 | Number of Executives | Percent of Total | Mean International Orientation Score |
|--------------------------------|-------------------------|---------------------|---|
| None | 535 | 70.9% | $a_{v1} = 101.17$ |
| Less than 6 months | 55 | 7.3 | $a_{v2} = 103.55$ |
| Less than 2 years | 53 | 7.0 | $a_{v3} = 108.66$ |
| Less than 5 years | 52 | 6.9 | $a_{v4} = 109.48$ |
| 5 years or over | 60 | 7.9 | $a_{v5} = 114.32$ |
| Total | 755 | 100.0% | 103.48 |

percent of the executives had spent 5 years or more outside the United States before age 15. Many of the executives having spent 5 years or more outside the U.S. before age 15 may have been born outside the U.S.; therefore, a number of the executives in this category may be bi-nationals.

Hays had indicated finding a relationship between amount of time spent overseas at an early age and the internationalization of one's ideas. A previous study conducted by the author and Hackett also found amount of time spent overseas at an early age to be significantly related to international orientation.⁶ This study also found these two variables to be significantly related (see table 34). Table 35 reveals that the relationship between amount of time spent overseas before age fifteen and international orientation appears to be positive and relatively consistent, yet somewhat weak. Executives with over six months overseas experience before age fifteen were found to be significantly more internationally oriented than executives with no overseas experience. Yet, executives with between two and five years overseas before age fifteen were not more internationally oriented than executives who had been overseas for less than six months before reaching age fifteen. It appears that considerable

⁶Charles M. Langston and Donald W. Hackett, "Cultural Inflexibility and International Management Education," paper presented at the annual meeting of the Academy of Management, Seattle, Washington, 20 August 1974, p. 11.

TABLE 34

ANALYSIS OF VARIANCE OF OVERSEAS TIME BEFORE AGE FIFTEEN IN RELATION
TO INTERNATIONAL ORIENTATION

| Source of Variation | Sum of Squares | d.f. | Mean Square | F |
|----------------------|----------------|------|-------------|------|
| Between Groups | 13,204.9 | 4 | 3301.225 | 9.66 |
| Error: Within Groups | 256,393.7 | 750 | 341.858 | |
| Total | 269,598.6 | 754 | | |

F is significant at the .05 level since 9.66 is greater than 2.38.

TABLE 35

DUNCAN'S MULTIPLE RANGE TEST OF OVERSEAS TIME BEFORE AGE FIFTEEN
IN RELATION TO INTERNATIONAL ORIENTATION

| Means | a_{v1} | a_{v2} | a_{v3} | a_{v4} | a_{v5} | Shortest Significant Range |
|-----------------|----------|----------|----------|----------|----------|----------------------------|
| a_{v1} 101.17 | 101.17 | 2.38 | 7.49 | 8.31 | 13.15 | $R_2 = 6.26$ |
| a_{v2} 103.55 | | | 5.11 | 5.93 | 10.77 | $R_3 = 6.59$ |
| a_{v3} 108.66 | | | | .82 | 5.66 | $R_4 = 6.82$ |
| a_{v4} 114.32 | | | | | 4.84 | $R_5 = 6.98$ |

| a_{v1} | a_{v2} | a_{v3} | a_{v4} | a_{v5} |
|----------|----------|----------|----------|----------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |

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Any two of the above means not underscored by the same line are significantly different.

Any two of the above means underscored by the same line are not significantly different.

overseas experience at an early age is required before this variable has a significant impact on the level of one's international orientation.

Test of Hypothesis Concerning Longest
Trip Overseas and International
Orientation

The chief executives were asked to indicate the longest amount of time they had spent outside the United States at one time. As table 36 reveals, 298 of the 485 executives who had been outside the United States reported that their longest trip overseas was between six months and two years in duration. In fact, of the executives having traveled overseas, 61.4 percent indicated their longest trip amounted to between six months and two years. The frequency of this response appears to be related to the overseas military experience of the chief executives. As will be examined in the next section, many of the executives had had overseas military experience. Since many overseas military deployments are of twelve or thirteen months in duration, overseas military experience appears to explain why a relatively large number of executives had spent between six months and two years overseas at one time.

Table 37 reveals that the length of the longest time the executive has spent overseas at one time is significantly related to the level of his international

TABLE 36

LONGEST TRIP OVERSEAS AND INTERNATIONAL ORIENTATION

| Longest Overseas Trip | Number of Executives | Percent of Total | Mean International Orientation Score |
|-----------------------|----------------------|------------------|--------------------------------------|
| None | 270 | 35.8% | a _{w1} 99.25 |
| Less than 1 month | 34 | 4.5 | a _{w2} 99.06 |
| Less than 6 months | 51 | 6.7 | a _{w3} 102.62 |
| Less than 1 year | 126 | 16.7 | a _{w4} 103.17 |
| Less than 2 years | 172 | 22.8 | a _{w5} 105.42 |
| Less than 5 years | 54 | 7.1 | a _{w6} 112.61 |
| Over 5 years | 48 | 6.4 | a _{w7} 115.15 |
| Total | 755 | 100.0% | 103.48 |

TABLE 37

ANALYSIS OF VARIANCE OF LONGEST TRIP OVERSEAS IN RELATION
TO INTERNATIONAL ORIENTATION

| Source of Variation | Sum of Squares | d.f. | Mean Square | F |
|----------------------|------------------|------------|-------------|------|
| Between Groups | 17,325.1 | 6 | 2,887.517 | 8.56 |
| Error: Within Groups | <u>252,273.5</u> | <u>748</u> | 337.26 | |
| Total | 269,598.6 | 754 | | |

F is significant at the .05 level since 8.56 is greater than 2.11.

orientation. The results of Duncan's Multiple Range Test, however, indicate that short trips abroad (less than one year) are not significantly related to international orientation. In fact, the executives who had been overseas for periods of less than six months scored lower on the international orientation measure than the executives who had not been overseas; this difference, however, was not statistically significant (see table 38).

Executives who had been overseas for periods of long duration were more internationally oriented than executives who had been overseas for short periods of time. Specifically, executives who had spent two years or more overseas at one time were significantly more internationally oriented than executives who had spent less than two years overseas at one time. Only trips of such a long nature appear to be significantly related to higher levels of international orientation.

Test of Hypothesis Concerning Overseas
Military Experience and International
Orientation

Overseas military duty was suggested by the director of the author's dissertation committee and by the pilot study as a factor possibly related to international orientation. The executives were, therefore, asked to indicate whether they had had overseas military experience. As table 39 indicates, of the chief executives responding

TABLE 38

DUNCAN'S MULTIPLE RANGE TEST OF LONGEST TRIP OVERSEAS IN RELATION TO INTERNATIONAL ORIENTATION

| | a_{w2} | a_{w1} | a_{w3} | a_{w4} | a_{w5} | a_{w6} | a_{w7} | Shortest Significant Range |
|-----------------|----------|----------|----------|----------|----------|----------|----------|----------------------------|
| Means | 99.06 | 99.25 | 102.62 | 103.17 | 105.42 | 112.61 | 115.15 | |
| a_{w2} 99.06 | | .19 | 3.56 | 4.11 | 6.36 | 13.55 | 16.09 | $R_2 = 6.26$ |
| a_{w1} 99.25 | | | 3.37 | 3.92 | 6.17 | 13.36 | 15.90 | $R_3 = 6.58$ |
| a_{w3} 102.62 | | | | .55 | 2.80 | 9.99 | 12.53 | $R_4 = 6.81$ |
| a_{w4} 103.17 | | | | | 2.25 | 9.44 | 11.98 | $R_5 = 6.97$ |
| a_{w5} 105.42 | | | | | | 7.19 | 9.73 | $R_6 = 7.10$ |
| a_{w6} 112.61 | | | | | | | 2.54 | $R_7 = 7.21$ |
| | a_{w2} | a_{w1} | a_{w3} | a_{w4} | a_{w5} | a_{w6} | a_{w7} | |

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Any two of the above means not underscored by the same line are significantly different.

Any two of the above means underscored by the same line are not significantly different.

TABLE 39

OVERSEAS MILITARY EXPERIENCE AND
INTERNATIONAL ORIENTATION

| | Number of Executives | Percent of Total | Mean International Orientation Score |
|-----------------------------------|-------------------------|---------------------|---|
| Without Overseas Military Duty | 478 | 63.3% | $a_{x1} = 102.64$ |
| With Overseas Military Duty | 277 | 36.7 | $a_{x2} = 104.93$ |
| Total | 755 | 100.0% | 103.48 |

to this study, 36.7 percent indicated that they had had overseas military experience. The executives who had had overseas military experience were somewhat more internationally oriented than the executives who had not had overseas military experience; however, the analysis of variance reveals (table 40) that this difference is not statistically significant. As a result, it cannot be generalized that overseas military duty is positively related to international orientation.

