

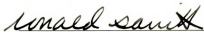


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AN EXAMINATION OF FACTORS THAT
INFLUENCE EXPORT INVOLVEMENT

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CATHERINE NANCY AXINN

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Ph. D. degree in Marketing


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AN EXAMINATION OF FACTORS THAT
INFLUENCE EXPORT INVOLVEMENT

By

Catherine Nancy Axinn

A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Marketing and Transportation

1985

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ABSTRACT

AN EXAMINATION OF FACTORS THAT INFLUENCE EXPORT INVOLVEMENT

By

Catherine Nancy Axinn

The purpose of this study was to enhance understanding of export behavior by examining critical factors in exporting. The research was conceptualized within the framework of adoption theory, with export involvement representing the degree to which a firm has adopted and implemented exporting.

Field research was conducted by mailing questionnaires to top executives of 383 firms in the machine tool industry located in the Province of Ontario and the State of Michigan. The analysis was based on responses obtained from 105 firms (an effective response rate of 27.4%).

Examination of the factors which were expected to influence export involvement was the central focus of this research. These factors were of two types: perceived innovation attributes (indices of managers' perceptions of the characteristics of exporting), and adopter characteristics (characteristics of firms).

Results indicate that a combination of both groups of factors provides the fullest explanation of export involvement. In addition, managers' perceptions of the relative advantage of exporting were shown to be the most important determinant of a firm's export involvement. Other significantly influential factors included two firm characteristics, the percent of managers with overseas work experience and market

area, and managers' perceptions of the complexity of exporting.

It is, therefore, suggested that in order to account for the variability in export involvement exhibited by firms in the same industry and location, we need to consider "behavioral" elements, such as the perceptions managers have of exporting, in addition to the structural variables proffered by economic theory. It is further suggested that involvement in exporting signifies that a choice has been made (either implicitly or explicitly) between alternate strategies for accomplishing firm goals and that future research should consider exporting within the context of the strategic choice processes and procedures of firms, not as an isolated behavior.

For my parents, whose spoken and unspoken expectations, love and encouragement have facilitated not only this accomplishment but many others.

ACKNOWLEDGMENTS

The support, encouragement and expectations of many people were an integral part of the graduate experience from which this dissertation emerged.

The combined talents of the Dissertation Committee members, Dr. Ronald Savitt, Chair, and Dr. Forrest "Sam" Carter, Dr. John L. Hazard, and Dr. Richard V. Farace, ensured that the dissertation process was both enlightening and enriching. While stimulating and challenging the student in terms of subject matter, they also shared their life experiences to very positive effect. All of their efforts were greatly appreciated. A special note of thanks has been well earned by my Chair, whose sense of perspective and sense of humor were invaluable.

The Canadian American Business Development Program funded by the Business Fund for Canadian Studies in the United States provided considerable support for this study, allowing me to give it my undivided attention for a year. My gratitude is also extended to the members of the faculty of the Department of Marketing and Transportation, particularly Dr. Donna Goehle, who first interested me in this topic, and to my doctoral colleagues, Sharon V. Thach and Paul M. Lane, without whose encouragement this may never have been accomplished. In addition, the assistance of many members of the School of Management at Syracuse University is also appreciated.

To the members of my family, nuclear and extended, I am especially grateful. Their help and inspiration, concern and faith in me have been a continual source of strength, enabling me to persevere to this end, and beginnings beyond.

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CHAPTER ONE

INTRODUCTION

Exporting continues to be the primary means by which firms gain access to the international marketplace. Over the past two decades world-wide exports have expanded from \$118 billion in 1960 to \$1,766 billion in 1984 (International Monetary Fund, 1984 and 1985). This substantial growth has stimulated an increase in the volume of research concerned with understanding exporting; yet very little is known about the factors that influence a firm's involvement in this important activity.

The export process and a firm's decision to export have been described in a number of ways. Writers have tended to include some combination of the following sets of variables in their models and analyses: 1) characteristics of firms, 2) characteristics of managers, 3) managers' expectations (perceptions) of their results of exporting, 4) the activities of outside agencies or change agents, and 5) environmental considerations.

Theorists have developed several models which identify stages in the export process. Generally these flow from a point where management concentrates on the firm's efforts on the domestic market, with no interest exhibited in exporting, through several intermediate phases until management has developed a long-term commitment to exporting and actively seeks new export markets (Bilkey and Tesar, 1977; Cavusgil and

Nevin, 1980; Czinkota and Johnston, 1981). These models indicate one of the major conclusions which previous research allows: involvement in exporting is a gradual process (Cavusgil and Nevin, 1980).

Another conclusion which has been drawn is that the initial export involvement of a firm can be considered the adoption of an innovation. Simmonds and Smith (1968) state that:

Entry into an export market is just as much an innovation as the adoption of a new production process, for example, so there is every reason to suspect that many of the findings concerning other innovations will apply. (p. 94)

Building on this assertion, other writers have employed several diffusion of innovation/adoption process constructs in their models and investigations. Studies have 1) assessed the characteristics of adopters (exporters) and non-adopters (non-exporters) at both the manager and firm level (Snavelly, et al., 1964; Simpson and Kujawa, 1974; Cavusgil, Bilkey and Tesar, 1979); 2) explored the role of change agents (Simpson and Kujawa, 1974; Lee and Brasch, 1978); and, 3) modeled stages of the export process after stages in the adoption process (Bilkey and Tesar, 1977; Cavusgil and Nevin, 1980).

Almost every major construct in Rogers' (1962) paradigm of the adoption of an innovation (Figure 1) has been explored by the research cited above. The focus of this research is on a set of constructs in this paradigm which has here-to-fore been excluded from major consideration in the context of exporting: the perceived characteristics.

This study was designed to examine how managers' perceptions of the characteristics of exporting influence firm involvement in exporting. In addition, these perceptions are compared with the characteristics of

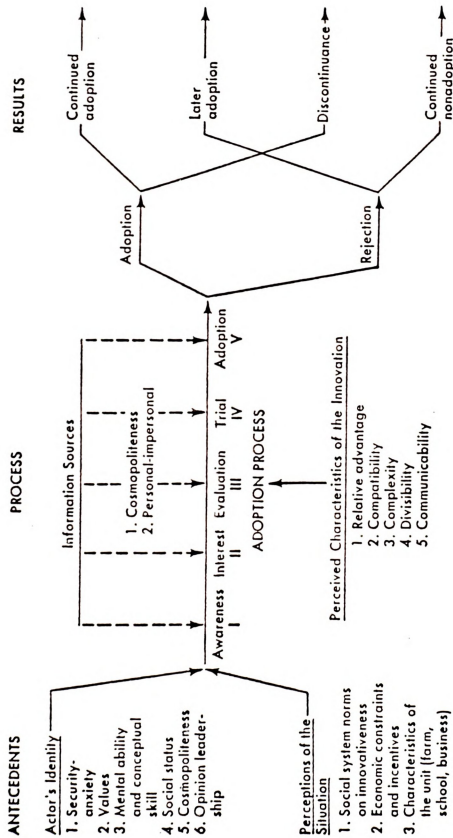


FIGURE 1

PARADIGM OF THE ADOPTION OF AN INNOVATION BY AN INDIVIDUAL WITHIN A SOCIAL SYSTEM

SOURCE: E.M. Rogers, Diffusion of Innovations, (New York: The Free Press, 1962), p. 306.

firms and their managers to determine the relative contribution of each toward explaining variance in the export involvement of firms.

Scholars exploring the adoption of innovations in the context of rural sociology have noted the necessity to include perceptions of the characteristics of innovations in their analyses of adoption behavior. In examining the use of adopter characteristics alone, Thio (1971) notes that:

The implication is clear that there are still other important factors such as innovation attributes [characteristics] that should be considered simultaneously in order to predict more successfully the likelihood of one's accepting an innovation...[Thus], a consideration that takes into account both the innovation-attributes and the adopter-characteristics...may account for more variance in adoption rates. (p. 60)

The research of Fliegel, Kivlin and Sekhon (1968) also indicates the importance of considering innovation attributes or characteristics. In summarizing their findings they state:

The total variability accounted for [by innovation attributes] in rate of adoption was quite high...We interpret [this] to mean that the approach to diffusion of innovations via their attributes is a meaningful and rewarding one. (p. 449)

The dependent variable in this research is export involvement rather than rate of adoption or simply adoption/non-adoption. There are several reasons for this choice. First, as noted by Downs and Mohr (1976), "operationalizing innovation by the extent of implementation comes closer to capturing the variations in behavior that we really want to explain." (p. 709) Second, because exporting is a marketing activity in which a firm can involve itself (adopt) for one sale and then not undertake again for a period of the time, level of export involvement becomes a more meaningful indicator of the degree to which exporting has been adopted and implemented as a part of the permanent strategy of a firm. Also,

several researchers have found significant differences between firms with varying levels of involvement in exporting (Bilkey and Tesar, 1977; Czinkota and Johnston, 1981).

The third conclusion which has been drawn from the exporting literature is related to the relationality of the export decision making process (Cavusgil and Nevin, 1980). Lee and Brasch (1978) in their examination of the rationality of the export adoption decision found the majority of firms to be non-rational, with many moving ahead with exporting without much rational analysis or deliberate planning. These firms are reported to have only vague justifications for their actions. It is posited here that these 'vague justifications' may, in fact, be related to the managers' perceptions of the characteristics of exporting.

This examination of the influence of managers' perceptions of exporting or firm export involvement has the potential to make several contributions, theoretical and practical. From a theoretical perspective, this fuller application of adoption/diffusion constructs to the study of exporting offers two important opportunities.

First, it allows further assessment of the possible contribution of adoptive theory to the understanding of marketing practices. Adoption constructs have been usefully employed in research on new product adoption and diffusion (Rogers, 1976), but have not been similarly employed in the study of the adoption and implementation of marketing practices, such as exporting.

Second, by focusing on export involvement, the study should be able to illustrate the usefulness of perceived characteristics as indicators of implementation and not just adoption. According to Tornatzky and

Klein (1982):

Innovation characteristics research studies should focus on both adoption and implementation as the dependent variables, and not simply dichotomous yes/no adoption decisions. ...The failure to use degree-of-implementation as a dependent variable probably yields misleading correlations of innovation characteristics with innovation behavior. (pp. 29,32)

From a practical perspective, this study could have important implications for public policy makers concerned with export promotion and expansion and for export facilitating agents as well. First, if we can determine which perceived characteristics of exporting have a greater affect on export involvement then agencies concerned with export expansion may be able to make better use of limited resources by focusing their promotion on those characteristics. Further, if it is determined that export involvement is more greatly influenced by either characteristics of firms or managers' perceptions of exporting, it will be possible to develop better screening criteria for identifying potential exporters.

Second, a fuller understanding of how managers perceive exporting will also be useful to export middlemen, such as freight forwarders and bankers. For instance, determining how manufacturing managers perceive the complexities of exporting can assist such agencies in designing the services they offer and in presenting them properly to their clients.

In conclusion, this research is undertaken with the expectation that it can expand and enhance our understanding of export involvement. In summarizing the results of a recent study, Cavusgil and Nevin (1981) conclude that, "the reluctance of firms to export may be largely attributed to top management's lack of determination to export." (p. 119) This could be interpreted to mean that some firms don't export because

their managers don't want to export; or conversely, that other firms export because their managers do want to export. The current study is concerned, fundamentally, with understanding why the managers of some firms want to export and others do not.

This issue is approached through examination of the perceived characteristics of exporting because, as illustrated in Figure 1, perceived characteristics are thought to influence a potential adopter's evaluation of an innovation. Therefore, it is expected that this study will demonstrate how the evaluation of exporting, via its perceived characteristics, affects export involvement.

The following chapter will begin with an examination of the nature of perceived characteristics, as evidenced in the literature and will continue with a review of the literature on exporting.

The models, hypotheses and relevant definitions are presented in Chapter Three, while Chapter Four consists of a description of the methodology used to gather data and the procedures used to develop measures of the perceived characteristics of exporting and other variables. Chapter Five presents the results of testing the hypotheses, and a brief discussion of these results. A summary of the study and a discussion of its implications, limitations, and conclusions appear in Chapter Six.

CHAPTER TWO

LITERATURE REVIEW

INTRODUCTION

The following literature review serves a number of purposes. The first section examines some of the key issues which have emerged from the literature on the perceived characteristics of an innovator. It will also provide an indication of how perceived characteristics have been defined in previous research. The second section reviews several export-related models in order to illustrate how the current research, and particularly the perceived characteristics of exporting, fit into existing theoretical frameworks.

The third, and major, section of this chapter reviews, in detail, the most relevant of the extant empirical literature. This review is conducted in two parts. The first part focuses on comparative research. The objective here is to identify variables which have been useful in distinguishing between exporters and non-exporters. The second part focuses on predictive research. This is the research which is most similar, in design and intent, to the present study. In this instance, the objective is to identify variables which have been significant predictors of export behavior in previous studies.

Throughout the examination of the empirical literature, particular attention will be paid to concepts and variables which may be

meaningfully related to measures of the perceived characteristics of exporting. In addition, it is primarily on the basis of this review that the characteristics of firms included in this study will be selected.

PERCEIVED CHARACTERISTICS

Throughout several decades the perceived characteristics of innovations have been repeatedly incorporated in innovation research.

Innovation characteristics research describes the relationship between the attributes or characteristics of an innovation and the adoption or implementation of that innovation. This topic represents one of the classic issues in the innovation literature, albeit one that has been little studied in the last decade. (Tornatzky and Klein, 1982, p. 28)

Over the course of years a plethora of characteristics has been ascribed to innovation. This multiplicity has resulted in the assertion by one author that, "we need a standard classification scheme for describing the perceived attributes of innovations in universal terms" (Rogers, 1983) while others (Downs and Mohr, 1976) have decried this line of research as fruitless.

Several underlying issues provide the foundation for the controversy concerning innovation characteristics research. These issues pertain to the characteristics' 1) basic nature, 2) multiplicity, 3) multidimensionality, and 4) intercorrelation. The likelihood that these issues are interrelated merely complicates their resolution.

It is important to realize that innovation characteristics research is not the only field of study to be afflicted by problems such as these. Inquiries concerning such complex theoretical constructs as 'motivation', 'culture', and many other social science concepts face similar sets of issues.

Questions related to the basic nature of characteristics have been raised by Downs and Mohr (1976). They took issue with the inclusion of both primary and secondary characteristics in innovation research and with the failure of researchers "to pay sufficient attention to the distinction between the two" (Tornatzky and Klein, p. 28). The differentiation between primary and secondary characteristics espoused by Downs and Mohr was based on definitions given by Jeans (1966):

Secondary qualities are those which are perceived by the senses and so may be differently estimated by different percipients; primary qualities are those which are essential to the object or substance and so are inherent in it whether they are perceived or not. (p. 196)

Due to their 'perceived' nature, Downs and Mohr suggest that secondary characteristics should be viewed as measures of the relationship between the organization and the innovation and as such they "can be viewed as variables that characterize the circumstances surrounding a particular decision to innovate." (p. 706) Thus the essence of the Downs and Mohr criticism of perceived or secondary characteristics is that they vary naturally on a situational basis and cannot be expected to produce consistent results. The attendant implication is that primary characteristics are more stable.

In an effort to answer this and other allegations made by Downs and Mohr a meta-analysis of innovation characteristics research was conducted by Tornatzky and Klein (1982). In rebuttal, they assert that:

If anything, Downs and Mohr (1976) probably underplay the importance of 'subjective' factors. Downs and Mohr ignore the perceptual literature in social psychology and related fields which has for many years noted that even what is assumed to be invariable physical reality (e.g., a primary attribute) is always subject to social influences. ... Furthermore, while so-called primary attributes of innovations can be measured 'objectively', the meaning of the objective measure of the characteristic is subjective, that is, in the

mind of the perceiver. Thus while an innovation may cost a fixed amount (and cost is a so-called primary attribute), the cost of the innovation is evaluated by the potential adopter relative to his or her financial resources. (p. 28)

In accordance with this persuasive argument and Rogers' suggestion that "it is the beholder's perceptions that influence the beholder's behavior" (1983, p. 212), the current research considers only secondary or perceived characteristics of exporting in its analysis of export involvement.

In a sense, the whole issue of primary versus secondary characteristics arises from the multiplicity of characteristics of innovations included in past research. How this multiplicity came about or, for that matter, how so-called primary characteristics came to be included in this line of research at all can only be surmised. It seems likely, however, that both developments resulted from efforts by researchers to cope with relatively inexact definitions of characteristics provided by Rogers (1962, 1971, 1983) and arrive at reasonably precise methods of measuring various aspects of innovations.

Rogers himself has changed the names and definitions of the characteristics of innovations over the decades, yet even in his landmark synthesis of innovation research in 1962 the characteristics were clearly identified as "perceived" (See Figure 1). Over the years the word perceived has worked its way into his actual definitions of several characteristics. Rogers' (1983) most recent definitions of the perceived characteristics of innovations are presented below:

Relative advantage is the degree to which an innovation is perceived as being better than the idea it supersedes. (p. 213)

Compatibility is the degree to which an innovation is perceived as consistent with the existing values, past experiences, and needs of

potential adopters. (p. 223)

Complexity is the degree to which an innovator is perceived as relatively difficult to understand and use. (p. 230)

Trialability is the degree to which an innovation may be experimented with on a limited basis. (p. 231)

Observability is the degree to which the results of an innovation are visible to others. (p. 232)

In introducing these definitions Rogers states that:

Selection of these five characteristics is based upon past writings and research as well as on a desire for maximum generality and succinctness. We are working toward a comprehensive set of characteristics of innovations that are as mutually exclusive and as universally relevant as possible. (p. 211)

No doubt the criteria of maximum generality and universal relevance account for the inexactness of the definitions, and considering the diverse innovations to which these general characteristics have been applied, it is not surprising that individual researchers have developed customized variants.

Closely linked with the multiplicity of characteristics and the development of customized variants is the issue of multidimensionality. Several of the characteristics, as identified by Rogers, are multi-dimensional by definition while others are multidimensional by default. Both Compatibility and Complexity are multidimensional by definition. An innovation may be compatible if it is perceived as consistent with existing values or past experiences or the needs of potential adopters; it may be complex if it is relatively difficult to understand and (or) relatively difficult to use.

In studying the adoption and implementation of specific innovations the relevance of each dimension of these two characteristics will vary and so will the customization of specific measures. Indeed, Tornatzky

and Klein found that their ability to generalize about the relationship between Compatibility and adoption was "limited by the fact that some of the studies measured practical compatibility, some value compatibility and some a combination of the two." (p. 34)

Relative Advantage, Trialability and Observability are characteristics which are multi-dimensional by default. A particular innovation may be perceived as being better than the idea (practice, product) it supersedes in any number of ways. Rogers followed his earliest definition of Relative Advantage by stating that:

Profitability, the difference between economic returns resulting from adoption of an innovation and the innovation's economic costs, is one dimension of relative advantage. (1962, p. 146)

Social approval or the status giving aspects of an innovation have also been associated with relative advantage (Rogers, 1983). Tornatzky and Klein assert that:

Relative advantage is perhaps too broad and amorphous a characteristic to be of much use. Typically it is the garbage pail characteristic in innovation characteristics studies into which any number of innovation characteristics are dumped. (p 34)

Trialability and Observability may also be perceived multidimensionally, depending on the specific nature of an innovation. Results may be made visible in various ways and different types of experimental uses may be possible, thus measurement customization may be necessary.

Multidimensionality contributes to the multiplicity of characteristics of innovations when measures developed to reflect specific aspects of an innovation are treated empirically and conceptually, not as components of more general characteristics of innovations but, as characteristics in and of themselves.

Tornatzky and Klein's meta-analysis covered the ten characteristics

of innovations which were most frequently employed in the seventy-five pieces of research they analyzed. These included (in order and with the number of studies using each in parentheses): Compatibility (41), Relative Advantage (29), Complexity (21), Cost (20), Communicability (13), Profit (10), Divisibility (10), Social Approval (8), Trialability (8), and Observability (7). Twenty additional characteristics were also found in the articles they reviewed, but these were not analyzed.

In Figure 2 the characteristics analyzed by Tornatzky and Klein, and those not analyzed, are listed in association with the classic innovation characteristics (Rogers') of which they may be considered components. Also listed in Figure 2 are the characteristics identified by Zaltman, Duncan and Holbek (1973), to be discussed presently.

Examination of Figure 2 reveals that the multiplicity related to Relative Advantage is most pronounced. Indeed, the classification presented could be considered representative of the "garbage pail" syndrome mentioned by Tornatzky and Klein. On the other hand, a reasonable rationale could be presented to justify considering each of the separate "characteristics" as component dimensions or aspects of the classic characteristic, Relative Advantage. Based on earlier discussions of Rogers, both profitability and social approval should be construed as components of relative advantage. Cost, referred to previously by Tornatzky and Klein as a primary characteristic, is in reality a component of profitability as profit equals revenue minus cost. Similar reasoning can be applied to the "characteristics" not studied by Tornatzky and Klein, as well as those identified by Zaltman, et al.

CLASSIC CHARACTERISTICS (ROGERS-BASED)	CHARACTERISTICS STUDIED BY TORNATZKY AND KLEIN	CHARACTERISTICS NOT STUDIED BY TORNATZKY AND KLEIN	CHARACTERISTICS IDENTIFIED BY ZALTMAN, DUNCAN AND HOLBEK
Relative Advantage	Relative advantage Profitability Social approval Cost	Continuing cost Flexibility Importance Initial cost Mechanical attraction Payoff Rate of cost recovery Regularity of reward Reliability Riskiness Specificity of evaluation Savings of discomfort Saving of time Scientific status	Financial cost - initial - continuing Returns to investment Efficiency - overall time saving - avoidance of bottlenecks Risk and Uncertainty Scientific status Perceived relative advantage Terminality Susceptability to successive modification Gateway capacity (open avenues to other innovations)
Compatibility	Compatibility	Pervasiveness Radicalness	Compatibility Pervasiveness Impact on interpersonal relationships
Complexity	Complexity	Ease of operation	Complexity
Triability	Divisibility Triability		Reversibility Divisibility Degree of commitment
Observability	Communicability Observability	Clarity of results Visibility	Communicability Clarity of results Publicness vs. privateness Gatekeepers

FIGURE 2

SUMMARY OF CHARACTERISTICS OF INNOVATIONS

SOURCES: E.M. Rogers, Diffusion of Innovations, New York: The Free Press, 1962. L.G. Tornatzky and K.J. Klein, "Innovation Characteristics and Innovation Adoption-Implementation: A Meta-Analysis of Findings," IEEE Transactions on Engineering Management Vol. EM-29, No. 1 (February 1982), 28-45. G.R. Zaltman, R. Duncan and J. Holbek, Innovations and Organizations, New York: John Wiley & Sons, 1973.

Somewhat more interesting is the treatment of Trialability and Observability by Tornatzky and Klein. In addition to these two classic characteristics, their evolutionary predecessors, Divisibility and Communicability, were also analyzed. To justify separate treatment Trialability and Observability were defined according to the Rogers and Shoemaker (1971) definitions (actually identical to Rogers' definitions cited above). Divisibility was defined as the "extent to which an innovation can be tried on a small scale prior to adoption." (Fliegel, Kivlin and Sekhon, 1968, p. 446) and Communicability was defined as "the degree to which aspects of an innovation may be conveyed to others." (Rothman, 1974, p. 441) Tornatzky and Klein admitted the "the notion of communicability is very similar to and obviously related to that of observability." (p. 36) They also asserted that although "the divisibility of an innovation is closely related to its trialability" (p. 37) and "a highly divisible innovation is usually highly 'trialable' " (p. 37) but "not all 'trialable' innovations are divisible." (p. 37)

It should be recognized that Tornatzky and Klein are not responsible for this confusing multiplicity of terms. They simply reported on the characteristics as they were used in the literature. Some researchers have studied 'observability', others 'communicability', some 'divisibility', and others 'trialability'. But are these conceptually distinct characteristics? Probably not, but depending on the specific nature of a particular innovation one or another term may appear more relevant, just as circumstances may dictate the appropriateness of various component aspects of relative advantage.

This is similar to the reasoning used by Zaltman, et al., in

introducing their long list of characteristics:

Each of the various types of innovations can possess a varied combination of attributes that have been found to be relevant for describing, explaining, and predicting responses to innovations. (p. 33)

Although it is probably true that each innovation possesses a variety of attributes, it is also possible to consider these attributes as components of the classic characteristics as defined by Rogers. This possibility has been demonstrated by Kivlin and Fliegel (1968) in a study of the adoption of farm practices.

In analyzing their results they utilized a factor analysis of the dairy farmers' perceptions of fifteen attributes of modern farm practices. Although the study included both medium and small scale farmers, only the factor analysis of the medium sized farmers' perceptions is reported here. Table 1 presents the five factors which resulted from Kivlin and Fliegel's analysis, along with the factor loadings for each of the innovation attributes, and the factor names they proposed.

Their results indicate that the perceived innovation attributes can be empirically associated with underlying factors. Also, the factors which they identified, although not mirroring exactly the classic characteristics of an innovation, are good approximations of them (labeled in parentheses on Table 1).

There are intriguing aspects of Kivlin and Fliegel's results. First, Factor A is composed, primarily, of aspects of Relative Advantage, as they are listed in Figure 2; the exception is 'complexity'. Complexity might reasonably be expected to appear on a factor of its own, but there are several plausible explanations for the result shown in Table 1.

TABLE 1

FACTORS UNDERLYING FARMER'S PERCEPTIONS OF NEW PRACTICES

FACTOR A: Long-run Investment Implications
(Relative Advantage)

- .87 Rate of Cost Recovery
 - .73 Continuing Cost
 - .70 Regularity of Reward
 - .61 Initial Cost
 - .59 Complexity
-

FACTOR B: Clear Results
(Communicability)

- .86 Clarity of Results
 - .32 Social Approval
-

FACTOR C: Conservation of Time and Effort
(Compatibility)

- .85 Saving of Discomfort
 - .82 Saving of Time
 - .80 Compatibility
-

FACTOR D: Farm Reorganization
(Divisibility)

- .87 Divisibility for Trial
 - .85 Pervasiveness
 - .71 Mechanical Attraction
-

FACTOR E: Dairying for Profit

- .76 Association with Dairying
 - .66 Payoff
-

SOURCE: Adapted from, J.E. Kivlin and F.C. Fliegel, "Orientations to Agriculture: A Factor Analysis of Farmers' Perceptions of New Practices," Rural Sociology, Vol. 33 No. 2, June 1968, 127-140.

Since most of the other attributes on Factor A concern costs, perhaps less complex innovations cost less to adopt. It is also possible that more complex innovations are associated with higher long-run returns.

A second and somewhat related aspect of the results is the apparent dispersion among several factors of various attributes which were associated with Relative Advantage in Figure 2. Social Approval appears on Factor B with Clarity of Results, an attribute which Zaltman, et al., logically associate with Communicability. Savings of Discomfort and Time appear on Factor C with Compatibility. Mechanical Attraction appears on Factor D with Divisibility for Trial and Pervasiveness, which Zaltman, et al., associate with Compatibility.

Third is the independence of perceived payoff of adoption from perceived costs. Kivlin and Fliegel suggest that Factor E could represent short-run profit interest and Factor A long-run investment concerns. Were this true, the implications for export involvement would be very important as exporting is frequently considered a long-run strategy, and is not usually associated with short run profits (Thach and Axinn, 1983).

The relatively unexpected associations evident in Kivlin and Fliegel's results stimulate doubt about the mutual exclusivity of the classic characteristics, which leads to consideration of the fourth innovation characteristics issue: the interrelatedness of the characteristics. Rogers contends that "each of (the five characteristics) is somewhat empirically interrelated with the other four, but they are conceptually distinct." (p. 211)

Tornatzky and Klein suggest that the very multiplicity of

characteristics:

raises serious questions about the independence of these dimensions. In fact, one of the neglected areas of research in this area is analysis of the independence of perceived attributes. (p. 33)

They also state that:

Given the intercorrelation of the innovation characteristics in a study involving several characteristics, it is impossible to ascertain, from the regression coefficients alone, the first order relationship between a single independent variable and the dependent variable; multicollinearity of independent variables may actual(ly) reverse their regression coefficient signs in the equation. (p. 31)

Although no single researcher can presume to resolve all these issues, each researcher must both acknowledge and address them with respect to their own undertaking. The current research is based on the following suppositions:

- 1) Secondary or perceived characteristics of exporting are the most appropriate indicators of export involvement.
- 2) Multiple aspects of exporting can be treated empirically as components of the classic characteristics: Relative Advantage, Compatibility, Complexity, Trialability and Observability.
- 3) Each characteristic is expected to be empirically multidimensional.
- 4) Several aspects of each characteristic are expected to be interrelated with aspects of other characteristics.

In addition, Rogers' (1983) definitions of perceived characteristics provide the general framework for defining the perceived characteristics of exporting used in this study. These are provided below in order to serve as a point of reference for the following discussion of the export literature.

Perceived Relative Advantage of Exporting is the degree to which exporting is perceived as better than marketing to domestic markets.

Perceived Compatibility of Exporting is the degree to which exporting is perceived as consistent with the goals of the firm and with the firm's domestic marketing practices.

Perceived Complexity of Exporting is the degree to which exporting is perceived as difficult to implement or undertake.

Perceived Trialability of Exporting is the degree to which exporting is perceived as possible to try on a limited basis.

Perceived Observability of Exporting is the degree to which the results of exporting are perceived as visible.

THEORETICAL FRAMEWORKS

The following discussion reviews three models which are the most pertinent to the current research. Other export-related models which have been developed may be examined in Bilkey's (1978) comprehensive review of the export marketing literature.

A Model of the Export Development Process

Bilkey and Tesar (1977) were the first to propose a "stages" model of the export development process (Figure 3). This model intentionally follows the pattern of the adoption of an innovation developed by Rogers (see Figure 1). Thus, Stage One corresponds with Awareness, Stage Two with Interest, Stage Three with Evaluation, Stage Four with Trial and Stage Five with Adoption. In a sense, Stage Six represents an iteration back to Stage Three with the evaluation of additional foreign market entry opportunities.

Managers' perceptions of the characteristics of exporting are relevant to the management activity at Stage Three of this model. This is especially appropriate because of the correspondence between Stage Three in the Bilkey and Tesar Model and Evaluation Stage in Rogers' Adoption Model. Examination of Rogers' model (Figure 1) reveals that the

- Stage One: Management is not interested in exporting, would not even fill an unsolicited export order.
- Stage Two: Management would fill an unsolicited export order, but makes no effort to explore the feasibility of exporting.
- Stage Three: Management actively explores the feasibility of exporting (can be skipped if unsolicited export orders are received).
- Stage Four: The firm exports on an experimental basis to some psychologically close country.
- Stage Five: The firm is an experienced exporter to that country and adjusts exports optimally to changing exchange rates, tariffs, etc.
- Stage Six: Management explores the feasibility of exporting to additional countries that, psychologically, are further away.
- And so on

FIGURE 3

A MODEL OF THE EXPORT DEVELOPMENT PROCESS

SOURCE: W.J. Bilkey and G. Tesar, "The Export Behavior of Smaller-Sized Wisconsin Manufacturing Firms," Journal of International Business Studies, (Spring/Summer 1977), p. 93.

perceived characteristics of an innovation are explicitly represented as impacting the evaluation of the innovation.

In relating this model of export development to the concept of export involvement, it could be said that a firm at Stage One is uninvolved in exporting and becomes progressively more involved as it moves through the later stages.

Because this model specifies the nature of the markets to which a firm exports at different stages, its usefulness as a general model and its relevance to the current research is diminished. By stipulating that experimental exporting is focused on 'psychologically close' countries the model confounds its intent by introducing issues of market selection while apparently ignoring the demand-responsive motives of firms. Similarly, the intrusion of market selection considerations reduces the model's relevance to the primary concern of this research as our focus is on export involvement, per se, regardless of the identity of specific export markets.

A Model of Incremental Internationalization

Cavusgil and Nevin (1980) present a model of the incremental involvement of a firm in the international marketplace (see Figure 4). They suggest that movement from one stage to the next takes place "as a result of successive decisions made by management over a period of time." (p. 69) In this model exporting plays a key role at the Experimental Involvement Stage. According to the authors, given "sufficient stimuli, decision makers in a non-exporting firm may become interested in exporting and may engage in subsequent evaluation of the desirability of

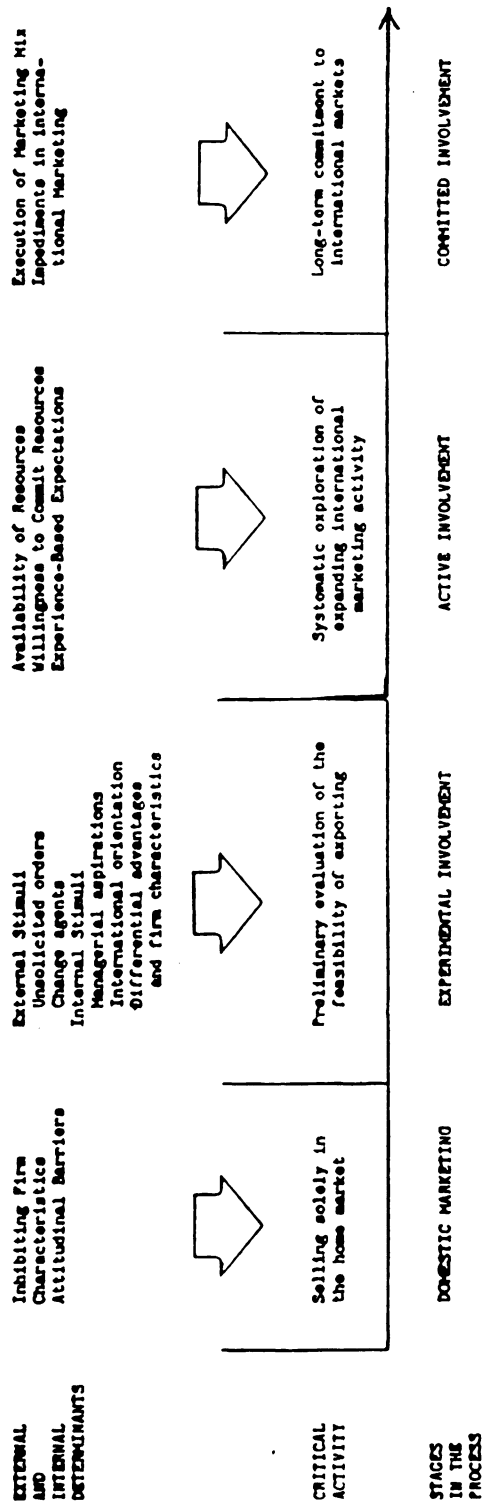


FIGURE 4

A MODEL OF INCREMENTAL INTERNATIONALIZATION PROCESS OF THE FIRM

SOURCE: S.T. Cavusgil and J.R. Nevin, "A Conceptualization of the Initial Involvement in International Marketing," in Theoretical Developments in Marketing, C.W. Lamb and P.M. Dunne (Eds.), American Marketing Association, 1980, p. 69.

exporting for their firm." (p. 69)

It is probably during the "preliminary evaluation of the feasibility of exporting" that managers' perceptions of the characteristics of exporting become important. It is also possible that the managers' perceptions of exporting, while not actually being stimuli, could be considered internal determinants of experimental involvement.

