AN ATTEMPTED INTEGRATION OF THE LITERATURE ON THE EXPORT BEHAVIOR OF FIRMS

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Abstract. Forty-three studies on the export behavior of firms involving eleven countries were assembled. (The author believes that they constitute nearly all of the available literature on the subject.) An attempt was made to integrate them into a more-or-less meaningful whole that both yields interesting implications and provides a useful background guide for future research on the subject.

INTRODUCTION

■ The export behavior of firms relates to the supply side of international trade. A substantial body of literature has developed on the subject since the early 1960s, but it is so widely scattered and difficult to obtain that few analysts appear to be aware of more than a portion of what has been written. No common model has been developed for the various empirical findings on the export behavior of firms. This article reviews the essential features of that literature and integrates them by topic covered.

SUMMARY OF THE LITERATURE

Most empirical studies have identified multiple considerations relating to the export behavior of firms. Such studies are referred to under each of the topics to which they apply.

Export Initiation

Analysts concerned with the initiation of the export process have tended to focus on the effects of change-agents, both external and internal. *External* change-agents include chambers of commerce, industrial associations, banks, government agencies, and other firms [Pinney, 1970]. The latter appear to be overwhelmingly the most important [Tesar, 1975]; they include corporations that buy-out smaller firms and then pressure them to export, foreign firms interested in buying machinery for their own use or components for their manufacturing process, foreign importers, and export agents. Seven studies concerned with the source of initiative for exporting obtained information from exporters about whether their firm's initial export order was received unsolicited. Affirmative responses were obtained from the following percents of firms: 73% in a British Columbia study [Perkett, 1963]; 44% in a UK study [Simmonds and Smith, 1968]; and 40%, 60%, 69%, 82%, and 83% respectively in five U.S. studies [Snavely, et al., 1964; Tesar, 1975; Sinai, 1970; Simpson and Kujawa, 1974; Pavord and Bogart, 1975]. The five U.S. studies yield a simple arithmetic average of 67%.

The important *internal* change-agent tends to be a member of the firm's top management who is interested in and enthusiastic about exporting [Pinney, 1970]. The determinants of whether or not management takes the initiative in exporting appear to be the following. *First*, is management's diffuse impression of the attractiveness of exporting as an abstract ideal, independently of whatever particular contribution exporting might make to its own firm [Simpson, 1973]. (The latter cannot be known by management until he or she explores the feasibility of exporting or gains export experience.) *Second*, is

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the degree of the firm's international orientation [Wiedersheim-Paul, Welch, and Olson, 1975]; Cunningham and Spigel's [1971] UK findings suggest that this is determined by the firm's background and traditions, and by the foreign attitudes of its top management. (In Perlmutter–Thorelli terminology the latter attitudes are ethnocentric, polycentric, and geocentric [Perlmutter, 1969; Thorelli, 1966].) A study by Langston and Teas [1976] indicates that for U.S. firms the foreign attitudes of top management correlate, in turn, with whether or not they had studied a foreign language while in school; whether or not they had lived abroad sufficiently long to have experienced cultural shock; and whether or not that foreign experience was attractive. Managers' ages also are relevant, younger ones tending to be more internationally minded than older ones [Pinney, 1970]. A *third* determinant of whether management takes the initiative in initiating exporting is its confidence in the firm's competitive advantage [Tesar, 1975; Snavely, et al., 1964]. Tesar [1975] measured this as a composite involving: management's perception of whether or not the firm's product has unique qualities; management's perception of whether or not the firm has technological, marketing, financial, or price advantages; whether or not the firm possesses exclusive information about a foreign market or customer; whether or not the firm has a patented product; and whether or not the firm has an efficient distribution network. Snavely, et al. [1964] found evidence that management's confidence in the firm's competitive advantage related to whether the firm had (or believed that it could have) national distribution, and to whether the firm's product was patented. A *fourth* determinant of whether or not management takes the initiative in exporting is adverse home market conditions, causing management to explore exporting as a means for the firm's survival [Pavord and Bogart, 1975]. The relationship of this initiative to general economic conditions varies greatly among firms, because of the differential impacts that a country's economic condition has at any given time on its various industries [Rao, 1977].

Motivation for Exporting

The *motivation* for exporting is distinct from, though often related to, the *initiation* of exporting. Some firms are pushed into exporting by an external change agent (e.g., a foreign customer); some simply take advantage of export opportunities that come their way with no evident objective in mind, while others are motivated to initiate exporting deliberately. Analyses of export motivation apply primarily to the latter group of firms.