Test of Hypothesis Concerning Type of
Overseas Military Experience
and International Orientation

To further explore the relationship, if any, between overseas military experience and international orientation, the executives were asked to indicate the

TABLE 40

ANALYSIS OF VARIANCE OF OVERSEAS MILITARY EXPERIENCE IN RELATION
TO INTERNATIONAL ORIENTATION

| Source of Variation | Sum of Squares | d.f. | Mean Square | F |
|----------------------|----------------|------|-------------|------|
| Between Groups | 917.3 | 1 | 917.3 | 2.57 |
| Error: Within Groups | 268,681.3 | 753 | 356.8 | |
| Total | 269,598.6 | 754 | | |

F is not significant at the .05 level since 2.57 is less than 3.85.

circumstances of their overseas military experience. The pilot study suggested that to explore military experience in relation to international orientation, one needs to examine not only overseas military experience per se, but also the type of overseas military experience. Specifically, it was suggested to the researcher that those involved overseas in a combatant role might be significantly less internationally oriented than those who served overseas in the military in other than a combatant role. Therefore, those executives who had served overseas in a military capacity were asked to indicate the nature of their military experience. Table 41 summarizes the information concerning type of overseas military experience and international orientation.

Of the executives who had served overseas in a military capacity, almost one-third had served in a combatant role. As table 41 shows, considerable variation was found to exist between the international orientation scores of those executives who had not had overseas military experience, those executives who had had overseas military experience in a combatant role, and those executives who had had overseas military experience in other than a combatant role. The mean international orientation score of the executives who had served in combat was 89.82, considerably lower than the score of those who had not served overseas in the military, which, in turn, was

TABLE 41

TYPE OF OVERSEAS MILITARY EXPERIENCE AND INTERNATIONAL ORIENTATION

| Type of Overseas Military Experience | Number of Executives | Percent of Total | Mean International Orientation Score |
|---|-------------------------|---------------------|---|
| None | 478 | 63.3% | $a_{y1} = 102.64$ |
| Combatant Role | 91 | 12.1 | $a_{y2} = 89.82$ |
| Other Overseas Assignments | 186 | 24.6 | $a_{y3} = 112.32$ |
| Total | 755 | 100.0% | 103.48 |

considerably lower than the score of those who had served overseas in other than a combat role. The results of the analysis of variance (table 42) and Duncan's Multiple Range Test (table 43) reveal the significance of these differences. Executives who had served overseas in combat were significantly less internationally oriented than executives in either of the other groups, while executives who had served overseas in a military capacity not involving combat were significantly more internationally oriented than executives who had served in combat. In addition, executives who had served overseas in other than a combatant role were significantly more internationally oriented than executives who had not served in the military overseas. These results demonstrate the importance of examining type of overseas military experience in relation to international orientation.

Summary

The statistical findings resulting from this study have been presented in this chapter. The results of the nonresponse study indicated that late respondents did not differ significantly from early respondents. Since nonrespondents have been found to be roughly equivalent to late respondents, the assumption was therefore made that nonrespondents did not differ from the respondents of this study.

TABLE 42

ANALYSIS OF VARIANCE OF TYPE OF OVERSEAS MILITARY EXPERIENCE IN RELATION
TO INTERNATIONAL ORIENTATION

| Source of Variation | Sum of Squares | d.f. | Mean Square | F |
|----------------------|----------------|------|-------------|-------|
| Between Groups | 32,206.5 | 2 | 16,103.25 | 51.01 |
| Error: Within Groups | 237,392.1 | 752 | 315.68 | |
| Total | 269,598.6 | 754 | | |

F is significant at the .05 level since 51.01 is greater than 3.01.

TABLE 43

DUNCAN'S MULTIPLE RANGE TEST OF TYPE OF OVERSEAS MILITARY EXPERIENCE
IN RELATION TO INTERNATIONAL ORIENTATION

| Means | a_{y2} | a_{y1} | a_{y3} | Shortest Significant Range |
|-----------------|----------|----------|----------|----------------------------------|
| | 89.82 | 102.64 | 112.32 | |
| a_{y2} 89.82 | | 12.82 | 22.50 | $R_2 = 6.69$ |
| a_{y1} 102.64 | | | 9.68 | $R_3 = 7.04$ |
| | a_{y2} | a_{y1} | a_{y3} | |

Since none of the above means are underscored, all are significantly different at the .05 level.

The quantitative analysis of the international orientation data presented in this chapter resulted in a number of significant findings. A summary of the findings is presented in table 44. Of the twelve hypotheses tested in relation to international orientation, eight were found to be significant. The exporting executives were found to be significantly more internationally oriented than the non-exporting executives. In addition, international orientation was found to be related to extent of export involvement, extent of formal education, foreign language capability, total time overseas, overseas time before age fifteen, longest trip overseas, and type of overseas military experience. International orientation was not related to the age of the executive, type of educational background, recency of overseas travel, or aggregate overseas military experience.

In addition to the tests related to international orientation, the Kolmogorov-Smirnov test was used to analyze the amount of time spent overseas prior to involvement with exporting. The results of this analysis showed that the exporting executives had had significantly more overseas travel prior to their becoming involved with exporting than had the non-exporting executives.

TABLE 44

SUMMARY OF FINDINGS OF THE STATISTICAL HYPOTHESES TESTS

| Factor | Significantly Related to International Orientation* |
|--------------------------------------|---|
| Exporter vs. Non-exporter | Yes |
| Extent of Export Involvement | Yes |
| Age of the Executive | No |
| Extent of Formal Education | Yes |
| Type of Educational Background | No |
| Foreign Language Capability | Yes |
| Total Time Overseas | Yes |
| Recency of Overseas Travel | No |
| Overseas Time Before Age Fifteen | Yes |
| Longest Trip Overseas | Yes |
| Overseas Military Experience | No |
| Type of Overseas Military Experience | Yes |

*Significance is at the .05 level.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The methodology and results of this research effort will be summarized in this chapter. The conclusions and implications for international trade theory and policy resulting from the findings of this study will then be examined. The conclusions and implications resulting from the research findings will also be explored in relation to the exporter/non-exporter dichotomy, overseas experience and international orientation, foreign language training, and the recruitment of internationally oriented executives. Finally, recommendations for further research will be proffered.

Summary

The almost exclusive focus of international trade theory on macro-level economic factors has limited its explanatory power, for research has found macro-level factors to be significant but not sufficient in explaining the positive export decision. In order to explain the

dynamics of export initiation, it has become increasingly apparent that one must look at factors at both the macro and the micro level. Review of recent literature which has focused on the micro level revealed that several studies have pointed to the importance of the international orientation of a firm's chief executive. Yet, most of the findings of these studies concerning international orientation have been of an ancillary nature. The purpose of this research study was, therefore, to directly analyze the international orientation of the chief executives of Virginia manufacturing firms. Specifically, the purpose of this research was to determine whether the international orientation of chief executives of non-exporting manufacturing firms located in Virginia differed significantly from the international orientation of chief executives of Virginia exporting manufacturing firms. It was also the purpose of this study to analyze some of the factors which had been suggested as being related to international orientation. As a result, this research study examined age, education, foreign language capability, and overseas experience in relation to international orientation.

Thirteen research questions were addressed by this study. These research questions were set forth and then translated into testable research hypotheses. The research hypotheses were stated in both narrative and

notational form. To test the research hypotheses, information was collected from a random sample of chief executives of Virginia exporting manufacturers and a random sample of chief executives of Virginia non-exporting manufacturers. Both groups of executives were identified by examining the Directory of Virginia Manufacturers, 1975.

To determine the total sample size, a decision had to be made regarding the confidence level desired, the amount of error allowed, and the acceptable response rate. It was decided to specify a confidence level of 95 percent, to allow an error rate of not more than five percent on either side of the mean, and to accept a response rate of not less than fifty percent. Based on these decisions, the required total sample size was calculated to be 1310. Of the 1310 executives surveyed, 917 were chief executives of non-exporting manufacturers and 393 were chief executives of exporting manufacturers. Of the executives surveyed, 755 returned usable questionnaires, resulting in a response rate of 57.6 percent. The results of the nonresponse study indicated that the assumption could reasonably be made that nonrespondents did not differ from the respondents of this study.

The questionnaire used in the mail survey consisted of two sections. The first section contained questions about the chief executive and his background. The second

section contained the Worldmindedness Scale, a scale designed to measure the chief executive's international orientation.

After determining that the international orientation data did not violate the assumptions of normality of distribution and homogeneity of variance, the data analysis was conducted using parametric analysis of variance and Duncan's Multiple Range Test. Information concerning the amount of time the executives had spent overseas prior to their involvement with exporting was analyzed using the Kolmogorov-Smirnov non-parametric test.

The statistical analysis of the quantitative data resulted in a number of significant findings. The exporting executives were found to have had significantly more overseas travel prior to their involvement with exporting than had the non-exporting executives. Of the twelve hypotheses tested in relation to international orientation, eight were found to be significant. The chief executives of the non-exporting manufacturing firms were found to be significantly less internationally oriented than the chief executives of the exporting manufacturing firms. In addition, international orientation was found to be related to extent of export involvement, extent of formal education, foreign language capability, total time overseas, overseas time before age fifteen, duration of the longest trip overseas, and type of overseas military experience.

International orientation was not related to the executive's age, type of educational background, recency of overseas travel, or aggregate overseas military experience.

International Trade Theory and Policy

The results of this research have theoretical implications for international trade theory and practical implications for public policy towards international trade. On the theoretical level, several authors have contended that the international orientation of a firm's chief executive needs to be added as a micro-level dimension to international trade theory. The results of this research lend support to this contention, for this research found that the chief executives of Virginia non-exporting manufacturers were significantly less internationally oriented than the chief executives of Virginia exporting manufacturers.