Cavusgil and Nevin note that, "Decision-making at this stage appears to be based on essentially management's diffuse impressions of the attractiveness of exporting." (p. 70) They indicate that, "It is possible for management to come out of the preliminary evaluation with unfavorable expectations." (p. 70) This is attributed to weak or insufficient stimuli, without considering the possibility that the "diffuse impressions" of management may, in fact, involve negative perceptions of exporting.

A Model of the Role of the Individual in Export Decision Making

Reid (1980) offers a framework for viewing export adoption which explicitly includes the role played by a firm's managers, their knowledge, experience, and perceptions (see Figure 5). He suggests that:

The nature of the knowledge to be acquired as well as the different aspects of the export decision which have to be considered, suggest different decision-maker characteristics at work. Since the decision process involves a consideration of new idea(s), then those factors which are related to adoption of innovation can be expected to play a critical role. It must be noted that one is not proposing the primacy of an 'innovation' characteristic; one is merely indicating here that those individual attributes which favour easier foreign market information accessibility, transmission and interpretation would be those likely to favour foreign entry consideration. (p. 266)

Reid continues by stating that;

while there is little substantive evidence on which one can

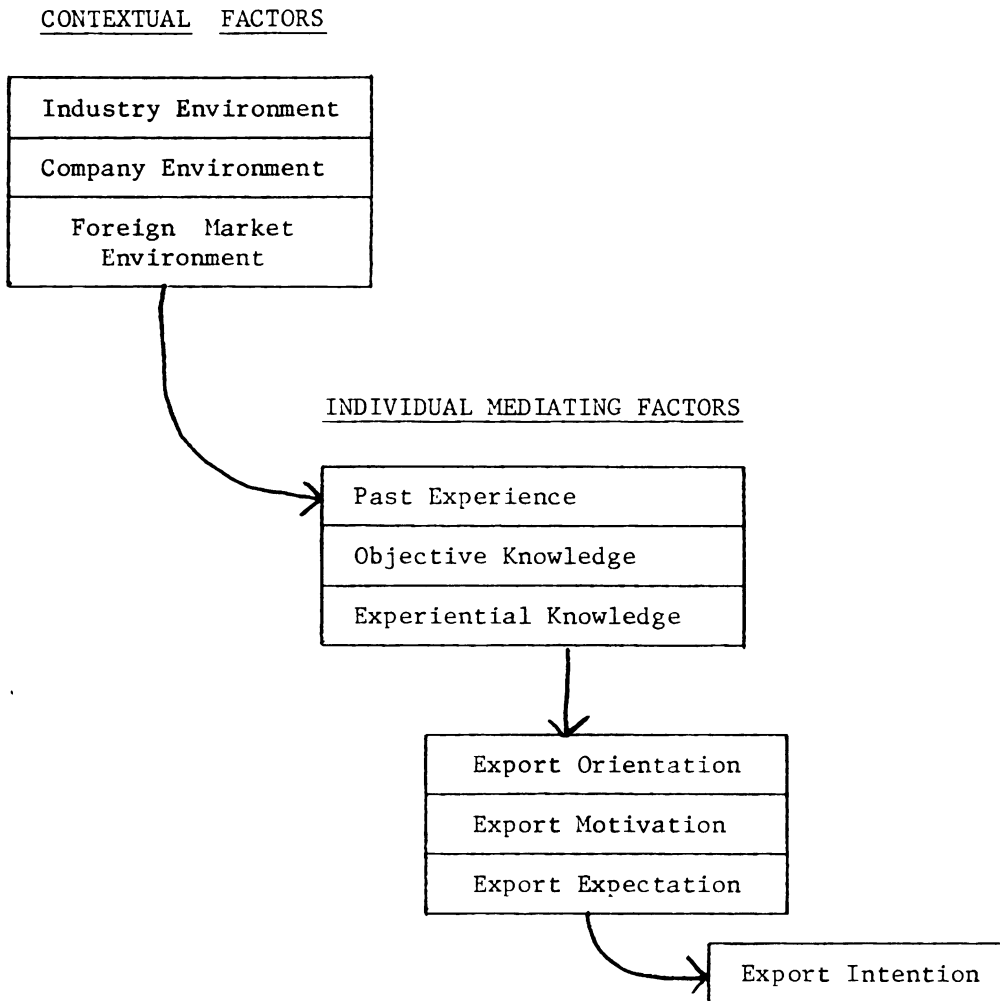


FIGURE 5

THE ROLE OF THE INDIVIDUAL IN EXPORT DECISION MAKING

SOURCE: S. Reid, "A Behavioral Approach to Export Decision Making," Marketing in the 80's: Changes and Challenges, R.P Bagozzi, e. a. (Eds), American Marketing Association, 1980, p. 265.

generalize for individual characteristics in the context of export adoption, one can postulate by analogy the existence of a similar profile as found among consumer innovators... It can be suggested that factors such as age, extent and type of education, national origin, communication variables such as print readership, frequency of travel, languages spoken, social interaction factors such as membership of trade associations, professional associations, are likely to influence export entry decisions. (p. 267)

Studies indicate that managers who decide to export have a greater than chance likelihood of:

- 1) either being immigrants or having experience living and working abroad (Simmonds and Smith, 1968; Garnier, 1974; Mayer and Flynn, 1973; Langston and Teas, 1976)
- 2) having foreign language experience (Mayer and Flynn, 1973; Langston and Teas, 1976)
- 3) having university educations (Mayer and Flynn, 1973; Simpson and Kujawa, 1974)
- 4) being young (Pinney, 1970) [as reported in Reid, 1980]

To clarify the relevant aspects of export adoption, Reid develops the matrix shown in Figure 6, indicating that in his view:

the adoption of exporting as a mode of foreign entry by a firm requires the satisfaction of at least four conditions. These are (1) the availability of sufficient information, (2) the existence of a favourable attitude toward exporting, (3) the availability of the foreign entry possibility, and (4) the possession of the economic means to pursue exporting as a mean of entry. While the last condition is clearly contextual, related to industry and firm environment, the other conditions are closely related to individual decision maker factors, which are socio-psychological in origin. (p. 266)

Although Reid's explicit focus is on individual adopter attributes rather than innovation characteristics, it is the role played by managers' perceptions of innovation characteristics with which the current research is concerned. In the context of Reid's classification

	Conditions	Dominant Factor	Specific Variables Involved
1.	Availability of Sufficient Information	Managerial Objective/experiential knowledge	Education, Readership, membership of relevant associations, knowledge and usage of institutional sources of information, past export experience. Firm contextual factors constraining the amount and type of information secured
2.	Existence of favourable attitude toward exporting.	Managerial/past experience	Managerial export orientation. Existing and past firm performance.
3.	Availability of foreign entry possibility	Managerial perception of foreign market opportunity	Unsolicited foreign order (serendipity as a result of firm reputation) or sought foreign orders. Exposure to foreign market stimuli and search for foreign markets through exhibitions, trade fairs, advertising, travel.
4.	Possession of economic means	Managerial perception of firm capability	Perceived firm resources relevant for export entry.

FIGURE 6

RELEVANT ASPECTS OF EXPORT ADOPTION

SOURCE: S. Reid, "A Behavioral Approach to Export Decision Making," Marketing in the 80's: Changes and Challenges, R.P. Bagozzi, et. al. (Eds), American Marketing Association, 1980, p.266.

of the condition required for export adoption, managers' perceptions may be related to both the "existence of a favorable attitude toward exporting" (Condition 2) and "managerial perception of firm capability" (Dominant Factor 4) (see Figure 6).

One premise of the current research is the expectation that attitudes toward and evaluations of exporting are influenced by managers' perceptions of the relative advantages of exporting in comparison with other methods of obtaining firm goals. The attitude toward exporting may also be related to the degree to which exporting is perceived by managers as compatible with their business both operationally and strategically. Therefore it is likely that positive perceptions of both relative advantage and compatibility will lead to increased export involvement.

Managers' perceptions of firm capability and of firm resources relevant to export entry [and involvement] (Variable 4) may be related to both the perceived trialability and perceived complexity of exporting. If managers perceive the possibility of experimenting with exporting on a trial basis, then they may believe that fewer firm resources are required for their initial involvement in exporting than would be necessary for a complete commitment to export marketing. This reasoning would further suggest that perceived trialability and export involvement should be positively related.

Viewing manpower as a component of economic resources, it is important to consider managers' beliefs about the amount of employee time involved in executing export sales, particularly in handling export paper work. If managers believe that the complexities of export marketing require excessive amounts of employee time as compared with domestic

marketing, then they may decide that their firm does not possess the relevant resources to become involved in exporting. Thus it should be expected that perceived complexity and export involvement are negatively related.

The three models just described have provided a context within which it is possible to see relationships between manager's perceptions of the characteristics of exporting and 1) the role of managers in export decision making, 2) the export development process, and 3) a firm's incremental involvement in the international marketplace. The next section will provide a more detailed description of the characteristics of firms that export and those that do not.

EMPIRICAL RESEARCH

The empirical research on exporting can be grouped into two categories: Comparative and Predictive. Studies in the comparative category have been conducted with one of two underlying purposes in mind. Some of these studies have been concerned with developing profiles of exporters and non-exporters which may be used to identify firms that do not export but possess the potential for exporting. Other studies have compared exporting and non-exporting firms or different types of exporting firms with the intent of understanding the differences between the groups. The variables on which firms are compared and profiles are constructed may be grouped into four types: 1) Characteristics of Firms, 2) Characteristics of Managers, 3) Managers' Perceptions of Exporting, and 4) Outside Influences [or external stimuli]. These same types of variables have been used in predictive research to predict a variety of

export-related behaviors.

Comparative Studies

- Profiles of Exporters and Non-Exporters

Two groups of researchers have contributed profiles of exporting and non-exporting firms. Their findings are summarized in the chart shown in Figure 7. The first group, Snavely, Weiner, Ulbrich and Enright (1964) were concerned with economic development in Connecticut and thought the profiles would help identify potential exporters. Their research team conducted interviews with 145 managers of Connecticut firms that exported and 142 firms that had never exported. The exporter characteristics they identified are attributes which characterized a greater number of the exporting firms than non-exporting firms. The reverse is true for non-exporter characteristics.

Although the research is weakened by a low level of measurement and the use of a judgment sample, the results give a general picture of the types of firms most and least likely to export.

The profiles imply some interesting relationships between the marketing practices of firms and managerial perceptions of the characteristics of exporting--particularly perceived compatibility.

In this study exporters tended to:

- 1) Serve the entire U.S. market rather than only a local market.
- 2) Use a combination of selling techniques rather than personal selling alone.
- 3) Use diversified merchandising techniques.

Given this composite description, one would expect these firms to

CHARACTERISTICS OF FIRMS	EXPORTERS	NON-EXPORTERS
Size	*Gross sales were over \$1 million (CBT)	Employ less than 100 people (CBT)
Product	Have unique product (CBT) One or more products were patented (S) Held sole rights to patents used (S)	Lacked unique product (CBT) Non-technically oriented industry (CBT)
Structure		No formal structure for exporting (CBT)
Planning	*Planned for exporting (CBT) Systematically explored feasibility of exporting (CBT)	*Did NOT systematically explore exporting (CBT)
Marketing Practices	Used a combination of selling techniques (S) Used diversified selling techniques (S) Had a price advantage in markets served (S)	Firm sold directly to buyers (S) Firm used only personal selling (S)
Market Area	Served entire U.S. market (S) Sold beyond local market (CBT)	Firm had only local market (S)
Goals	High profit aspiration (CBT)	Low profit aspiration (CBT) *Low aspirations for firm growth (CBT)
CHARACTERISTICS OF MANAGERS		
Attitude toward foreign markets	Management was willing to study foreign markets (S)	
PERCEPTIONS MANAGERS HAVE RE:		
Effects of exporting on firm goals	*Very favorable expectations re effect of exporting on firm's growth (CBT) *Favorable expectations of exporting on firm's market development (CBT)	*Neutral or unfavorable expectations re effects of exporting on firm growth (CBT)
Exporting with respect to their firm		Firm regarded its size as a barrier to exporting (S)

FIGURE 7

PROFILES OF EXPORTERS AND NON-EXPORTERS

SOURCES: Adapted from, W.P. Snavelly, et. al., Exporter Survey of the Greater Hartford Area Vols I & II (1964), Washington, D.C.: Small Business Administration (S). S.T. Cavusgil, W.J. Bilkey and G. Tesar, "A Note on the Export Behavior of Firms: Exporter Profiles," Journal of International Business Studies, (Spring/Summer 1979), 91-97 (CBT).

possess the characteristics identified by Cavusgil, Bilkey and Tesar (1979), i.e., to have a significant sales volume (over \$1 million), placed a high value on growth and market development and to participate in activities, such as exporting, which present an opportunity for achieving these goals. These firms would be expected to rely on a number of middlemen to assist them in achieving their goals. National distribution, in particular, is difficult to achieve without the assistance of intermediaries such as wholesalers. Non-exporting firms, in contrast, tended to sell directly to buyers rather than using any middlemen.

This difference in customary selling methods and channel structure may be critical in managers' evaluation of exporting, particularly perceived compatibility. Export marketing often relies on the use of agents and middlemen. It would be highly unlikely for a firm which had never used such intermediaries in their domestic marketing activities to find it immediately acceptable to use them in entering foreign markets. A firm that usually sells directly to its customers may simply consider the use of an agent, domestic or export, incompatible with its normal mode of operation. Operational congruence between domestic and export activities is one facet of compatibility considered in the current research.

The other facet of compatibility included here is goal congruence. The significance of variables related to the expected effects of exporting on firm goals in Cavusgil, Bilkey and Tesar's profile analysis reinforces the importance of goal congruence. Three of the seven primary variables (denoted by asterisks in Figure 7) used to describe exporters

and non-exporters relate to goal congruence.

To develop their profiles, Cavusgil, Bilkey and Tesar used responses to a mail survey of 473 small and medium sized Wisconsin manufacturing firms. An AID Tree of the probability of exporting was then developed. Ninety-six percent of the firms possessing the four primary "exporter" characteristics were, in fact, exporting firms, while only five percent of the firms possessing the three primary "non-exporter" characteristics exported. Four additional exporter characteristics and five additional non-exporter characteristics were also identified. (These appear without asterisks in Figure 7.)

Caution is advised, however, in interpreting these results. It should not be concluded that 96% of exporting firms have exactly these "exporter" characteristics. For instance, 38% of the firms which did NOT plan for exporting, but which did have very favorable expectations of the effects of exporting on firm growth were, in fact, exporters.

Nevertheless, the results are useful in addressing goal congruence with respect to the perceived compatibility of exporting. Firms which placed low value on growth tended not to export. Firms with favorable expectations of the effect of exporting on growth tended to export. This suggests that exporting may be a marketing practice which managers generally perceive as congruent with growth. Thus the implication that if a firm values growth, exporting should be perceived as a "consistent" activity, appropriate to consider undertaking in pursuit of the firm's growth goals.

However, if a firm does not value growth, exporting would probably not be viewed as consistent with firm goals. In this case, the firm

should not be expected to evaluate the perceived compatibility of exporting favorably.

- A Comparison of Exporters and Non-Exporters

Simpson and Kujawa (1974) compared managers of exporting and non-exporting firms with regard to 1) perceptions of the risks and cost/benefit relationship associated with exporting and 2) reactions to various hypothesized export stimuli. Their study involved interviews with a stratified sample of decision makers in 120 Tennessee manufacturing firms. Fifty of the firms had begun exporting in the previous five years, seventy of the firms were non-exporters. Decision maker perceptions of selected export decision variables were recorded by the interviewer on a seven point ordinal scale. For example, response categories ranged from "considerably less than domestic" to "considerably more than domestic." (p. 112) The weighted mean responses for each group (exporters and non-exporters) were compared for each variable and a Kolmogorov-Smirnov test was performed.

The exporters and non-exporters did not differ significantly on several variables. These included: International Travel, Expropriations, Foreign Exchange Problems and the Cost of Product Adaptations.

Variables on which the two groups differed significantly are displayed in Table 2. Several of these variables, risk, profit and cost items, may be related to perceived relative advantage. Note that exporters perceived exporting as offering appreciably higher profit and lower risks and costs than did non-exporters. This result suggests that

TABLE 2
COMPARISON OF EXPORTER AND NON-EXPORTER RESPONSES

Variable	Exporters Mean Response	Non-exporters Mean Response	Difference	Significance Level
Risk	4.08	4.86	-0.78	$p < .02$
Profit	4.26	3.01	+1.25	$p < .001$
Education	3.92	3.23	+0.59	$p < .05$
Communications	4.76	5.77	-1.01	$p < .001$
Costs	3.84	5.84	-2.00	$p < .001$
Executive Time	4.38	5.87	-1.49	$p < .001$
Packaging	4.76	5.77	-1.01	$p < .001$
Insurance	4.20	5.19	-.099	$p < .001$
Clerical Time	4.92	5.67	-0.75	$p < .01$
Shipping	4.58	6.06	-1.48	$p < .001$

SOURCE: Adapted from, C.L. Simpson and D. Kuja, "The Export Decision Process: An Empirical Inquiry," Journal of International Business Studies, (Spring/Summer 1974), 107-117.

NOTE: Responses were given on seven point ordinal scales and were obtained from 50 exporters and 70 non-exporters.

when managers perceive greater relative advantages to exporting their firms are more likely to export. Executive Time and Communication (Barriers) may be related to the perceived complexity of exporting, with non-exporters perceiving a much greater level of executive effort and more communication barriers. This result suggests a negative relationship between perceived complexity and export involvement.

The Education variable included by Simpson and Kujawa is really a characteristic of managers rather than a perception. In their study a '4' was indicative of the manager obtaining a Bachelor's degree. Managers of firms which exported tended to have more education than managers of firms which did not export.

The second issue examined by these researchers was the relative importance of internal and external stimuli to export. Internal stimuli were defined as including:

- 1) Excess Capacity
- 2) Production of a (Domestically) seasonal product
- 3) Entry of domestic competitors into export markets
- 4) Profit motivation

According to Simpson and Kujawa:

No non-exporting firm indicated having reacted to, analyzed or otherwise "received" any internal stimuli. Of the exporting firms, 21 percent [10 firms] , indicated that profit motives were of prime consideration. Other internal stimuli studied, such as seasonal products and competition, were apparently inconsequential for both exporters and non-exporters alike. (p. 110)

Three of these 'internal stimuli' (1, 2, 4) are variables that most other researchers have treated as characteristics of firms. The fourth 'entry of domestic competitors into export markets' has not been addressed in other research. The 'external stimuli' studied by Simpson

and Kujawa are much more comprehensive than those addressed by other researchers.

External stimuli include:

- 1) Trade mission activities
- 2) Trade fairs
- 3) U.S. Department of Commerce Activity
- 4) Sales agent activity
- 5) Fortuitous orders from foreign customers

Results indicated that of the non-exporting companies, 17 percent (12 firms) had been approached by foreign sales agents, while 7 percent (5 firms) had been approached by the U.S. Department of Commerce. Under neither condition did they begin to export. None of the exporting firms reported receiving either of the above stimuli. Also, Trade Missions and Trade Fairs were not reported as stimuli by either group.

The most frequently cited external stimulus reported was the fortuitous or unsolicited order. Eighty-two percent (41) of the exporting companies and thirty-two percent (21) of the non-exporting companies reported receiving such orders. Given that the non-exporting companies did not respond to any of these external stimuli, Simpson and Kujawa were led to the conclusion that "an external stimulus is a significant but not sufficient condition for initiation of exports." (p. 109)

If one refers back to Figure 6, it will be noted that Reid classified these stimuli as "Significant Variables Involved" in becoming aware of foreign entry possibilities (Condition 3). It should also be recalled that both internal and external stimuli played a key role in the model

developed by Cavusgil and Nevin (Figure 4). It is expected that the receipt of unsolicited orders is related to managers' perceptions of the trialability of exporting. The fact that such stimuli have been shown to be insufficient in and of themselves for the initiation of exporting is an additional stimulus to examine managerial perceptions of the characteristics of exporting more fully.

Set in the framework developed for this review, the profiles of Exporters and Non-exporters that result from Simpson and Kujawa's study are presented in Figure 8. When compared with the previously identified profiles several interesting points arise. First, with the exception of the firm characteristics of 'Goals', entirely new information is added to our understanding of firms which do and don't export. Second, the findings related to firms goals are consistent. Exporters tend to have greater profit aspiration/motivation than non-exporters. Thus it may be expected that firms which place a greater importance on profit are more likely to be involved in exporting.

The three remaining comparative studies differ substantially, from each other and the previously cited research, in their analytic approaches.

- A Comparison of Canadian-Owned and Foreign-Owned Firms

Abdel-Malek (1974) used Likert-type and bipolar adjective scales to compare the degree of a manager's orientation toward exports in Canadian-owned and foreign-owned firms in Canada. Orientations were measured and compared on the following factors:

- 1) The importance of exports as an organizational activity.

VARIABLES	EXPORTERS	NON-EXPORTERS
CHARACTERISTICS OF FIRMS		
Product Seasonal Production	NO DIFFERENCES	
Structure Excess Capacity	NO DIFFERENCES	
Goals Profit Motivation	Important to 21%	Not important
CHARACTERISTICS OF MANAGERS		
Education	Higher average 3.92 yrs. College	Lower average 3.23 yrs College
PERCEPTIONS MANAGERS HAVE RE:		
Risks of Export	Lower	Higher
Profitability of exporting	Higher	Lower
Communication barriers to exporting	Lower	Higher
Costs of Exporting	Lower	Higher
OUTSIDE INFLUENCES		
Foreign sales agents	No contacts	17% contacted
U.S. Department of Commerce	No contacts	7% contacted
Trade missions or fairs	NO DIFFERENCES	
Unsolicited orders	82% contacted	32% contacted

FIGURE 8

SIMPSON AND KUJAWA'S FINDINGS

SOURCE: Adapted from, C.L. Simpson and D. Kujawa, "The Export Decision Process: An Empirical Inquiry," Journal of International Business Studies, (Spring/Summer 1974), 107-117.

- 2) The extent of satisfaction with past export experience.
- 3) The adequacy of the firm's resources for export purposes.
- 4) The positive and negative characteristics of exports relative to competing activities.
- 5) The attractiveness of export opportunities relative to other alternatives.
- 6) Doing business with foreign customers and intermediaries.

Each of these factors was made up of a set of component variables. Only two component variables of the first factor were found to be significantly different between the two groups. Managers of foreign-owned firms in Canada were found to place a higher degree of importance on the role of exports in their firm and also to perceive a greater contribution by exports to company profits than managers of Canadian-owned firms. There were no significant differences between the managers regarding either their satisfaction with past export experience or the adequacy of their firm's resources for export purposes (Factors 2 and 3).

There were a number of significant differences in perceptions of managers regarding the subcomponents of Factors 4, 5 and 6. Of interest here are the identities of the characteristics of exports measured as sub-components of Factor 4, not the results of Abdel-Malek's analysis, per se. The components of Factor 4 were measured relative to domestic sales and included: importance, riskiness, dynamism, complexity, stability, competitiveness, profitability, difficulty, prestige and flexibility needs. Domestic sales were rated more favorably than export sales (by both Canadian and foreign-owned firms) on all characteristics except dynamism, and Canadian firm managers seemed to perceive export sales as having higher prestige than domestic sales. Differences between

managers of Canadian and foreign-owned firms were most notable in their perceptions of the complexity and difficulty of exporting. Canadian-owned firm managers perceived greater complexity and difficulty in obtaining export sales than did managers of foreign-owned firms. These two variables should be viewed as components of "perceived complexity" of exporting.

Unfortunately, although the sample included exporting and non-exporting firms of both ownership types, no attempt was made to separate their responses in the analysis. This might have produced different and interesting results. Also, the analysis is necessarily restricted in its generalizability due to the use of a judgment sample.

- A Comparison of Exporters' Initial Stimulus and Rationality

Lee and Brasch (1978) compared exporting firms concerning whether the initiating force in the export adoption process was the perception of a problem internal to the firm or the result of being made aware of the innovation (exporting) by external change agents. Questionnaires were sent to the presidents of 35 small exporting manufacturers in Nebraska. Twenty four of the firms indicated that they had begun exporting due to the efforts of external change agents (such as, government agencies, banks, and other export agencies) rather than in response to internal stimuli. This result is, in general, consistent with the findings of Simpson and Kujawa cited previously. However, whereas the only significant external stimulus found by Simpson and Kujawa was the receipt of unsolicited orders, Lee and Brasch found firms which were responsive to other external stimuli, such as agents of the U.S. Department of Commerce.

The second comparison made by Lee and Brasch concerned whether the export decision process was rational or nonrational. To determine this, their questionnaire included items from a rationality index which they developed. Firm responses were judged by a panel of four experts and classified as either rational or nonrational.

Decisions were judged nonrational if managers 1) did not consult expert authorities; 2) did not collect much information in either a quantitative or qualitative sense; and 3) had only vague justifications for getting involved in exporting. The decisions of twenty-four of the firms were judged as nonrational. Accepting that the panel of experts ("an international banker, a foreign freight forwarder, a state industrial export consultant, and a local university research staff member," (p. 87)) was qualified to judge rationality, it is still questionable whether rationality requires overt information seeking and consultation with expert authorities. Further, the vague justifications provided by the managers may have, in fact, reflected their unarticulated perceptions of the characteristics of exporting.

The authors concluded that the size of the firms studied may have affected their findings on the rationality issue:

A typical Nebraska exporter is fairly small and is basically a family operation. For a firm of this type, concepts like an information system, planning and controlling, which are facilitators of rational decision making, might be inconceivable luxuries. Further, the economic advantage of exporting is difficult to calculate for an export adopting firm. Perhaps this difficulty also helps to explain why this study found a preponderance of nonrational adoption behavior. (p. 92)

This last point, regarding the difficulty of calculating the economic advantages of exporting, can be related to the perceived observability of exporting, or what Zaltman, Duncan and Holbek (1973) refer to as "clarity

of results." (p. 37) If, as suggested by Lee and Brasch, rational decision making depends upon economic justification for actions taken by the firm, and if such economic justification is difficult to obtain, it should not be surprising that the majority of exporters studied by Lee and Brasch made 'nonrational' decisions to export. Perhaps it is more surprising that, given this lack of observable evidence of the benefits of exporting, these firms still become exporters as seventy-eight percent of the studies which relate observability with adoption have found a positive relationship between the two variables (Rogers, 1983; p. 239).

- A Comparison of Segmentation Methods

Czinkota and Johnston (1981), in the final comparative study discussed in this review, compared four methods of segmenting U.S. firms in order to identify which method was most effective in differentiating among groups of firms. They hoped that their results would then be used as a guide for developing separate export promotion programs tailored to the needs of each group.

Data were collected by a questionnaire mailed to 1019 small and medium sized manufacturers in the materials handling, avionics and aviation support and industrial instruments industries in the United States. A response rate of 30% yielded 237 usable responses. Of the four segmentation methods, segmentation by 1) Stage of Export Activity, 2) Managerial Attitudes, 3) Size, and 4) Service Orientation, differentiating by stage of export activity was found to be the most effective or successful means of identifying distinct groups of firms.

An approach was deemed "successful" in segmenting firms if the mean score of firms in a group was significantly different from the mean

scores of the other group(s) when using the particular method of differentiation. To obtain such significant data points, the groups were compared on export dimensions comprising up to 20 individual variables using MANOVA, and on individual export issues using ANOVA. The number of significant data points obtained in the testing of each set of hypotheses was utilized as decision criterion for the determination of the most helpful and informative method of differentiating among firms.

For both the export dimensions and the individual export issue comparisons, the international stages [exporting activity] yielded the highest number of significant data points (47 out of a possible 110) when compared with all other grouping methods. (pp. 361-362)

It should be noted that even the most successful of the segmentation methods was effective in differentiating among groups of firms in only 42% of the tests. This result suggests that further research testing the efficacy of combinations of segmentation methods may be in order.

Czinkota and Johnston used quantitative cut-off points on nine variables (ranging from past, present, and future export volume to number of export customers and personnel committed to exporting) to identify six stages of export activity,

- 1) The unwilling firm
- 2) The uninterested firm
- 3) The interested firm
- 4) The experimenting exporter
- 5) The semiexperienced small [volume] exporter
- 6) The experience large [volume] exporter (p. 355)

This classification system was modeled closely after the stages in Bilkey and Tesar's Model of the Export Development Process (see Figure 3) and therefore its success in differentiating among groups of firms may be construed as additional support of the Bilkey and Tesar Model.

Of major concern to the current research is the apparent lack of

effectiveness of classification by managerial attitudes as a segmentation method. However, the classification system used by Czinkota and Johnston was in reality a means of distinguishing between firms on the basis of their Proactive or Reactive motivations for exporting rather than a measure of the attitudes or perceptions of exporting held by managers. The chart in Figure 9 identifies the factors which they associated with proactive and reactive motivations of export effort (p. 357). Proactive motivations were scored as +1 and Reactive motivations as -1. Firms with overall positive scores were classified as Proactive, firms with negative scores as Reactive and firms whose scores balanced to zero were classified as situational exporters. Examination of Figure 9 reveals that several of these so-called motivations are variables which are treated by many other researchers as characteristics of firms, therefore, it would seem inappropriate to consider them indicative of managerial attitudes.

The underlying motivation behind Czinkota and Johnston's research, and all other comparative studies, has been to understand the differences between groups of firms with regard to their export activities and responsiveness to export stimuli, and hence to derive a fuller understanding of export behavior. Another group of researchers has approached these same basic issues through other methods. This second group of researchers has employed many of the variables identified as useful in differentiating among groups of firms in an effort to predict various export related behaviors and activities.

PROACTIVE MOTIVATIONS	REACTIVE MOTIVATIONS
Exclusive information	Competitive pressures
Managerial urge	Over production
Unique products	Declining domestic sales
Profit advantage	Excess capacity
Marketing advantage	Saturated domestic market
Technological advantage	Proximity to ports
DISC	
Other tax advantages	

FIGURE 9

FACTORS MOTIVATING THE EXPORT EFFORT

SOURCE: M.R. Czinkota and W.J. Johnston, "Segmenting U.S. Firms for Export Development," Journal of Business Research 9 (1981), 353-365.



Predictive Studies

- Testing a Model of the Export Development Process

The first of the predictive studies was an attempt by Bilkey and Tesar (1977) to provide a test of their Model of the Export Development Process (see Figure 3). Their analysis involved the development of regression equations to predict firm movement from one stage of the model to the next. The data used to develop the regression equations was collected in a mail survey of 473 small and medium sized Wisconsin manufacturing firms. Tesar conducted the survey as part of his dissertation research.

Bilkey and Tesar focused their attention on identifying the determinants of movement between Stages Two and Three, Three and Four and four and Five. They concluded the following:

- The export development process of firms tends to proceed in stages...
- Considerations that influence firms' progression from one stage to the next tend to differ by stage for the three stages examined
- Within the size-range of firms studied, size was relatively unimportant when account was taken of the quality and dynamism of management (p. 95)

The model testing conducted in this study is laudable and on a prima facie basis the conclusions have important implications. However, there are complications in the execution, raising both conceptual and methodological questions, which must be addressed.

Equation One (see Figure 10) stimulated two conceptual concerns. The first concern centers on the nearly tautological relationship between the dependent variable, actively exploring the feasibility of exporting (X), and the independent variable, planning for exporting (L). One relevant

EQUATION ONE

From Stage Two to Stage Three:

$$X = .020 + .465L + .032C$$

where: X = Whether or not management actively explored the feasibility of exporting (1 = yes, 0 = no)

L = Whether or not management planned for exporting (1 = yes, 0 = no)

C = Management's perceptions of the firm's competitive advantages (score = -2 to +4)

$$\text{Unbiased } R^2 = .241$$

EQUATION TWO

From Stage three to Stage Four:

$$A = -.1393 + .0002E + .105M + .692U + .046S$$

where: A = Whether the firm exports experimentally (1 = yes, 0 = no)

E = Management's expectations as to what exporting would contribute to its firm (scale range = -1,000 to +1,000) - (partial cor = +.241)

M = Management, scale as a composite of the following five current considerations, all weighted equally:

W = Managerial views (Filley-House index - 5 pt. agree-disagree)

D = Whether the firm had a special structure, such as a department for evaluating exports (1 = yes, 0 = no)

P = Whether management has a more or less fixed policy regarding exporting (1 = yes, 0 = no)

L = Whether management plans for exporting (1 = yes, 0 = no)

X = Whether management has systematically explored the feasibility of exporting (1 = yes, 0 = no) (partial cor = +.396)

U = Whether the firm's first export order was unsolicited (1 = yes, 0 = no) (partial cor = +.735)

S = The firm's size as measured by the number of employees (categorized as follows: 1 = <25; 2 = 25-99; 3 = 100-249; 4 = 250-499; 5 = 500-1000; 6 = >1000) (partial cor = +.183)

$$\text{Unbiased } R^2 = .690$$

FIGURE 10

BILKEY AND TESAR'S REGRESSION EQUATIONS

SOURCE: W.J. Bilkey and G. Tesar, "The Export Behavior of Smaller-Sized Wisconsin Manufacturing Firms," Journal of International Business Studies, (Spring/Summer 1977), 93-98.