Two UK studies [Hunt, Froggatt, and Hovel, 1967; Cooper, Hartley, and Harvey, 1970] concluded that short-term profit was *not* the motive for exporting; rather, that it was long-term profitability secured through market diversification and long-term growth. A study of 138 Midwestern exporters of scientific and industrial instruments [Pavord and Bogart, 1975] found that the primary motive for exporting was to avoid losses from a saturated home market and consequent declining domestic sales. An accounting analysis of 22 Indiana exporting firms [Barnhart, 1968] concluded that their accounting methods were too inadequate to indicate how much, if any, profit resulted from exporting. However, the managers' *subjective* estimates were that exporting contributed little to short-term profit [Tookey, 1964; Barnhart, 1968; Sinai, 1970]. On the other hand, a study of 120 Tennessee manufacturing firms [Simpson, 1973] indicated that those managements regarded exporting as a means to high profit. Do these differing attitudes merely reflect different economic conditions? Britain's exchange rate was relatively high in the early 1960s when Tookey's study was made. The U.S. exchange rate was high when Barnhart and Sinai's studies were made (during the late 1960s) but had fallen by the time Simpson made his study [1973]. The U.S. was in a recession when Pavord and Bogart's study was made [1975].

Classical economic theory implies that a firm's probability of exporting tends to vary directly with the profit its management expects from exporting. Hirsch [1971] in a study of 497 Danish, Dutch, and Israeli manufacturing firms concluded that *no* such relationship existed. Similar conclusions were drawn from a study of 21 Tennessee firms

[Granade and Dicer, 1973]. However, other studies of U.S. manufacturing firms [Simpson, 1973; Tesar, 1975; Bilkey and Tesar, 1975] *did* yield such a relationship. Consistent with the latter studies, Alexandrides [1971], in a questionnaire study of 104 Georgia manufacturing firms, found that exporters' attitudes toward exporting varied directly with the perceived profitability of exporting, and inversely with the perceived intensity of their domestic competition. Unfortunately, these studies were based on judgment samples, rather than on random samples, with no consideration for possible differences in the firms' export stages. (As will be explained later, the percent of sales exported by experienced firms tends to vary according to the perceived profitability of exporting, but the initiation of experimental exporting seems to relate primarily to nonprofit considerations.) Possibly Hirsch's and Granade and Dicer's samples included a larger proportion of firms at early stages of the export process than did the other studies.

Perceived Obstacles to Exporting

A considerable number of studies focused on perceived serious obstacles (or barriers) to exporting, the apparent rationale being that a government could stimulate exporting by removing those obstacles, which usually are institutional and infrastructural. Several cross-sectional studies found that nonexporting firms perceived significantly more serious obstacles to exporting than did exporting firms [Alexandrides, 1971; de la Torre, 1972; Simpson, 1973; Rao and Weinrauch, 1974; State of Minnesota, 1975; Tesar, 1975; Bilkey and Tesar, 1975]. Others found either no relation [Doyle and Schommer, 1976], or an inverse relation—meaning that nonexporters perceived fewer obstacles to exporting than did exporters [Bilkey, 1970]. These seemingly contradictory findings are explicable by differences in the export development of the firms selected for the studies. That is, nonexporters that have *not* even explored the feasibility of exporting (which will be defined later as firms in Export Stages One and Two) have no basis for knowing their obstacles to exporting; and they, therefore, tend to list fewer than do the exporting firms [Bilkey, 1970]. However, nonexporters that *have* explored the feasibility of exporting (which will be defined later as firms in Export Stage Three) tend to list more serious obstacles to exporting than do the exporting firms [Bilkey, 1970]. The most frequent serious obstacles to exporting reported by U.S. firms in the empirical studies are: insufficient finances, foreign government restrictions, insufficient knowledge about foreign selling opportunities, inadequate product distribution abroad, and a lack of foreign market connections. The type of obstacles perceived tend to vary by industry [Pinney, 1971] and by firms' export stages [Tesar, 1975].

Management

In a study of 50 exporting and 70 nonexporting Tennessee manufacturing firms, Simpson [1973] found that 69% of the nonexporters admitted that they could export. He concluded that their real reason for not doing so was managerial apathy. Doyle and Schommer [1976] found a tendency for nonexporting Minnesota firms to believe that someone outside the firm should be responsible for proving that exporting would be successful for them. These kinds of observations have led various analysts to focus on the quality of management as an important determinant of exporting. Three means of measurement have been devised for this purpose. *One*, is peer evaluations as to: which firms are most efficient; and which firms best perform product planning, advertising, research, and sales administration functions. This method of measurement found that exporting firms tend to be evaluated more highly than nonexporting firms [Perkett, 1963]. A *second* measure of the quality of management has respondents evaluate their own managements. This approach indicated that exporters tended to rate their managements as being more aggressive than did the nonexporters [Doyle and Schommer, 1976]. A *third* measurement of the quality of management compares (a) managers' attitudes and activities, and (b) the firm's functions and organizational structure with (c)

accepted good management practices. Studies using this approach found that exporting firms tended to have better management than did the nonexporting firms [Tookey, 1964; Cunningham and Spigel, 1971; Wiedersheim-Paul, Welch, and Olson, 1975; Tesar, 1975; Bilkey and Tesar, 1975].