In this study, the chief executives of the non-exporting manufacturers scored 99.47 on the international orientation measure, while the chief executives of the exporting manufacturers scored 112.53. Some insight into the relative nature of these scores can be gained by examining the results of a previous study by the author and Donald Hackett.¹ In the 1974 Langston and Hackett study,

¹Charles M. Langston and Donald W. Hackett, "Cultural Inflexibility in International Management Education," paper presented at the 34th annual meeting of the Academy of Management, Seattle, Washington, 20 August 1974.

a national survey of a sample of management professors (all of which were members of the Academy of Management) yielded an average international orientation score of 105.94 on the Worldmindedness Scale. In the study, some variation was found to exist on the international orientation scores by region of the United States. The forty management professors located geographically in the Southeastern United States who participated in the study achieved an average score of 98.70 on the international orientation measure.²

In examining the scores of the chief executives of Virginia manufacturing firms in relation to the scores derived from the previous study by Langston and Hackett, the scores of the chief executives of Virginia non-exporting manufacturers (99.47) appear to be roughly comparable to the scores of the Southeastern management professors (98.70), while the scores of the chief executives of Virginia exporting manufacturers (112.53) are considerably higher than the scores of either of the other two groups. Additional insight into the relative nature of these scores is revealed by further examining the conclusions of the Langston and Hackett study. The study found that management professors were considerably more ethnocentric than

²Although the study found some regional variation on the international orientation scale, this variation was not found to be significant at the .05 level.

professors in selected other functional areas of business administration. The authors concluded that the results of the study indicated the existence of considerable ethnocentricity on the part of management professors. Management professors in the Southeast were even more ethnocentric. The comparability of the scores of Virginia non-exporters and the Southeastern management professors would lead one to conclude that the chief executives of Virginia non-exporting manufacturers also demonstrate considerable ethnocentrism.

These results would appear to help explain the paradox found by Simpson. As noted previously, Simpson found that 69 percent of non-exporters felt that they could export, but had chosen not to enter the export marketplace.³ This occurrence, it would appear, could be due to the existence of considerable ethnocentrism on the part of the non-exporting executives.

These results also raise some questions concerning U.S. export promotion programs designed to inform non-exporters of the profitability of exporting. Simpson's results indicate that many non-exporters are aware that exporting is potentially profitable, but have for other reasons chosen not to export.⁴ This contrasts with the

³Claude L. Simpson, Jr., "The Export Decision: An Interview Study of the Decision Processes in Tennessee Manufacturing Firms" (Ph.D. dissertation, Georgia State University, 1973), p. 45.

⁴Ibid.

philosophy of the Bureau of International Commerce of the Department of Commerce. The Bureau of International Commerce maintains that lack of knowledge of the profitability of exporting is a primary cause of non-exporters not becoming involved in exporting.

Beginning with the MBA Export Expansion Program and continuing with the subsequent Regional Export Expansion Program, the Bureau undertook the task of making available to selected non-exporters information concerning the profitability of exporting and the mechanics of export initiation. These programs have not proven to be as successful as the Bureau had originally anticipated. Experiences during the University of Oklahoma's participation in these programs note this lack of successfulness. As part of the Bureau of International Commerce's Export Expansion Programs, selected graduate students in the College of Business Administration, under the direction of a faculty advisor, prepared detailed export marketing plans for several non-exporting firms located in Oklahoma. At the conclusion of the study by the student-faculty team from the University of Oklahoma, the participating firm was given a detailed marketing plan which described step-by-step the mechanics of exporting the firm's product. In addition, the firm was provided a pro-forma income statement showing the potential profitability of its export involvement. After being provided this information, most

of the firms still decided not to export. Given the details of how to export and the information concerning the profitability of exporting, many of the firms rationalized their continued decision not to export by stating:

Our firm just doesn't have the time to undertake an export operation. We should not have become involved with this export study because we must limit our obligations to our domestic market.

The decision makers had apparently authorized the study hoping that the results of the study would help justify their decision not to export.

Recognizing the ineffectiveness of its export initiation efforts, the Bureau of International Commerce has begun to shift the emphasis of its Export Expansion Programs. The Bureau has begun to deemphasize use of the programs as a means to stimulate non-exporting firms to initiate exporting. The Bureau has, in contrast, begun to emphasize use of the Export Expansion Programs as a means to help exporters initiate additional export programs or further their existing export efforts. The results of this study indicate such a shift in emphasis is probably warranted, for given the ethnocentrism of non-exporters revealed by this study, export promotion programs designed to provide information about export mechanics and the profitability of exporting will continue to be less than effective.

The results of this study indicate that to involve more non-exporters in direct exporting, the ethnocentrism

of non-exporting executives needs to be reduced and an international orientation needs to be developed. One U.S. government program which attempts to foster development of an international orientation is the U.S. Trade Mission Program. The Bureau of International Commerce now sponsors several international trade missions each year. This governmental program exposes participating U.S. businessmen to foreign business environments for a short period of time. At the foundation of the program is the belief that even a short exposure to a foreign environment will foster an international orientation, and thus stimulate export initiation. This research, however, found that short visits overseas by the executive are not significantly related to the level of his international orientation.⁵ This result would appear to indicate that the Bureau of International Commerce needs to reexamine the U.S. Trade Mission Program in light of its objectives.

As has been indicated, in order to involve more non-exporting firms in direct exporting, the ethnocentrism of non-exporting executives needs to be reduced and an international orientation needs to be fostered. Yet, it appears that this variable is not in the short run easily alterable. The results of this study indicate that only

⁵In fact, the executives participating in this study who had been overseas for periods of less than six months scored somewhat lower on the international orientation measure than the executives who had not been overseas.

considerable time abroad is significantly related to international orientation; only large increments of education are related to international orientation; only overseas trips of long duration are related to international orientation. These results lend support to those who in recent years have begun to question the efficacy of government efforts to increase the number of American companies directly engaged in exporting activities. In recent years a growing number of researchers have called for increased use of professional foreign trade firms as exporting intermediaries.⁶ In the United States such professional exporting intermediaries are commonly referred to as Export Management Companies (EMCs). Kizilbash defines an EMC as a professional international trade firm

. . . which represents two or more U.S. manufacturers of allied and non-competitive products, handles their entire export operations worldwide or in specific markets, and receives its compensation from commissions on sales . . . or mark up on resale of products.⁷

Most EMCs buy products from U.S. manufacturers and perform all the services attendant to exporting the product. In

⁶Thomas J. de Seve, "Using an Export Management Company," paper presented at the 3rd annual meeting of the International Trade Seminar, Tulsa, Oklahoma, 4 October 1972, p. 4.

⁷Askari H. Kizilbash, "A Study of Export Marketing Objectives and Practices" (Ph.D. dissertation, University of Nebraska, 1971), p. 33. Kizilbash's definition of the EMC follows the definition given in Paul F. Bellins, "An Evaluation of Combination Export Management Firms" (Ph.D. dissertation, New York University, 1966), p. 1.

this way, EMCs in the United States are somewhat analogous to Japan's General Trading Companies, although the EMCs lack the enormous size and national government support of the Japanese General Trading Companies.

By use of an EMC the U.S. manufacturer does not become involved in exporting the product which it manufactures. Kizilbash notes that the EMCs in the United States primarily represent manufacturers who wish to avoid any personal involvement with foreign business.⁸ It would appear that use of an EMC as the mechanism for exporting would be an appropriate form of export marketing for the ethnocentric non-exporting manufacturer for it would offer him the opportunity to capitalize on some of the profits derived from export sales while allowing him to avoid personal contact and involvement with foreign peoples and businesses.

The Exporter/Non-Exporter Dichotomy

Theory and research in the area of international trade have generally employed a dichotomous classification of business firms based on a firm's involvement or lack of involvement in exporting. The results of this research indicate, however, that exporters are not as a group homogeneous. Two groups of exporters are apparent. The first group of exporters is comprised of the firms which

⁸ Kizilbash, p. 40.

derive ten percent or less of total sales from export sales, while the second group is comprised of the firms which derive greater than ten percent of total sales from export sales. The international orientation of the chief executives of the two groups of exporters was found to differ significantly: the chief executives of exporting firms deriving ten percent or less of total sales from export sales were found to be significantly less internationally oriented than the chief executives of the exporting firms deriving greater than ten percent of total sales from export sales. The majority of the exporters included in this study (63.4 percent) derive ten percent or less of total sales from export sales. Only 36.6 percent of the exporting executives were in the group of executives found to be significantly more internationally oriented.

Research by George Tesar yielded results in this regard comparable to those obtained by this study.⁹ In a study of the characteristics of 167 Wisconsin exporting manufacturing firms, Tesar used step-wise discriminant analysis to classify exporters into groups based on common characteristics. Two groups of exporters emerged: those deriving ten percent or less of total sales from export

⁹George Tesar, "Classification of Exporters and Nonexporters Based on Their Perception of Exports," paper presented at the annual meeting of the Academy of International Business, Dallas, Texas, 29 December 1975, and George Tesar, "Empirical Study of Export Operations Among Small and Medium-Sized Manufacturing Firms" (Ph.D. dissertation, University of Wisconsin, 1975).

sales and those deriving greater than ten percent of total sales from export sales. Of the exporting firms included in the study, only 22 percent had enough export sales to place them in the latter group.¹⁰ Tesar referred to the group of exporters whose export sales represented ten percent or less of total sales as passive exporters. Exporting firms whose export sales represented a greater percentage of total sales were referred to as aggressive exporters.