EQUATION THREE

From Stage Four to Stage Five:

$$D = .3151 + .0004E - .048B - .041M$$

where D = Per cent of firm's total sales, in value terms, currently being exported (range .10 to .45)

E = Management's expectations as to what exporting would contribute to their firm (scale range: -1000 to +1000) (partial cor + .775)

B = The number of barriers management perceives to exporting (range = 0 to 9) (partial cor = - .531)

M = Management, scaled as a composite of the same five variables listed above (range = -.05 to +4.5) (partial cor = -.325)

$$\text{Unbiased } R^2 = .698$$

FIGURE 10 (cont'd.)

question pertains to the direction of the relationship between these two variables. Is not exploration of the feasibility of an action part of the planning process? In many instances it is. Feasibility studies are often part of planning processes related to new product development, site selection, and major construction projects, such as dams and power plants. In each situation the feasibility study may be the result of preliminary planning and may, in turn, lead to additional planning. One must wonder, therefore, whether exploring feasibility (X) might not serve equally well as a predictor of planning (L).

The second concern with Equation One centers on the calculation of the independent variable, competitive advantage (C). Respondents were asked "which of the following advantages have helped your firm compete more successfully?" (p. 98) Responses of technology, efficient production methods, unique product and efficient marketing techniques each received a score of plus one, the response proximity to market received a score of minus two. The apparent assumption of this scoring procedure is that proximity to market is not a valid competitive advantage, or perhaps more accurately, that firms who consider proximity an advantage are less likely to export--but are they three times less likely than firms with efficient production methods?

Equation Two is of particular interest to the current research because it deals with movement from Stage Three, the exploring feasibility or "evaluation" stage of the model to the experimental exporting or "trial" stage, Stage Four. This is the movement where, according to Rogers' model (Figure 1), managers' perceptions of the characteristics of exporting should be expected to have an impact.

Independent variable (E), management's expectations of exporting's contribution to the firm may be considered roughly analogous to the perceived relative advantage of exporting. This variable was calculated as a weighted sum of the expected effect of exporting on firm profits, firm growth, the security of the firm's investment, development and/or security of the firm's markets, and contribution to the development of the U.S. economy. These components provide an indication of issues to be considered in preparing the index of relative advantage of exporting used in the current research. Also, independent variables (U), receipt and response to unsolicited orders, indicates an important feature of the perceived trialability of exporting.

The independent variable, Management (M), however, provides some cause for concern. Both the dependent variable from Equation One (X), and the independent variable (L), are used as components of (M). Although it is quite reasonable in a progressive model to use the output of one equation as input for the next, the inclusion in Equation Two of the variable (L) amounts, in an sense, to double counting of that variable. If the legitimacy of Equation One is accepted this should be unnecessary.

The measurement of the independent variable (S), firm size, provides another cause for concern. Regression assumes the use of inter-level measures, not categorical. While the use of "dummy" variables is common in regression, these are usually entered into the equation as either zeros or ones. In Equation Two, size of the firm (S) is represented in six categories. If these categories were of equal intervals this might not be as great a problem, however, in this instance one category has 25

members, another has 74, and another 500. This results in an inappropriate and perhaps misleading use of regression.

The final comment about Equation Two involves Bilkey and Tesar's third conclusion. They suggest that firm size isn't really important, especially when the quality and dynamism of management is taken into consideration. It is assumed, on the basis of the data presented, that when they speak of quality and dynamism of management they are referring to variable (M). However, it is difficult to believe that the components of this variable (W, D, P, L, X), actually have much relationship to management quality and dynamism, the construct they presumably are intended to measure. These components are identical to the variables that Cavusgil and Nevin label "Level of Commitment to Export Marketing" (see Figure 14). Is it a value judgment of the researchers that such commitment represents quality management?

Equation Three is intended to predict movement to Stage Five, experienced exporting. This equation is of interest because the dependent variable (D) is measured as percent of sales from exporting. This same measure is used to represent Export Involvement, the independent variable in the current research.

Although the dependent variable from Equation Two (A) is not used as a predictor in Equation Three, two of Equation Two's independent variables are used again. The management variable (M) was positively related to experimental exporting in Equation Two, however, in Equation Three the same variable is negatively related to experienced exporting. If, as discussed earlier, (M) is intended to represent management quality and dynamism, the obvious conclusion is that although quality and

dynamism lead firms to experiment with exporting inferiority and impotence lead firms to become experienced in it. Clearly this is unlikely. However, it serves to reinforce earlier questions regarding Bilkey and Tesar's third conclusion and suggests that further research is needed into the relationship between management variables and exporting.

The other repeated variable is (E) management's expectations of the contribution of exporting to their firm. As noted previously, this variable may be considered conceptively similar to the perceived relative advantage of exporting. Therefore, its continued predictive usefulness and high partial correlation (.775) provide evidence that perceived relative advantage should be strongly, and positively, related to Export Involvement.

The third independent variable in Equation Three is also of special importance to the current research. This variable, (B)--the number of barriers management perceives to exporting, bears a strong conceptual resemblance to the perceived complexity of exporting and its elements provide an indication of issues which should be addressed by items designed to measure perceived complexity.

Values for (B) were derived by summing the number of barriers which respondents indicated in answering the following question:

"Check which, if any, of the following barriers to exporting are so serious as to make it extremely difficult or impossible to export; () foreign opportunities are difficult to determine; () it costs too much money to get started in exporting; () adequate representation in foreign markets is difficult to obtain; () it is difficult to collect your money overseas; () different product standards and consumer habits make US products unsuitable for exports; () service is difficult if not impossible in foreign markets; () foreign business practices are difficult to understand; () shipping documents, export licenses, and other paperwork requires too much time; () it is difficult to convert some currencies to U.S. dollars. (p. 98)

Thus it would seem that items concerned with paperwork, financing and business practices are important components of the perceived complexity of exporting. Additionally, the negative relationship found between (B) and (D) suggests that perceived complexity should be negatively related to Export Involvement.

In sum, this work by Bilkey and Tesar provides a valuable stepping stone, as well as a number of intriguing questions, for future research. However, considering the large number of dummy variables, the researchers may have made an even greater contribution had they used analytic techniques requiring only nominal level measurement, as employed in the other studies based on this data (Cavusgil, Bilkey and Tesar, 1979; Cavusgil, 1976; Cavusgil and Nevin, 1981).

- Other Analyses of the Same Data

Cavusgil (1976), in his dissertation, used Tesar's data from Wisconsin manufacturing firms to examine organizational determinants of: 1) involvement in exporting and, 2) expansion of export activity. Cavusgil's treatment of these two dependent variables differs somewhat from the treatment of Export Involvement as the dependent variable in the current research. Although his first dependent variable is called involvement, it is not conceptualized as representing a range of involvement (as it is in the current research), but represents a dichotomy: involvement or lack of involvement. As such, it is measured by using " '1' for exporting firms and '0' for non-exporting firms." (p. 89)

In his analysis of export expansion, Cavusgil studied only exporting firms and measured this second dependent variable as:

...export sales/total sales ratio. [However,] the data allowed this ratio to be measured only in ranges, such as 1-9%, 10-19%, and so on,

rather than specific percentages... Consequently, midpoints were used as the dependent variable; 5%, 10%, 15%, and so on. (p. 90)

In the current research the dependent variable, Export Involvement, is measured by the percent of sales a firm obtains by exporting. Therefore, both of Cavusgil's analyses are of interest.

In conducting these analyses, Cavusgil used both Automatic Interaction Detection (AID) and Multiple Classification Analysis (MCA). The results of the AID analysis for his first dependent variable formed the basis for the profiles presented in Figure 7 (Cavusgil, Bilkey and Tesar, 1979).

As a result of the complete analysis with respect to his first dependent variable, Cavusgil developed the model shown in Figure 11.

In order to test the significance of this multi-stage causal process, several multiple regression analyses were carried out using, again, the MCA program. ...first of all, ...market planning is viewed as a function of several background variables. In order of importance, they are: a unique product, size of firm (employment), aspirations for growth, type of industry, and proximity to market. They were all statistically significant. All but the last variable influence planning positively. The adjusted multiple correlation coefficient ($R^2 = 15.4\%$) was significant at $\alpha = 0.01$.

Secondly, tendency to export was predicted by growth expectations and market planning. Both predictors were statistically significant. They explained $R^2 = 34.0\%$ of the variation in the probability to export, and this result was again significant at $\alpha = 0.01$. (p. 132)

The finding related to the significance of growth expectations is particularly relevant to the current research. This is because of the strong conceptual relationship between management's expectations concerning the effects of exports on the firm's growth and managers' perceptions of the relative advantage of exporting.

A similar analysis with respect to Cavusgil's second dependent variable produced the model shown in Figure 12. The multiple regression

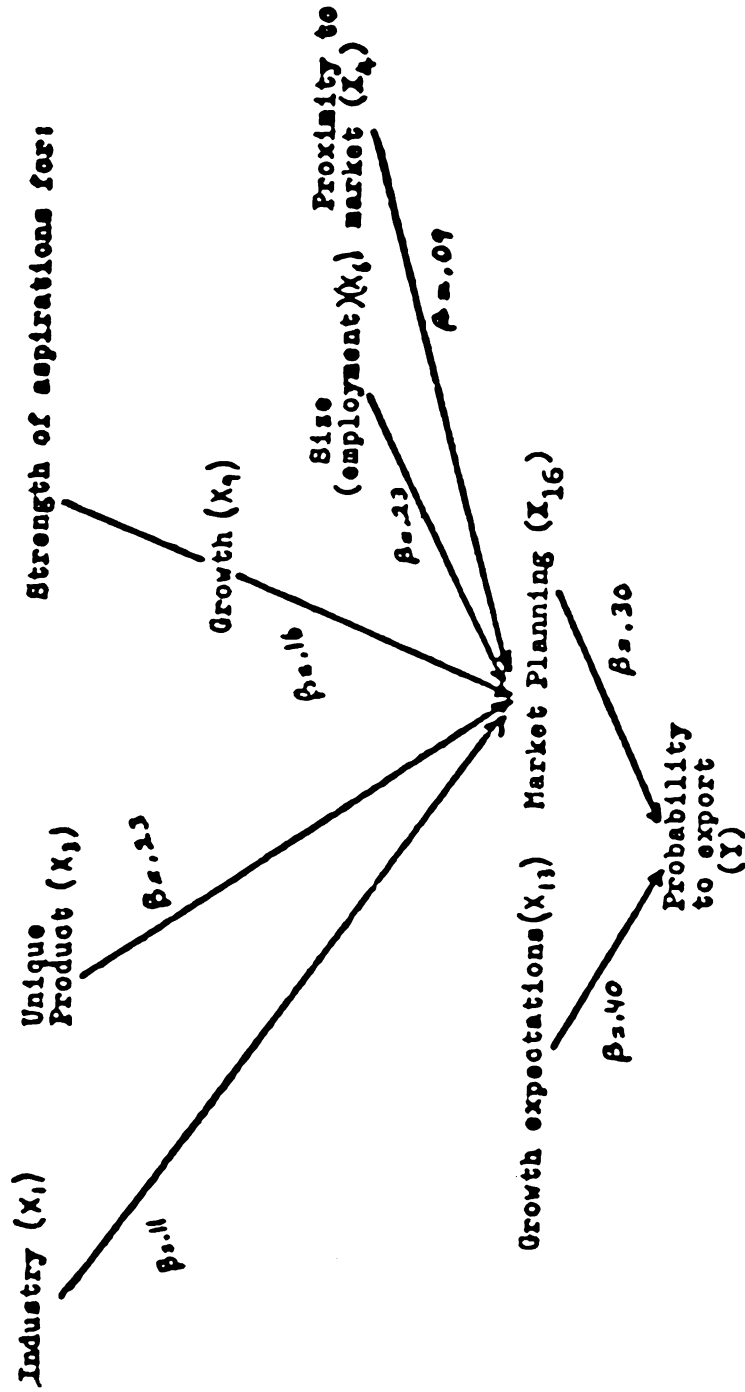


FIGURE 11

MODEL TESTING CAVUSGIL'S FIRST DEPENDENT VARIABLE

SOURCE: S.T. Cavusgil, "Organizational Determinants of Firms' Export Behavior: An Empirical Analysis." Ph.D. dissertation, The University of Wisconsin, 1976.

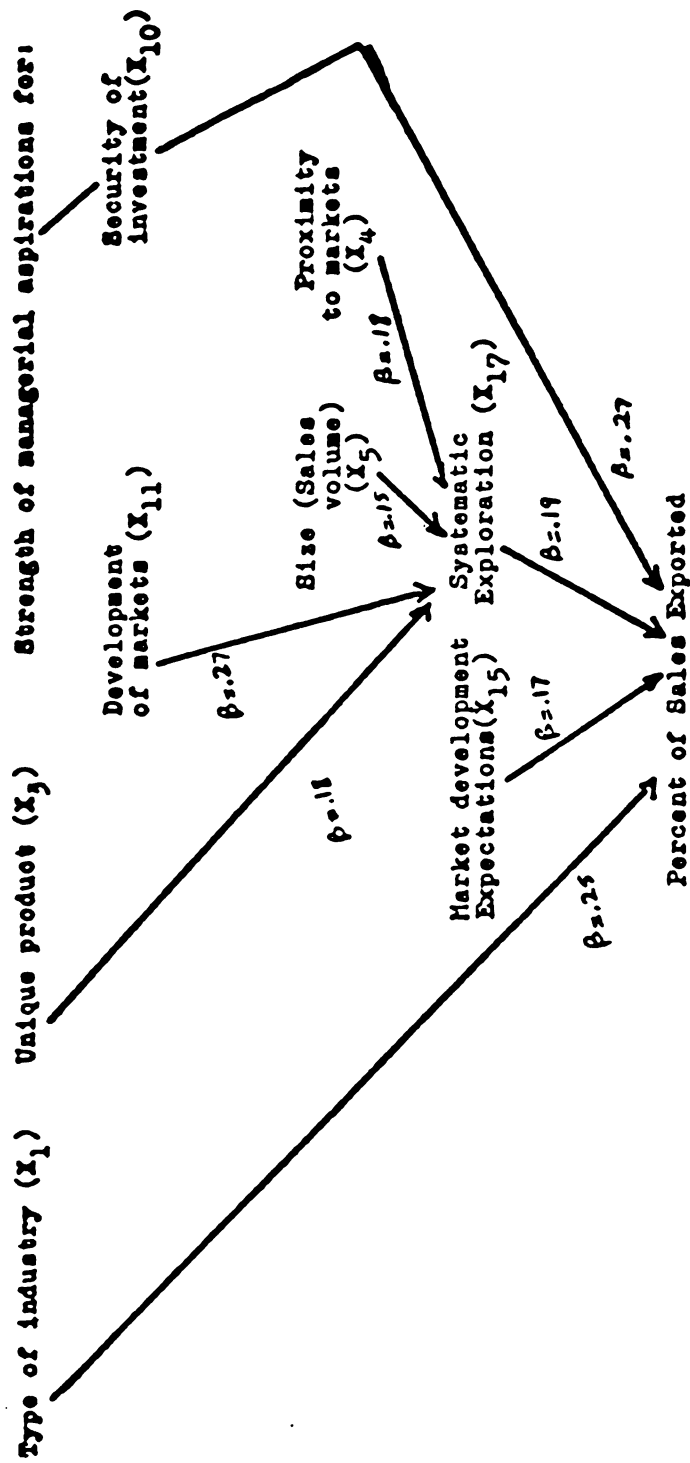


FIGURE 12

MODEL TESTING CAVUSGIL'S SECOND DEPENDENT VARIABLE

SOURCE: S.T. Cavusgil, "Organizational Determinants of Firms' Export Behavior: An Empirical Analysis." Ph.D. dissertation, The University of Wisconsin, 1976.

analysis performed with "Percent of Sales Exported" as the dependent variable incorporated four independent variables: 1) type of industry, 2) market development expectations, 3) systematic exploration, and 4) the strength of aspirations for security of investment. "All predictors were significant, and they explained 17.6 percent of the variation." (p. 156)

Only two of the independent variables in this regression analysis are relevant to the current research. First, market development expectations should be considered as a component of perceived relative advantage. Second, aspirations for security of investment should be considered conceptually similar to the importance of stability to the firm. The importance of stability is one of the firm characteristics which will be assessed in this study. The primary contribution of Cavusgil's research to the current effort is that he provides a bench mark with which the results of this research may be compared.

Cavusgil and Nevin (1981) investigated internal determinants of export marketing behavior, intending "to shed some light on the question of why firms have been reluctant to export." (p. 114) Their dependent variable, Export Marketing Behavior, was dichotomous and indicated whether or not a firm was currently exporting. Data used in this analysis came, again, from the survey conducted by Tesar (1975). However, as with Cavusgil's (1976) previous study, the techniques they employed allowed for the categorical nature of this data.

The analysis conducted by Cavusgil and Nevin was based on a model (Figure 13) which is a simplified version of Cavusgil's earlier model (Figure 11). Although the model presented in Figure 13 indicates possible "casual relationships" between the sets of variables, these

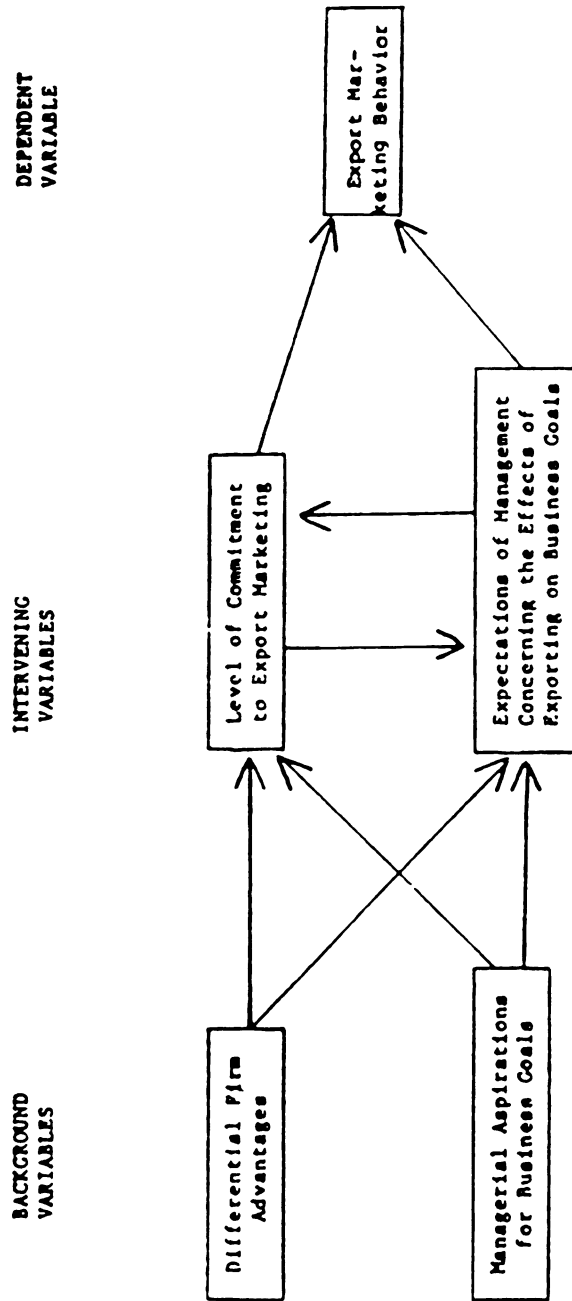


FIGURE 13

PROPOSED CAUSAL RELATIONSHIPS AMONG THE INTERNAL DETERMINANTS OF EXPORT BEHAVIOR

SOURCE: S.T. Cavusgil and J.R. Nevin, "Internal Determinants of Export Marketing Behavior: An Empirical Investigation," Journal of Marketing Research, (February 1981), 114-119.

relationships are not explicitly tested. The researchers used Automatic Interaction Detection (AID) analysis, entering variables in accordance with their order in the model, to reduce the 19 component variables of the four variable sets to ten key variables. They then conducted a Multiple Classification Analysis (MCA) on the reduced set of ten variables with the dependent variable. The chart in Figure 14 indicates both the variables used in the MCA and those which were dropped because they were not significant in the AID analysis.

The subset of "internal determinant" variables used in the MCA were found to explain 46% of the variance in export marketing behavior. Cavusgil and Nevin concluded that:

Variation in export marketing behavior of firms can be explained to a substantial degree, by differences in internal firm and management characteristics...The results seem to support the contention that the reluctance of firms to export may be largely attributed to top management's lack of determination to export. (p. 119)

This conclusion appears to suggest that more firms would export if only they wanted to do so, but let's take a closer look at the variables used to arrive at this deduction. Which of the variables in this analysis indicate management's lack of determination to export? Only the variables in group three, expectations of management about the effects of exporting in business goals, can be considered reflective of management's determination to export; and only one of these, expectations about firm growth, was used in the predictive analysis. The rest of the variables used by Cavusgil and Nevin must really be classified as characteristics of firms, and as such cannot provide any indication of management "determination" or lack thereof.

Cavusgil, Bilkey and Tesar (1979) used the same data set in their

Variable Group	Significant Variables included in MCA	Nonsignificant Variables excluded from MCA
Differential Advantage	Technology intensiveness of firm's industry Possession of a unique product Proximity to market Sales Volume	Possession of any differential price, technology, or unique product advantage Employment Capital investment
Strength of Managerial for Business Goals	Aspirations for growth Aspirations for sec- urity of market	Aspirations for profit Aspirations for sec- urity of investment
Expectations of Management about Effects of Ex- porting on Bus- iness Goals	Expectations about firm's growth	Expectations about firm's profits Expectations about security of firm's investment Expectations about development of firm's markets
Level of commit- ment to export marketing	Market planning Systematic exploration of the possibility of exporting Policy towards exports	Formal structure for evaluating export opportunities

FIGURE 14

CAVUSGIL AND NEVIN'S SIGNIFICANT AND NONSIGNIFICANT VARIABLES

SOURCE: Adapted from, S.T. Cavusgil and J.R. Nevin, "Internal Determinants of Export Marketing Behavior: An Empirical Investigation," Journal of Marketing Research, (February 1981), 114-119.

comparative analysis of exporters and non-exporters (see Figure 7) and found that favorable expectations of the effect of exporting on firm growth was a characteristic of exporting firms while non-exporters tended to have neutral or unfavorable expectations. Interestingly, that comparative analysis also revealed that non-exporters had low aspirations for firm growth as well. In addition, growth expectations were a significant predictor of exporting in Cavusgil's previous study. Certainly these and other studies provide substantial evidence to link growth goals with expectations about exporting and export behavior and perhaps Cavusgil and Nevin's conclusion should have been that the reluctance of firms to export may be largely attributed to top management's lack of determination to grow. This may be especially appropriate in that the beta coefficient for the growth expectations variable was nearly twice that of any other variable used in the MCA analysis. (p. 118)

This variable is also of importance because it is the only variable employed by Cavusgil and Nevin which touches on the perceptions managers have of exporting. As suggested in Chapter One, it is believed that a more complete exploration of managers' perceptions of exporting can provide a fuller exploration of their suppose "lack of determination."

- Reid Looks at New Variables

The final predictive study to be considered here is Reid (1983). Reid's work is of particular importance for several reasons: 1) five dependent variables representing different and very specific export behaviors are used; 2) a variety of manager characteristics are included as independent variables along with variables indicative of firm

characteristics; and 3) much of the data used to develop the regression equations is interval or ratio in nature and in general comprises more sophisticated measures than have previously been used.

The purpose of Reid's research was twofold: first, to provide an empirical link between export decision making, managerial characteristics, firm characteristics and environmental factors and second, to "examine the relative contribution of firm and managerial characteristics to explaining the variance in different types of export behavior." (p. 323) Data was obtained from export decision makers through the use of personal interviews and 'drop and mailback questionnaires'. The sample included 89 firms with between 100 and 500 employees in the metal fabrication, machinery and furniture industries in Ontario, Canada.

The five dependent variables used by Reid included measures of the firm's likelihood of 1) exporting to new foreign markets (E1), 2) introducing new products into foreign markets (E2), and 3) increasing the present proportion of export sales to current [foreign] markets (E3), in the next twelve months. Also used as dependent variables were a measure of the expected change in export sales over the next twelve months (E4) and the number of new foreign market (countries) the firm expected to enter in the next twelve months (E5). Two sets of independent variables were employed, in various combinations, in the five regression equations. Table 3 identifies the independent variables and indicates their levels of significance in each of the equations. An additional independent variable, foreign market orientation of the manager, was developed but not entered into any of the equations and is therefore not shown in Table 3.

TABLE 3
SUMMARY OF REID'S RESULTS

INDEPENDENT VARIABLES	DEPENDENT VARIABLES				
	E1	E2	E3	E4	E5
Firm Characteristics:					
Size (A): Number of employees, sales, number of separate staff functions	ne	ne	ne	ne	ns
Size (B): Number of technical and academic employees	***	*	ne	*	**
Technology: Ownership of copyright, patent, license or design (0/1)	***	*	ne	*	***
Extraregional Sales: Percent of sales in Canada outside Ontario	*	ne	ns	ne	ne
Unsolicited Orders: Receipt from cus- tomers within the last two years (0/1)	***	***	***	ne	*
Domestic Competition: Increased local competition or loss of major within the last two years (0/1)	ns	*	ns	ne	ns
Organizational Membership: Number of associations firm belongs to	*	**	***	ns	ns
Manager Characteristics:					
Information Search and Usage: A sum- mative measure derived from factor analysis of scales representing readership, awareness and use of numerous print sources	***	ne	ne	ne	***
Education: University educated in Engineering or Business (0/1)	ns	ne	ns	*	ne

TABLE 3 (cont'd.)

INDEPENDENT VARIABLES	DEPENDENT VARIABLES				
Managers' Perceptions	E1	E2	E3	E4	E5
Belief in Contribution of Exports: Composit scale of perceived contribution of exports to profits, sales revenue, stability, economies of scale, reputation, product and market development	***	ns	**	ne	***

SOURCE: Adapted from, S.D. Reid, "Managerial and Firm Influences on Export Behavior," Journal of the Academy of Marketing Science, Vol. 11 No. 3 Summer 1983, 323-332.

NOTES: E1 = Firm's likelihood of exporting to new foreign markets in the next 12 months

E2 = Firm's likelihood of introducing new products into foreign markets in the next 12 months

E3 = Firm's likelihood of increasing their present proportion of export sales to current foreign markets in the next 12 months

E4 = Firm's expected change in export sales over the next 12 months

E5 = Number of new foreign markets the firm expects to enter in the next 12 months

(0/1) = dummy variable

ne = not entered

ns = not significant

* = significant at $p = .10$

** = significant at $p = .01$

*** = significant at $p = .001$

The percent of variance explained for each of the dependent variables was 38% (E1), 20% (E2), 16% (E3), 8% (E4) and 29% (E5), respectively. Reid concluded that "The lack of success in accounting for the variation in export commitment type behavior [E3 and E4] suggests that such activity is affected by other variables, not considered in the research." (p. 329) Although all of Reid's dependent variables are relevant to the current research, as any of them may be considered measures of Export Involvement, E3 and E4 are most closely related to the measure employed here, percent of sales from exporting. Therefore, the behavior of the independent variables in these two equations stimulates keen interest. Examination of Table 3 reveals that no variable is significant in both equations and many of the variables which were significant in one equation were not even entered into the other. Unfortunately, Reid's discussion does not allow us to determine whether entry of variables into the equations was a matter of researcher choice or an artifact of the analytic procedures used. It would be intriguing, and potentially very useful, to know the result if additional variables were included in each equation.

In the case of equation three (E3), one must wonder about the effect of including "Size (B)" and "Technology," especially as they were both significant in every other equation. In the case of equation four (E4), the exclusion of the independent variables "belief in the contribution of exports" and "unsolicited orders" deprives this analysis of variables which have had considerable impact in several other equations.

Several comments are pertinent to the overall performance of the individual independent variables. First, with regard to the two size

variables, it is important to note that Size A--a composite of several aspects of size--was not significant in the only equation in which it was entered. Since one of its components, sales, has been found to meaningfully differentiate between exporters and non-exporters its non-entry into four of the five equations is curious. Size B, an innovative variable not employed in previous research, was significant in all four of the equations in which it was entered and should probably be pursued in future research.

The performance of "technology" and "unsolicited orders" are consistent with all previous research, whereas the performance of "extra-regional sales" is surprising given the usefulness of market area (national vs. local distribution) in differentiating between exporters and non-exporters in the profiles developed by Snavely et al. "Organizational membership" is another variable which has not been considered previously and show much promise.

"Domestic competition," although shown in Table 3 among the firm characteristics, is more properly an environmental factor. It is possible that its lack of significance is related to definitional ambiguity or, perhaps the competitive conditions in the three industries vary in such a fashion as to cancel each other out when combined for this analysis.

Turning to the manager characteristics, the performance of "information search and usage" is worthy of particular notice. Although several of the models discussed earlier incorporated such search and use, this is the first time that any attempt has been made to measure it so comprehensively. Given its outstanding performance in equations one and

five (E1 and E5) one can only regret that it was not included in the other analyses.

"Belief in the contribution of exports" is a variable which bears a strong similarity to "the expected effects of exporting on firm goals," used by the Bilkey, Tesar, Cavusgil, Nevin group of studies, although it is arrived at through more complex calculation. As with that previously discussed variable, an analogy can be drawn between the concept of "contribution of exports" and perceived relative advantage.

The performance of "Education" is both interesting and confusing. It is interesting because Simpson and Kujawa found differences between the educational levels of exporters and non-exporters and therefore the poor performance of education in Reid's analysis appears contradictory. It is confusing because it would seem to be so similar, conceptually, to "Size B" that it should be reasonable to expect similar performance; perhaps the differences in level of measurement account, in part, for differences in performance.

SUMMARY

The first section of this review developed the conceptual underpinnings for the perceived characteristics of exporting, and provided definitions of them. It was determined that each characteristic was likely to be multidimensional in nature; each having, potentially, several components reflecting various aspects of exporting.

The second section demonstrated the probable role of the perceived characteristics of exporting in several export-related models. Managers' perceptions of the characteristics of exporting were discussed in

relation to: 1) the export development process, 2) a firm's incremental involvement in the international marketplace, and 3) the manager's role in export decision making.

The third, and most substantial, section of this review examined empirical contributions to the export literature. These contributions provide several strong indications of the characteristics of firms relevant to export involvement. These are seen to include: market area, technology (having a patent or unique product), firm size, firm goals (especially growth, profit and stability), and various characteristics of managers (particularly their level of education).

The next chapter contains the hypotheses, the models and the specifications of constructs. The models reflect alternative views of export involvement. Although innovative/adoption literature suggests that both the perceived characteristics of exporting and characteristics of firms (adopters) should be expected to influence export involvement, the export literature has really only examined the influence of firm characteristics on exporting. Therefore, the three models, developed in the following chapter, reflect the full range of conceptual explanations of export involvement: perceived innovation characteristics only, firm characteristics only, and both firm and perceived innovation characteristics together.

CHAPTER THREE

MODELS, DEFINITIONS AND HYPOTHESES

MODELS

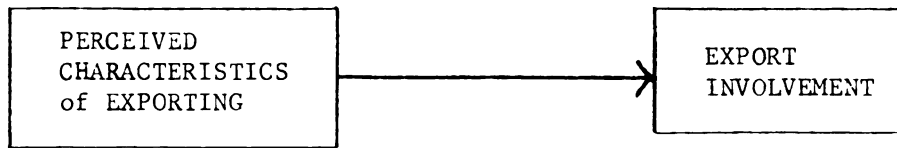
Introduction to Models

This research is designed to analyze which factors have the greatest influence on a firm's export involvement. This assessment is performed by comparative testing of three models. One model defines a firm's export involvement as a function of its managers' perceptions of exporting. A second defines export involvement as a function of certain physical characteristics of the firm. Finally, both sets of variables are combined into a consolidated model which is then compared with the separate ones. All three models, in simplified forms, appear in Figure 15.

Thus the current research is concerned with two basic research questions. The first question is founded on the premise that managers' perceptions of exporting can provide a "better" explanation of firm involvement in exporting than can be provided by firm characteristics, which are basically descriptive in nature. Therefore, the first research question can be stated as follows:

- Q1: Will managers' perceptions of the characteristics of exporting account for more variance in export involvement than can be accounted for by the characteristics of firms?

MODEL I



MODEL II



MODEL III

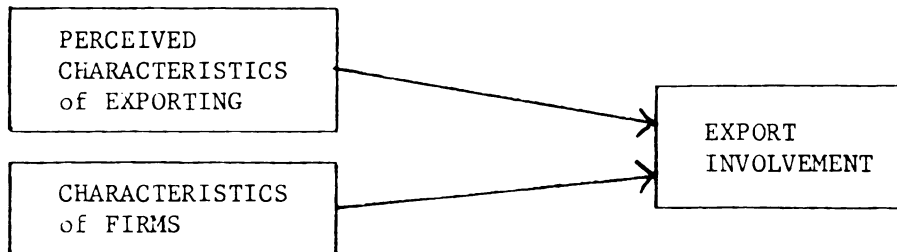


FIGURE 15

ALTERNATE MODELS TO BE TESTED

The second question is founded on the work of Thio (1971), who suggests that simultaneous consideration of both the characteristics of adopters (i.e., firms) and the perceived characteristics of an innovation (i.e., exporting) can enhance the explanation of variance in adoption (i.e., export involvement).

Therefore the second research question can be stated as follows:

Q2: Will the combination of managers' perceptions of exporting with the characteristics of firms explain more variance in export involvement than either set of variables can do separately?

Before proceeding to a formal statement of hypotheses, it will be useful to define the specific variables involved in the models.

DEFINITIONS OF VARIABLES

Export Involvement (EI)

Export involvement is defined as the percent of total sales which a firm obtains by exporting.

This definition of the dependent variable has both conceptual and methodological advantages for the current research. Conceptually, it is important because it indicates the extent to which a firm has adopted and implemented exporting; hence, it comes closer to capturing the variations in export behavior than would a categorical measure, such a exporter/non-exporter (Downs and Mohr, 1976). Also, because exporting is a marketing activity in which a firm may be involved on a one-time or random basis, percent of sales of exports provides a meaningful indicator of a wide range of export involvement (from none, i.e., 0% of sales from exports, to complete, i.e., 100% of sales from exports). Additionally, when a wide

range of sales volumes can be expected, using percent of sales represents a more accurate measure of involvement in exporting than would a simple measure of export sales volume. Methodologically, the use of this type of ratio-level measurement offers substantial benefits and allows this research to avoid several of the problems inherent in previous export studies due to the lower level of measurement employed in them. Although studies conducted by Cavusgil (1976) and Bilkey and Tesar (1977) used percent of sales from exporting as the dependent variable, in both instances this variable was measured categorically.

Finally, the use of this type of implementation-oriented dependent variable gives this study an opportunity to contribute to research in the area of perceived characteristics. According to Tornatzky and Klein (1982):

Innovation characteristics research studies should focus on both adoption and implementation as the dependent variables, and not simply dichotomous yes/no adoption decisions. (p. 29)

Tornatzky and Klein reported that most previous studies of innovation characteristics used just adopt/non-adopt as the dependent variable. Only five out of seventy-five studies used dependent variables which might reflect degree of implementation, as is done by percent of sales from exporting.

Perceived Characteristics of Exporting

As noted in the previous chapter, Rogers' (1983) definitions of the five basic perceived characteristics of innovations provide the general framework for defining the perceived characteristics of exporting. These

variables have not been explicitly employed in past export research, however, previous studies do provide insights into ways in which these constructs may be conceptualized. In addition, two recent summaries of perceived characteristics research (Rogers, 1983; Tornatzky and Klein, 1982) provide an indication of how these five variables may be expected to perform.

- Relative Advantage (RELAD)

Perceived Relative Advantage of Exporting is the degree to which exporting is perceived as better than marketing to domestic markets.

The export literature provides several suggestions with respect to how exporting may be better than marketing to domestic markets. The clearest concern the expected effect of exporting on firm profits (Simpson and Kujawa, 1974; Abdel-Malek, 1974; Bilkey and Tesar, 1977; Reid, 1983) and firm growth (Cavusgil, 1976; Bilkey and Tesar, 1977; Cavusgil and Nevin, 1981). Other potential features of relative advantage that emerge from the literature include: 1) the comparative risk of exporting (Simpson and Kujawa, 1974; Abdel-Malek, 1974), 2) the relative cost of exporting (Simpson and Kujawa, 1974; Bilkey and Tesar, 1977), and the expected affect of exporting on 3) firm stability (Abdel-Malek, 1974; Bilkey and Tesar, 1977; Reid, 1983), 4) firm reputation/prestige (Abdel-Malek, 1974; Reid, 1983), 5) product and market development (Bilkey and Tesar, 1977; Reid, 1983), 6) economies of scale (Reid, 1983), and 7) competitiveness (Abdel-Malek, 1974). The perceived relative advantage of exporting, therefore, encompasses each of

these features.

According to Rogers, sixty-seven percent (29) of the forty three studies incorporating perceived relative advantage found it to be positively related to adoption. Tornatzky and Klein's meta-analysis included only five studies which reported statistical results; in all five a positive relationship between relative advantage and adoption was found. Thus, in the current research, a positive relationship is expected between the perceived relative advantage of exporting and export involvement.

- Compatibility (PAT)

Perceived Compatibility of exporting is the degree to which exporting is perceived as consistent with the goals of the firm and with the firm's domestic marketing practices.

Thus, for the purposes of this research, compatibility includes two elements: goal consistency and practice consistency. The research of Cavusgil (1976) and Bilkey and Tesar (1977) indicates that perceived consistency with the goals of growth and market development is especially important. In addition, Abdel-Malek (1974) and Simpson and Kujawa (1974) suggest that consistency with the goal of profit is also important.

The only indicator in the literature with respect to practice consistency is provided by Snively, et al. (1964). Their research indicates that consistency in selling methods and pricing are important. The current research will also consider consistency in distribution, service and finance.

Compatibility was assessed in more studies considered by Tornatzky and Klein than any other perceived characteristic: forty-one. Only thirteen of these studies, however, provided the appropriate statistical data to facilitate assessing the direction of the relationship between compatibility and adoption. Ten studies supported a positive relationship. Rogers cites eighteen studies which also support a positive relationship between compatibility and adoption. It is therefore expected that the perceived compatibility of exporting will be positively related to export involvement.

- Complexity (PLEX)

Perceived Complexity of Exporting is the degree to which exporting is perceived as difficult to implement or undertake.

While Abdel-Malek (1974) studied differences in perceived complexity and difficulty, in general, and Simpson and Kujawa (1974) assessed differences in perception of communication barriers, Bilkey and Tesar (1977) developed a measure of, "the number of barriers management perceives to exporting." (p. 98) Included in this measure were the following considerations: 1) the difficulty of obtaining adequate representation in foreign markets, 2) the difficulty of obtaining payment, 3) differences in product standards, 4) the difficulty of providing service, 5) the difficulty of understanding foreign business practices, 6) the time involved in handling paperwork associated with exporting, and 7) the difficulty of converting foreign currencies to U.S. dollars. Therefore, in the present study, the perceived complexity of

exporting will involve the perceived difficulty of coping with paperwork, financing, varying product standards, relations with representatives, and differences in business practices.

According to both Rogers and Tornatzky and Klein, complexity is negatively related to adoption. In this instance the support provided by Rogers is less strong. Although nine of the sixteen "complexity" studies he reviewed supported a negative relationship, this is only fifty-six percent (56%). Tornatzky and Klein analyzed twenty-one studies of complexity. Seven of these provided first order correlations sufficient for their analysis procedures. They state that:

All but one of the seven studies found a negative relationship between the complexity of an innovation and its adoption. (p. 36)

Therefore, the perceived complexity of exporting is expected to be negatively related to export involvement.

- Trialability (TRIAL)

Perceived Trialability of Exporting is the degree to which exporting is perceived as possible to try on a limited basis.

Previous research indicates that firms are most often stimulated to try exporting in response to receiving unsolicited orders from potential foreign buyers (Simpson and Kujawa, 1974; Lee and Brasch, 1978). Therefore, firm responsiveness to the inquiries of potential foreign buyers should be an indication of perceived trialability.

The trialability of exporting is also expected to be positively related to export involvement. Rogers found that nine out of thirteen studies (69%) incorporating trialability supported a positive

relationship with adoption. The support provided by Tornatzky and Klein is less clear. None of the eight studies of trialability which they reviewed provided sufficient statistical results to permit analysis of the direction of the relationship between trialability and adoption. Also included in Tornatzky and Klein's analysis were ten studies of divisibility. Five of these did provide an indication of directionality. Moreover, "three (3) of these found divisibility to be positively related to adoption while the other two showed a negative relationship." (p. 37)

- Observability (COM)

Perceived Observability of Exporting is the degree to which the results of exporting are perceived as visible.

Because the export literature provides no useful insights regarding observability, it is helpful to recall its close conceptual linkage with communicability. Thus, for the purposes of the current research, observability will involve exposure to the means by which the results of exporting may become evident, both within and between firms.

Seven of the nine studies (78%) reviewed by Rogers which had assessed observability found it to be positively related to adoption. The meta-analysis conducted by Tornatzky and Klein included thirteen studies of communicability and seven studies of observability. None of these studies provided sufficient statistical data to allow Tornatzky and Klein to assess the relationship with adoption. Thus, based on Rogers' summary alone, it is possible to tentatively project a positive relationship between the observability of exporting and export involvement.

Characteristics of Firms

From among the vast array of characteristics of firms which have been employed in previous studies eight have been chosen to be included in the current research. Because a primary objective of this study is to compare manager's perceptions of exporting with characteristics of firms in terms of their explanatory power, it is important to include characteristics which previous studies have shown to have some value in this regard. Thus, the following discussion provides a rationale for each of the variables, including a summary of its previous use.

- Market Area (MA)

The geographic extent of the market area served by a firm has been incorporated into research on exporting in a number of ways. Whether firms sold their products in or beyond their "local" markets throughout their entire "national" market and the proportion of sales made extra-regionally have been considered (Snavelly, et. al., 1964; Cavusgil, Bilkey and Tesar, 1979; Reid, 1983). The general finding has been that the broader the market area served by a firm, the more likely it is to export. Therefore, market area is expected to have a positive impact on Export Involvement.

- Technology (NC)

Various technology-related measures have been included in previous research. Generally, these have concerned the possession of patents or "unique" products by a firm and the technological intensity of the

industry to which the firm belongs (Cavusgil, 1976; Cavusgil, Bilkey and Tesar, 1979; Czinkota and Johnston, 1981; Snavely, et al., 1964; Bilkey and Tesar, 1977; Cavusgil and Nevin 1981; Reid, 1983). Technology has commonly been positively associated with exporting and is expected to be in the current research as well.

- Size (S2)

Size is another variable which has occurred frequently. It has been measured in two ways: 1) in terms of sales volume (Cavusgil, Bilkey and Tesar, 1979; Cavusgil and Nevin, 1981; Reid, 1983) and 2) in terms of number of employees (Cavusgil, 1976; Cavusgil, Bilkey and Tesar, 1979; Bilkey and Tesar, 1977; Reid, 1983). Although the findings related to size are somewhat indeterminant, it is generally thought to be positively related to exporting. This relationship is expected to be sustained in the current research.

- Goals: Profit (PROFIT), Growth (GROWTH), Stability (STABLE)

Three major goals have emerged as important in previous research: profit, growth and stability. Studies by Cavusgil (1976), Cavusgil, Bilkey and Tesar (1979) and Cavusgil and Nevin (1981), in particular, have highlighted aspirations for profit, growth and market security (a form of stability) as indicative of the extent of a firm's involvement in exporting. Their findings suggest that high aspirations for both profit and growth are related to exporting, while low aspirations are related to not exporting. High aspirations for market security, have also been

associated with not exporting. Thus previous research would suggest a positive relationship between the desire for profit and export involvement and between the desire for growth and export involvement while the desire for stability may be expected to be negatively related to export involvement.

- Characteristics of Managers: Overseas Experience (PWOS) and Education (PCOL)

Because the actions taken by firms are shaped by the managers of them, this research will incorporate two of the important characteristics of managers which have appeared in previous studies. Several studies (Simmonds and Smith, 1968; Garnier, 1974; Mayer and Flynn, 1973; Langston and Teas, 1976) have indicated that when a firm has managers who are immigrants or who have lived or worked overseas, they (the firms) are more likely to export. This overseas experience may have been gained in a number of ways. Firms may hire foreign nationals or immigrants who had worked for firms in their home countries, or they may hire managers from other domestic firms which have subsidiaries or other international involvements. Also, the managers of a firm may gain overseas experience by working internationally for that firm. This study does not distinguish between the various possible sources of overseas experience.

Other researchers (Mayer and Flynn, 1973; Simpson and Kujawa, 1974; Reid, 1983) have been able to show at least some relationship between the level of education possessed by managers and the export behaviors of their firms.

So that the variables employed in this study may be appropriately construed as characteristics of firms they will be defined as follows:

PWOS) The percent of managers with overseas work experience.

PCOL) The percent of managers with college degrees.

It is expected that both variables will be positively related to export involvement.

HYPOTHESES

The first three hypotheses are as follows:

- H₁: There is no significant linear relationship in Model I (Perceived Characteristics of Exporting).
- H₂: There is no significant linear relationship in Model II (Characteristics of Firms).
- H₃: There is no significant linear relationship in Model III (Combined Model).

The hypotheses of primary interest to this research are:

- H₄: The amount of variance in Export Involvement explained by Model I is less than or equal to the amount of variance explained by Model II.

$$R^2_I \leq R^2_{II}$$

- H₅: The amount of variance in Export Involvement explained by Model III is less than or equal to the amount of variance explained by either Model I or Model II.

$$R^2_{III} \leq R^2_I, R^2_{II}$$

Given that each model is defined by the following equations:

MODEL I

$$EI = \beta_1 \text{ RELAD} + \beta_2 \text{ COM} + \beta_3 \text{ TRIAL} + \beta_4 \text{ PLEX} + \beta_5 \text{ PAT}$$

MODEL II

$$EI = \beta_1 MA + \beta_2 NC + \beta_3 SZ + \beta_4 PCOL + \beta_5 PWOS + \beta_6 PROFIT \\ + \beta_7 GROWTH + \beta_8 STABLE$$

MODEL III

$$EI = \beta_1 MA + \beta_2 NC + \beta_3 SZ + \beta_4 PCOL + \beta_5 PWOS + \beta_6 PROFIT \\ + \beta_7 GROWTH + \beta_8 STABLE + \beta_9 RELAD + \beta_{10} COM \\ + \beta_{11} TRIAL + \beta_{12} PLEX + \beta_{13} PAT$$

where:

EI	= Export Involvement
RELAD	= Perceived Relative Advantage
COM	= Perceived Observability
TRIAL	= Perceived Trialability
PLEX	= Perceived Complexity
PAT	= Perceived Compatibility
MA	= Market Area
NC	= Technology Level
SZ	= Size
PCOL	= Percent of Managers with College Degrees
PWOS	= Percent of Managers with Overseas Work Experience
PROFIT	= Importance of the Goal of Profit
GROWTH	= Importance of the Goal of Growth
STABLE	= Importance of the Goal of Stability

The following chapter will discuss, in detail, how each of the variables is operationalized and the procedures used in collecting the data employed to test these hypotheses.

CHAPTER 4

METHODOLOGY

INTRODUCTION

The preceding hypotheses were tested using data collected via a survey sent by mail to manufacturers of machine tools located in Michigan and Ontario. The rationale for using this particular population and data collection method, along with a description of the procedures used in developing operational measures of each of the variables and collecting the data are presented in the following discussion.

RATIONALE

Population

Two considerations have influenced the selection of the study population: location and industry. Firms in two countries, the United States and Canada, have been chosen as subjects because previous export research has been limited to studying firms in one country (Czinkota and Johnston, 1981--United States; Abdel-Malek, 1974--Canada), and often to one state or province (Simpson and Kujawa, 1974--Tennessee; Lee and Brasch, 1978--Nebraska; Reid, 1983--Ontario; Cavusgil, 1976, Bilkey and Tesar, 1977, Cavusgil, Bilkey and Tesar, 1979, Cavusgil and Nevin, 1981--all the same data from Wisconsin; Snavelly, et al., 1964--Connecticut). Also, examination of firms in two countries permits observation of firm

export involvements in environments with differing economic and political conditions, which is not possible in single country studies.

Firms in Michigan and Ontario, in particular, have been chosen as subjects for two reasons. The most important of these is the industrial similarity of the two regions. Of secondary concern were restrictions placed on the scope of the study related to the accessibility of subjects in the preliminary phases of the research.

This study has been limited to firms in one industry, machine tools, in an effort to control, to some extent, for variance due to differences between industries. Previous export research has been based on studies of firms across industries. As marketing scholars have noted differences in marketing practices by industry since the days of the commodities approach (e.g., Breyer, 1931), this control was deemed important.

The machine tool industry has been chosen because, 1) it is characterized by a high volume of international trade, 2) both the United States and Canada are substantial participants in this trade, and 3) the machine tool industry provides a major component of the industrial base of both Ontario and Michigan.

Mail Survey

Survey methodology has been selected because it offers the best opportunity to assess both the characteristics of firms and managers' perceptions of the characteristics of exporting across the population of machine tool manufacturers in both regions.

Laboratory or field experiments might yield useful insights, however



very few firms could have been studied via these methods and the artificiality potentially imposed would seriously reduce the usefulness of the results. Field study, although it provides an opportunity to maintain the real-world context of data collection, would allow a very limited number of firms to be studied. Also, although the characteristics of firms and their export activities could certainly be observed through field study, it is questionable whether the perceptions managers have of exporting could be accurately ascertained. For the same reasons the panel method is not appropriate for the phenomenon under study.

It is acknowledged that there are disadvantages to using the survey method. It is not possible, in the survey, to probe the issues raised, and care must be taken in constructing the measurement instrument in such a way that appropriate responses are elicited. It is believed, however, that for the current purposes, the advantages of being able to obtain a sizable amount of information from a large number of firms justify the use of a survey. Also, it is believed that the impact of the disadvantages is reduced to an acceptable degree by interviews conducted in the early phases of the research. These interviews allowed for the probing of issues and contributed to the construction of the measurement instrument.

A mail survey was chosen for the opportunity it provides to include in this study all the members of a large and geographically dispersed population. Also, according to Dillman (1978), mail surveys were found to outperform face to face and telephone surveys with respect to two of four performance categories: obtaining accurate answers and

administrative requirements. In addition, when taking the specialized nature of this population into account, the comparative performance of mail surveys is adequate with respect to the third category, obtaining a representative sample. The performance category where mail surveys fall short of the other methods concerns questionnaire construction and question design. It is believed that both the interviews and the pre-test of some of the questions ameliorate these concerns to an acceptable degree.

DEVELOPING OPERATIONAL MEASURES

The steps followed in this study to develop operational measures of the variables, particularly the perceived characteristics of exporting, have mirrored as closely as possible the procedures recommended by Churchill (1979), shown in Figure 16. Accordingly, the domains of each construct were specified in the previous chapter on the basis of the literature review. The definitions which resulted contributed to the development of sample items. Additional sample items were generated on the basis of ten interviews.

Confidential interviews were conducted with managers in six Michigan and four Ontario machine tool manufacturing firms (see Interview Schedule in Appendix A-1). These firms were selected to represent a wide range of sizes and export involvement levels. Insights gained from these interviews which contributed to the development of sample items are summarized in Appendix A-2. In general, the interview responses supported and enhanced the definitions of the perceived characteristics

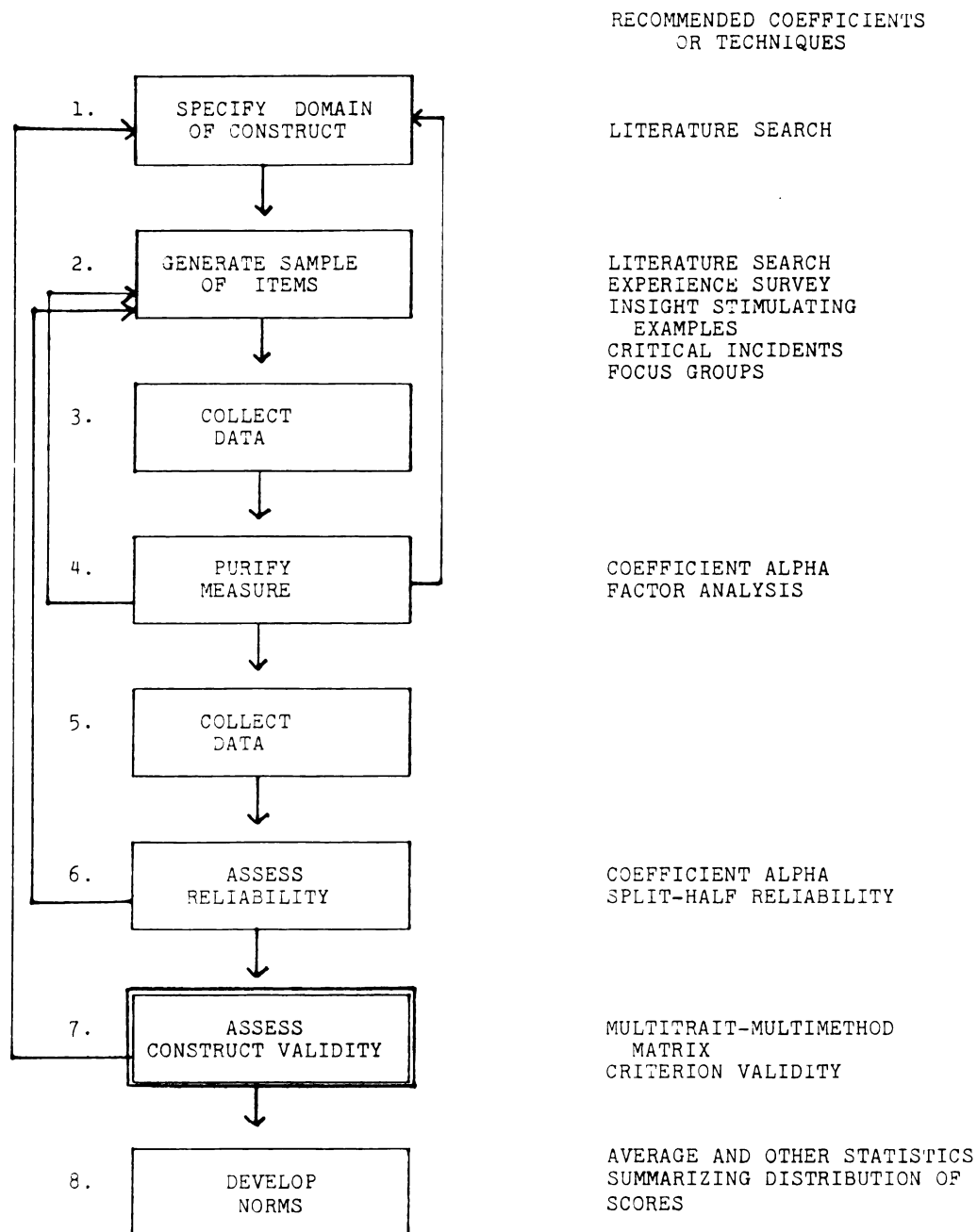


FIGURE 16

CHURCHILL'S SUGGESTED PROCEDURES FOR DEVELOPING BETTER MEASURES

SOURCE: Adapted from, G.A. Churchill, Jr., "A Paradigm for Developing Better Measures of Marketing Constructs," Journal of Marketing Research, (February 1979), 64-73.

of exporting presented in Chapter Three.

Preliminary Measures

Each of the perceived characteristics of exporting is measured by an index composed of Likert-type questions. This type of composite measure is considered more appropriate for this research because it involves a simple accumulation of scores assigned to individual attributes or items. Scales are not considered appropriate because they involve the assignment of scores related to expected patterns of attributes (sometimes referred to as the intensity structure of the attributes) (Babbie, 1979). There is however, no reason to assume any particular pattern among the components of the perceived characteristics of exporting at this time.

In preparing the preliminary items an effort was made to ask about the same aspect of each construct in several different ways. Also, occasionally items were phrased in the negative, "to reduce 'yea-' or 'nay-'saying tendencies" (Churchill, p. 69) of the respondents. All items were measured on five point scales. In most cases response categories ranged from 'strongly agree' (5) to 'strongly disagree' (1). The exceptions were the goal consistency items of the perceived compatibility index where response categories ranged from 'very consistent' (5) to 'very inconsistent' (1). The five preliminary perceived characteristics of exporting indices are presented in Figures 17 through 21.



1. Exporting is not risky if you plan well.
2. The cost of serving export markets is really more reasonable than most people think.
3. Export markets for my firm's products could be mor ptofitable than the U.S.
4. My firm could make higher margins on products sold in the U.S. than on products sold in foreign markets.
5. Exporting offers better growth opportunities for my firm than the U.S. market does.
6. My firm will be better able to diversify its product lines if it exports.
7. The financial returns to the owners of my firm will be greater if we concentrate on our U.S. customers and don't get involved in exporting.
8. Selling in foreign markets could help my firm develop more competitive products to sell at home.
9. Exporting would improve my firm's market position at home.
10. Exporting can stabilize my firm's sales.
11. Increasing our investments in the U.S. market can provide more stable profits than investing in export markets.
12. Exporting can provide important learning experiences for my firm.
13. For the same amount of money, my firm would expect to get more profit from export sales than from sales here in the U.S.
14. Exporting could help my firm get better economies of scale in production.
15. My firm's profits could be hurt by exporting.
16. Current exchange rates give my firm an advantage in selling to foreign buyers.
17. Making sales to foreign buyers is risky.

FIGURE 17

ITEMS IN PRETESTED RELATIVE ADVANTAGE INDEX

1. Please indicate how CONSISTENT you think each of the following goals is with exporting.
 - a. Profit
 - b. Growth
 - c. Stability
 - d. Diversification
 - e. Increased Market Share
 - f. Returns to Owners
 - g. Economies of Scale
2. My firm would probably use the same price structure in selling to foreign buyers as we use in pricing our products for sale in the U.S.
3. My firm could use pretty much the same sales techniques in any market.
4. Sales agents/distributors like we use here are available in foreign markets.
5. In selling in foreign markets my firm could evaluate sales agents/distributors the same way we evaluate them here.
6. My firm could distribute its products to buyers in foreign markets in the same way we distribute them to our customers here.
7. Exporting requires having an Export Department.
8. Our employees won't need special training for us to export.
9. We can use the same methods to ship to foreign buyers that we use to ship to our U.S. customers.
10. My firm's products could be packaged the same for sales in foreign markets as they are packaged here.
11. My firm could finance sales of its products to foreign buyers the same way it finances sales to customers here.

FIGURE 18

ITEMS IN PRETESTED COMPATIBILITY INDEX

1. Obtaining payment for sales made to foreign buyers is relatively simple.
2. Obtaining export financing is a complicated process.
3. Business people in other countries are not like us.
4. The paperwork involved in processing an export sale is easy to understand.
5. Evaluating the performance of sales agents/distributors in foreign markets is difficult.
6. The paperwork necessary for exporting is overwhelming.
7. Export financing is easy to get.
8. Business practices are pretty much the same in most countries.
9. Exporting is just too complicated to be bothered with.
10. Locating sales agents/distributors in foreign markets is easy.
11. Specifications, regulations and codes for my firm's products vary greatly from country to country.
12. The strength of the U.S. dollar today makes export sales more difficult.
13. Exporting is easy because you don't have to service the products you sell to foreign buyers.
14. Getting an adequate share of a foreign market would be easy if you sold a very special product.
15. Exchange rate variations make exporting difficult.
16. Exporting requires that my firm learn new packaging methods.
17. Getting an adequate share of a foreign market would be easy for my firm.
18. Language differences are a barrier to exporting for my firm.

FIGURE 19

ITEMS IN PRETESTED COMPLEXITY INDEX

1. Unsolicited inquiries from foreign buyers provide a good opportunity to test an export market.
2. My firm would reply to any inquiry from a potential foreign buyer.
3. My firm would reply to any inquiry from an import agent or distributor.
4. My firm would check on the credit rating of a foreign buyer before responding to an inquiry.
5. My firm would check into the credit standing of a country before replying to an inquiry from a buyer in that country.
6. My firm would reply to an inquiry from a potential foreign buyer only if we already had customers in that country.
7. My firm would reply to all inquiries from foreign firms which are subsidiaries of our U.S. customers.
8. Exporting is the kind of activity that a firm can try once or twice and then re-evaluate.
9. A firm can go in and out of export markets depending on how sales are going at home.
10. It would be costly for my firm to withdraw from exporting once we got into it.
11. Because of the investment required, once a firm starts exporting it is committed.
12. For my firm, exporting requires a permanent commitment.

FIGURE 20

ITEMS IN PRETESTED TRIALABILITY INDEX

1. I've heard people from other firms in our industry talk about getting good results from exporting.
2. I've heard people from other firms in our industry talk about problems they have had with exporting.
3. I've read about the success of other firms in our industry in export markets.
4. I've read about the problems that other firms in our industry have had with exporting.
5. Most of my information about exporting comes from personal contact with people who have exported.
6. My firm would expect to see the results of our export efforts directly on our income statement.
7. Identifying the profits from exporting would be fairly difficult.
8. My firm would expect to see the results of our export efforts directly on our balance sheet.

FIGURE 21

ITEMS IN PRETESTED OBSERVABILITY INDEX



Pretest

The primary purpose of the pretest was to collect data to be used in assessing the reliability of the measures of the perceived characteristics of exporting and to assist in identifying items that should be eliminated from the indices. Therefore, the pretest instrument was composed, almost entirely, of items making up the five indices presented in the previous section.

Arrangement of the index items in the pretest instrument was guided, in part, by the belief that the five perceived characteristics of exporting would have little meaning in their own right to any potential respondent. Therefore the items were divided into two basic groups: "what you think about exporting in general" and "your thoughts about exporting in relation to your own firm." In addition, care was taken to intermix items from the various indices. The complete pretest instrument appears in Appendix B-1.

Initially, pretest questionnaires were administered to participants at two Export Basics Seminars conducted by the U.S. Department of Commerce in Michigan. A total of sixteen questionnaires were either submitted at the close of the seminar or returned by mail within two weeks.

Two steps were taken as a result of this limited response. First, letters (with additional questionnaires enclosed) were sent to seminar attendees who had not returned the first questionnaire. This mailing resulted in the receipt of ten additional responses.

The second step was to administer the survey to local manufacturers.

Top executives of twelve industrial manufacturers with facilities in the vicinity of Lansing, Michigan (identified using the Harris Michigan Industrial Directory 1983-84), were contacted by phone and their cooperation solicited. Seven responses were received in time to be included in the pretest analysis; two were received later.

A total of thirty-three responses were accumulated through these efforts. The twenty-six questionnaires from seminar participants represent a completion rate of forty-eight percent (48%). The seven questionnaires received from local manufactures represent a response rate of fifty-eight percent (58%). Of the thirty-three (33) completed questionnaires received twenty-nine (29) were usable in the pretest analysis, discussed in the following section.

Initial Measure Purification

Churchill states that:

Coefficient alpha absolutely should be the first measure one calculates to assess the quality of the instrument. (p. 68)

Accordingly, each index was subjected to a reliability analysis to determine its coefficient alpha using a computer routine developed for the Statistical Package for the Social Sciences (SPSS). In addition to coefficient alpha, this routine provides corrected item-to-total correlations and an indication of what coefficient alpha would be if each item were deleted, both of which are useful in identifying items which should be eliminated from their indices to improve the reliability of the measure.

In interpreting the results generated by these analyses, Churchill suggests that one first determine the desired magnitude of coefficient alpha and then take steps to improve it, if necessary. Drawing on Nunnally (1967), Churchill suggests that in the early stages of basic research, "reliabilities of .50 to .60 suffice and that increasing reliabilities beyond .80 is probably wasteful." (p. 68) Because this research represents the first attempt at developing measures of the perceived characteristics of exporting, it was decided that a minimum level of .60 would be the target for coefficient alpha.

Elimination of items which do not appear to sufficiently share the common core of a construct is the usual method for improving coefficient alpha. Churchill suggests two procedures for identifying such items:

The easiest way to find them is to calculate the correlation of each item with the total score and to plot these correlations by decreasing order of magnitude. Items with correlations near zero would be eliminated. Further, items which produce a substantial or sudden drop in the item-to-total correlations would also be deleted. (p. 68)

Both procedures were used to identify and delete items from the perceived characteristics of exporting indices. Tables 4 to 8 present both the initial reliability analyses and the analyses which were done subsequent to the deletion of poorly correlated items for each of the five indices. For both the initial reliability analyses and the analyses of the revised indices, responses of "Don't know" were recoded as "Neither" (3).

Final selection of items for inclusion in the survey instrument was only partially based on these results. Several items (from each index)

TABLE 4

PERCEIVED RELATIVE ADVANTAGE INDEX PRETEST RELIABILITIES

Items	Initial Reliabilities		Revised Reliabilities		Adjustments
	Corrected Item-to-total Correlation	Alpha If Item Deleted	Corrected Item-to-total Correlation	Alpha If Item Deleted	
1.	-.23547*	.46681	-.10632*	.69906	Retained
2.	.16596	.33776	--	--	Retained
3.	.27282	.29384	.21597	.62615	
4.	-.06607	.40817	--	--	
5.	.29621	.30317	.25585	.60893	
6.	.54611	.16554	.56237	.49557	
7.	.43746	.25816	.39385	.57238	
8.	.34800	.28091	.53576	.52808	
9.	--	--	.50875	.51846	
10.	.15317	.33984	--	--	
11.	.11102	.35228	--	--	
12.	.13865	.34741	--	--	
13.	-.08884	.40784	--	--	
14.	.06720	.36358	--	--	
15.	-.30699	.40145	--	--	
16.	-.00201	.37667	--	--	
17.	-.12774	.42443			
Alpha		.36709		.62305	

* Item was incorrectly coded in this analysis.