In analyzing the results of his study Tesar concluded:

The passive exporters in this study tend to reflect the characteristics of the non-exporters, while the aggressive exporters tend to reflect the characteristics of exporters.¹¹

Tesar's findings and the results of this study indicate that caution needs to be employed when generalizing about exporters as a single, homogeneous group.

Overseas Experience and International Orientation

The total amount of time the executive had spent overseas was found to be significantly related to the level of his international orientation; yet great variability was found to exist in this relationship. While total overseas experience proved to be a factor in differentiating

¹⁰Tesar, "Empirical Study of Export Operations," p. 97.

¹¹Ibid., p. 137.

the two groups of executives and a significant factor in relation to international orientation, the total amount of time spent overseas in the aggregate sense did not appear to be as important as the timing and the nature of the overseas experience. Overseas experience at an early age, the duration of overseas visits, and the nature of one's overseas military experience, if any, need to be examined when exploring overseas travel as an explanatory dimension.

These results contrast with the predominant emphasis of international business literature. International business literature has tended to emphasize the importance of total time overseas in internationalizing one's ideas and have tended to pay relatively little attention to the nature and timing of the overseas experience. The results of this study question this emphasis. Fayerweather, Boddewyn, and Engberg have also questioned the general emphasis placed on time spent abroad:

Suffice it to say that its benefits tend to be too readily accepted, and that there are limitations and complications which require careful evaluation. Particularly pertinent here are real reservations as to how full or valid the experience with the foreign environment may be.¹³

¹²Mark R. Greene, "Education for International Business," American Association of Collegiate Schools of Business Bulletin 6 (January 1970):p. 17.

¹³John Fayerweather, Jean Boddewyn, and Holger Engberg, International Business Education (New York: Graduate School of Business Administration, New York University, 1966), p. 24.

Smith has noted that time abroad may reinforce a person's prejudice. He emphasizes that for some people general intercultural experiences may facilitate oversimplified perceptions, reinforcing their pre-existing prejudices.¹⁴ Smith contends that sending a person already somewhat ethnocentric to a foreign culture ". . . for the purpose of enlarging his view of the world is quite likely to do more harm than good."¹⁵ Smith says that such a person ". . . may well return believing more strongly than before in the superiority of the in-group and the rightness of a nationalistic, rather than a world-minded, orientation."¹⁶ In fact, Smith's studies led him to conclude that when placed in a foreign environment, some people not only casually find reinforcement for their prejudices, they actively seek evidence in the foreign culture that serves to reinforce their prejudices.

It appears that greater emphasis should be placed on examining the nature of a person's overseas experiences in the internationalization of his orientation. The findings of this study indicate the importance of such an examination.

¹⁴Howard P. Smith, "Do Intercultural Experiences Affect Attitudes?" Journal of Abnormal and Social Psychology 51 (November 1955):473.

¹⁵Ibid., p. 475.

¹⁶Ibid.

Foreign Language Capability and
International Orientation

It has been contended that since English is generally considered the commercial language of the world, foreign language training is no longer useful for the executive involved in international business.¹⁷

Fayerweather, Boddewyn, and Engberg conclude that beyond being a possible asset on one's resume, ". . . there is really not very much that one can usefully say about languages in international business curriculum planning."¹⁸

Terpstra notes that most international business students do not know in which foreign countries, if any, they will be doing business during their careers. And, Terpstra adds, "Learning German or Japanese . . . is not a great help if one's career does not involve Germany or Japan."¹⁹

The results of this study question the contention that foreign language training is no longer useful for the executive involved in international business. While it is true that having learned German is not of much direct benefit if one conducts his foreign business activities only in Japan, having learned German may offer indirect benefits for the executive in his business relationships in Japan,

¹⁷Fayerweather, Boddewyn, and Engberg, p. 18.

¹⁸Ibid.

¹⁹Vern Terpstra, International Marketing (New York: Holt, Rinehart and Winston, 1972), p. 91.

for foreign language training in general appears to be a cultural sensitizer. Robuck and Simmonds note, "Foreign language training can be extremely useful for developing cultural sensitivity."²⁰ This study found language capability to be highly related to international orientation. In addition to the knowledge of a language one gains from foreign language training, foreign language training appears to serve a useful function as an agent for reducing ethnocentricity and promoting an international orientation.

Internationally Oriented Executives

Individuals or groups charged with the responsibility of recruiting, evaluating, and selecting a firm's chief executive should be cognizant of the applicant's international orientation, particularly if the firm is interested in initiating or developing exports. If the firm is actively involved in exporting or seeks to be actively involved in the future, the individual selected to be the firm's chief executive should be internationally oriented. Individuals possessing a high degree of international orientation constitute what has been referred to as the third culture.

In its original anthropological setting, Useem, Donoghue, and Useem used the term third culture to refer

²⁰Stefan H. Robuck and Kenneth Simmonds, International Business and Multinational Enterprises (Homewood, Ill.: Richard D. Irwin, 1973), p. 526.

to the bridging of cultural ties.²¹ In a broader sense, the third culture has been defined as a group consisting of those individuals who possess a value orientation or frame of reference such that they are able to transcend nationalistic attitudes and cognitively analyze issues from a global perspective.²² Individuals in the third culture are thus characterized by a high degree of international orientation.

In evaluating applicants for the chief executive position in a firm actively involved or seeking to be actively involved in exporting, the selection team should seek individuals who are internationally oriented, i.e., individuals who are members of the third culture. In seeking such individuals the selection team should pay attention to the prospective chief executive's total overseas experience, the length of his longest overseas visit, the amount of time he spent overseas before age fifteen, the nature of his overseas military experience, his foreign language capability, and the extent of his education.

²¹John Useem, John D. Donoghue, and Ruth H. Useem, "Men in the Middle of the Third Culture," Human Organization (Fall 1963), pp. 169-79. See also John Fayerweather, International Business Management (New York: McGraw-Hill Book Company, 1969), p. 96.

²²Charles M. Langston, "The Third Culture in Multinational Enterprises," paper presented at the 15th annual meeting of the International Studies Association, St. Louis, Missouri, 21 March 1974, p. 6.

The results of this research indicate that executives having had considerable overseas experience, overseas trips of substantial duration, considerable overseas experience before age fifteen, overseas military duty in other than a combatant role, language development to the level of fluency in one or more foreign languages, and extensive educational training would be most likely to be internationally oriented.

Recommendations for Further Research

This research effort was limited by the time and financial resources available to the researcher. As a result, the sample survey was limited to the chief executives of Virginia exporting manufacturers and the chief executives of Virginia non-exporting manufacturers. Restricting the survey design of this research effort to the state of Virginia limits the generality of the research results. Replication of this research effort in other geographical regions of the United States is needed before general inferences can be made. In addition, replication of this study overseas would provide information for cross-cultural comparisons and contrasts.

The scope of this research effort was defined to include only manufacturing firms. The research design could be broadened to include service and trade firms as well as manufacturing firms.

Other areas deserving further research have been indicated by the results of this study. The relationship of overseas experience to international orientation merits further research. An investigation into the various reasons for travel overseas would appear to offer useful insights into the nature of the relationship between overseas experience and international orientation. The impact of time spent overseas on one's international orientation is also possibly affected by the area of the world in which the time is spent. Research into such a relationship could analyze overseas experience in relation to specific countries or the analysis could focus on overseas experience in such general geographical regions as in Western Europe and Southeast Asia. The impact of travel to a foreign country on international orientation could also be analyzed in relation to the level of economic development of the foreign country.

The results of this study suggest a need for additional inquiries into the role of overseas military experience in fostering or hindering an international orientation. The impact of overseas military service on an individual's international orientation might be influenced by whether the individual volunteered for military service or was drafted into military service. Additional research into the specific nature of the individual's overseas military duties would also appear to be warranted.

This study has demonstrated the importance of including attitudinal variables in theories of international trade and export marketing. It is anticipated that further studies will examine other attitudinal variables and personality characteristics in relation to exporting and non-exporting executives.

Finally, the results of this research effort indicate the importance of incorporating micro-level factors into theories of international trade. Further research is needed to identify and explore other micro-level factors which can help in explaining the dynamics of the export marketing decision-making process.

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APPENDICES

APPENDIX A
SAMPLE SIZE DETERMINATION

SAMPLE SIZE DETERMINATION

The determination of a sample size requires a decision as to the level of confidence the researcher requires. In addition, the researcher must make a decision as to the amount of error he is willing to accept from the sample statistics. For this study, a confidence level of 95 percent was desired, and the error rate was not to exceed 5 percent on either side of the mean. To determine the actual amount of error the researcher is willing to accept, an estimate of the overall population mean is needed. Based on a previous survey of international orientation, it was estimated that the mean was approximately 109 (with a variance of approximately 22.5); therefore, the error allowed was ± 5.45 units on either side of the estimated mean.¹

With the error rate and confidence level specified and the mean and variance estimated, the sample size was determined using the following general formula:²

¹Charles M. Langston and Donald W. Hackett, "Cultural Inflexibility in International Management Education" paper presented at the 34th annual meeting of the Academy of Management, Seattle, Washington, 20 August 1974.

²The general sample size formula was derived from one given in William G. Cochran, Sampling Techniques, 2nd ed. (New York: John Wiley, 1963), p. 81.

$$N \doteq \max \frac{S_i^2}{\pi_i VR}$$

Since

$$V = \frac{l^2}{(2Z)^2}$$

the specific computational formula was:

$$n \doteq \max \frac{4S_i^2 Z^2}{\pi_i l^2 R}$$

where:

n = Sample size

S_i^2 = Variance for treatment (subdivision or level) i

π_i = Percentage of the total sample in treatment i

V = Allowed variance on estimate of treatment

l = Total error allowed in estimating the treatment mean (two times the error allowed on each side of the estimated treatment mean)

Z = Z statistic for the specified level of confidence

R = Minimum survey response rate allowed

To calculate the sample size, Z and R had to be determined. The appropriate Z statistic was 1.96 since a confidence level of 95 percent was desired.³ To specify R a decision had to be made concerning the minimum response rate which would be considered acceptable. For this study,

³Robert D. Mason, Statistical Techniques in Business and Economics, 3rd ed. (Homewood, Ill.: Richard D. Irwin, 1974), p. 617.

the minimum acceptable response rate was set at fifty percent usable responses for each of the executive groups.⁴

After estimating S_i and l and specifying Z and R , the maximization of n as required by the formula occurs when π_i is the smallest. To determine the maximum n , the researcher must estimate what the smallest percentage of total responses any one subdivision will receive. In testing the hypotheses set forth in this study, it was estimated that some of the subdivisions might contain as few as ten percent of the total responses. In these cases, π_i would be .10 and n would be maximized. Thus, where:

$$S_i = 22.5$$

$$\pi_i = .1$$

$$l = 10.9$$

$$Z = 1.96$$

$$R = .5$$

the required sample size is:

$$n = \frac{4(22.5)^2(1.96)^2}{(.1)(10.9)^2(.5)} = 1310$$

The total sample size was, therefore, 1310, which constituted a sample of 30.34 percent of the total

⁴Erdos recognizes fifty percent as an acceptable response rate. See Paul L. Erdos, Professional Mail Surveys (New York: McGraw-Hill Book Company, 1970), p. 144. This goal was considered realistic since a previous application of the questionnaire yielded a response rate of greater than fifty percent. See Langston and Hackett, p. 7.

population of 4,318 firms. This total sample had to be divided proportionately between the exporting group and the non-exporting group if the study was to generalize about the relationship of age, education, etc. to the level of international orientation of chief executives of Virginia manufacturing firms. In other words, 30.34 percent of the 1,296 exporting manufacturers had to be sampled, and, correspondingly, 30.34 percent of the 3,022 non-exporting manufacturers had to be sampled. Consequently, 393 exporting manufacturers were sampled and 917 non-exporting manufacturers were sampled.

These sample sizes are relatively large, due to the fact that formal allowance was made for dividing the sample into subdivisions of unequal response size.⁵ Cochran notes that many social science researchers use sample surveys which are, in fact, too small because they fail to allow for subdividing the sample.

Thus if estimates with variance V are wanted for each of k subdivisions the sample size must be (several times) . . . as large as is needed for an over-all estimate of the same precision. This point tends to be overlooked in calculations of sample size. . . .⁶

⁵If no allowance had been made for subdividing the sample, the sample size would have been 436 firms.

⁶Cochran, p. 81.

APPENDIX B
INITIAL COVER LETTER



School of Business Administration
 department of Business Management • 804-489-6451 • Norfolk, Va. 23508

April 16, 1976

Mr. John Doe
 The International Corporation
 Norfolk, Virginia 00000

Dear Mr. Doe:

As part of a continuing program of attitudinal research, the School of Business at Old Dominion University is attempting to determine attitudes of businessmen concerning selected controversial issues in the area of international affairs.

Enclosed with this letter is a two-part confidential questionnaire. Your completed questionnaire will in no manner be related to or identified with you. You will note that the questionnaire has been carefully designed so that only a moment of your time will be needed to answer the questions and to place the completed questionnaire in the return mail. For each question in Part II, a scaled line is given immediately to the right of the question. You are requested to check anywhere along the line you wish, as illustrated in the following example:



Please take just a moment to complete and return your questionnaire in the enclosed postage paid envelope.

Thank you very much.

Sincerely,

Charles Langston
 Assistant Professor

CL:ggs

Enclosures

APPENDIX C
SECOND COVER LETTER



School of Business Administration
department of Business Management • 804-489-6451 • Norfolk, Va. 23508

April 30, 1976

Mr. John Doe
The International Corporation
Norfolk, Virginia 00000

Dear Mr. Doe:

Recently I mailed you a confidential questionnaire dealing with selected controversial issues in the area of international affairs. Most of these questionnaires have been returned but a few have not. I would like to express my appreciation to those of you that returned the first questionnaire. Input from the business community into the School of Business Administration's program of attitudinal research is extremely valuable.

Since I am using a relatively small sample for this study, the return of all questionnaires is important to insure that the results of the study provide accurate and useful information. I know that some of the first questionnaires may have been lost in the mail and that some people may have thought they had no useful information to give me. But the nature of this study is such that all questionnaires are important.

I would like to again stress that your completed questionnaire will in no manner be related to or identified with you or your firm. If you did not return the first questionnaire, please take just a moment to complete and return the enclosed questionnaire.

Thank you very much.

Sincerely,

Charles Langston
Assistant Professor

CL:ggs
Enclosures

APPENDIX D

SECTION ONE OF THE QUESTIONNAIRE

QUESTIONNAIRE

Directions: Following you will find a two-part questionnaire. Please respond to the questions that pertain to you in Part I and then proceed to Part II of the questionnaire.

Part I

Please respond to each of the following questions by placing an "X" in the applicable response category.

1. To what degree does your firm export?

- None (If none, skip question 2 and proceed to question 3.)
 Between 1% and 10% of sales Between 11% and 20% of sales
 Between 21% and 30% of sales Between 31% and 40% of sales
 Between 41% and 50% of sales Over 50% of sales

2. Prior to your involvement with exporting, how much time had you spent outside the United States?

- None Less than 1 month Less than 6 months
 Less than 1 year Less than 2 years
 Less than 5 years 5 years or over

3. What is your age?

- Under 25 25-34 35-44 45-54
 55 years and over

4. What is the extent of your formal education?

- 1 to 8 years Some high school High school graduate
 Some college College graduate Post graduate work

5. What is your educational background?

- Education Business General Academic
 Engineering, Mathematics, Biology, or other Science
 English, History, Art or other Arts and Letters
 Psychology, Sociology, or other Social Science
 _____ Other

6. How many foreign languages do you speak somewhat fluently?
 0 1 2 3 4 5 or more
7. How much time have you spent outside the United States?
 None (If none, skip questions 8-11 of Part I and proceed to Part II.)
 Less than 1 month Less than 6 months
 Less than 1 year Less than 2 years
 Less than 5 years 5 years or over
8. When was the most recent time you were outside the United States?
 Within the last month Within the last 6 months
 Within the last year Within the last 2 years
 Within the last 5 years Over 5 years ago
9. How much time did you spend outside the United States prior to age fifteen?
 None Less than 6 months Less than 1 year
 Less than 2 years Less than 5 years 5 years or over
10. What is the longest time you have ever been outside the United States at one time?
 Less than 1 week Less than 1 month
 Less than 6 months Less than 1 year
 Less than 2 years Less than 5 years
 5 years or over
11. Have you spent time outside the United States while serving with a branch of the military service?
 No Yes
 If yes, have you served outside the United States in a military combatant role during a war or police action?
 No Yes

Part II

Please indicate your response to the following questions by placing a check anywhere along the scale you wish.

APPENDIX E
ORIGINAL ETHNOCENTRISM SCALE

THE ORIGINAL ETHNOCENTRISM SCALE

The following statements refer to opinions regarding a number of social groups and issues, about which some people agree and others disagree. Please mark each statement in the left-hand margin according to your agreement or disagreement, as follows:

- +1: slight support, agreement
- +2: moderate support, agreement
- +3: strong support, agreement

- 1: slight opposition, disagreement
- 2: moderate opposition, disagreement
- 3: strong opposition, disagreement

- _____ 1. The many political parties tend to confuse national issues, add to the expense of elections, and raise unnecessary agitation. For this and other reasons, it would be best if all political parties except the two major ones were abolished.

- _____ 2. If there are enough Negroes who want to attend dances at a local dance hall featuring a colored band, a good way to arrange this would be to have one all-Negro night, and then the whites could dance in peace the rest of the time.

- _____ 3. Patriotism and loyalty are the first and most important requirements of a good citizen.

- _____ 4. Certain religious sects whose beliefs do not permit them to salute the flag should be forced to conform to such a patriotic action, or else be abolished.

- _____ 5. The Negroes would solve many of their social problems by not being so irresponsible, lazy, and ignorant.