TABLE 5

PERCEIVED COMPATIBILITY INDEX PRETEST RELIABILITIES

Items	Initial Reliabilities		Revised Reliabilities		Adjustments
	Corrected Item-to-total Correlation	Alpha If Item Deleted	Corrected Item-to-total Correlation	Alpha If Alpha Deleted	
1.a.	.62228	.70532	.70490	.81889	Changed
1.b.	.63046	.70305	.71311	.81721	
1.c.	.51097	.71528	.57624	.83197	
1.d.	.56239	.70890	.65592	.82311	
1.e.	.53011	.71717	.60979	.83023	
1.f.	.61188	.71057	.72898	.81983	
1.g.	.11494	.74654	--	--	
2.	.39442	.72659	.29464	.86153	Retained
3.	.41907	.72401	.33881	.85755	
4.	-.17206	.76976	--	--	
5.	.48804	.71670	.58258	.83145	Retained
6.	.26890	.73800	--	--	
7.	.15841	.75085	--	--	
8.	.12524	.75204	--	--	
9.	.01772	.75399	--	--	
10.	.13554	.74848	--	--	
11.	.13243	.75192	--	--	
Alpha		.74476		.84881	

TABLE 6

PERCEIVED COMPLEXITY INDEX PRETEST RELIABILITIES

Items	Initial Reliabilities		Revised Reliabilities		Adjustments
	Corrected Item-to-total Correlation	Alpha If Item Deleted	Corrected Item-to-total Correlation	Alpha If Item Deleted	
1.	.49405	.45475	.43162	.62656	
2.	.32735	.48350	.20213	.68935	
3.	.22552	.50570	.34567	.65383	
4.	.38617	.47675	.30317	.65804	
5.	.47347	.46247	.48800	.61408	
6.	.42371	.46636	.62515	.57176	
7.	.38480	.49289	.30498	.65850	
8.	.04777*	.53586	--	--	Retained
9.	.24133	.50982	.29188	.66013	
10.	.00089	.54705	--	--	Retained
11.	.03473	.54237	--	--	Retained
12.	-.11084	.57964	--	--	
13.	.00517*	.54499	--	--	
14.	-.07784	.55715	--	--	
15.	.12521	.52531	--	--	
16.	.05636	.54340	--	--	
17.	.17302	.51762	--	--	
18.	.19486	.51252			
Alpha		.53068		.67362	

* Items were incorrectly coded in this analysis.

TABLE 7

PERCEIVED TRIALABILITY INDEX PRETEST RELIABILITIES

Items	Initial Reliabilities		Revised Reliabilities		Adjustments
	Corrected Item-to-total Correlation	Alpha If Item Deleted	Corrected Item-to-total Correlation	Alpha If Item Deleted	
1.	.09985	.40407	--	--	Retained
2.	.42700	.26279	.36144	.57888	
3.	.43924	.29970	.44320	.54576	
4.	.34405	.29821	.60590	.41976	
5.	.38599	.28323	.62414	.41283	
6.	-.39098	.49407	-.18601	.73300	Deleted
7.	.03180	.42062	--	--	
8.	.21570	.36269	--	--	
9.	.08596	.40353	--	--	Retained
10.	.09569	.40049	--	--	Retained
11.	-.05158	.44873	--	--	Retained
12.	-.05018	.46238	--	--	
Alpha		.40763		.62160	

TABLE 8
PERCEIVED OBSERVABILITY INDEX PRETEST RELIABILITIES

Items	Initial Reliabilities		Revised Reliabilities		Adjustments
	Corrected Item-to-total Correlation	Alpha If Item Deleted	Corrected Item-to-total Correlation	Alpha If Item Deleted	
1.	.43974	.54743	.70941	.74177	Retained
2.	.54757	.51356	.64438	.77315	
3.	.52038	.53172	.76893	.72510	
4.	.48448	.53126	.48555	.85012	
5.	.0	.62644	--	--	
6.	.28881	.59196	--	--	
7.	.24765	.60149	--	--	
8.	-.06268	.66575	--	--	
Alpha		.61665		.82036	

which performed poorly in the pretest analyses were retained in the survey because it was believed that they addressed components of their constructs which were not adequately captured by the other items in the index. Further, their performance may have been affected by the small number of subjects in the pretest. It was therefore believed that when the reliabilities were reassessed using the survey data, the performance of these items would be improved. Items retained under those conditions are identified by an 'R' in right hand columns of Tables 4-8.

As shown in the tables, purification of the indices resulted in attainment of an acceptable coefficient alpha for each index.

Measures of Other Variables

Justifications for each of the chosen firm characteristics were presented in Chapter Three. A brief description of how Firm Characteristics were measured follows.

- Market Area (MA)

The item used to measure market area was the first question on the survey questionnaire (see Figure 22). A value of one (1) was assigned to the "local market" response, and a value of six (6) to the "throughout the world" response. Values assigned to intermediate responses ranged from two (2) through five (5).

MARKET AREA

1. Which of the following statements best describes where you sell your products?
- ☐ WE SELL MOST OF OUR PRODUCTS LOCALLY (WITHIN 100 MILES OF OUR PLANT).
- ☐ WE SELL MOST OF OUR PRODUCTS IN ONTARIO.
- ☐ WE SELL MOST OF OUR PRODUCTS IN ONTARIO AND NEARBY AREAS OF THE UNITED STATES.
- ☐ WE SELL OUR PRODUCTS NATIONWIDE IN CANADA.
- ☐ WE SELL OUR PRODUCTS THROUGHOUT NORTH AMERICA.
- ☐ WE SELL OUR PRODUCTS THROUGHOUT THE WORLD.

TECHNOLOGY

4. Are some of these machines numerically or computer numerically controlled (NC or CNC)?
- ☐ NONE ARE
- ☐ LESS THAN 25% ARE
- ☐ 26-50% ARE
- ☐ 51-75% ARE
- ☐ 76-100% ARE

SIZE

68. What was you firm's total sales volume in 1983? \$: _____
- 69.a. How many employees does your firm have in Canada? _____
- b. How many in the world? _____

GOALS

63. Please indicate the degree to which each of the following firm goals is IMPORTANT to your firm.

VI=VERY IMPORTANT QI=QUITE IMPORTANT SI=SLIGHTLY IMPORTANT
N= NEITHER UI= UNIMPORTANT DK= DON'T KNOW

	VI	QI	SI	N	UI	DK
a. Profit	☐	☐	☐	☐	☐	☐
b. Growth	☐	☐	☐	☐	☐	☐
c. Stability	☐	☐	☐	☐	☐	☐

MANAGERS

70. How many managers are there in your firm? _____
71. How many of your managers have college degrees? _____
72. How many of your managers have a year or more of work experience outside Canada? _____

FIGURE 22

FIRM CHARACTERISTICS QUESTIONS

- Technology (NC)

The technology measure used in this study is industry specific. The leading edge of technological development in the machine tool industry is concerned with the production of numerically controlled (NC) and computer numerically controlled (CNC) machinery (Cremeans and Dalton, 1982). Thus item four on the questionnaire asked respondents what proportion of their machines were either numerically or computer controlled (see Figure 22). The response that none were was assigned a zero (0), less than 25% a one (1), and so on such that a response of 76-100% was assigned a value of four (4).

- Size

Size was initially measured by both total 1983 sales volume and number of employees, as indicated by items 68 and 69 in Figure 22. Analysis of responses indicated that over a third of the respondents would not reveal their firm's sales volume while they were considerably less reticent about the number of employees. A correlation analysis showed that these two measures were very highly correlated (.99) and therefore it is the number of employees which a firm employees domestically (69.2) which is used as the measure of size in this study.

- Goals

The importance of the goals of profit, growth and stability was measured using non-symmetric Likert-type response categories ranging from Very Important (5) to Unimportant (1), with the response of Neither being

assigned a value of two (2) (see item 63, Figure 22). The decision to include varying levels of importance but only one level of unimportance resulted from suggestions made by the interviewees during the preliminary phases of the research. Respondents were also allowed to indicate that they didn't know the importance of the goal. Cases containing "Don't Know" responses to these items were deleted from the data set for two reasons. First, it was not deemed possible to impute a meaning to this response with regard to the importance of goals. Second, there were very few cases in which this response occurred and therefore the deletions were not a serious impairment to the data set.

- Managers Overseas Experience (PWOS) and Education (PCOL)

The last two independent variables in this study were: 1) the percent of managers with overseas work experience, and 2) the percent of managers with college degrees. These two variables were calculated using responses to items 70, 71, and 72 (see Figure 22).

- Export Involvement (EI)

Export involvement was measured by asking what percent (%) of total 1983 sales volume came from export sales? Responses to this item were verified by independent calculations based on questions about total dollar sales volume and dollar export volume. Although this procedure uncovered no discrepancies, it did allow occasional inclusion into the data set of calculated responses when a respondent had omitted answering directly.

THE SURVEY

Members of the survey population were identified by crosschecking several industry specific listings. Michigan machine tool manufacturers were included on the survey mailing list if their names appeared in at least two of the following sources: Pick's Michigan Purchasing Directory (1984), Harris Michigan Industrial Directory 1983-84, and the 1983 Directory of the National Machine Tool Builders' Association. Ontario machine tool manufacturers were identified using the Canadian Trade Index (1983). The final survey mailing list included 305 Michigan firms and 78 Ontario firms.

Dillman's (1978) Total Design Method (TDM) was the basis for both the questionnaire construction and the methodology used to execute the survey. This method rests on the premise that everything possible should be done to make the respondent wish to participate in the survey and also make it easy for the respondent to do so in a manner that facilitates obtaining appropriate responses to the questions asked. Separate versions of the questionnaire were developed for subjects in Michigan and Ontario so that questions would contain the appropriate phraseology for each group (see Appendices C-1 and C-2).

Each survey packet contained the questionnaire, a cover letter and a return envelope. Identification numbers were placed only on the return envelopes to help assure respondents of the anonymity of their completed questionnaires. Three mailings of the complete packet took place and a post card reminder was sent one week after the first mailing. (See Appendices D-1, D-2 and D-3 for examples of the three cover letters; D-4

contains an example of the post card reminder.)

These procedures resulted in responses from 180 Michigan firms and 46 Ontario firms, giving overall response rates of 59.01% and 58.97%, respectively. Only 100 of the Michigan responses and 28 of the Ontario responses contained apparently usable and complete questionnaires; thus the effective response rates were 26.1% and 35.89%. (See Appendix E-1 for a record of the responses received.)

Non-usable responses consisted, for the most part, of questionnaires returned without being completed by firms which did not manufacture machine tools (although most performed other functions in the machine tool industry). Approximately forty percent of the intended subjects did not respond. Information to explain this non-response is unavailable.

Data preparation revealed that 12 apparently usable questionnaires had to be discarded because they contained a very high proportion of "Don't Know" responses to items in the perceived characteristics of exporting indices. Therefore 116 cases make up the data set employed for the measure refinement analyses. The final data set, used to test the hypotheses, consisted of 105 cases due to the deletion of 11 additional cases from which responses to critical questions were missing. A description of the respondents follows.

DESCRIPTION OF RESPONDENTS

The final data set included 24 firms from Ontario and 81 from Michigan. Machine tools production was the major line of business for 73% of these firms. The remaining firms manufactured machine tools as a

supplementary activity, or manufactured parts for machine tools.

The majority of firms in this study were privately owned; only 16% were publicly traded. Nearly half (48%) were closely held corporations while 18% were family owned, 15% were proprietorships, and 3% were partnerships.

Sixty percent (60%) of the survey questionnaires were completed by the presidents or general managers to whom they were sent. Sales or marketing executives completed 14% and the remaining 26% were completed by other executives in the firm.

Summary statistics for each of the variables examined in this research are provided in Table 9.

MEASUREMENT REFINEMENT

Several types of analyses were undertaken to examine and evaluate the relationships among the items comprising the perceived characteristics of exporting indices. These analytic procedures provide evidence of the reliability and validity of the indices.

Preliminary Reliabilities

According to Churchill (1979), "coefficient alpha is the basic statistic for determining the reliability of a measure based on internal consistency." (p. 70) Therefore this statistic was examined in the preliminary reliability analyses (see column 1 of Tables 10-14).

These analyses were conducted using the listwise deletion of missing data option (SPSS), with "Don't Know" responses specified as missing,

TABLE 9

SUMMARY STATISTICS FOR STUDIED VARIABLES

Variables	Michigan Mean (n=81)	Ontario Mean (n=24)	Total Mean (n=105)	Standard Deviation	Range Min. Max.	
Dependent Variable:						
Export Involvement	8.62	36.39*	14.96	22.90	0.00	100.00
Independent Variables:						
Perceived Characteristics of Exporting						
Relative Advantage	27.15	29.54*	27.70	4.41	18.00	39.00
Compatibility	35.88	36.91	36.12	6.29	16.00	52.00
Complexity	41.66	40.95	41.50	6.39	30.00	60.50
Trialability	10.48	11.70*	10.76	2.30	4.00	15.00
Observability	16.80	18.29*	17.14	2.84	6.00	24.00
Characteristics of Firms						
Market Area	4.59	4.00	4.45	1.55	1.00	6.00
Technology	1.11	1.25	1.14	1.32	0.00	4.00
Size (Employment)	294.09	75.45	244.12	1279.34	3.00	13000.
PCOL	52.11	29.75*	46.90	33.73	0.00	100.00
PWOS	9.18	48.44*	18.33	29.23	0.00	100.00
Importance of Profit	4.53	4.50	4.52	.83	1.00	5.00
Importance of Growth	4.07	4.08	4.07	.89	1.00	5.00
Importance of Stability	4.39	4.50	4.41	.71	3.00	5.00

* indicates that a significant difference exists between the means of the two groups at $p = .05$.

TABLE 10

MEASUREMENT REFINEMENT: PERCEIVED RELATIVE ADVANTAGE INDEX

ITEMS	PRELIMINARY Item-to-Total	FINAL Item-to-Total
Sub-group R-1		
32. Exporting would improve my firm's (9) market position at home.	.45462	.29955
38. My firm will be better able to (6) diversify its product lines if it exports.	.60237	.29167
42. Selling in foreign markets could (8) help my firm develop more compe- titive products as home.	.55440	.32972
Sub-group R-2		
29. Export markets for my firm's (3) products could be more profit- able than the U.S. market.	.43739	.30473
30. My firm could make higher margins (4) on products sold in the U.S. than on products sold in foreign markets.	.54805	.31577
Sub-group R-3		
26. The cost of serving export markets (2) is really more reasonable than most people think.	.48908	.40876
33. Exporting offers better growth (5) opportunities for my firm than the U.S. market does.	.37807	.30002
40. The financial returns to the owners (7) of my firm will be greater if we concentrate on our U.S. customers and <u>don't</u> get involved in exporting.	.58527	.46984
Sub-group R-4		
14. Exporting is not risky if you plan (1) well. (* item was incorrectly coded)	-.11029*	.16723
N	54	116
Coefficient Alpha	.75404	.64244
Guttman Split-half	--	.54955

NOTE: Item numbers from Table 4 are in parentheses.

TABLE 11
MEASURE REFINEMENT: PERCEIVED COMPATIBILITY INDEX

ITEMS	PRELIMINARY Item-to-Total	FINAL Item-to-Total
Sub-group A-1		
(1) a. Profit	.74861	.62695
b. Growth	.69232	.65770
c. Stability	.67280	.60632
d. Diversification	.68070	.51419
e. Increase Market Share	.70375	.67416
f. Returns to Owners	.72743	.74541
g. Increase Sales Volume	.69154	.62345
Sub-group A-2		
28. My firm would probably use the same (2) price structure in selling to foreign buyers as we use in pricing our products for sale in the U.S.	.36108	.15272
31. My firm could use pretty much the (3) same sales techniques in any market.	.40888	.15573
37. In selling in foreign markets my (5) firm could evaluate sales agents/ distributors the same way we eval- uate them here.	.30514	.16969
39. My firm could distribute its products (6) to buyers in foreign markets in the same way we distribute them to our customers here.	.28402	.10414
Sub-group A-3		
35. Sales agents/distributors like we (4) use here are available in most foreign markets.	.24948	---
N	54	116
Coefficient Alpha	.86201	.79456
Guttman Split-half	--	.46176

NOTE: Item numbers from Table 5 are in parentheses.

TABLE 12

MEASUREMENT REFINEMENT: PERCEIVED COMPLEXITY INDEX

ITEMS	PRELIMINARY Item-to-Total	FINAL Item-to-Total
Sub-group E-1		
13. Obtaining payment for sales made (1) to foreign buyers is relatively simple.	.45581	-.36427
15. Obtaining export financing is a (2) complicated process.	.43694	.37274
18. The paperwork involved in process- (4) ing an export sale is easy to understand.	.36171	.14665
22. Export financing is easy to get. (7)	.52587	.52727
25. Locating sales agents/distributors (10) in foreign markets is easy.	.44976	.27958
Sub-group E-2		
21. The paperwork necessary for (6) exporting is overwhelming.	.46396	.30030
24. Exporting is just too complicated (9) to be bothered with.	.32437	.22431
Sub-group E-3		
17. Business people in other countries (3) are <u>not</u> like us.	.12097	.32337
19. Evaluating the performance of sales (5) agents/distributors in foreign markets is difficult.	.27753	.25773
23. Business practices are pretty much (8) the same in most countries.	.32425	.41783
34. Specifications, regulations and codes for my firm's products vary from country to country.	.27550	.21875
Sub-group E-4		
49. My firm would check on the credit (T4) rating of a foreign buyer before responding to an inquiry.	--	.28603
50. My firm would check into the (T5) credit standing of a country before replying to an inquiry from a buyer in that country.	--	.28539
N	54	116
Coefficient Alpha	.72415	.60383
Guttman Split-half	--	.60959

NOTE: Item numbers from Table 6 are in parentheses.

TABLE 13

MEASUREMENT REFINEMENT: PERCEIVED TRIALABILITY INDEX

ITEMS	PRELIMINARY Item-to-Total	FINAL Item-to-Total
Sub-group T-1		
49. My firm would check on the credit (4) rating of a foreign buyer before responding to an inquiry.	.13998	--
50. My firm would check into the (5) credit standing of a country before replying to an inquiry from a buyer in that country.	.05114	--
Sub-group T-2		
47. My firm would reply to any inquiry (2) from a potential foreign buyer.	.12326	.45498
48. My firm would reply to an inquiry (3) from an import agent or distributor.	.05825	.52024
Sub-group T-3		
12. Exporting is the kind of activity (8) that a firm can try once or twice and then re-evaluate.	.26858	--
16. A firm can go in and out of (9) export markets depending on how sales are going at home.	.42460	--
20. Unsolicited inquiries from (1) foreign buyers provide a good opportunity to test an export market.	.19826	.23371
38. It would be costly for my firm (10) to withdraw from exporting once we got into it.	.19666	--
N	54	116
Coefficient Alpha	.41293	.60189
Guttman Split-half	--	.62331

NOTE: Item numbers from Table 7 are in parentheses.

TABLE 14

MEASUREMENT REFINEMENT: PERCEIVED OBSERVABILITY INDEX

ITEMS	PRELIMINARY	FINAL
	Item-to-Total	Item-to-Total
Sub-group 0-1		
44. I have heard people from other (2) firms in our industry talk about problems they have had with exporting.	.70093	.50538
46. I have read about the problems (4) that other firms in our industry have had with exporting.	.63536	.58063
Sub-group 0-2		
41. My firm would expect to see the (6) results of our export efforts directly on our income statement.	.26730	.28620
43. I have heard people from other (1) firms in our industry talk about getting good results from exporting.	.67911	.51111
45. I have read about the success of (3) other firms in our industry in export markets.	.68269	.42811
N	54	116
Coefficient Alpha	.81087	.70611
Guttman Split-half	--	.69473

NOTE: Item numbers from Table 8 are in parentheses.

resulting in the inclusion of only 54 of the 116 cases. This severe reduction in the number of cases stimulated reexamination of the treatment of "Don't Know" responses. It was decided that not knowing could not be construed as either neutrality or agreement. Therefore a value of 2.5 (between neutral and disagree) was assigned to "Don't Know" responses for all further analyses.

Preliminary reliability measures for four of the five indices were as good or better than the reliabilities achieved in the pretest analysis; the exception was the trialability index. It was determined, however, that further examination of the behavior of all index components would be done before taking steps to revise any of the indices.

Factor Analyses

Motivation for the factor analyses is derived, primarily, from expectations raised in the literature review concerning the nature of the five perceived characteristics of exporting, particularly their multidimensionality and interrelatedness. Multidimensionality was assessed by factor analyzing (SPSS, varimax rotation) each of the indices. The resulting factors are labeled as subgroups in Table 10 through 14.

Factor analysis (again using SPSS varimax rotation) of all index items together was done to examine the interrelatedness of components of the various indices. The fifteen factors which resulted are presented in Table 15.

Two disparate phenomena are revealed when the results of the combined factor analysis are compared with those of the factor analyses of the

TABLE 15

FACTOR ANALYSIS OF PERCEPTION INDICIES TOGETHER

FACTORS Loading Number Index	FACTORS Loading Number Index	FACTORS Loading Number Index
Factor One Goal Compatibility	Factor Five Similar Bus. Pract.	Factor Ten Relative Advantage 2
.73 a PAT	.59 17 PLEX	.67 33 RELAD
.84 b PAT	.70 23 PLEX	.43 40 RELAD
.66 c PAT	-.53 31 PAT	
.68 d PAT	-.47 39 PAT	Factor Eleven Paperwork Complexity
.82 e PAT		.49 13 PLEX
.84 f PAT	Factor Six General Difficulty	.68 18 PLEX
.86 g PAT	.39 20 TRIAL	.36 21 PLEX
Factor Two Obscureability	.40 24 PLEX	
.37 41 COM	-.49 43 PLEX	Factor Twelve Trialability
.55 43 COM	.53 28 PAT	.80 12 TRIAL
.82 44 COM		
.41 45 COM	Factor Seven Competitiveness	Factor Thirteen Agent Availability
.71 46 COM	.55 32 RELAD	-.51 25 PLEX
Factor Three Financial Complexity	.75 38 RELAD	.66 35 PAT
.65 15 PLEX	.64 42 RELAD	
.80 22 PLEX	-.45 36 TRIAL	Factor Fourteen Agent Performance
Factor Four Credit Check	Factor Eight Relative Advantage 1	.53 16 TRIAL
.84 49 PLEX	.35 26 RELAD	-.52 19 PLEX
.71 50 PLEX	.45 29 RELAD	.50 37 PAT
	.90 30 RELAD	
	Factor Nine Response/Trial	Factor Fifteen Risk
	.89 47 TRIAL	.55 14 RELAD
	.66 48 TRIAL	

NOTE: Each item is listed with the factor on which it had the highest factor loading.

separate indices: 1) several factors have remained stable and 2) many factors have exhibited considerable instability. Factors remaining stable include: Factor 1 (A-1), Factor 4 (T-1/E-4), Factor 9 (T-2) and Factor 15 (R-4).

The most positive change to take place is the integration into Factor 2 of Observability subgroups O-1 and O-2. Also somewhat encouraging is the near-stability of subgroups R-1, R-2 and R-3. (Factors 7, 8, and 10.) Another minimal change involves the separation of subgroup E-1 into Factors 3 and 11.

Of greater interest is the apparent disintegration of the Compatibility, Complexity and Trialability indices exemplified by Factors 4, 6, 12, 13, and 14. However, scrutiny of the content of the items associated with each factor reveals that their behavior in this analysis probably reflects the expected interrelatedness between aspects of one construct and aspects of another.

For instance, Factor 5 combines items intended to measure the perceived complexity of exporting due to differences in business practices and between business people with items intended to measure the perceived compatibility of exporting due to being able to use the same sales techniques and distribution methods in both domestic and export markets. Although these four items were designed to measure two separate constructs, it is not very surprising that they are related to each other.

Correlation Analysis

Another indication of the interrelatedness of various aspects of the five characteristics of exporting was obtained through analysis of the correlation matrix from which these fifteen factors were derived. Analysis of inter-item correlations was also used to provide evidence of the construct validity of each of the indices.

According to Churchill (1979):

...to establish the construct validity of a measure, the analyst...must determine (1) the extent to which the measure correlates with other measures designed to measure the same thing and (2) whether the measure behaves as expected. (p. 70)

Because there are no other measures of the perceived characteristics of exporting it has been necessary to rely upon the second procedure in this study. This assessment was based on the following expectations about the behavior of each measure.

- 1) Perceived complexity is expected to be negatively related to perceived relative advantage, perceived compatibility, perceived trialability and perceived observability.
- 2) Perceived relative advantage, perceived compatibility, perceived trialability and perceived observability are all expected to be positively related to each other.

Figure 23 presents all the significant (at .05 or better) positive and negative correlations between all the items in all five indices, facilitating several observations. First, all within-index correlations are positive; negative correlations would have been indicative of problems. Second, the relationships which were expected between the five constructs have, by and large, been demonstrated.

The greatest inconsistencies involve items from the perceived

trialability index. Indeed, it was by observing the correlations of items 49 and 50 (subgroup T-1/E4) that it became apparent that these items should be shifted from the trialability index to the complexity index. These items were negatively related to other trialability items and positively related to other complexity items. In addition, their correlations with items from the other indices followed the pattern of complexity items and were contrary to the pattern of trialability items. Items 49 and 50 were included with the complexity items in preparing Figure 23.

Further examination of trialability correlations in Figure 23 indicates that items 12, 16 and 36 should also be dropped from this index. Therefore, only items 20, 47 and 48 are retained in the trialability index for the remaining analyses. Correlations involving the retained items are circled in Figure 23 and all but one conform to the expected relationships with other constructs.

Another apparent inconsistency concerns correlations involving items from the perceived observability index. Of particular interest here is the large number of positive correlations with complexity items and the occasional negative correlations with compatibility items. On a prima facie basis these are contradictory to the expected relationships between these constructs. However, the observability index is made up of two types of items, observability of success and observability of problems, and the apparently contradictory correlations all concern items related to the observability of problems. This realization provides a reasonable and consistent explanation for the direction of the observed

correlations and therefore they are construed as evidence that the expected relationships are maintained.

One other adjustment made prior to assessing the final reliabilities of the indices was the deletion of item 35 from the Compatibility index. This item was deleted for two reasons: it was consistently separated from the other compatibility items in the factor analyses and it had a very high proportion of "Don't Know" responses.

Final Reliabilities

The final reliability analyses of the indices were performed using 116 cases. At this stage, reliability was assessed using both coefficient alpha and Guttman split-half statistics. These statistics and the item-to-total correlations are presented in the second columns of Tables 10 to 14. Final alphas for all indices met or exceeded the .60 criterion.

CHAPTER FIVE

ANALYSIS: TESTING THE HYPOTHESES

HYPOTHESES TESTING

The hypotheses presented in Chapter Three were tested using regression programs developed by the SAS Institute (1982). This chapter contains the results of this hypothesis testing along with a discussion of their implications.

The first three hypotheses concern whether or not the three models represent significant linear relationships between the dependent variable, Export Involvement (EI) and the varying sets of independent variables. The first three hypotheses (in null form) are stated as follows:

- H_1 : There is no significant linear relationship in Model I (Perceived Characteristics of Exporting).
- H_2 : There is no significant linear relationship in Model II (Characteristics of Firms).
- H_3 : There is no significant linear relationship in Model III (Combined Model).

As the assessment of these hypotheses involves the same procedure in each case, they are discussed here together. The significance of each model was tested using an F test. A significance level of at least $\alpha = .05$ was deemed necessary in order to reject the hypotheses. All three models exceeded this criterion, each being significant at the $\alpha = .001$ level or better. Therefore, in each case, the null hypotheses cannot be

accepted and, as each model has been shown to represent a significant linear relationship, the alternate hypotheses are accepted. The three models and relevant statistical information are presented in Tables 16 through 18.

The fourth hypothesis is stated in null form as follows:

H₄: The amount of variance in Export Involvement (EI) explained by Model I is less than or equal to the amount of variance explained by Model II.

A statistical statement of this hypothesis, using the Coefficients of Determination, may take either of the following forms:

$$R^2_I \leq R^2_{II} \quad \text{or} \quad R^2_I - R^2_{II} \leq 0$$

To test whether or not the difference in R squares is less than or equal to zero, a confidence interval around zero was established using Fisher's Z' (Neter, Wasserman and Kutner, 1983). With a desired confidence level of .95, the resultant confidence interval is:

$$- .196 \leq Z'_0 \leq .196$$

The computed Z' value for the difference between Model I and Model II is :0487. Because this value falls within the confidence interval established, the null form of the hypothesis four cannot be rejected. This result leads to the conclusion that the levels of explanation provided by the Model I and II are not significantly different.

The fifth hypothesis is stated in null form as follows:

H₅: The amount of variance in Export Involvement (EI) explained by Model III is less than or equal to the amount of variance explained by either Model I or Model II.

Again, statistical statements of this hypothesis are as follows:

$$R^2_{III} \leq R^2_I \quad \text{or} \quad R^2_{III} - R^2_I \leq 0$$

TABLE 16
EVALUATION OF MODEL I

Regression Equation					
EI = .41 RELAD* + .04 COM + .02 TRIAL - .24 PLEX* - .13 PAT					
Adjusted R ² = .24					
Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Prob > F
Model	4	14670.99	3667.75	9.195	0.0001
Error	100	39886.67	398.87		
Total	104	54557.66			
Significance of Independent Variables					
Variable	Significance Level		Standardized Estimate		
Relative Advantage (RELAD)	.0001*		.41		
Observability (COM)	.6417		.04		
Trialability (TRIAL)	.8178		.02		
Complexity (PLEX)	.0011*		-.24		
Compatibility (PAT)	.1076		-.13		

* Significant Variables

TABLE 17
EVALUATION OF MODEL II

Regression Equation					
$EI = .31 MA^* + .10 NC - .01 SZ - .14 PCOL + .35 PWOS^* \\ + .05 PROFIT - .02 GROWTH - .09 STABLE$					
Adjusted $R^2 = .19$					
Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Prob > F
Model	7	13633.72	1947.68	4.522	0.0002
Error	95	40915.52	430.69		
Total	102	54549.24			
Significance of Independent Variables					
Variable	Significance Level		Standardized Estimate		
Market Area (MA)	.0004*		.31		
Technology (NC)	.3311		.10		
Size (SZ)	.9273		-.01		
Percent of Managers with College Degrees (PCOL)	.1212		-.14		
Percent of Managers with Overseas Work Experience (PWOS)	.0002*		.35		
Importance of Profit (PROFIT)	.5356		.05		
Importance of Growth (GROWTH)	.8709		-.02		
Importance of Stability (STABLE)	.2599		-.09		

* Significant Variables

TABLE 18
EVALUATION OF MODEL III

Regression Equation					
$EI = .23 MA^* + .09 NC - .03 SZ - .14 PCOL + .24 PWOS^*$ $+ .11 PROFIT - .00 GROWTH - .09 STABLE + .31 RELAD^*$ $- .01 COM + .02 TRIAL - .22 PLEX^* - .10 PAT$					
Adjusted $R^2 = .32$					
Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Prob > F
Model	12	21786.56	1815.55	4.987	0.0001
Error	90	32762.69	364.03		
Total	102	54549.25			
Significance of Independent Variables					
Variable	Significance Level		Standardized Estimate		
Market Area (MA)	.0061*		.23		
Technology (NC)	.3279		.09		
Size (SZ)	.7750		-.03		
Percent of Managers with College Degrees (PCOL)	.0991		-.14		
Percent of Managers with Overseas Work Experience (PWOS)	.0081*		.24		
Importance of Profit (PROFIT)	.2458		.11		
Importance of Growth (GROWTH)	.9755		-.00		
Importance of Stability (STABLE)	.2360		-.09		
Relative Advantage (RELAD)	.0004*		.31		
Observability (COM)	.9520		-.01		
Trialability (TRIAL)	.8046		.02		
Complexity (PLEX)	.0032*		-.22		
Compatibility (PAT)	.2094		-.10		

* Significant Variables

and

$$R^2_{III} \leq R^2_{II} \quad \text{or} \quad R^2_{III} - R^2_{II} \leq 0$$

Hypothesis five was tested using partial F tests to indicate whether or not the full model (Model III) provides a significantly greater level of explanation than each of the partial models (Models I and II). This test involves a comparison of the sums of squares associated with the explanatory power of each model. Again, a confidence level of .95 was used as the criterion.

The test of Model I and Model III resulted in a partial F of 2.44; in the test of Model II and Model III, partial F = 2.79. In both cases the partial F was significant at a confidence level of .975. These results, in combination, indicate that the full model (Model III) does indeed explain a significantly greater amount of the variance in Export Involvement than can be explained by either Model I or Model II separately. Therefore, the null form of hypothesis five is rejected and the alternate hypothesis is accepted.

DISCUSSION

The major conclusion derived from the foregoing analysis, and based on the results of the partial F tests, is that Model III provides the fullest explanation of export involvement, combining, as it does, both the perceived characteristics of exporting and the characteristics of firms. In interpreting the meaning of this result two considerations are relevant. First, how does the explanation provided here compare with the explanations offered by previous researchers? Second, how important are

each of the independent variables in providing this explanation?

Comparison of Explanations

Several factors impinge upon any researcher's ability to explain human behavior, including the behavior of organizations such as a firm's export involvement. Most such efforts at explanation are predicated on the assumption that behavior is patterned. Therefore, the quality of all explanations depends on the extent to which such patterns exist, can be identified and their components isolated. Explanations of the phenomenon of exporting are no different. Each researcher begins by identifying a potential pattern and determining its components in her (his) view. The quality of the resulting explanation is thus determined by the accuracy with which the researcher's choices reflect the reality of the phenomenon. These efforts are hindered, somewhat, by the complexity of the phenomenon, the wide variety of possible component variables and the instability of analytic techniques to incorporate more than a relatively small proportion of all the potential variables. Thus perfect explanations are not expected.

Attempts by other researchers to explain the phenomenon of exporting have resulted in the development of ten different regression-type models (or equations). These models (Bilkey and Tesar's 3 (1977), Cavusgil's 2 (1976), and Reid's 5 (1983)), provide a basis for comparison with Model III because they were developed or tested using similar methodology and analytic techniques. They did not, however, employ either uniform conceptualizations of patterns or identical measures of component

variables, and the levels of explanation achieved by these other models varied considerably. Coefficients of determinations for these models range from $R^2 = .08$ to $R^2 = .698$.

Only two of the previous studies used percent of sales from exporting as the dependent variable (Bilkey and Tesar's Equation Three (1977) and Cavusgil's Model Two (1976)). In both instances the dependent variable was actually measured categorically and a substantially smaller number of independent variables (than used in the current research) were employed.