- ___ 6. Any group or social movement which contains many foreigners should be watched with suspicion and, whenever possible, be investigated by the FBI.
- ___ 7. There will always be superior and inferior nations in the world and, in the interests of all concerned, it is best that the superior ones be in control of world affairs.
- ___ 8. Negro musicians are sometimes as good as white musicians at swing music and jazz, but it is a mistake to have mixed Negro-white bands.
- ___ 9. Although women are necessary now in the armed forces and in industry, they should be returned to their proper place in the home as soon as the war ends.
- ___ 10. Minor forms of military training, obedience, and discipline, such as drill, marching and simple commands, should be made a part of the elementary school educational program.
- ___ 11. It would be a mistake to have Negroes for foremen and leaders over whites.
- ___ 12. The main threat to basic American institutions during this century has come from the infiltration of foreign ideas, doctrines, and agitators.
- ___ 13. Present treatment of conscientious objectors, draft-evaders, and enemy aliens is too lenient and molly-coddling. If a person won't fight for his country, he deserves a lot worse than just a prison or a work camp.
- ___ 14. Negroes may have a part to play in white civilization, but it is best to keep them in their own districts and schools and to prevent too much intermixing with whites.
- ___ 15. One main difficulty with allowing the entire population to participate fully in government affairs (voting, jobs, etc.) is that such a large percentage is innately deficient and incapable.
- ___ 16. Manual labor and menial jobs seem to fit the Negro mentality and ability better than more skilled or responsible work.

- ___ 17. It is a mistake to allow any Japanese to leave internment camps and enter the army where they would be free to commit sabotage.
- ___ 18. In view of the present national emergency, it is highly important to limit responsible government jobs to native, white, Christian Americans.
- ___ 19. In a community of 1,000 whites and 50 Negroes, a drunken Negro shoots and kills an officer who is trying to arrest him. The white population should immediately drive all the Negroes out of town.
- ___ 20. European refugees may be in need, but it would be a big mistake to lower our immigration quotas and allow them to flood the country.
- ___ 21. The many faults, and the general inability to get along, of the Oklahomans ("Okies"), who have recently flooded California, prove that we ought to send them back where they came from as soon as conditions permit.
- ___ 22. The people who raise all the talk about putting Negroes on the same level as whites and giving them the same privileges are mostly radical agitators trying to stir up conflicts.
- ___ 23. It has become clear that the Germans and Japanese are racially war-minded and power-seeking, and the only guarantee of future peace is to wipe out most of them and to keep the rest under careful control.
- ___ 24. A large-scale system of sterilization would be one good way of breeding out criminals and other undesirable elements in our society and so raise its general standards and living conditions.
- ___ 25. An occasional lynching in the South is a good thing because there is a large percentage of Negroes in many communities and they need a scare once in a while to prevent them from starting riots and disturbances.
- ___ 26. Mexico can never advance to the standards of living and civilization of the U.S., due mainly to the innate dirtiness, laziness, and general backwardness of Mexicans.

- _____ 27. Filipinos are all right in their place, but they carry it too far when they dress lavishly, buy good cars, and go around with white girls.
- _____ 28. It would be best to limit Negroes to grammar and trade school education since more schooling just gives them ambitions and desires they are unable to fulfill in white competition.
- _____ 29. Zootsuiters demonstrate that inferior groups, when they are given too much freedom and money, just misuse their privileges and create disturbances.
- _____ 30. The most vicious, irresponsible, and racketeering unions are, in most cases, those having largely foreigners for leaders.
- _____ 31. There is something inherently primitive and uncivilized in the Negro, as shown in his music and his extreme aggressiveness.
- _____ 32. We are spending too much money for the pampering of criminals and the insane, and for the education of inherently incapable people.
- _____ 33. There will always be wars because, for one thing, there will always be races who ruthlessly try to grab more than their share.
- _____ 34. Most Negroes would become officious, overbearing, and disagreeable if not kept in their place.

APPENDIX F
FINAL ETHNOCENTRISM SCALE

FINAL ETHNOCENTRISM SCALE

The following statements refer to opinions regarding a number of social groups and issues, about which some people agree and others disagree. Please mark each statement in the left-hand margin according to your agreement or disagreement, as follows:

- +1: slight support, agreement
- +2: moderate support, agreement
- +3: strong support, agreement

- 1: slight opposition, disagreement
- 2: moderate opposition, disagreement
- 3: strong opposition, disagreement

- _____ 1. One trouble with Jewish businessmen is that they stick together and prevent other people from having a fair chance in competition.
- _____ 2. I can hardly imagine myself marrying a Jew.
- _____ 3. There may be a few exceptions, but in general Jews are pretty much alike.
- _____ 4. The trouble with letting Jews into a nice neighborhood is that they gradually give it a typical Jewish atmosphere.
- _____ 5. To end prejudice against Jews, the first step is for the Jews to try sincerely to get rid of their harmful and irritating faults.
- _____ 6. There is something different and strange about Jews; it's hard to tell what they are thinking and planning, and what makes them tick.
- _____ 7. Negroes have their rights, but it is best to keep them in their own districts and schools and to prevent too much contact with whites.

- ___ 8. It would be a mistake ever to have Negroes for foremen and leaders over whites.
- ___ 9. Negro musicians may sometimes be as good as white musicians, but it is a mistake to have mixed Negro-white bands.
- ___ 10. Manual labor and unskilled jobs seem to fit the Negro mentality and ability better than more skilled or responsible work.
- ___ 11. The people who raise all the talk about putting Negroes on the same level as whites are mostly radical agitators trying to stir up conflicts.
- ___ 12. Most Negroes would become overbearing and disagreeable if not kept in their place.
- ___ 13. Zootsuiters prove that when people of their type have too much money and freedom, they just take advantage and cause trouble.
- ___ 14. The worst danger to real Americanism during the last 50 years has come from foreign ideas and agitators.
- ___ 15. Now that a new world organization is set up, America must be sure that she loses none of her independence and complete power as a sovereign nation.
- ___ 16. Certain religious sects who refuse to salute the flag should be forced to conform to such a patriotic action, or else be abolished.
- ___ 17. Filipinos are all right in their place, but they carry it too far when they dress lavishly and go around with white girls.
- ___ 18. America may not be perfect, but the American Way has brought us about as close as human beings can get to a perfect society.
- ___ 19. It is only natural and right for each person to think that his family is better than any other.
- ___ 20. The best guarantee of our national security is for America to have the biggest army and navy in the world and the secret of the atom bomb.

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APPENDIX G

INTERNATIONALISM-NATIONALISM SCALE

THE INTERNATIONALISM-NATIONALISM SCALE

The following statements refer to opinions regarding a number of social groups and issues, about which some people agree and others disagree. Please mark each statement in the left-hand margin according to your agreement or disagreement, as follows:

- +1: slight support, agreement
- +2: moderate support, agreement
- +3: strong support, agreement

- 1: slight opposition, disagreement
- 2: moderate opposition, disagreement
- 3: strong opposition, disagreement

- ___ 1. We need more leaders like MacArthur, who have the morals and the strength to put our national honor above appeasement.

- ___ 2. If it weren't for Russia and her satellites, the world would be headed toward peace and prosperity by now.

- ___ 3. In the long run, it would be to our best interest as a nation to spend less money for military purposes and more money for education, housing, and other social improvements.

- ___ 4. The immigration of foreigners to this country should be kept down so that we can provide for Americans first.

- ___ 5. The only way peace can be maintained is to keep America so powerful and well armed that no other nation will dare to attack us.

- ___ 6. Our best policy in China would be to forget about Chiang Kai-shek and to work for a coalition between the Communists and the "center" parties.

- _____ 7. If the United Nations doesn't show more signs of getting tough with Russia soon, America must be prepared to carry on the fight by itself.
- _____ 8. While we should give military aid to countries which are prepared to fight our enemies, we ought to cut down on foreign economic help, or else the other countries will just play us for a sucker.
- _____ 9. In these troubled times, if we are to be strong and united against our common enemy, we must have more laws and safeguards against the spreading of dangerous ideas.
- _____ 10. One main trouble with American foreign policy today is that there is too much concern with military force and too little concern with political negotiation and economic reconstruction.
- _____ 11. In view of America's moral and material superiority, it is only right that we should have the biggest say in deciding United Nations policy.
- _____ 12. The first principle of our foreign policy should be to join forces with any country, even if it is not very democratic, just as long as it is strongly anti-Communist.

APPENDIX H
THE FASCISM SCALE

THE FASCISM SCALE

The following statements refer to opinions regarding a number of social groups and issues, about which some people agree and others disagree. Please mark each statement in the left-hand margin according to your agreement or disagreement, as follows:

- +1: slight support, agreement
- +2: moderate support, agreement
- +3: strong support, agreement

- 1: slight opposition, disagreement
- 2: moderate opposition, disagreement
- 3: strong opposition, disagreement

- _____ 1. Obedience and respect for authority are the most important virtues children should learn.
- _____ 2. A person who has bad manners, habits, and breeding can hardly expect to get along with decent people.
- _____ 3. If people would talk less and work more, everybody would be better off.
- _____ 4. The business man and the manufacturer are much more important to society than the artist and the professor.
- _____ 5. Science has its place, but there are many important things that can never possibly be understood by the human mind.
- _____ 6. Every person should have complete faith in some supernatural power whose decisions he obeys without questions.
- _____ 7. Young people sometimes get rebellious ideas, but as they grow up they ought to get over them and settle down.