Bilkey and Tesar's (1977) dependent variable in their Equation Three was not only measured categorically, but also limited to a range of 10% - 45%. Their dependent variables were a management scale (M) (- .05 to + 4.5), the number of barriers management perceives to exporting (B) (0 to 9), and management's expectation of exporting's contribution to the firm (E) (- 1000 to + 1000). This formulation achieved the highest level of explanation ($R^2 = .698$) of any of the previous models.

However, by limiting the dependent variable as described above, Bilkey and Tesar systematically excluded from their analysis firms with no or little (less than 10%) involvement in exporting, thus effectively restricting the range of behavior which their model attempts to explain. Also, it is quite likely that there are some attributes which all firms that export tend to have (as shown in the profile analysis earlier), attributes which firms that do not export may or may not also possess. Therefore, the limitation of firms included in this analysis may also result in less variability in the independent variables, contributing to their very high R^2 .

The other analysis using a similar dependent variable, Cavusgil's (1976) Model Two (see Figure 12), achieved a coefficient of determination of only .176. The performance of all three models developed in the current research were superior to this. This comparison is even more significant when it is recognized that in conducting his analysis of this model Cavusgil used only firms that exported.

Further comparisons with other models are both difficult and inappropriate due to the wide variation in dependent variables. However, it may be observed that Model III of the current research explained a greater amount of variance in Export Involvement than seven of the ten previous models of export behavior were able to explain in their respective dependent variables. Models with superior performance included Bilkey and Tesar's Equation Three ($R^2 = .698$) discussed above, Bilkey and Tesar's Equation Two ($R^2 = .690$) which used a categorical (exporter/nonexporter) dependent variable, and Reid's (1983) Equation One ($R^2 = .38$), where the dependent variable was the likelihood of the firm exporting to new foreign markets in the next twelve months.

The fact that Model III, with a coefficient of determination of .319, outperformed two-thirds of the previous export models has several implications. First, it suggests that export researchers should continue searching for both appropriate patterns to model and the appropriate components to include in them in order to obtain more perfect explanations. Second, it suggests the importance of identifying the components of Model III which were significant in this analysis, so that they may be used in future efforts.

Importance of Independent Variables

All the independent variables in each of the three models were assessed to determine whether or not they were significant using a confidence level of .95. Unfortunately, although each of the models, in toto, was significant, most of the independent variables were not.

In Model I, which used the indices of the perceived characteristics as predictors, only Relative Advantage (RELAD) and Complexity (PLEX) were significant, both at the level of $\alpha = .001$. In terms of the relative importance of the independent variables in Model I, as indicated by the standardized parameter estimates (Beta coefficients), Relative Advantage is the most important with a Beta coefficient of .341. The Beta coefficient for Complexity was - .223.

In Model II, which used the characteristics of firms as predictors, only two of the eight independent variables were significant. These were Market Area (MA: $\alpha = .001$) and the percent of managers with overseas work experience (PWOS: $\alpha = .001$). Of these two, the percent of managers with overseas work experience was the most important, with a Beta coefficient of .346; Market Area has a Beta coefficient of .308.

In Model III, which contained the two sets of independent variables, the same four variables were significant. Again, they were all significant at $\alpha = .001$. In this combined analysis Relative Advantage was the most important ($\beta = .314$), followed by percent of managers with overseas work experience ($\beta = .243$), Market Area ($\beta = .320$) and Complexity ($\beta = -.223$).

These findings stimulate several observations. First, the stability

of the significant variables in both the partial and full models is worthy of note. None lost significance and no additional variables became significant in the full model. The full implications of this finding will require further research but it seems to indicate that these four variables alone account for a large part of the variance in Export Involvement.

Second, a number of observations about the behavior of the perceived characteristics of exporting are relevant. Of particular importance is the dominant contribution made by perceived relative advantage. Further, the implied directions of the relationships between Relative Advantage, Complexity and the dependent variable, Export Involvement, are consistent with the expectations derived from previous perceived characteristics research. As suggested in Chapter Three, Relative Advantage is positively related to Export Involvement while Complexity is relatively related to Export Involvement.

In addition, it should be noted that Relative Advantage and Complexity are roughly equivalent to two of the three independent variables used by Bilkey and Tesar in their Equation Three, although they were measured differently. Indeed, items for the Relative Advantage Index were, in part, developed on the basis of considerations employed by Bilkey and Tesar in arriving at their measure (E)--the expected effects of exporting on the firm; and items for Complexity Index were based, in part, on some of the barriers to exporting incorporated in their measure (B). Further, the signs of Beta coefficients of Relative Advantage and (E) are both positive with signs of Beta coefficients of Complexity and

(B) are both negative, thus supporting their conceptual parallelism.

Several comments are also pertinent to the firm characteristics which were significant in this analysis. First, Market Area, as it was used here, had not been incorporated into previous explanatory models. The closest approximation was Reid's (1983) measure of the percent of sales obtained extra-regionally. As an independent variable in his Equation One (predicting the likelihood of exporting to new foreign markets in the next twelve months), this variable was only marginally significant ($\alpha = .1$) and was negatively related to the dependent variable.

In explanation of the reasonably strong showing made by Market Area in both Models II and III in the current research, it must be remembered that responses to this measure included market areas described as "North America" and "world-wide," thus allowing for a potentially tautological relationship between this variable and the dependent variable, Export Involvement.

Second, perhaps the same criticism might be applied to the PWOS variable (percent of managers with overseas work experience). In measuring this variable no attempt was made to control responses in terms of whether the managers obtained their overseas experience with the responding firm or previous to their employment with that firm. Therefore, it might be suggested that a firm with high export involvement should naturally be expected to have a high percent of managers with overseas experience. On the other hand, it is equally reasonable to argue that a firm which desires to increase its export involvement may seek to hire managers who have previous overseas work

experience. Unfortunately, the data collect for this study do not allow for resolution of this dilemma and because this is a variable which has not appeared in any of the other regression-type models, it is impossible to seek either clarification of this issue or confirmation of the variable's importance in them. It may also be noted that both significant firm characteristics were found to be positively related to export involvement.

SUMMARY

Further discussion of the implications of the findings of this study will be presented in the next chapter. However, to summarize the analysis, the following points may be made:

- 1) All three models are significant.
- 2) There do not appear to be significant differences between Model I and Model II in terms of their ability to explain variation in Export Involvement.
- 3) The combination of the perceived characteristics of exporting and the characteristics of firms in Model III provides a better and more complete explanation of Export Involvement than either Model I (Perceived Characteristics of Exporting) or Model II (Firm Characteristics).
- 4) Only four (4) of the thirteen (13) independent variables in the analysis were significant predictors in any model.
- 5) Of the significant variables in Model III, Relative Advantage contributes the most toward explaining the variance in Export Involvement.

CHAPTER SIX

SUMMARY, DISCUSSION and THEORETICAL LINKAGES

SUMMARY

The purpose of this study was to enhance understanding of the factors that influence a firm's export involvement. The research was conceptualized within the framework of adoption theory so that export involvement represents the degree to which a firm has adopted and implemented exporting. This was measured as the percent of sales which a firm obtains by exporting. Examination of the factors which were expected to influence export involvement was the central focus of this research. These factors fell into two categories: perceived innovation-attributes (indices of managers' perceptions of the characteristics of exporting), and adopter characteristics (characteristics of firms).

Results indicate that, for the 105 machine tool firms included in the study, a combination of both groups of factors provides the fullest explanation of export involvement. In addition, manager's perceptions of the relative advantage of exporting were shown to be the most important determinant of a firm's export involvement. Other significant determinants included two firm characteristics, the percent of managers with overseas work experience and market area, and managers' perceptions of the complexity of exporting.

DISCUSSION

As preface to the following remarks several comments about the limitations to the generalizability of these findings are required. The most obvious constraints on generalizability concern the intentional restrictions of the population to firms in one specific industry (machine tools) and two specific geographic regions (the Province of Ontario and the State of Michigan).

These restrictions necessarily limit the generalizability of the findings while at the same time suggesting several directions for future research. Although this particular industry/location combination was chosen, in part, because the machine tool industry is highly concentrated in these regions of each country, it is certainly possible that Michigan machine tool manufacturers are not representative of machine tool producers throughout the United States, and that Ontario firms are not representative of all Canadian machine tool producers. Therefore, one direction suggested for future research is more nationwide study of the export involvement of firms. Czinkota and Johnston (1981) have conducted the only truly nationwide export-related study so far, and their emphasis was on segmenting firms rather than explaining involvement.

Of potentially greater importance, however, are variations in export involvement which are likely to be found between industries. Indeed, it was due to the expectation of industry-based variation that this study was limited to one industry. Because machine tools are high-technology, high value, specialized industrial products, a study focused on the export involvement of firms producing low-technology, low value,

standardized consumer products should provide a valuable contrast to and extension of the findings presented here.

Finding One

By combining managers' perceptions of the characteristics of exporting with the characteristics of firms, it is possible to explain 32% of the variance in export involvement, a significantly greater level of explanation than is possible by examining either set of variables alone.

The primary implication of this finding is that future research should not be limited to examination of either firm characteristics or perceptions of exporting separately. This finding substantively supports Thio's (1971) contention that, "a consideration that takes into account both the innovation-attributes and the adopter-characteristics...may account for more variance... ." (p. 60)

In order to substantiate the unique contributions made by managers' perceptions of the characteristics of exporting, regression analyses were performed using the firm characteristics as predictors of the perceptions of exporting. Results indicated that none of the perceived characteristics of exporting were explained by any linear relationship of the firm characteristics. It must therefore be concluded that each of the significant independent variables adds something different to our understanding of export involvement and that both managers' perceptions of exporting and the characteristics of firms ought to be incorporated in future export research.

Finding Two

Four variables have been identified as significant predictors of export involvement while nine others, which were expected to be meaningful, were not statistically significant in the analysis.

The major implication of the second finding is that future research needs to be directed toward identifying variables which will be consistently meaningful (significant) across a variety of situations and applications. All of the firm characteristics which were not significant in the current study (size, technology, education, and the importance of profit, growth and stability) were selected because they had been meaningful in previous studies of exporting. On the other hand, the two firm characteristics which were significant here were either measured differently than they had been in previous research (market area) or had not been used in previous predictive research (percent of managers with overseas work experience). It is therefore also suggested that attention needs to be given to determining the most appropriate methods of measuring each variable.

Finding Three

Perceived relative advantage is the most important predictor and is positively related to export involvement.

The significance of perceived relative advantage in explaining export involvement suggests quite plainly that firms are likely to be more involved in exporting if their managers perceive it to be more advantageous than selling in their domestic market. Or, put even more simply, people or firms are more likely to do things they think they will

benefit from. Indeed, according to the abstract of a recent dissertation, "The decision maker's expectation of export's contributions to the firm," (Dissertation Abstracts International, 1985) is among the most important determinants of whether or not a firm will export.

Firms may benefit from exporting in a number of ways, most of which were addressed by questions in the relative advantage index (see Table 10). Exporting can be profitable; it can offer higher margins, growth opportunities and greater returns to the owners of the firm. Exporting can also help a firm develop more competitive products and stimulate diversification of its produce line, thereby improving its market position at home as well as abroad.

The pre-eminent role of perceived relative advantage in explaining export involvement is potentially the most important finding of this study. Agencies and organizations interested in encouraging exporting will be able to adjust their export promotion programs to reflect the advantages of exporting as perceived by managers. If the appropriate benefits of exporting are incorporated into promotional programs they should be able to stimulate non-exporters to begin exporting and current exporters to increase their involvement in exporting.

Finding Four

The percent of managers with overseas work experience is the most important firm characteristic, and is positively related to export involvement.

The fourth finding indicates that a firm's export involvement is positively related to and enhanced by the presence in the firm of

managers with overseas work experience. Several of the limitations of this finding were addressed in Chapter Five. The major concern, indicated at that time, pertains to the fact that there is no evidence as to whether these managers gained their overseas experience prior to joining the responding firm or afterward. Further research is required to determine whether or not this distinction is important. However, the fact that a linkage exists between a firm's export involvement and the percent of its managers who have overseas work experience remains important regardless of the source of their experience.

The implications of this finding are particularly relevant to firms desiring to increase their export involvement. In this instance the firm's managers should consider two options: 1) they may hire management personnel who already have overseas work experience, or 2) they may arrange for current personnel to gain this experience.

There are many reasons why managers with overseas work experience can be important assets to a firm interested in exporting. Through living and working in foreign countries a manager can gain an understanding of the business practices prevalent there, thus potentially reducing the perceived complexities of exporting. In addition, such experience can provide the manager with greater knowledge of the foreign market environment and thereby equip him to perceive the benefits of exporting to that market and assist him in doing so effectively.

Finding Five

Market area is the next most important variable and is positively related to export involvement.

The essence of this finding is that the larger the market area of a firm, the greater its involvement in exporting is likely to be. The potentially tautological character of this finding was addressed in Chapter Five. The implication remains, however, that a firm whose market covers an extensive geographic space may be more prone to extending that coverage even further than a firm whose market coverage is limited.

It is also possible that this finding is indicative of something quite different. Perhaps the manager of the basically local or regional firm perceived the firm as just that--a local supplier. Perhaps, as is true for many smaller Michigan machine tool producers, the firm's origins lie in supplying the Detroit-based automotive industry. In this instance the manager may have neither the desire nor the need to extend his firm's market coverage, especially to include foreign markets. While, in a sense, these comments are purely speculative, they are also supported by information gathered in the interviews described in Chapter Four. What may, in fact, lie at the root of this finding are not variations in market area but variations in firm ownership. However, ownership was not one of the variables included in this study and this therefore remains an issue for further research.

Finding Six

Perceived complexity is the least important of the significant predictors and is negatively related to export involvement.

The implications of the sixth finding are similar to those discussed with respect to perceived relative advantage (Finding Three), but are in some senses broader reaching. Because perceived complexity is negatively related to export involvement, its components indicate areas of concern to managers which should be minimized or counteracted by export facilitating agencies and organizations. These areas of concern include: 1) paperwork involved in executing an export sale, 2) export financing, 3) obtaining payment for goods sold overseas, 4) checking the credit ratings of foreign buyers and the credit standings of foreign countries, 5) locating and evaluating agents and distributors in foreign markets, 6) variations in specifications, regulations and codes in foreign markets, and 7) variations in business practices in foreign markets (see Table 12).

Conclusions

This study was undertaken in the expectation that it could make a variety of contributions. Because the study involved an examination of both perceived innovation-attributes and innovator-characteristics, it has provided a fuller application of adoption/diffusion constructs to the explanation of exporting than previous research. In addition, the study has demonstrated that export involvement is better explained by a combination of managers' perceptions of exporting and firm characteristics.

This result, in itself, supports several theoretical conclusions. First, it reconfirms the relevance of adoption theory to marketing, not

in terms of new product adoption and diffusion, but specifically with respect to the study of marketing practices. In a field which habitually borrows from other disciplines, it can only be helpful to be reassured of the continuing appropriateness of the concepts which are borrowed.

Second, the results of this study also support the premise that the perceived characteristics of innovations can be useful in explaining implementation as well as adoption. However, the study results related to this conclusion were mixed. Although perceived relative advantage and perceived complexity were significant predictors of export involvement, perceived compatibility, perceived trialability and perceived observability were not significant. Therefore, additional research is recommended to continue exploration of the usefulness of perceived characteristics as explanatory variables. Such research might be directed toward perfecting the measurement of these constructs and also toward examining their role in the implementation of a variety of innovations.

The results of this research also have implications for public policy makers and other export facilitating organizations. First, the results indicate that attention should be given to improving the relative advantage of exporting. Second, attention should be given to reducing the complexity of exporting.

Export facilitators can also contribute to the reduction of complexity by offering a wider variety of services to their customers and by lobbying for standardized international product codes and world-wide credit reporting systems. In addition, it should be recognized that

facilitating agents, banks and freight forwarders, perform highly technical functions for exporters. Therefore, their personnel must be both well trained and sensitive to potential confusion on the part of their clients.

Finally, the contribution of this research to developing a clearer and more complete explanation of export involvement really remains to be seen. This kind of contribution can only be shown if the additional insights offered by the research stand the tests of time and duplication. If future researchers find that managers' perceptions of relative advantage and complexity and their overseas work experience and market area continue to explain export involvement, across industries and from nation to nation, then it may be said that this study has made a contribution to the understanding of exporting.

THEORETICAL LINKAGES

This study has been concerned with examining the influence of the perceptions managers have of exporting on the variability of the export involvement of firms. Historically, explanations of exporting have been based on economic theory. According to macro-economic theory trade takes place between nations because each nation has a comparative advantage in the production of some product or products. This theory has been used to explain the heavy involvement of the United States in exporting high technology products such as machine tools. Within this theoretical framework, the propensity of a nation to export certain products has been attributed to various structural variables such as relative factor

endowments, price ratios, and cost ratios. An industry's propensity to export has been attributed to another set of structural variables, including economies of scale, and product differentiation. It might, therefore, be reasonable to expect that two firms in the same industry and location, subject to similar structural conditions, would exhibit a similar propensity to export or level of export involvement. However, this was not the case for the firms in the machine tool industry which were studied here.

How then, can we account for the variability in export involvement exhibited by firms in the same location and industry? The results of this research indicate that in addition to developing a clearer understanding of structural variables we also need to consider "behavioral" elements, such as the perceptions managers have of exporting.

Inasmuch as this study has been concerned with the export involvement of firms, it must be acknowledged that exporting can and should be considered as one component of a firm's strategy. Earlier it was observed that perhaps Cavusgil and Nevin's (1981) conclusion should have been that the reluctance of firms to export may be largely attributed to top management's lack of determination to grow (see Chapter Two, page 63). Indeed, previous export research provides substantial evidence linking a firm's interest in growth with its involvement (or non-involvement) in exporting. Perhaps it is time that we stop asking, "why do firms export?" and begin asking, "why do firms choose exporting as a means of obtaining growth or other goals instead of alternate available strategies?"

According to Ansoff (1957):

There are four basic growth alternatives open to a business. It can grow through increased market penetration, through market development, through product development or through diversification. (p. 113)

In discussing these alternatives, Kotler (1980) states that, "market development consists of the company's seeking increased sales by taking its current products into new markets," (p. 79) including international markets. Hence, exporting can be placed directly into Ansoff's product/market expansion matrix (see Figure 24). A firm may choose to grow by marketing its existing products in export markets, international market development, or by developing new products for export markets, international diversification.

Viewing export involvement in this context may, in the long run, enhance our understanding of the phenomenon in general and the role of managers' perceptions of growth strategies in particular. Hansen (1956) has observed that, "basically, growth for the individual firm...requires the existence of certain primary attitudes. These attitudes are more important than the availability of capital." (p. 93) Certainly, in the current research managers' perceptions of the relative advantage of exporting were more important than any characteristic of the firm.

Further support for this perspective is provided by Aaker (1984), who suggests that it is important for managers of a firm to understand the backgrounds of the managers of competing firms in order to understand, and perhaps predict, the kinds of strategies those competitors are likely to pursue. Likewise, it is apparent that both the backgrounds (overseas

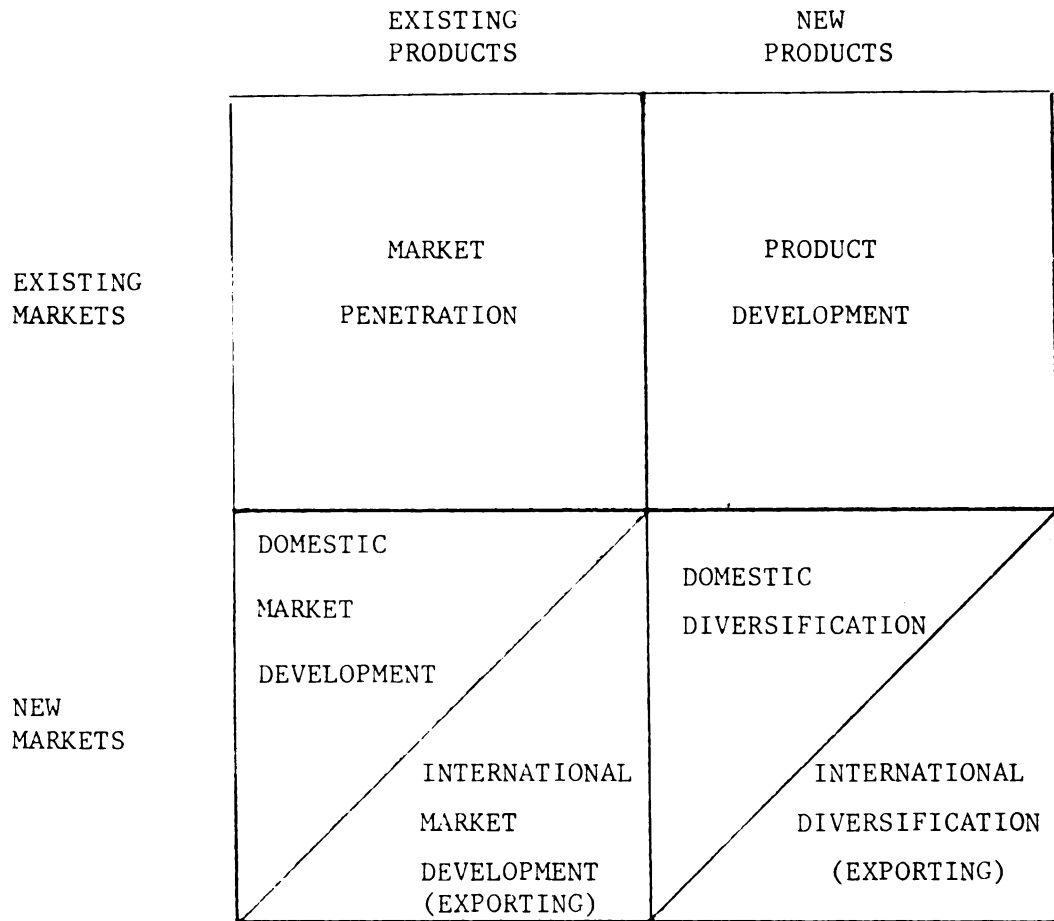


FIGURE 24

ADAPTED PRODUCT/MARKET EXPANSION MATRIX

SOURCE: Adapted from, H.I. Ansoff, "Strategies for Diversification," Harvard Business Review, (September-October 1957), 113-124.

work experience) and perceptions/beliefs which managers possess are important in order to understand a firm's propensity to involve itself in exporting as a strategy.

In conclusion, therefore, it is recommended that, in future, export research should be concerned with examining exporting within the context of the strategy choice processes and procedures of firms. In addition, it is suggested that this line of research may also reveal that the selection of any particular strategy (not just exporting) is conditioned, in part, by the perceptions managers have of that strategy.

APPENDICIES

APPENDIX A-1

INTERVIEW SCHEDULE

I asked for your time and assistance today for two reasons:

First, because I'm interested in your company's experience in the international market place, particularly with exporting.

Second, because I am preparing to do a major study of machinery exporting from Michigan/Ontario and I need to be sure that I'm asking meaningful questions in a way that will be understood by those involved in the study.

If at any time you feel that a question I have asked is either inappropriate or vague, please stop me.

1. Does your company export?
2. Do you have a separate export department or division responsible for export sales?

If yes:

- a. Did you make foreign sales before you had a separate division responsible for exporting?
 - b. How important do you think it is to have a separate division responsible for exporting? WHY?
3. Do you have manufacturing subsidiaries and/or Joint Ventures outside the U.S.?
 - a. Where are these located?

APPENDIX A-1 (cont'd.)

- b. How important was each of the following factors in your choice of these locations?

Entry into common market (or the like)

1 2 3 4 5

Language

1 2 3 4 5

Was approached by someone in that country

1 2 3 4 5

Financing

1 2 3 4 5

Host country government incentives

1 2 3 4 5

Host country government restrictions

1 2 3 4 5

U.S. government incentives

1 2 3 4 5

U.S. government restrictions

1 2 3 4 5

Other, please specify: _____

4. Do you also have additional overseas sales offices?

- a. Are there assembly functions performed at these offices?
- b. Where are these located?

APPENDIX A-1 (cont'd.)

- c. How important was each of the following factors in your choice of these locations?

Entry into common market (or the like)

1 2 3 4 5

Language

1 2 3 4 5

Already had customers there

1 2 3 4 5

Was approached by someone in that country

1 2 3 4 5

Financing

1 2 3 4 5

Host country government incentives

1 2 3 4 5

Host country government restrictions

1 2 3 4 5

U.S. government incentives

1 2 3 4 5

U.S. government restrictions

1 2 3 4 5

Other, please specify: _____

5. Do you have licensing agreements with companies overseas?

- a. Where are these located?

APPENDIX A-1 (cont'd.)

b. How important was each of the following factors in your choice?

Entry into common market (or the like)

1 2 3 4 5

Language

1 2 3 4 5

Already had customers in that country

1 2 3 4 5

Was approached by someone in that country

1 2 3 4 5

Financing

1 2 3 4 5

Host country government incentives

1 2 3 4 5

Host country government restrictions

1 2 3 4 5

U.S. government incentives

1 2 3 4 5

U.S. government restrictions

1 2 3 4 5

Other, please specify: _____

6. Does each subsidiary have the freedom to respond to inquiries it receives OR are world-wide sales areas divided among the subsidiaries in a manner such that orders are forwarded to the appropriate subsidiary?
7. Who started exporting first, a foreign subsidiary or headquarters?

APPENDIX A-1 (cont'd.)

8. How important is each of the following factors in your company's decision to allocate resources from domestic to international marketing efforts OR from international to domestic marketing efforts?

Expected Sales

1 2 3 4 5

Expected Profit

1 2 3 4 5

ROI

1 2 3 4 5

Competitive Considerations

1 2 3 4 5

Risk Considerations

1 2 3 4 5

Economies of Scale

1 2 3 4 5

Combination

1 2 3 4 5

Other, please specify: _____

9. Do you receive unsolicited orders?
- a. Do you always respond?
 - b. How do you decide when to respond?
 - c. Who decides?

APPENDIX A-1 (cont'd.)

10. How important is each of the following in distributing your products in your export markets?

Foreign Agents (Manufacturer's Representatives)

1 2 3 4 5

Distributors

1 2 3 4 5

Subsidiary Sales Force

1 2 3 4 5

Wholesalers

1 2 3 4 5

Direct Shipments to Customers

1 2 3 4 5

Own Sales Force

1 2 3 4 5

Other, please specify: _____

11. Is this similar to or different from the way you distribute in your home market?

IF DIFFERENT: In what way?

APPENDIX A-1 (cont'd.)

12. How important is each of the following in promoting your products in your export markets?

Trade Shows

1 2 3 4 5

Foreign Agents

1 2 3 4 5

Company Sales Force

1 2 3 4 5

Mailing of Brochures, etc.

1 2 3 4 5

Trade Journal Advertising

1 2 3 4 5

Magazine/Newspaper Advertising

1 2 3 4 5

Special Promotions

1 2 3 4 5

U.S. Embassy Promotions

1 2 3 4 5

Catalog Shows

1 2 3 4 5

Our foreign agents/distributors do their own

1 2 3 4 5

Other, please specify: _____

13. Is this similar to or different from the way you promote in your home market?

IF DIFFERENT: In what way?

APPENDIX A-1 (cont'd.)

14. Do you price for export markets in dollars or foreign currency?

15. In relation to your competitors in your export markets, are you prices:

Quite High A Little Higher About the Same A Little Lower Lower

16. In relation to your competitors in the U.S. are your prices:

Quite High A Little Higher About the Same A Little Lower Lower

17. Comparing your own prices here in the U.S. to the prices you charge in foreign markets, are your U.S. prices:

Higher A Little Higher About the Same A little Lower Lower

18. How important are each of the following sources of export financing?

Local Bank Commercial Credit

1 2 3 4 5

Major Bank (i.e., New York) Commercial Credit

1 2 3 4 5

Federal Export Promotion Guarantees

1 2 3 4 5

Foreign Government Financing

1 2 3 4 5

Other, please specify: _____

APPENDIX A-1 (cont'd.)

19. How many product lines does your company produce?
20. About what proportion (%) of your products are exported?
21. About how many different products is this?
22. Does this vary by country?
23. In your view, what are the major complicating factors in serving your export markets?

Can you prioritize these?

24. Are there particular markets where the complication effectively prohibit entry?
25. Are there some markets which you consider so attractive or important that you make every effort to sell there regardless of the complications?
 - a. Where?
 - b. Why?

APPENDIX A-1 (cont'd.)

26. Do you export to:

Europe?

Asia?

South/Central America?

Africa?

Canada?

Eastern Block Countries?

Other?

27. Which countries would you consider your MAJOR export markets?

28. Do you systematically review markets to decide whether or not to remain?

On what criteria?

29. Is exporting a "Good Thing" for your company?

Why or why not?

30. What are the benefits/drawbacks?

APPENDIX A-1 (cont'd.)

31. How important are each of the following goals to your company?

Profitability

1 2 3 4 5

Sales/Firm Growth

1 2 3 4 5

Market Share Maintenance or Growth

1 2 3 4 5

Firm Stability

1 2 3 4 5

Maintenance & Growth of Shareholder Wealth

1 2 3 4 5

THINK ABOUT THE MANAGERS IN YOUR COMPANY

32. About how many are there?

33. Is their average age:

25-34 [] 35-44 [] 45-54 [] 55-64 []

34. About what percent have a college degree?

35. About what percent have worked overseas?

36. About what percent can speak a foreign language?

37. About what percent were born or have lived overseas?

APPENDIX A-1 (cont'd.)

THINK ABOUT YOUR COMPANY IN GENERAL

38. Does your company sell its products nationwide in the U.S.?
39. How many employees does your company have in the U.S.?
40. About what percent of these employees are active in exporting?
41. What was your company's total sales volume in 1982?
42. About what percent of sales came from exporting from U.S. plants?
43. Does this vary alot by product?
In what way?
44. Do you receive any newsletters from the government?
45. Have you ever attended an export promotion seminar?

APPENDIX A-2

INSIGHTS FROM INTERVIEWS

Insights about the Relative Advantage of Exporting

- exporting contributes to broadening the market base of the firm
- exporting can smooth the impact of business cycles
- exporting can keep a firm competitive
- exporting can be profitable
- exporting helps achieve economies of scale
- exporting can be risky
- exporting can be costly

Insights about the Compatibility of Exporting

- with the goals of: growth, profit, stability, returns to owners, diversification
- with practices including: direct sales, pricing
- major contribution in this area was identification of the marketing practices relevant to this industry

Insights about the Complexity of Exporting

Related to: paperwork, language differences, variety of regulations, differences in business practices, difficulty with financing/payment, difficulties in penetrating markets, problems with agent selection and evaluation, problems with packaging shipping and service, exchange rates (mentioned only by U.S. firms)

Insights about the Trialability of Exporting

- responses to unsolicited inquiries might differ depending on whether they were from a potential customer, a potential agent/distributor, or a foreign subsidiary of a current customer

Insights about the Observability of Exporting

- managers at least occasionally read about the results of other firms' export efforts.

APPENDIX B-1

PRETEST INSTRUMENT

CANADIAN/AMERICAN BUSINESS DEVELOPMENT FORUM

EXPORT STUDY

This is a survey of business people's views about exporting.
We ask for your cooperation and assistance
in sharing your thoughts about exporting and your firm.

Please take a few minutes to answer the following questions.

THANK YOU FOR YOUR TIME.

Conducted by the
DEPARTMENT OF MARKETING AND TRANSPORTATION
MICHIGAN STATE UNIVERSITY

APPENDIX B-1 (cont'd)

First we would like to know what you think about exporting in general.

Please indicate the degree to which you AGREE or DISAGREE with each of the following statements by placing an X in the appropriate BOX: [X]

SA=STRONGLY AGREE

A=AGREE

N=NEITHER

D=DISAGREE

SD=STRONGLY DISAGREE

DK=DON'T KNOW

	SA	A	N	D	SD	DK
1. Any firm that has a competitive advantage would consider exporting a good opportunity.	[]	[]	[]	[]	[]	[]
2. Exporting is the kind of activity that a firm can try once or twice and then re-evaluate.	[]	[]	[]	[]	[]	[]
3. Obtaining payment for sales made to foreign buyers is relatively simple.	[]	[]	[]	[]	[]	[]
4. The strength of the U.S. dollar today makes export sales more difficult.	[]	[]	[]	[]	[]	[]
5. Exporting is <u>not</u> risky if you plan well.	[]	[]	[]	[]	[]	[]
6. Exporting is easy because you <u>don't</u> have to service the products you sell to foreign buyers.	[]	[]	[]	[]	[]	[]
7. Exporting requires having an Export Department.	[]	[]	[]	[]	[]	[]
8. Identifying the profits from exporting would be fairly difficult.	[]	[]	[]	[]	[]	[]
9. Because of the investment required, once a firm starts exporting it is committed.	[]	[]	[]	[]	[]	[]
10. Obtaining export financing is a complicated process.	[]	[]	[]	[]	[]	[]
11. A firm can go in and out of export markets depending on how sales are going at home.	[]	[]	[]	[]	[]	[]
12. Business people in other countries are <u>not</u> like us.	[]	[]	[]	[]	[]	[]
13. The paper work involved in processing an export sale is easy to understand.	[]	[]	[]	[]	[]	[]
14. Getting an adequate share of a foreign market would be easy if you sold a very special product.	[]	[]	[]	[]	[]	[]

APPENDIX B-1 (cont'd.)

SA=STRONGLY AGREE A=AGREE N=NEITHER D=DISAGREE SD=STRONGLY DISAGREE		DK=DON'T KNOW					
		SA	A	N	D	SD	DK
15.	Exchange rate variations make exporting difficult.	[]	[]	[]	[]	[]	[]
16.	Evaluating the performance of sales agents/distributors in foreign markets is difficult.	[]	[]	[]	[]	[]	[]
17.	Unsolicited inquiries from foreign buyers provide a good opportunity to test an export market.	[]	[]	[]	[]	[]	[]
18.	The paper work necessary for exporting is overwhelming.	[]	[]	[]	[]	[]	[]
19.	Making sales to foreign buyers is risky.	[]	[]	[]	[]	[]	[]
20.	Export financing is easy to get.	[]	[]	[]	[]	[]	[]
21.	Business practices are pretty much the same in most countries.	[]	[]	[]	[]	[]	[]
22.	Exporting is just too complicated to be bothered with.	[]	[]	[]	[]	[]	[]
23.	Locating sales agents/distributors in foreign markets is easy.	[]	[]	[]	[]	[]	[]
24.	The cost of serving export markets is really more reasonable than most people think.	[]	[]	[]	[]	[]	[]
25.	Please indicate how CONSISTENT you think each of the following goals is with exporting.						
VC=VERY CONSISTENT C=CONSISTENT N=NEITHER I=INCONSISTENT VI=VERY INCONSISTENT		DK=DON'T KNOW					
		VC	C	N	I	VI	DK
	a. Profit	[]	[]	[]	[]	[]	[]
	b. Growth	[]	[]	[]	[]	[]	[]
	c. Stability	[]	[]	[]	[]	[]	[]
	d. Diversification	[]	[]	[]	[]	[]	[]
	e. Increased Market Share	[]	[]	[]	[]	[]	[]
	f. Returns to Owners	[]	[]	[]	[]	[]	[]
	g. Economies of Scale	[]	[]	[]	[]	[]	[]

APPENDIX B-1 (cont'd.)

The following questions ask you for your thoughts about exporting in relation to your own firm.

Please indicate the degree to which you AGREE or DISAGREE with each of the following statements by placing an X in the appropriate BOX: [X]

SA=STRONGLY AGREE A=AGREE N=NEITHER D=DISAGREE SD=STRONGLY DISAGREE
DK=DON'T KNOW

	SA	A	N	D	SD	DK
26. For my firm, exporting requires a permanent commitment.	[]	[]	[]	[]	[]	[]
27. My firm would probably use the same price structure in selling to foreign buyers as we use in pricing our products for sale in the U.S.	[]	[]	[]	[]	[]	[]
28. Export markets for my firm's products could be more profitable than the U.S.	[]	[]	[]	[]	[]	[]
29. Exporting requires that my firm learn new packaging methods.	[]	[]	[]	[]	[]	[]
30. My firm could make higher margins on products sold in the U.S. than on products sold in foreign markets.	[]	[]	[]	[]	[]	[]
31. My firm could use pretty much the same sales techniques in any market.	[]	[]	[]	[]	[]	[]
32. My firm would expect to see the results of our export efforts directly on our balance sheet.	[]	[]	[]	[]	[]	[]
33. Getting an adequate share of a foreign market would be easy for my firm.	[]	[]	[]	[]	[]	[]
34. Exporting would improve my firm's market position at home.	[]	[]	[]	[]	[]	[]
35. Exporting offers better growth opportunities for my firm than the U.S. market does.	[]	[]	[]	[]	[]	[]
36. Our employees <u>won't</u> need special training for us to export.	[]	[]	[]	[]	[]	[]
37. Exporting can stabilize my firm's sales.	[]	[]	[]	[]	[]	[]
38. We can use the same methods to ship to foreign buyers that we use to ship to our U.S. customers.	[]	[]	[]	[]	[]	[]



APPENDIX B-1 (cont'd.)

	SA=STRONGLY AGREE	A=AGREE	N=NEITHER DK=DON'T KNOW	D=DISAGREE	SD=STRONGLY DISAGREE	
	SA	A	N	D	SD	DK
39. Specifications, regulations and codes for my firm's products vary greatly from country to country.	[]	[]	[]	[]	[]	[]
40. Increasing our investments in the U.S. market can provide more stable profits than investing in export markets.	[]	[]	[]	[]	[]	[]
41. Sales agents/distributors like we use here are available in foreign markets.	[]	[]	[]	[]	[]	[]
42. It would be costly for my firm to withdraw from exporting once we got into it.	[]	[]	[]	[]	[]	[]
43. Exporting can provide important learning experiences for my firm.	[]	[]	[]	[]	[]	[]
44. In selling in foreign markets my firm could evaluate sales agents/distributors the same way we evaluate them here.	[]	[]	[]	[]	[]	[]
45. My firm will be better able to diversify its product lines if it exports.	[]	[]	[]	[]	[]	[]
46. For the same amount of money, my firm would expect to get more profit from export sales than from sales here in the U.S.	[]	[]	[]	[]	[]	[]
47. My firm's products could be packaged the same for sales in foreign markets as they are packaged here.	[]	[]	[]	[]	[]	[]
48. Exporting could help my firm get better economies of scale in production.	[]	[]	[]	[]	[]	[]
49. My firm's profits could be hurt by exporting.	[]	[]	[]	[]	[]	[]
50. My firm could distribute its products to buyers in foreign markets in the same way we distribute them to our customers here.	[]	[]	[]	[]	[]	[]
51. The financial returns to the owners of my firm will be greater if we concentrate on our U.S. customers and <u>don't</u> get involved in exporting.	[]	[]	[]	[]	[]	[]

APPENDIX B-1 (cont'd.)

SA-STRONGLY AGREE A-AGREE N-NEITHER D-DISAGREE SD-STRONGLY DISAGREE
DK-DON'T KNOW

	SA	A	N	D	SD	DK
52. My firm would expect to see the results of our export efforts directly on our income statement.	[]	[]	[]	[]	[]	[]
53. My firm could finance sales of its products to foreign buyers the same way it finances sales to customers here.	[]	[]	[]	[]	[]	[]
54. Language differences are a barrier to exporting for my firm.	[]	[]	[]	[]	[]	[]
55. Selling in foreign markets could help my firm develop more competitive products to sell at home.	[]	[]	[]	[]	[]	[]
56. Current exchange rates give my firm an advantage in selling to foreign buyers.	[]	[]	[]	[]	[]	[]

The following questions ask what you think about your firm's possible responses to inquiries from foreign buyers.

Please indicate the extent to which you AGREE or DISAGREE with each of the following statements by placing an X in the appropriate BOX: [X]

	SA	A	N	D	SD	DK
57. My firm would reply to an inquiry from a potential foreign buyer only if we already had customers in that country.	[]	[]	[]	[]	[]	[]
58. My firm would reply to any inquiry from a potential foreign buyer.	[]	[]	[]	[]	[]	[]
59. My firm would reply to an inquiry from an import agent or distributor.	[]	[]	[]	[]	[]	[]
60. My firm would check on the credit rating of a foreign buyer before responding to an inquiry.	[]	[]	[]	[]	[]	[]
61. My firm would check into the credit standing of a country before replying to an inquiry from a buyer in that country.	[]	[]	[]	[]	[]	[]
62. My firm would reply to all inquiries from foreign firms which are subsidiaries of our U.S. customers.	[]	[]	[]	[]	[]	[]

APPENDIX B-1 (cont'd.)

The following questions ask you about how you get information about exporting.

Please indicate the extent to which you AGREE or DISAGREE with each of the following statements by placing an X in the appropriate BOX: [X]

	SA=STRONGLY AGREE	A=AGREE	N=NEITHER DK=DON'T KNOW	D=DISAGREE	SD=STRONGLY DISAGREE	
	SA	A	N	D	SD	DK
63. I've heard people from other firms in our industry talk about getting good results from exporting.	[]	[]	[]	[]	[]	[]
64. I've heard people from other firms in our industry talk about problems they have had with exporting.	[]	[]	[]	[]	[]	[]
65. I've read about the success of other firms in our industry in export markets.	[]	[]	[]	[]	[]	[]
66. I've read about the problems that other firms in our industry have had with exporting.	[]	[]	[]	[]	[]	[]
67. Most of my information about exporting comes from personal contact with people who have exported.	[]	[]	[]	[]	[]	[]

These last few questions ask you about your firm and will be used for classification purposes only.

68. Please indicate the degree to which each of the following firm goals is IMPORTANT to your firm.

VI=VERY IMPORTANT	QI=QUITE IMPORTANT UI=UNIMPORTANT		SI=SLIGHTLY IMPORTANT DK=DON'T KNOW		N=NEITHER		
	VI	QI	SI	N	UI	DK	
a. Profit	[]	[]	[]	[]	[]	[]	
b. Growth	[]	[]	[]	[]	[]	[]	
c. Stability	[]	[]	[]	[]	[]	[]	
d. Diversification	[]	[]	[]	[]	[]	[]	
e. Increased Market Share	[]	[]	[]	[]	[]	[]	
f. Returns to Owners	[]	[]	[]	[]	[]	[]	
g. Economies of Scale	[]	[]	[]	[]	[]	[]	

APPENDIX B-1 (cont'd.)

69. Has your firm exported in the past five (5) years?

☐ YES

☐ NO

☐ DON'T KNOW

70. Have you attended an export seminar before?

☐ YES

☐ NO

☐ DON'T KNOW

71. What is your TITLE: _____

72. How many years have you worked for this firm? _____

(YEARS)

73. How many years have you held your present position? _____

(YEARS)

74. What kinds of products does your company produce?
(i.e., furniture, machinery, food, etc.)

75. My firm is:

☐ FAMILY OWNED

☐ A CORPORATION

☐ A DIVISION or SUBSIDIARY OF A CORPORATION

☐ OTHER, PLEASE SPECIFY: _____

☐ DON'T KNOW

THANK YOU VERY MUCH FOR YOUR ASSISTANCE.

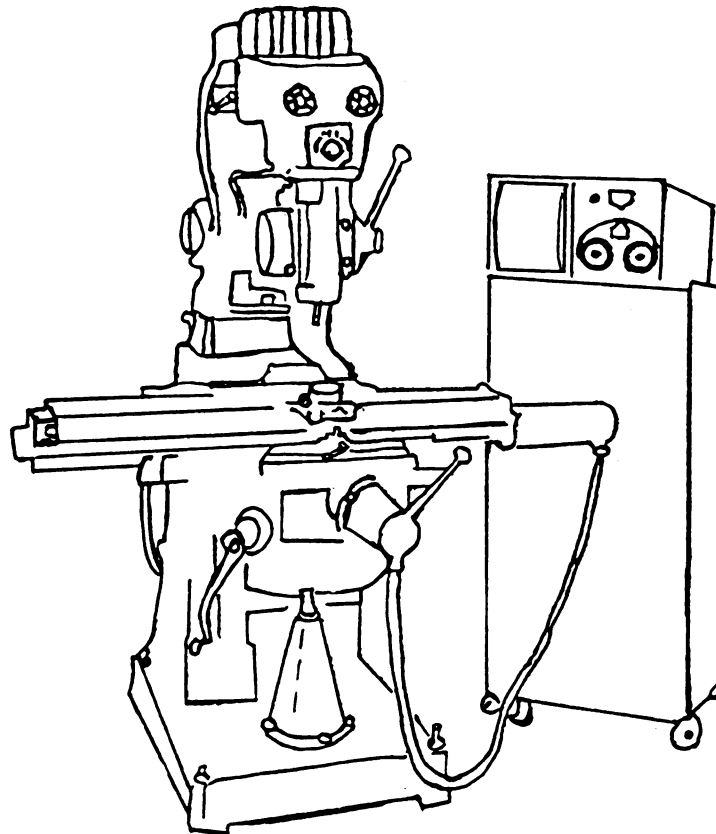
If you choose to take this with you instead of completing it here at the conference, please ask for one of the self-addressed stamped envelopes which are available.



APPENDIX C-1

SURVEY FOR MICHIGAN FIRMS

MACHINERY MARKETING AND EXPORT STUDY



This study is being conducted as part of the Canadian/American Business Studies Project to assist machinery manufacturers in finding ways to increase sales both at home and abroad.

Please answer the following questions. If you wish to comment on any questions or qualify your answers, please use the margins or a separate sheet of paper.

Return this questionnaire to:

Machinery Marketing & Export Study
Dept. of Marketing & Transportation
Michigan State University
East Lansing, Michigan 48824

APPENDIX C-1 (cont'd.)

SECTION ONE: GENERAL BUSINESS PRACTICES

(In answering the following questions please place an X in each of the appropriate boxes: [X].)

1. Which of the following statements best describes where you sell your products?

- [] WE SELL MOST OF OUR PRODUCTS LOCALLY (WITHIN 100 MILES OF OUR PLANT).
 [] WE SELL MOST OF OUR PRODUCTS IN MICHIGAN.
 [] WE SELL MOST OF OUR PRODUCTS IN MICHIGAN AND NEARBY AREAS OF CANADA.
 [] WE SELL OUR PRODUCTS NATIONWIDE IN THE U.S.
 [] WE SELL OUR PRODUCTS THROUGHOUT NORTH AMERICA.
 [] WE SELL OUR PRODUCTS THROUGHOUT THE WORLD.

2. Please identify the products your firm makes. (Mark as many as apply.)

	STANDARDIZED	SPECIALIZED
GRINDING MACHINES	[]	[]
BORING MACHINES	[]	[]
DRILLING MACHINES	[]	[]
MILLING MACHINES	[]	[]
MACHINE CENTERS	[]	[]
OTHER METAL CUTTING MACHINERY	[]	[]
DIE CASTING MACHINERY	[]	[]
OTHER METAL FORMING MACHINERY	[]	[]
AUTOMATIC TRANSFER MACHINES	[]	[]
OTHER, PLEASE SPECIFY: _____	[]	[]

3. Is this machinery your major line of business?

- [] YES
 [] NO → IF NO, WHAT IS YOUR MAJOR BUSINESS? _____

4. Are some of these machines numerically or computer controlled (NC or CNC)?

- [] NONE ARE
 [] LESS THAN 25% ARE
 [] 26-50% ARE
 [] 51-75% ARE
 [] 76-100% ARE

APPENDIX C-1 (cont'd.)

5. How many patents does your company have? _____

6. Please indicate below how frequently you sell your products to each of the following customer groups. (Mark one category for each customer group.)

	REGULARLY SELL TO	FREQUENTLY SELL TO	SOMETIMES SELL TO	RARELY SELL TO	NEVER SELL TO
AUTOMOBILE/TRUCK INDUSTRY.....	[]	[]	[]	[]	[]
AEROSPACE/AIRPLANE INDUSTRY.....	[]	[]	[]	[]	[]
APPLIANCE INDUSTRY	[]	[]	[]	[]	[]
MILITARY EQUIPMENT INDUSTRY	[]	[]	[]	[]	[]
OIL INDUSTRY	[]	[]	[]	[]	[]
OTHER MACHINERY MANUFACTURERS	[]	[]	[]	[]	[]
OTHER: _____	[]	[]	[]	[]	[]
PLEASE SPECIFY					

7. Please indicate the extent to which each of the following is used to obtain sales inside the U.S.

	MAJOR FACTOR IN MOST SALES				NOT A FACTOR
PRESIDENT/GENERAL MANAGER	[]	[]	[]	[]	[]
SALES/MARKETING MANAGER	[]	[]	[]	[]	[]
YOUR OWN SALES PERSONNEL	[]	[]	[]	[]	[]
MANUFACTURER'S REPRESENTATIVES	[]	[]	[]	[]	[]
DISTRIBUTORS/DEALERS	[]	[]	[]	[]	[]
SUBSIDIARY SALES PERSONNEL	[]	[]	[]	[]	[]
PARENT COMPANY SALES PERSONNEL	[]	[]	[]	[]	[]

APPENDIX C-1 (cont'd.)

8. Please indicate the extent to which each of the following is used to promote your products to buyers inside the U.S.:

	MAJOR FACTOR IN PROMOTION				NOT A FACTOR
TRADE SHOWS	☐	☐	☐	☐	☐
MAILING OF BROCHURES, ETC.	☐	☐	☐	☐	☐
TRADE JOURNAL ADVERTISING	☐	☐	☐	☐	☐
COMPANY SALES PERSONNEL	☐	☐	☐	☐	☐
AGENTS/REPRESENTATIVES	☐	☐	☐	☐	☐
WORD OF MOUTH BETWEEN CUSTOMERS	☐	☐	☐	☐	☐

9. In relation to your competitors in the U.S. Market, are your prices...

- ☐ A LOT HIGHER THAN COMPETITORS?
- ☐ A LITTLE HIGHER THAN COMPETITORS?
- ☐ ABOUT THE SAME AS COMPETITORS?
- ☐ A LITTLE LOWER THAN COMPETITORS?
- ☐ A LOT LOWER THAN COMPETITORS?

10. Please indicate the extent to which each of the following is used to finance sales to buyers inside the U.S.:

	USED TO FINANCE MOST SALES				NEVER USED
INTERNAL COMPANY FINANCING	☐	☐	☐	☐	☐
COMMERCIAL CREDIT FROM BANKS IN THE U.S.	☐	☐	☐	☐	☐
COMMERCIAL CREDIT FROM BANKS IN CANADA	☐	☐	☐	☐	☐
OTHER THIRD PARTY FINANCING	☐	☐	☐	☐	☐
BUYER ARRANGES FINANCING	☐	☐	☐	☐	☐

APPENDIX C-1 (cont'd.)

SECTION TWO: THOUGHTS ABOUT EXPORTING

The next several questions ask you what you think about exporting in general.
(Please indicate the degree to which you AGREE or DISAGREE with each
of the following statements by placing an X in the appropriate BOX: [X])

SA=STRONGLY AGREE A=AGREE N=NEITHER D=DISAGREE SD=STRONGLY DISAGREE
DK=DON'T KNOW

	SA	A	N	D	SD	DK
11. Any firm that has a competitive advantage would consider exporting a good opportunity.	[]	[]	[]	[]	[]	[]
12. Exporting is the kind of activity that a firm can try once or twice and then re-evaluate.	[]	[]	[]	[]	[]	[]
13. Obtaining payment for sales made to foreign buyers is relatively simple.	[]	[]	[]	[]	[]	[]
14. Exporting is <u>not</u> risky if you plan well.	[]	[]	[]	[]	[]	[]
15. Obtaining export financing is a complicated process.	[]	[]	[]	[]	[]	[]
16. A firm can go in and out of export markets depending on how sales are going at home.	[]	[]	[]	[]	[]	[]
17. Business people in other countries are <u>not</u> like us.	[]	[]	[]	[]	[]	[]
18. The paper work involved in processing an export sale is easy to understand.	[]	[]	[]	[]	[]	[]
19. Evaluating the performance of sales agents/distributors in foreign markets is difficult.	[]	[]	[]	[]	[]	[]
20. Unsolicited inquiries from foreign buyers provide a good opportunity to test an export market.	[]	[]	[]	[]	[]	[]
21. The paper work necessary for exporting is overwhelming.	[]	[]	[]	[]	[]	[]
22. Export financing is easy to get.	[]	[]	[]	[]	[]	[]
23. Business practices are pretty much the same in most countries.	[]	[]	[]	[]	[]	[]

APPENDIX C-1 (cont'd.)

	SA=STRONGLY AGREE	A=AGREE	N=NEITHER DK=DON'T KNOW	D=DISAGREE	SD=STRONGLY DISAGREE	
	SA	A	N	D	SD	DK
24. Exporting is just too complicated to be bothered with.	[]	[]	[]	[]	[]	[]
25. Locating sales agents/distributors in foreign markets is easy.	[]	[]	[]	[]	[]	[]
26. The cost of serving export markets is really more reasonable than most people think.	[]	[]	[]	[]	[]	[]
27. Please indicate how CONSISTENT you think each of the following goals is with exporting.						
	VC=VERY CONSISTENT	C=CONSISTENT VI=VERY INCONSISTENT	N=NEITHER DK=DON'T KNOW	I=INCONSISTENT		
	VC	C	N	I	VI	DK
a. Profit	[]	[]	[]	[]	[]	[]
b. Growth	[]	[]	[]	[]	[]	[]
c. Stability	[]	[]	[]	[]	[]	[]
d. Diversification	[]	[]	[]	[]	[]	[]
e. Increase Market Share	[]	[]	[]	[]	[]	[]
f. Returns to Owners	[]	[]	[]	[]	[]	[]
g. Increase Sales Volume	[]	[]	[]	[]	[]	[]

The following questions ask you for your thoughts about exporting in relation to your own firm. (Please indicate the degree to which you AGREE or DISAGREE with each of the following statements by placing an X in the appropriate BOX: [X])

	SA=STRONGLY AGREE	A=AGREE	N=NEITHER DK=DON'T KNOW	D=DISAGREE	SD=STRONGLY DISAGREE	
	SA	A	N	D	SD	DK
28. My firm would probably use the same price structure in selling to foreign buyers as we use in pricing our products for sale in the U.S.	[]	[]	[]	[]	[]	[]
29. Export markets for my firm's products could be more profitable than the U.S. market.	[]	[]	[]	[]	[]	[]

APPENDIX C-1 (cont'd.)

	SA	A	N	D	SD	DK
30. My firm could make higher margins on products sold in the U.S. than on products sold in foreign markets.	[]	[]	[]	[]	[]	[]
31. My firm could use pretty much the same sales techniques in any market.	[]	[]	[]	[]	[]	[]
32. Exporting would improve my firm's market position at home.	[]	[]	[]	[]	[]	[]
33. Exporting offers better growth opportunities for my firm than the U.S. market does.	[]	[]	[]	[]	[]	[]
34. Specifications, regulations and codes for my firm's products vary from country to country.	[]	[]	[]	[]	[]	[]
35. Sales agents/distributors like we use here are available in most foreign markets.	[]	[]	[]	[]	[]	[]
36. It would be costly for my firm to withdraw from exporting once we got into it.	[]	[]	[]	[]	[]	[]
37. In selling in foreign markets my firm could evaluate sales agents/distributors the same way we evaluate them here.	[]	[]	[]	[]	[]	[]
38. My firm will be better able to diversify its product lines if it exports.	[]	[]	[]	[]	[]	[]
39. My firm could distribute its products to buyers in foreign markets in the same way we distribute them to our customers here.	[]	[]	[]	[]	[]	[]
40. The financial returns to the owners of my firm will be greater if we concentrate on our U.S. customers and <u>don't</u> get involved in exporting.	[]	[]	[]	[]	[]	[]
41. My firm would expect to see the results of our export efforts directly on our income statement.	[]	[]	[]	[]	[]	[]
42. Selling in foreign markets could help my firm develop more competitive products to sell at home.	[]	[]	[]	[]	[]	[]

APPENDIX C-1 (cont'd.)

The following questions ask you about how you get information about exporting. (Please indicate the extent to which you AGREE or DISAGREE with each of the following statements by placing an X in the appropriate BOX: [X])

SA=STRONGLY AGREE A=AGREE N=NEITHER D=DISAGREE SD=STRONGLY DISAGREE
DK=DON'T KNOW

- | | SA | A | N | D | SD | DK |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 43. I have heard people from other firms in our industry talk about getting good results from exporting. | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 44. I have heard people from other firms in our industry talk about problems they have had with exporting. | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 45. I have read about the success of other firms in our industry in export markets. | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 46. I have read about the problems that other firms in our industry have had with exporting. | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

The following questions ask what you think about your firm's possible responses to inquiries from foreign buyers. (Please indicate the extent to which you AGREE or DISAGREE with each of the following statements by placing an X in the appropriate BOX: [X])

- | | SA | A | N | D | SD | DK |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 47. My firm would reply to any inquiry from a potential foreign buyer. | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 48. My firm would reply to an inquiry from an import agent or distributor. | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 49. My firm would check on the credit rating of a foreign buyer before responding to an inquiry. | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 50. My firm would check into the credit standing of a country before replying to an inquiry from a buyer in that country. | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

51. Which of the following statements best describes your sales activity outside the U.S.?

☐ WE REGULARLY EXPORT OUR PRODUCTS TO BUYERS IN FOREIGN MARKETS

☐ WE SOMETIMES EXPORT OUR PRODUCTS TO BUYERS IN FOREIGN MARKETS.

☐ WE DO NOT SELL OUR PRODUCTS OUTSIDE OF THE U.S. → PLEASE TURN TO QUESTION 63.

APPENDIX C-1 (cont'd.)

SECTION THREE: BUSINESS PRACTICES OUTSIDE THE UNITED STATES

The following questions ask you about the sales and marketing practices that your firm uses in selling its products outside the U.S. (In answering the questions, please place an X in each of the appropriate boxes: [X].)

52. Considering your export activity during the past five years, please indicate the extent of your sales activity in each of the following areas:

	REGULARLY SELL IN	FREQUENTLY SELL IN	SOMETIMES SELL IN	RARELY SELL IN	NEVER SELL IN
WESTERN EUROPE	[]	[]	[]	[]	[]
CANADA	[]	[]	[]	[]	[]
ASIA	[]	[]	[]	[]	[]
CENTRAL/SOUTH AMERICA	[]	[]	[]	[]	[]
AFRICA	[]	[]	[]	[]	[]
MIDDLE EAST	[]	[]	[]	[]	[]
SOVIET/EASTERN BLOC	[]	[]	[]	[]	[]
OTHER: _____	[]	[]	[]	[]	[]

53. Please name the three foreign countries where you have your largest sales volume:

FIRST: _____

SECOND: _____

THIRD: _____

54. Please indicate the extent to which each of the following is used to promote your products to buyers outside the U.S.:

	MAJOR FACTOR IN PROMOTION				NOT A FACTOR
TRADE SHOWS	[]	[]	[]	[]	[]
MAILING OF BROCHURES, ETC.	[]	[]	[]	[]	[]
TRADE JOURNAL ADVERTISING	[]	[]	[]	[]	[]
CATALOG SHOWS	[]	[]	[]	[]	[]
U.S. EMBASSY PROMOTIONS	[]	[]	[]	[]	[]
COMPANY SALES PERSONNEL	[]	[]	[]	[]	[]
FOREIGN AGENTS/REPRESENTATIVES	[]	[]	[]	[]	[]
WORD OF MOUTH BETWEEN CUSTOMERS	[]	[]	[]	[]	[]

APPENDIX C-1 (cont'd.)

55. Please indicate the extent to which each of the following is used to obtain sales outside the U.S.:

	MAJOR FACTOR IN MOST SALES				NOT A FACTOR
PRESIDENT/GENERAL MANAGER	☐	☐	☐	☐	☐
SALES/MARKETING MANAGER	☐	☐	☐	☐	☐
AGENTS/REPRESENTATIVES IN OTHER COUNTRIES	☐	☐	☐	☐	☐
DISTRIBUTORS/DEALERS IN OTHER COUNTRIES	☐	☐	☐	☐	☐
YOUR OWN SALES PERSONNEL IN OTHER COUNTRIES	☐	☐	☐	☐	☐
YOUR SALES PERSONNEL IN THE U.S.	☐	☐	☐	☐	☐
SUBSIDIARY SALES PERSONNEL	☐	☐	☐	☐	☐
PARENT COMPANY SALES PERSONNEL	☐	☐	☐	☐	☐
EXPORT MANAGEMENT COMPANY OR OTHER U.S. AGENT	☐	☐	☐	☐	☐

56. How do you quote prices to buyers outside the U.S.?

- ☐ U.S. CURRENCY?
☐ CANADIAN CURRENCY?
☐ CURRENCY OF BUYER?
☐ OTHER? PLEASE SPECIFY: _____

57. In relation to competitors in foreign (export) markets, are your prices:

- ☐ A LOT HIGHER THAN COMPETITORS?
☐ A LITTLE HIGHER THAN COMPETITORS?
☐ ABOUT THE SAME AS COMPETITORS?
☐ A LITTLE LOWER THAN COMPETITORS?
☐ A LOT LOWER THAN COMPETITORS?

58. Comparing your own prices to buyers in the U.S. with your prices to buyers in other countries, are your prices in the U.S.:

- ☐ A LOT HIGHER THAN YOUR PRICES IN OTHER COUNTRIES.
☐ A LITTLE HIGHER THAN YOUR PRICES IN OTHER COUNTRIES.
☐ ABOUT THE SAME AS YOUR PRICES IN OTHER COUNTRIES.
☐ A LITTLE LOWER THAN YOUR PRICES IN OTHER COUNTRIES.
☐ A LOT LOWER THAN YOUR PRICES IN OTHER COUNTRIES.

APPENDIX C-1 (cont'd.)

59. Please indicate the extent to which each of the following is used to finance sales to buyers outside the U.S.:

	USED TO FINANCE MOST SALES				NEVER USED
INTERNAL COMPANY FINANCING	[]	[]	[]	[]	[]
COMMERCIAL CREDIT FROM BANKS IN THE U.S.	[]	[]	[]	[]	[]
COMMERCIAL CREDIT FROM BANKS IN CANADA	[]	[]	[]	[]	[]
COMMERCIAL CREDIT FROM BANKS IN BUYER'S COUNTRY	[]	[]	[]	[]	[]
FEDERAL EXPORT PROMOTION GUARANTEES	[]	[]	[]	[]	[]
FOREIGN GOVERNMENT FINANCING	[]	[]	[]	[]	[]
OTHER THIRD PARTY FINANCING	[]	[]	[]	[]	[]
BUYER ARRANGES FINANCING	[]	[]	[]	[]	[]

60. Do you have a separate Export Department or Division which is responsible for sales made to customers outside the U.S.?

- [] YES
[] NO
[] DON'T KNOW

61.a. What percent (%) of your total 1983 sales volume came from export sales?

_____ %

b. How much was this in dollars? \$: _____

62. Which of the following statements best describes your expectations about your firm's future involvement with exporting? (Mark as many as apply.)

- [] WE ARE FULLY COMMITTED TO OUR EXPORT MARKETS FOR THE FORESEEABLE FUTURE.
[] WE WILL CONTINUE EXPORTING WHENEVER OUR SALES IN THE U.S. ARE DOWN.
[] WE WILL PROBABLY STOP EXPORTING TO SOME COUNTRIES SOON.
[] WE ARE REVIEWING SEVERAL COUNTRIES AS POTENTIAL NEW MARKETS.
[] WE WILL CONTINUE TO EXPORT AS LONG AS WE RECEIVE INQUIRIES FROM FOREIGN BUYERS.

APPENDIX C-1 (cont'd.)

SECTION FOUR: COMPANY INFORMATION

These last few questions ask you about your firm and will be used for classification purposes only.

63. Please indicate the degree to which each of the following firm goals is IMPORTANT to your firm.

	VI=VERY IMPORTANT	QI=QUITE IMPORTANT UI=UNIMPORTANT	SI=SLIGHTLY IMPORTANT DK=DON'T KNOW	N=NEITHER		
	VI	QI	SI	N	UI	DK
a. Profit	[]	[]	[]	[]	[]	[]
b. Growth	[]	[]	[]	[]	[]	[]
c. Stability	[]	[]	[]	[]	[]	[]
d. Diversification	[]	[]	[]	[]	[]	[]
e. Increase Market Share	[]	[]	[]	[]	[]	[]
f. Returns to Owners	[]	[]	[]	[]	[]	[]
g. Increase Sales Volume	[]	[]	[]	[]	[]	[]

64. Which of the following best describes the ownership of your firm?

- [] INDIVIDUAL OWNER
 [] PARTNERSHIP
 [] FAMILY OWNED
 [] CLOSELY HELD CORPORATION
 [] PUBLICLY TRADED CORPORATION

65. Which of the following best describes your firm (plant)?
 (Mark more than one if appropriate.)

- [] THIS IS OUR ONLY MANUFACTURING PLANT IN THE U.S.
 [] THIS IS ONE OF SEVERAL MANUFACTURING PLANTS IN THE U.S.
 [] WE ARE A SUBSIDIARY OF A CANADIAN FIRM.
 [] WE ARE A SUBSIDIARY OF A U.S. FIRM.
 [] WE ARE A SUBSIDIARY OF A FIRM HEADQUARTERED IN: _____
 [] WE ARE THE HEADQUARTERS, WITH SUBSIDIARIES IN CANADA.
 [] WE ARE THE HEADQUARTERS, WITH SUBSIDIARIES IN THE U.S.
 [] WE ARE THE HEADQUARTERS, WITH SUBSIDIARIES IN: _____
-

APPENDIX C-1 (cont'd.)

66. Do you receive newsletters or other information from Federal or State government agencies about export opportunities?
- ☐ YES
- ☐ NO
- ☐ DON'T KNOW
67. Have you ever attended an export promotion seminar?
- ☐ YES
- ☐ NO
- ☐ DON'T KNOW
68. What was your firm's total sales volume in 1983? \$: _____
- 69.a. How many employees does your firm have in the U.S.? _____
- b. How many in the world? _____
70. How many managers are there in your firm? _____
71. How many of your managers have college degrees? _____
72. How many of your managers have a year or more of work experience outside the U.S.?
- _____
73. How many of your managers can speak a language other than English?
- _____
74. What is the average age of the managers in your firm?
- ☐ 25 - 34
- ☐ 35 - 44
- ☐ 45 - 54
- ☐ 55 - 64
75. What is your title? _____

APPENDIX C-1 (cont'd.)

**(If your firm exports, please answer question 76.

If your firm does not export, please answer question 77)

76. Please briefly describe how your firm became involved in exporting.

77. Has your firm considered exporting? Why do you not?

APPENDIX C-1 (cont'd.)

78. What actions would you recommend be taken by the Department of Commerce to assist your firm in increasing your sales in foreign markets?

THANK YOU FOR YOUR ASSISTANCE

APPENDIX C-1 (cont'd.)

Is there anything else you would like to tell us about your firm's experiences with exporting? If so, please use this space for that purpose.