- ___ 8. What this country needs most, more than laws and political programs, is a few courageous, tireless, devoted leaders in whom the people can put their faith.
- ___ 9. No sane, normal, decent person could ever think of hurting a close friend or relative.
- ___ 10. Nobody ever learned anything really important except through suffering.
- ___ 11. What the youth needs most is strict discipline, rugged determination, and the will to work and fight for family and country.
- ___ 12. An insult to our honor should always be punished.
- ___ 13. Sex crimes, such as rape and attacks on children, deserve more than mere imprisonment; such criminals ought to be publicly whipped or worse.
- ___ 14. There is hardly anything lower than a person who does not feel a great love, gratitude, and respect for his parents.
- ___ 15. Most of our social problems would be solved if we could somehow get rid of the immoral, crooked, and feebleminded people.
- ___ 16. Homosexuals are hardly better than criminals and ought to be severely punished.
- ___ 17. When a person has a problem or worry, it is best for him not to think about it, but to keep busy with more cheerful things.
- ___ 18. Nowadays more and more people are prying into matters that should remain personal and private.
- ___ 19. Some people are born with an urge to jump from high places.
- ___ 20. People can be divided into two distinct classes: the weak and the strong.
- ___ 21. Some day it will probably be shown that astrology can explain a lot of things.
- ___ 22. Wars and social troubles may someday be ended by an earthquake or flood that will destroy the whole world.

- _____ 23. No weakness or difficulty can hold us back if we have enough will power.
- _____ 24. It is best to use some prewar authorities in Germany to keep order and prevent chaos.
- _____ 25. Most people don't realize how much our lives are controlled by plots hatched in secret places.
- _____ 26. Human nature being what it is, there will always be war and conflict.
- _____ 27. Familiarity breeds contempt.
- _____ 28. Nowadays when so many different kinds of people move around and mix together so much, a person has to protect himself especially carefully against catching an infection or disease from them.
- _____ 29. The wild sex life of the old Greeks and Romans was tame compared to some of the goings-on in this country, even in places where people might least expect it.

APPENDIX I

SAMPSON AND SMITH'S WORLDMINDEDNESS SCALE

THE WORLDMINDEDNESS SCALE

Please indicate your response to each of the following statements by underlining the degree of agreement or disagreement which best represents your opinion regarding the statement.

| | Strongly Agree | Agree | Mildly Agree | Mildly Disagree | Disagree | Strongly Disagree |
|---|----------------|----------|--------------|-----------------|----------|-------------------|
| 1. Our country should have the right to prohibit certain racial and religious groups from entering it to live. | SA | <u>A</u> | MA | MD | D | SD |
| 2. Immigrants should not be permitted to come into our country if they compete with our own workers. | SA | <u>A</u> | MA | MD | D | SD |
| 3. It would be a dangerous procedure if every person in the world had equal rights which were guaranteed by an international charter. | SA | <u>A</u> | MA | MD | D | SD |
| 4. All prices for exported food and manufactured goods should be set by an international trade committee. | SA | <u>A</u> | MA | MD | D | SD |

| | Strongly Agree | Agree | Mildly Agree | Mildly Disagree | Disagree | Strongly Disagree |
|---|----------------|-------|--------------|-----------------|----------|-------------------|
| 5. Our country is probably no better than many others. | SA | A | MA | MD | D | SD |
| 6. Race prejudice may be a good thing for us because it keeps many undesirable foreigners from coming into this country | SA | A | MA | MD | D | SD |
| 7. It would be a mistake for us to encourage certain racial groups to become well educated because they might use their knowledge against us. | SA | A | MA | MD | D | SD |
| 8. We should be willing to fight for our country without questioning whether it is right or wrong. | SA | A | MA | MD | D | SD |
| 9. Foreigners are particularly obnoxious because of their religious beliefs. | SA | A | MA | MD | D | SD |
| 10. Immigration should be controlled by an international organization rather than by each country on its own. | SA | A | MA | MD | D | SD |
| 11. We ought to have a world government to guarantee the welfare of all nations irrespective of the rights of any one. | SA | A | MA | MD | D | SD |
| 12. Our country should not cooperate in any international trade agreements which attempt to better world economic conditions at our expense. | SA | A | MA | MD | D | SD |

| | Strongly Agree | Agree | Mildly Agree | Mildly Disagree | Disagree | Strongly Disagree |
|--|----------------|-------|--------------|-----------------|----------|-------------------|
| 13. It would be better to be a citizen of the world than of any particular country. | SA | A | MA | MD | D | SD |
| 14. Our responsibility to people of other races ought to be as great as our responsibility to people of our own race. | SA | A | MA | MD | D | SD |
| 15. An international committee on education should have full control over what is taught in all countries about history and politics. | SA | A | MA | MD | D | SD |
| 16. Our country should refuse to cooperate in a total disarmament program even if some other nations agreed to it. | SA | A | MA | MD | D | SD |
| 17. It would be dangerous for our country to make international agreements with nations whose religious beliefs are antagonistic to ours. | SA | A | MA | MD | D | SD |
| 18. Any healthy individual, regardless of race or religion, should be allowed to live wherever he wants in the world. | SA | A | MA | MD | D | SD |
| 19. Our country should not participate in any international organization which requires that we give up any of our national rights or freedom of action. | SA | A | MA | MD | D | SD |

| | Strongly Agree | Agree | Mildly Agree | Mildly Disagree | Disagree | Strongly Disagree |
|--|----------------|-------|--------------|-----------------|----------|-------------------|
| 20. If necessary, we ought to be willing to lower our standard of living to cooperate with other countries in getting an equal standard for every person in the world. | SA | A | MA | MD | D | SD |
| 21. We should strive for loyalty to our country before we can afford to consider world brotherhood. | SA | A | MA | MD | D | SD |
| 22. Some races ought to be considered naturally less intelligent than ours. | SA | A | MA | MD | D | SD |
| 23. Our schools should teach the history of the whole world rather than of our own country. | SA | A | MA | MD | D | SD |
| 24. An international police force ought to be the only group in the world allowed to have armaments. | SA | A | MA | MD | D | SD |
| 25. It would be dangerous for us to guarantee by international agreement that every person in the world should have complete religious freedom. | SA | A | MA | MD | D | SD |
| 26. Our country should permit the immigration of foreign peoples even if it lowers our standard of living. | SA | A | MA | MD | D | SD |
| 27. All national governments ought to be abolished and replaced by one central world government. | SA | A | MA | MD | D | SD |

| | Strongly Agree | Agree | Mildly Agree | Mildly Disagree | Disagree | Strongly Disagree |
|--|----------------|-------|--------------|-----------------|----------|-------------------|
| 28. It would not be wise for us to agree that working conditions in all countries should be subject to international control. | SA | A | MA | MD | D | SD |
| 29. Patriotism should be a primary aim of education so our children will believe our country is the best in the world. | SA | A | MA | MD | D | SD |
| 30. It would be a good idea if all the races were to intermarry until there was only one race in the world. | SA | A | MA | MD | D | SD |
| 31. We should teach our children to uphold the welfare of all people everywhere even though it may be against the best interests of our own country. | SA | A | MA | MD | D | SD |
| 32. War should never be justifiable even if it is the only way to protect our national rights and honor. | SA | A | MA | MD | D | SD |

APPENDIX J
THE REVISED WORLDMINDEDNESS SCALE

QUESTIONNAIRE

- | | Strongly Agree | Agree | Mildly Agree | Mildly Disagree | Disagree | Strongly Disagree |
|---|-------------------------------------|-------|--------------|-----------------|----------|-------------------|
| 1. Our country should have the right to prohibit certain racial and religious groups from entering it to live. | ----- ----- ----- ----- ----- ----- | | | | | |
| 2. Immigrants should not be permitted to come into our country if they compete with our own workers. | ----- ----- ----- ----- ----- ----- | | | | | |
| 3. It would be a dangerous procedure if every person in the world had equal rights which were guaranteed by an international charter. | ----- ----- ----- ----- ----- ----- | | | | | |
| 4. All prices for exported food and manufactured goods should be set by an international trade committee. | ----- ----- ----- ----- ----- ----- | | | | | |
| 5. Our country is probably no better than many others. | ----- ----- ----- ----- ----- ----- | | | | | |
| 6. Race prejudice may be a good thing for us because it keeps many undesirable foreigners from coming into this country. | ----- ----- ----- ----- ----- ----- | | | | | |
| 7. It would be a mistake for us to encourage certain racial groups to become well educated because they might use their knowledge against us. | ----- ----- ----- ----- ----- ----- | | | | | |
| 8. We should be willing to fight for our country without questioning whether it is right or wrong. | ----- ----- ----- ----- ----- ----- | | | | | |
| 9. Foreigners are particularly obnoxious because of their religious beliefs. | ----- ----- ----- ----- ----- ----- | | | | | |
| 10. Immigration should be controlled by an international organization rather than by each country on its own. | ----- ----- ----- ----- ----- ----- | | | | | |
| 11. We ought to have a world government to guarantee the welfare of all nations irrespective of the rights of any one. | ----- ----- ----- ----- ----- ----- | | | | | |
| 12. Our country should not cooperate in any international trade agreements which attempt to better world economic conditions at our expense. | ----- ----- ----- ----- ----- ----- | | | | | |
| 13. It would be better to be a citizen of the world than of any particular country. | ----- ----- ----- ----- ----- ----- | | | | | |
| 14. Our responsibility to people of other races ought to be as great as our responsibility to people of our own race. | ----- ----- ----- ----- ----- ----- | | | | | |
| 15. An international committee on education should have full control over what is taught in all countries about history and politics. | ----- ----- ----- ----- ----- ----- | | | | | |
| 16. Our country should refuse to cooperate in a total disarmament program even if some other nations agreed to it. | ----- ----- ----- ----- ----- ----- | | | | | |
| 17. It would be dangerous for our country to make international agreements with nations whose religious beliefs are antagonistic to ours. | ----- ----- ----- ----- ----- ----- | | | | | |
| 18. Any healthy individual, regardless of race or religion, should be allowed to live wherever he wants in the world. | ----- ----- ----- ----- ----- ----- | | | | | |