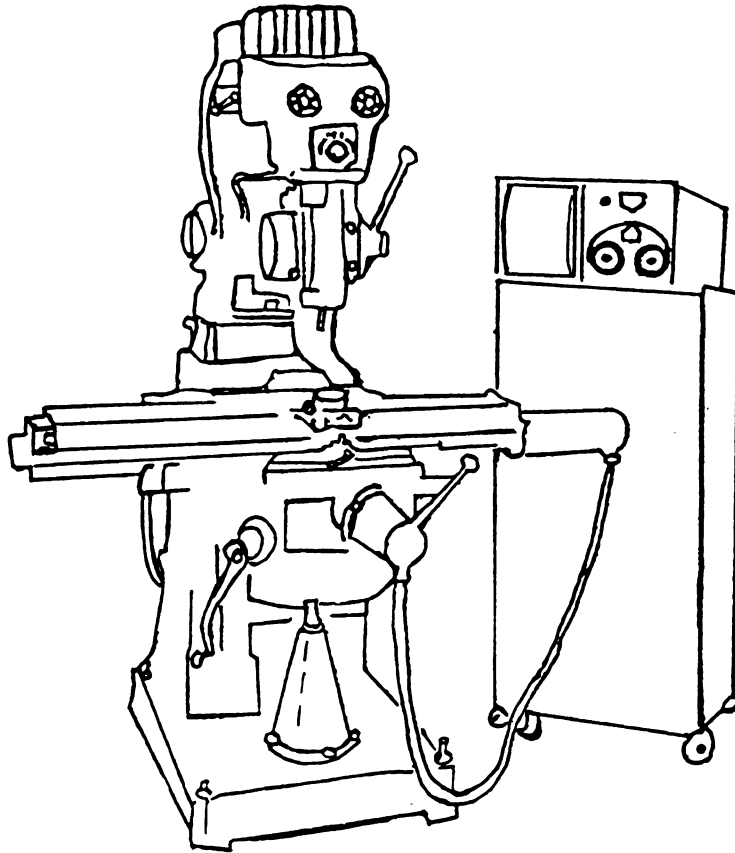
Also, any comments you wish to make that you think may help us in future efforts to understand the marketing and export activities of manufacturers in your industry will be appreciated, either here or in a separate letter.

Your contribution to this effort is very greatly appreciated. If you would like a summary of results, please print your name and address on the back of the return envelope (NOT on this questionnaire). We will see that you get it.

APPENDIX C-2

SURVEY FOR ONTARIO FIRMS

MACHINERY MARKETING AND EXPORT STUDY



This study is being conducted as part of the Canadian/American Business Studies Project to assist machinery manufacturers in finding ways to increase sales both at home and abroad.

Please answer the following questions. If you wish to comment on any questions or qualify your answers, please use the margins or a separate sheet of paper.

Return this questionnaire to:

Machinery Marketing & Export Study
Dept. of Marketing & Transportation
Michigan State University
East Lansing, Michigan 48824

APPENDIX C-2 (cont'd.)

SECTION ONE: GENERAL BUSINESS PRACTICES

(In answering the following questions please place an X in each of the appropriate boxes: [X].)

1. Which of the following statements best describes where you sell your products?

- [] WE SELL MOST OF OUR PRODUCTS LOCALLY (WITHIN 100 MILES OF OUR PLANT).
 [] WE SELL MOST OF OUR PRODUCTS IN ONTARIO.
 [] WE SELL MOST OF OUR PRODUCTS IN ONTARIO AND NEARBY AREAS OF THE U.S.
 [] WE SELL OUR PRODUCTS NATIONWIDE IN CANADA.
 [] WE SELL OUR PRODUCTS THROUGHOUT NORTH AMERICA.
 [] WE SELL OUR PRODUCTS THROUGHOUT THE WORLD.

2. Please identify the products your firm makes. (Mark as many as apply.)

	STANDARDIZED	SPECIALIZED
GRINDING MACHINES	[]	[]
BORING MACHINES	[]	[]
DRILLING MACHINES	[]	[]
MILLING MACHINES	[]	[]
MACHINE CENTERS	[]	[]
OTHER METAL CUTTING MACHINERY	[]	[]
DIE CASTING MACHINERY	[]	[]
OTHER METAL FORMING MACHINERY	[]	[]
AUTOMATIC TRANSFER MACHINES	[]	[]
OTHER, PLEASE SPECIFY: _____	[]	[]

3. Is this machinery your major line of business?

- [] YES
 [] NO → IF NO, WHAT IS YOUR MAJOR BUSINESS? _____

4. Are some of these machines numerically or computer controlled (NC or CNC)?

- [] NONE ARE
 [] LESS THAN 25% ARE
 [] 26-50% ARE
 [] 51-75% ARE
 [] 76-100% ARE

APPENDIX C-2 (cont'd.)

5. How many patents does your company have? _____

6. Please indicate below how frequently you sell your products to each of the following customer groups. (Mark one category for each customer group.)

	REGULARLY SELL TO	FREQUENTLY SELL TO	SOMETIMES SELL TO	RARELY SELL TO	NEVER SELL TO
AUTOMOBILE/TRUCK INDUSTRY.....	[]	[]	[]	[]	[]
AEROSPACE/AIRPLANE INDUSTRY.....	[]	[]	[]	[]	[]
APPLIANCE INDUSTRY	[]	[]	[]	[]	[]
MILITARY EQUIPMENT INDUSTRY	[]	[]	[]	[]	[]
OIL INDUSTRY	[]	[]	[]	[]	[]
OTHER MACHINERY MANUFACTURERS	[]	[]	[]	[]	[]
OTHER: _____	[]	[]	[]	[]	[]
PLEASE SPECIFY					

7. Please indicate the extent to which each of the following is used to obtain sales inside Canada.

	MAJOR FACTOR IN MOST SALES				NOT A FACTOR
PRESIDENT/GENERAL MANAGER	[]	[]	[]	[]	[]
SALES/MARKETING MANAGER	[]	[]	[]	[]	[]
YOUR OWN SALES PERSONNEL	[]	[]	[]	[]	[]
MANUFACTURER'S REPRESENTATIVES	[]	[]	[]	[]	[]
DISTRIBUTORS/DEALERS	[]	[]	[]	[]	[]
SUBSIDIARY SALES PERSONNEL	[]	[]	[]	[]	[]
PARENT COMPANY SALES PERSONNEL	[]	[]	[]	[]	[]

APPENDIX C-2 (cont'd.)

8. Please indicate the extent to which each of the following is used to promote your products to buyers inside Canada:

	MAJOR FACTOR IN PROMOTION				NOT A FACTOR
TRADE SHOWS	☐	☐	☐	☐	☐
MAILING OF BROCHURES, ETC.	☐	☐	☐	☐	☐
TRADE JOURNAL ADVERTISING	☐	☐	☐	☐	☐
COMPANY SALES PERSONNEL	☐	☐	☐	☐	☐
AGENTS/REPRESENTATIVES	☐	☐	☐	☐	☐
WORD OF MOUTH BETWEEN CUSTOMERS	☐	☐	☐	☐	☐

9. In relation to your competitors in the Canadian Market, are your prices...

- ☐ A LOT HIGHER THAN COMPETITORS?
- ☐ A LITTLE HIGHER THAN COMPETITORS?
- ☐ ABOUT THE SAME AS COMPETITORS?
- ☐ A LITTLE LOWER THAN COMPETITORS?
- ☐ A LOT LOWER THAN COMPETITORS?

10. Please indicate the extent to which each of the following is used to finance sales to buyers inside Canada:

	USED TO FINANCE MOST SALES				NEVER USED
INTERNAL COMPANY FINANCING	☐	☐	☐	☐	☐
COMMERCIAL CREDIT FROM BANKS IN CANADA	☐	☐	☐	☐	☐
COMMERCIAL CREDIT FROM BANKS IN THE U.S.	☐	☐	☐	☐	☐
OTHER THIRD PARTY FINANCING	☐	☐	☐	☐	☐
BUYER ARRANGES FINANCING	☐	☐	☐	☐	☐

APPENDIX C-2 (cont'd.)

SECTION TWO: THOUGHTS ABOUT EXPORTING

The next several questions ask you what you think about exporting in general.
(Please indicate the degree to which you AGREE or DISAGREE with each
of the following statements by placing an X in the appropriate BOX: [X])

SA=STRONGLY AGREE A=AGREE N=NEITHER D=DISAGREE SD=STRONGLY DISAGREE
DK=DON'T KNOW

	SA	A	N	D	SD	DK
11. Any firm that has a competitive advantage would consider exporting a good opportunity.	[]	[]	[]	[]	[]	[]
12. Exporting is the kind of activity that a firm can try once or twice and then re-evaluate.	[]	[]	[]	[]	[]	[]
13. Obtaining payment for sales made to foreign buyers is relatively simple.	[]	[]	[]	[]	[]	[]
14. Exporting is <u>not</u> risky if you plan well.	[]	[]	[]	[]	[]	[]
15. Obtaining export financing is a complicated process.	[]	[]	[]	[]	[]	[]
16. A firm can go in and out of export markets depending on how sales are going at home.	[]	[]	[]	[]	[]	[]
17. Business people in other countries are <u>not</u> like us.	[]	[]	[]	[]	[]	[]
18. The paper work involved in processing an export sale is easy to understand.	[]	[]	[]	[]	[]	[]
19. Evaluating the performance of sales agents/distributors in foreign markets is difficult.	[]	[]	[]	[]	[]	[]
20. Unsolicited inquiries from foreign buyers provide a good opportunity to test an export market.	[]	[]	[]	[]	[]	[]
21. The paper work necessary for exporting is overwhelming.	[]	[]	[]	[]	[]	[]
22. Export financing is easy to get.	[]	[]	[]	[]	[]	[]
23. Business practices are pretty much the same in most countries.	[]	[]	[]	[]	[]	[]

APPENDIX C-2 (cont'd.)

SA=STRONGLY AGREE A=AGREE N=NEITHER D=DISAGREE SD=STRONGLY DISAGREE
DK=DON'T KNOW

SA A N D SD DK

- | | | | | | | | |
|-----|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 24. | Exporting is just too complicated to be bothered with. | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 25. | Locating sales agents/distributors in foreign markets is easy. | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 26. | The cost of serving export markets is really more reasonable than most people think. | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 27. | Please indicate how CONSISTENT you think each of the following goals is with exporting. | | | | | | |

VC=VERY CONSISTENT C=CONSISTENT N=NEITHER I-INCONSISTENT
VI-VERY INCONSISTENT DK-DON'T KNOW

VC C N I VI DK

- | | | | | | | |
|--------------------------|-----|-----|-----|-----|-----|-----|
| a. Profit | [] | [] | [] | [] | [] | [] |
| b. Growth | [] | [] | [] | [] | [] | [] |
| c. Stability | [] | [] | [] | [] | [] | [] |
| d. Diversification | [] | [] | [] | [] | [] | [] |
| e. Increase Market Share | [] | [] | [] | [] | [] | [] |
| f. Returns to Owners | [] | [] | [] | [] | [] | [] |
| g. Increase Sales Volume | [] | [] | [] | [] | [] | [] |

The following questions ask you for your thoughts about exporting in relation to your own firm. (Please indicate the degree to which you AGREE or DISAGREE with each of the following statements by placing an X in the appropriate BOX: [X])

SA=STRONGLY AGREE A=AGREE N=NEITHER D=DISAGREE SD=STRONGLY DISAGREE
DK=DON'T KNOW

SA A N D SD DK

28. My firm would probably use the same price structure in selling to foreign buyers as we use in pricing our products for sale in Canada. ☐ ☐ ☐ ☐ ☐ ☐
29. Export markets for my firm's products could be more profitable than the Canadian market. ☐ ☐ ☐ ☐ ☐ ☐

APPENDIX C-2 (cont'd.)

	SA	A	N	D	SD	DK
30. My firm could make higher margins on products sold in Canada than on products sold in foreign markets.	[]	[]	[]	[]	[]	[]
31. My firm could use pretty much the same sales techniques in any market.	[]	[]	[]	[]	[]	[]
32. Exporting would improve my firm's market position at home.	[]	[]	[]	[]	[]	[]
33. Exporting offers better growth opportunities for my firm than the Canadian market does.	[]	[]	[]	[]	[]	[]
34. Specifications, regulations and codes for my firm's products vary from country to country.	[]	[]	[]	[]	[]	[]
35. Sales agents/distributors like we use here are available in most foreign markets.	[]	[]	[]	[]	[]	[]
36. It would be costly for my firm to withdraw from exporting once we got into it.	[]	[]	[]	[]	[]	[]
37. In selling in foreign markets my firm could evaluate sales agents/distributors the same way we evaluate them here.	[]	[]	[]	[]	[]	[]
38. My firm will be better able to diversify its product lines if it exports.	[]	[]	[]	[]	[]	[]
39. My firm could distribute its products to buyers in foreign markets in the same way we distribute them to our customers here.	[]	[]	[]	[]	[]	[]
40. The financial returns to the owners of my firm will be greater if we concentrate on our Canadian customers and <u>don't</u> get involved in exporting.	[]	[]	[]	[]	[]	[]
41. My firm would expect to see the results of our export efforts directly on our income statement.	[]	[]	[]	[]	[]	[]
42. Selling in foreign markets could help my firm develop more competitive products to sell at home.	[]	[]	[]	[]	[]	[]

APPENDIX C-2 (cont'd.)

The following questions ask you about how you get information about exporting. (Please indicate the extent to which you AGREE or DISAGREE with each of the following statements by placing an X in the appropriate BOX: [X])

SA=STRONGLY AGREE A=AGREE N=NEITHER D=DISAGREE SD=STRONGLY DISAGREE
DK=DON'T KNOW

- | | SA | A | N | D | SD | DK |
|--|-----|-----|-----|-----|-----|-----|
| 43. I have heard people from other firms in our industry talk about getting good results from exporting. | [] | [] | [] | [] | [] | [] |
| 44. I have heard people from other firms in our industry talk about problems they have had with exporting. | [] | [] | [] | [] | [] | [] |
| 45. I have read about the success of other firms in our industry in export markets. | [] | [] | [] | [] | [] | [] |
| 46. I have read about the problems that other firms in our industry have had with exporting. | [] | [] | [] | [] | [] | [] |

The following questions ask what you think about your firm's possible responses to inquiries from foreign buyers. (Please indicate the extent to which you AGREE or DISAGREE with each of the following statements by placing an X in the appropriate BOX: [X])

- | | SA | A | N | D | SD | DK |
|---|-----|-----|-----|-----|-----|-----|
| 47. My firm would reply to any inquiry from a potential foreign buyer. | [] | [] | [] | [] | [] | [] |
| 48. My firm would reply to an inquiry from an import agent or distributor. | [] | [] | [] | [] | [] | [] |
| 49. My firm would check on the credit rating of a foreign buyer before responding to an inquiry. | [] | [] | [] | [] | [] | [] |
| 50. My firm would check into the credit standing of a country before replying to an inquiry from a buyer in that country. | [] | [] | [] | [] | [] | [] |

51. Which of the following statements best describes your sales activity outside Canada?

[] WE REGULARLY EXPORT OUR PRODUCTS TO BUYERS IN FOREIGN MARKETS

[] WE SOMETIMES EXPORT OUR PRODUCTS TO BUYERS IN FOREIGN MARKETS.

[] WE DO NOT SELL OUR PRODUCTS OUTSIDE OF CANADA. → PLEASE TURN TO QUESTION 63.

APPENDIX C-2 (cont'd.)

SECTION THREE: BUSINESS PRACTICES OUTSIDE CANADA

The following questions ask you about the sales and marketing practices that your firm uses in selling its products outside Canada. (In answering the questions, please place an X in each of the appropriate boxes: [X].)

52. Considering your export activity during the past five years, please indicate the extent of your sales activity in each of the following areas:

	REGULARLY SELL IN	FREQUENTLY SELL IN	SOMETIMES SELL IN	RARELY SELL IN	NEVER SELL IN
WESTERN EUROPE	[]	[]	[]	[]	[]
THE UNITED STATES	[]	[]	[]	[]	[]
ASIA	[]	[]	[]	[]	[]
CENTRAL/SOUTH AMERICA	[]	[]	[]	[]	[]
AFRICA	[]	[]	[]	[]	[]
MIDDLE EAST	[]	[]	[]	[]	[]
SOVIET/EASTERN BLOC	[]	[]	[]	[]	[]
OTHER: _____	[]	[]	[]	[]	[]

53. Please name the three foreign countries where you have your largest sales volume:

FIRST: _____

SECOND: _____

THIRD: _____

54. Please indicate the extent to which each of the following is used to promote your products to buyers outside Canada:

	MAJOR FACTOR IN PROMOTION				NOT A FACTOR
TRADE SHOWS	[]	[]	[]	[]	[]
MAILING OF BROCHURES, ETC.	[]	[]	[]	[]	[]
TRADE JOURNAL ADVERTISING	[]	[]	[]	[]	[]
CATALOG SHOWS	[]	[]	[]	[]	[]
THE TRADE COMMISSIONER SERVICE	[]	[]	[]	[]	[]
COMPANY SALES PERSONNEL	[]	[]	[]	[]	[]
FOREIGN AGENTS/REPRESENTATIVES	[]	[]	[]	[]	[]
WORD OF MOUTH BETWEEN CUSTOMERS	[]	[]	[]	[]	[]

APPENDIX C-2 (cont'd.)

55. Please indicate the extent to which each of the following is used to obtain sales outside Canada:

	MAJOR FACTOR IN MOST SALES				NOT A FACTOR
PRESIDENT/GENERAL MANAGER	☐	☐	☐	☐	☐
SALES/MARKETING MANAGER	☐	☐	☐	☐	☐
AGENTS/REPRESENTATIVES IN OTHER COUNTRIES	☐	☐	☐	☐	☐
DISTRIBUTORS/DEALERS IN OTHER COUNTRIES	☐	☐	☐	☐	☐
YOUR OWN SALES PERSONNEL IN OTHER COUNTRIES	☐	☐	☐	☐	☐
YOUR SALES PERSONNEL IN CANADA	☐	☐	☐	☐	☐
SUBSIDIARY SALES PERSONNEL	☐	☐	☐	☐	☐
PARENT COMPANY SALES PERSONNEL	☐	☐	☐	☐	☐
EXPORT MANAGEMENT COMPANY OR OTHER CANADIAN AGENT	☐	☐	☐	☐	☐

56. How do you quote prices to buyers outside Canada?

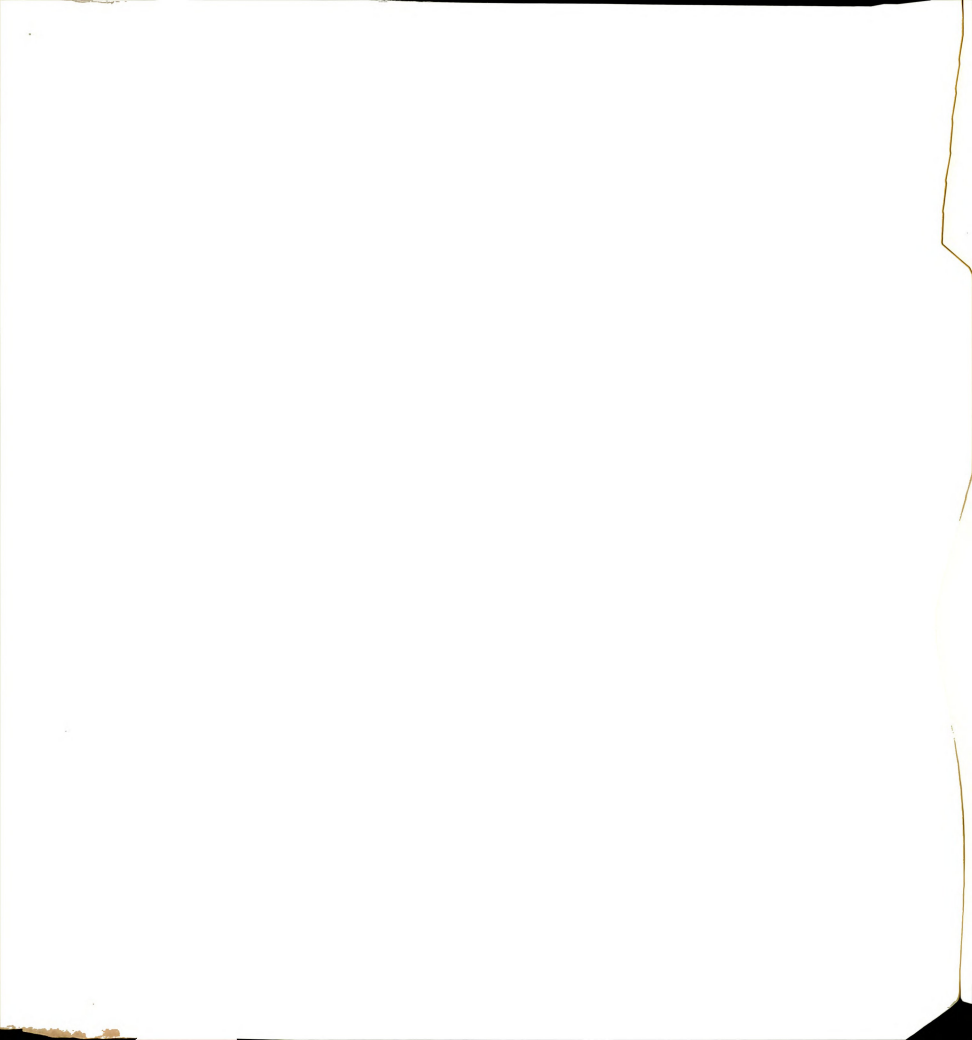
- ☐ CANADIAN CURRENCY?
☐ U.S. CURRENCY?
☐ CURRENCY OF BUYER?
☐ OTHER? PLEASE SPECIFY: _____

57. In relation to competitors in foreign (export) markets, are your prices:

- ☐ A LOT HIGHER THAN COMPETITORS?
☐ A LITTLE HIGHER THAN COMPETITORS?
☐ ABOUT THE SAME AS COMPETITORS?
☐ A LITTLE LOWER THAN COMPETITORS?
☐ A LOT LOWER THAN COMPETITORS?

58. Comparing your own prices to buyers in Canada with your prices to buyers in other countries, are your prices in Canada:

- ☐ A LOT HIGHER THAN YOUR PRICES IN OTHER COUNTRIES.
☐ A LITTLE HIGHER THAN YOUR PRICES IN OTHER COUNTRIES.
☐ ABOUT THE SAME AS YOUR PRICES IN OTHER COUNTRIES.
☐ A LITTLE LOWER THAN YOUR PRICES IN OTHER COUNTRIES.
☐ A LOT LOWER THAN YOUR PRICES IN OTHER COUNTRIES.



APPENDIX C-2 (cont'd.)

59. Please indicate the extent to which each of the following is used to finance sales to buyers outside Canada:

	USED TO FINANCE MOST SALES				NEVER USED
INTERNAL COMPANY FINANCING	☐	☐	☐	☐	☐
COMMERCIAL CREDIT FROM BANKS IN CANADA	☐	☐	☐	☐	☐
COMMERCIAL CREDIT FROM BANKS IN THE UNITED STATES	☐	☐	☐	☐	☐
COMMERCIAL CREDIT FROM BANKS IN BUYER'S COUNTRY	☐	☐	☐	☐	☐
FEDERAL EXPORT PROMOTION GUARANTEES	☐	☐	☐	☐	☐
FOREIGN GOVERNMENT FINANCING	☐	☐	☐	☐	☐
OTHER THIRD PARTY FINANCING	☐	☐	☐	☐	☐
BUYER ARRANGES FINANCING	☐	☐	☐	☐	☐

60. Do you have a separate Export Department or Division which is responsible for sales made to customers outside Canada?

- ☐ YES
☐ NO
☐ DON'T KNOW

61.a. What percent (%) of your total 1983 sales volume came from export sales?

_____ %

b. How much was this in dollars? \$(C): _____

62. Which of the following statements best describes your expectations about your firm's future involvement with exporting? (Mark as many as apply.)

- ☐ WE ARE FULLY COMMITTED TO OUR EXPORT MARKETS FOR THE FORESEEABLE FUTURE.
☐ WE WILL CONTINUE EXPORTING WHENEVER OUR SALES IN CANADA ARE DOWN.
☐ WE WILL PROBABLY STOP EXPORTING TO SOME COUNTRIES SOON.
☐ WE ARE REVIEWING SEVERAL COUNTRIES AS POTENTIAL NEW MARKETS.
☐ WE WILL CONTINUE TO EXPORT AS LONG AS WE RECEIVE INQUIRIES FROM FOREIGN BUYERS.

APPENDIX C-2 (cont'd.)

SECTION FOUR: COMPANY INFORMATION

These last few questions ask you about your firm and will be used for classification purposes only.

63. Please indicate the degree to which each of the following firm goals is IMPORTANT to your firm.

	VI=VERY IMPORTANT	QI=QUITE IMPORTANT UI=UNIMPORTANT	SI=SLIGHTLY IMPORTANT DK=DON'T KNOW				N=NEITHER	
			VI	QI	SI	N	UI	DK
a. Profit			[]	[]	[]	[]	[]	[]
b. Growth			[]	[]	[]	[]	[]	[]
c. Stability			[]	[]	[]	[]	[]	[]
d. Diversification			[]	[]	[]	[]	[]	[]
e. Increase Market Share			[]	[]	[]	[]	[]	[]
f. Returns to Owners			[]	[]	[]	[]	[]	[]
g. Increase Sales Volume			[]	[]	[]	[]	[]	[]

64. Which of the following best describes the ownership of your firm?

- [] INDIVIDUAL OWNER
 [] PARTNERSHIP
 [] FAMILY OWNED
 [] CLOSELY HELD CORPORATION
 [] PUBLICLY TRADED CORPORATION

65. Which of the following best describes your firm (plant)?
 (Mark more than one if appropriate.)

- [] THIS IS OUR ONLY MANUFACTURING PLANT IN CANADA.
 [] THIS IS ONE OF SEVERAL MANUFACTURING PLANTS IN CANADA.
 [] WE ARE A SUBSIDIARY OF A CANADIAN FIRM.
 [] WE ARE A SUBSIDIARY OF A U.S. FIRM.
 [] WE ARE A SUBSIDIARY OF A FIRM HEADQUARTERED IN: _____
 [] WE ARE THE HEADQUARTERS, WITH SUBSIDIARIES IN CANADA.
 [] WE ARE THE HEADQUARTERS, WITH SUBSIDIARIES IN THE U.S.
 [] WE ARE THE HEADQUARTERS, WITH SUBSIDIARIES IN: _____
-

APPENDIX C-2 (cont'd.)

66. Do you receive newsletters or other information from Federal or Provincial government agencies about export opportunities?

- ☐ YES
☐ NO
☐ DON'T KNOW

67. Have you ever attended an export promotion seminar?

- ☐ YES
☐ NO
☐ DON'T KNOW

68. What was your firm's total sales volume in 1983? \$(C): _____

69.a. How many employees does your firm have in Canada? _____

b. How many in the world? _____

70. How many managers are there in your firm? _____

71. How many of your managers have college degrees? _____

72. How many of your managers have a year or more of work experience outside Canada?

73. How many of your managers can speak a language other than English?

74. What is the average age of the managers in your firm?

- ☐ 25 - 34
☐ 35 - 44
☐ 45 - 54
☐ 55 - 64

75. What is your title? _____

APPENDIX C-2 (cont'd.)

**(If your firm exports, please answer question 76.
If your firm does not export, please answer question 77)

76. Please briefly describe how your firm became involved in exporting.

77. Has your firm considered exporting? Why do you not?

APPENDIX C-2 (cont'd.)

78. What actions would you recommend be taken by the Department of Industry, Trade and Commerce to assist your firm in increasing your sales in foreign markets?

THANK YOU FOR YOUR ASSISTANCE

APPENDIX C-2 (cont'd.)

Is there anything else you would like to tell us about your firm's experiences with exporting? If so, please use this space for that purpose.

Also, any comments you wish to make that you think may help us in future efforts to understand the marketing and export activities of manufacturers in your industry will be appreciated, either here or in a separate letter.

Your contribution to this effort is very greatly appreciated.
If you would like a summary of results, please print your name and address on the back of the return envelope (NOT on this questionnaire). We will see that you get it.

APPENDIX D-1

FIRST COVER LETTER

MICHIGAN STATE UNIVERSITY

March 6, 1984

GRADUATE SCHOOL OF BUSINESS ADMINISTRATION
DEPARTMENT OF MARKETING AND
TRANSPORTATION ADMINISTRATION

EAST LANSING MICHIGAN 48824-1121

ADDRESS

Dear Mr. :

With business conditions improving one of the major questions facing machinery manufacturers today is: What should we do to increase sales? One option available to most firms is exporting. But is this the right answer for every firm? Can you successfully use the same marketing techniques in other markets that you use in the U.S.? And what actions should be taken by government agencies to assist you in your efforts to obtain export sales? Answers to these and other questions are sought in this study.

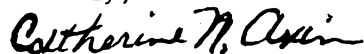
Your firm is one of a small number of representative Michigan machinery manufacturers in which executives are being asked to share their company's marketing practices and give their opinions of exporting. In order that the results truly represent the thinking and practice of Michigan machine producers, it is important that each questionnaire be completed and returned.

You may be assured of complete confidentiality. The return envelope has an identification number so that we may check your name off the mailing list when your questionnaire is returned and not disturb you further. Neither your name nor your firm's will ever be placed on the questionnaire.

The results of this research will be made available to all interested study participants and will also be sent to the appropriate government policy makers. You may receive your summary of the results by writing "copy of results requested" on the back of the return envelope, and printing your name and address below it. Please do not put this information on the questionnaire itself.

I would be pleased to answer any questions you might have. Please write or call. The telephone number is (517) 353-6381. Thank you for your assistance.

Sincerely,



Catherine N. Axinn
Project Director

APPENDIX D-2

SECOND COVER LETTER

CANADIAN-AMERICAN BUSINESS STUDIES PROJECT

MICHIGAN STATE UNIVERSITY

March 27, 1984

GRADUATE SCHOOL OF BUSINESS ADMINISTRATION
DEPARTMENT OF MARKETING AND
TRANSPORTATION ADMINISTRATION
EAST LANSING, MICHIGAN 48824-1121

ADVISORY COMMITTEE
STANLEY C. HOLLANDER, MARKETING
VICTOR HOWARD, CANADIAN STUDIES
RONALD NAVITT, MARKETING

About three weeks ago I wrote to you seeking your views on marketing and exporting machine tools. As of today we have not yet received your completed questionnaire.

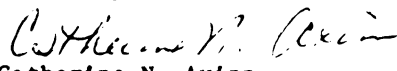
This study has been undertaken because we believe that by better understanding how machinery is marketed both in Canada and abroad it will be possible to develop programs to help Canadian machine tool builders increase their sales throughout the world.

I am writing to you again because of the significance each questionnaire has to the usefulness of this study. It is critical that responses be obtained from firms which do not currently export as well as from those that do. Your firm was selected to represent manufacturers in Ontario through a scientific selection process. In order for the results of this study to be truly representative of the views and practices of Ontario machinery builders, it is essential that each person in the sample return their questionnaire.

In the event that your questionnaire has been misplaced, a replacement is enclosed. If your firm does not produce machine tools and has therefore been included in our sample by mistake, please make a note of this on the questionnaire and return it to us.

Your cooperation is greatly appreciated.

Cordially,


Catherine N. Axinn
Project Director

P.S. A number of managers have written to ask when results will be available. We hope to have them out sometime this summer.

APPENDIX D-3

THIRD COVER LETTER

MICHIGAN STATE UNIVERSITY

April 24, 1984

GRADUATE SCHOOL OF BUSINESS ADMINISTRATION
DEPARTMENT OF MARKETING AND
TRANSPORTATION ADMINISTRATION

EAST LANSING MICHIGAN 48824-1121

Your thoughts about marketing and exporting machine tools are important to us, but we have not yet received your completed questionnaire.

The results of this study should be useful to your firm since they will provide an indication of which marketing practices are associated with obtaining higher sales volumes. I would be happy to send you a copy of the results, if you want one. To obtain the results and preserve your anonymity, simply put your name, address, and "copy of results requested" on the back of the return envelope (not the questionnaire). We expect to have the results ready sometime this summer.

The large number of questionnaires returned is very encouraging. But, whether we will be able to describe accurately what Michigan machinery producers think about these important topics depends on you and the others who have not yet responded. This is because our past experience suggests that those of you who have not yet sent in your questionnaire may hold very different views than those who have already replied.

This is the first state-wide study of this type that has ever been done. The usefulness of our results depends on how accurately we are able to describe the marketing practices currently being used by Michigan manufacturers.

It is for these reasons that I am writing to you again. In case our other correspondence did not reach you, a replacement questionnaire is enclosed. May I urge you to complete and return it as quickly as possible.

Your contribution to the success of this study will be appreciated greatly.

Most Sincerely,

Catherine N. Axinn
Project Director

APPENDIX D-4

POST CARD REMINDER

March 13, 1984

Last week a questionnaire seeking your thoughts on marketing and exporting machine tools was mailed to you.

If you have already completed and returned it to us, please accept our thanks. If not, please do so today. Because it has been sent to only a small number of Michigan manufacturers it is extremely important that yours also be included in the study if the results are to be accurate.

If by some chance you did not receive the questionnaire, or it got misplaced, please call me right now, collect (517-351-7858) and I will get another in the mail to you today.

Sincerely,

Catherine N. Axinn
Project Director

APPENDIX E-1

RESPONSE RECORD

3/6	3/7	3/8	3/9	3/12	3/13	3/14	3/15	3/16	3/19	3/20	3/21	
M * 0		5	15	15	7 P 1	4 1	3	2	20	7 3	4 1	
3/22	3/23	3/26	3/27	3/28	3/29	3/30	4/2	4/3	4/4	4/5	4/6	
3 3	1 2	1 2	**		12	18 3	13 3	5	2	4	7 2	
4/9	4/10	4/11	4/12	4/13	4/16	4/17	4/18	4/19	4/20	4/23		
3 5	3	3 7	1	4	5	1 2	.		1	1		
4/24	4/25	4/26	4/27	4/30	5/1	5/2	5/3	5/4	5/7	...	5/17	5/18
***		2	6	7	3			1	2 1		1	1

NOTES: M = Responses from Michigan firms in upper left

O = Responses from Ontario firms in lower right

* = First mailing with questionnaires

p = Post card reminder mailed

** = First follow-up mailing

*** = Second follow-up mailing

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