Strongly Agree
 Agree
 Mildly Agree
 Mildly Disagree
 Disagree
 Strongly Disagree

1. Our country should not participate in any international organization which requires that we give up any of our national rights or freedom of action. 
2. If necessary, we ought to be willing to lower our standard of living to cooperate with other countries in getting an equal standard for every person in the world. 
1. We should strive for loyalty to our country before we can afford to consider world brotherhood. 
2. Some races ought to be considered naturally less intelligent than ours. 
3. Our schools should teach the history of the whole world rather than of our own country. 
4. An international police force ought to be the only group in the world allowed to have armaments. 
5. It would be dangerous for us to guarantee by international agreement that every person in the world should have complete religious freedom. 
6. Our country should permit the immigration of foreign peoples even if it lowers our standard of living. 
7. All national governments ought to be abolished and replaced by one central world government. 
8. It would not be wise for us to agree that working conditions in all countries should be subject to international control. 
9. Patriotism should be a primary aim of education so our children will believe our country is the best in the world. 
10. It would be a good idea if all the races were to intermarry until there was only one race in the world. 
11. We should teach our children to uphold the welfare of all people everywhere even though it may be against the best interests of our own country. 
12. War should never be justifiable even if it is the only way to protect our national rights and honor. 

APPENDIX K
SCORING THE REVISED WORLDMINDEDNESS SCALE

SCORING THE REVISED WORLDMINDEDNESS SCALE

The revised Worldmindedness Scale consists of a series of sixty-millimeter response intervals. For each of the 32 statements, respondents may indicate the extent of their agreement or disagreement by checking anywhere along the interval scale they wish.

The scores for each statement range from zero to six. Since the interval scales are sixty millimeters in length, each millimeter represents one-tenth of a point. For the internationally oriented statements (statements 4, 5, 10, 11, 13, 14, 15, 18, 20, 23, 24, 26, 27, 30, 31, and 32), the statements are scored from right to left assigning each millimeter one-tenth of a point. For these statements, the score of six is given for strong agreement while the score of zero is given for strong disagreement. For the ethnocentric statements (statements 1, 2, 3, 6, 7, 8, 9, 12, 16, 17, 19, 21, 22, 25, 28, and 29), the statements are scored from left to right assigning each millimeter one-tenth of a point. For these statements, the score of six is given for strong disagreement while the score of zero is given for strong agreement.

An individual's overall score is obtained by summing the scores for each of the 32 statements. The possible range of scores is from 0, representing extreme ethnocentrism, to 192, representing extreme international orientation.

APPENDIX L
THE KOLMOGOROV-SMIRNOV TEST OF NORMALITY

THE KOLMOGOROV-SMIRNOV TEST OF NORMALITY

In the literature, the chi-square test is generally the test recommended for use in testing for normality of distribution.¹ As a result, for this study the chi-square test was used to test the international orientation data for normality.

An alternative to the chi-square test of normality is the two-tailed Kolmogorov-Smirnov one-sample test of normality. When the size of the sample is small, the Kolmogorov-Smirnov test appears to be a more powerful test than the chi-square test.² When the size of the sample is large, such a generalization concerning the power of the Kolmogorov-Smirnov test relative to the power of the

¹See, for example, Stephen P. Shao, Statistics for Business and Economics, 3rd ed. (Columbus, Ohio: Charles E. Merrill Publishing Company, 1976), pp. 425-426; James C. Terrell, Business Statistics (Boston, Mass.: Houghton Mifflin Company, 1975), pp. 289-292; Benjamin Perles and Charles Sullivan, Modern Business Statistics, rev. ed. (Englewood Cliffs, N.J.: Prentice-Hall, 1969), pp. 257-260; and J. P. Guilford, Fundamental Statistics in Psychology and Education, 3rd ed. (New York: McGraw-Hill Book Company, 1956), pp. 240-242.

²Irwin Miller and John E. Freund, Probability and Statistics for Engineers (Englewood Cliffs, N.J.: Prentice-Hall, 1965), p. 222.

chi-square test does not appear possible. In comparing the chi-square test to the Kolmogorov-Smirnov test, Gibbons states, "Some studies of power comparisons have been reported in the literature, but they do not seem to provide a definitive basis for choice in general."³ Gibbons further states that when the data to be analyzed are continuous, the two tests can be used interchangeably.⁴

Siegel, on the other hand, feels that the Kolmogorov-Smirnov test is a more powerful test than the chi-square test. In fact, he suggests that the Kolmogorov-Smirnov test may be more powerful than the chi-square test in all cases.⁵ Smith and Williams also contend that the Kolmogorov-Smirnov test is often a better test than the chi-square test.⁶

Since no consensus appears to exist in the literature concerning the relative merits of the two tests

³Jean Dickinson Gibbons, Nonparametric Statistical Inference (New York: McGraw-Hill Book Company, 1971), p. 87.

⁴Ibid., p. 86.

⁵Sidney Siegel, Nonparametric Statistics (New York: McGraw-Hill Book Company, 1956), p. 51.

⁶Lee H. Smith and Donald R. Williams, Statistical Analysis for Business, 2nd ed. (Belmont, Calif.: Wadsworth Publishing Company, 1976), p. 417. Smith and Williams provide a detailed description of the procedures involved in using the Kolmogorov-Smirnov test to test for normality of distribution.

in testing for normality of distribution, it was decided to further analyze the normality of the international orientation data using the Kolmogorov-Smirnov test. Table 45 contains the results of the Kolmogorov-Smirnov test of normality of the international orientation scores of the exporting executives, while table 46 presents the results of the Kolmogorov-Smirnov test of normality of the international orientation scores of the non-exporting executives. The tables show that the difference between the expected normal curve distribution and the actual observed distribution is not significant for either of the executive groups. It can be concluded, therefore, on the basis of the Kolmogorov-Smirnov analysis that the normal curve provides a reasonably good fit to both original distributions. Thus, the results of the Kolmogorov-Smirnov test support and reinforce the conclusions derived from the results of the chi-square test.

TABLE 45

KOLMOGOROV-SMIRNOV TEST OF NORMALITY OF DISTRIBUTION OF
THE INTERNATIONAL ORIENTATION SCORES OF THE
EXPORTING EXECUTIVES

| | Cumulative Percentage of the Exporting Executives Having the Specified International Orientation Score | | | | | | | | | |
|--|---|--------|--------|--------|---------|---------|---------|---------|---------|----------------|
| | 76 or less | 77-85 | 86-94 | 95-103 | 104-112 | 113-121 | 122-130 | 131-139 | 140-148 | 149 or over |
| Expected Normal Curve Distribu- tion | .02275 | .06681 | .15866 | .30854 | .50000 | .69146 | .84134 | .93319 | .97725 | 1.0000 |
| Observed Exporter Distribu- tion | .04741 | .09914 | .18966 | .29741 | .52155 | .68534 | .82328 | .90948 | .95690 | 1.0000 |
| Difference (D) | .02466 | .03233 | .03100 | .01113 | .02155 | .00612 | .01806 | .02371 | .02035 | 0 |

D is not significant at the .05 level since maximum D of .03233 is less than .08929 (the critical value of D for n=232).

TABLE 46

KOLMOGOROV-SMIRNOV TEST OF NORMALITY OF DISTRIBUTION OF
THE INTERNATIONAL ORIENTATION SCORES OF THE
NON-EXPORTING EXECUTIVES

| Cumulative Percentage of the Non-Exporting Executives Having the Specified International Orientation Score | | | | | | | | | | |
|---|---------------|--------|--------|--------|--------|---------|---------|---------|---------|----------------|
| | 63 or less | 64-72 | 73-81 | 82-90 | 91-99 | 100-108 | 109-117 | 118-126 | 127-135 | 136 or over |
| Expected Normal Curve Distribu- tion | .02275 | .06681 | .15866 | .30854 | .50000 | .69146 | .84134 | .93319 | .97725 | 1.0000 |
| Observed Exporter Distribu- tion | .03442 | .09369 | .18929 | .32505 | .50287 | .67878 | .81262 | .91013 | .96558 | 1.0000 |
| Difference (D) | .01167 | .02688 | .03063 | .01651 | .00287 | .01268 | .02872 | .02306 | .01167 | 0 |

D is not significant at the .05 level since maximum D of .03063 is less than .05947 (the critical value of D for n=523).