One study [Bilkey and Tesar, 1975] analyzed firms according to their stage in the export process. It found that the quality of management varied *directly* with whether or not the firm initiated experimental exporting (this is defined later as Export Stage Four), but varied *inversely* with the percent of sales exported by experienced exporters (defined later as Export Stage Five). A hypothesis for rationalizing the latter is that at more advanced stages of the internationalization process of firms, the better managers tended to have established production facilities abroad and therefore exported less than the poorer managers who had not developed foreign production facilities.[1]

Firm Size

Many analysts regard a firm's size as critical for its propensity to export, yet empirical findings on this issue have been mixed. Four studies found a positive cross-sectional relationship between firm size and the percent of firms that export [Perkett, 1963; Tookey, 1964; State of Minnesota, 1975]. Three studies found no meaningful relationship [Snavely, et al., 1964; Doyle and Schommer, 1976; Bilkey and Tesar, 1975]. Two studies concluded: that very small firms tend not to export, that beyond some point exporting is *not* correlated with size, and that between these two points exporting is correlated with firm size [Hirsch, 1971; Cavusgil, 1976]. The latter proposition seems capable of reconciling the other analysts' divergent findings; however, the relationship is complicated by a possible intercorrelation of firm size with the quality of management. The extent to which an intercorrelation exists could alone cause firm size to vary directly with a firm's propensity to export.

Export Destination

The Uppsala School argues that exporting tends to begin with the psychologically closest country, and then extends progressively to countries that are psychologically more-and-more distant [Wiedersheim-Paul, Welch, and Olson, 1975; Johanson and Vahlne, 1975].[2] This harmonizes with Linder's international trade theory [Linder, 1961], and three analysts have provided empirical data on the issue. Sinai [1970], in a study of 139 Oregon firms, found that the rank-ordered frequency of export destination was: Canada, Europe, Latin America. The State of Minnesota [1975] in a study of 720 Minnesota exporting firms found that 80% exported to Canada. Their rank-ordered frequency of export destination was: Canada, UK, Japan, Mexico, Australia, West Germany, France, Italy. Tesar [1975], in a study of 423 Wisconsin firms found that those exporting only a small percentage of their total sales (light exporters) tended to derive most of their export earnings from Canada, whereas those exporting a large percentage of their total sales (heavy exporters) tended to derive most of their export earnings from Western Europe. These findings are essentially consistent with the concept of psychological distances. Note that all three studies were in the northern part of the U.S. On the basis of Swedish studies, Carlson [1975] concluded: that firms producing technology-intensive products are more influenced by psychological distance than producers of other products, and that small firms are more influenced by psychological distance than are large firms.

Export Risk

Portfolio theory suggests that an exporting firm probably faces less total market risk than a nonexporting firm, because of its market diversification [Hirsch and Lev, 1971], but little empirical work has been done on this issue. Hirsch [1971], in a study of Danish,

Dutch, and Israeli firms, concluded that foreign *entry* is more hazardous than domestic selling. Tesar [1975] found that the "light exporters" in his sample perceived more risk from exporting than did "heavy exporters."

Exporting to Foreign Affiliates

A survey of 330 U.S. firms with 3,579 foreign affiliates [Bradshaw, 1969] showed that 52% of their exports were made to their own foreign affiliates. Of the latter exports, 55% were for resale without further manufacture; 35% were for further processing; 7% were for capital equipment; and 3% were for all else. The growing relative importance of exporting to affiliates was indicated by a survey of 298 U.S. multinational firms [Barker, 1972]. The share of their total exports to their majority-owned affiliates was 44% in 1966 and 55% in 1970. In 1964, exports to affiliates accounted for 46% of all U.S. exports to Canada, for 33% to Latin America, for 21% to Europe, and 11% to Africa, Asia, and Oceania combined [Pizer and Cutler, 1965]. Inasmuch as these studies covered the largest, and presumably most advanced, U.S. firms, is it possible that exporting to affiliates is the ultimate current stage of a firm's export process?

Export Models

A basic modeling question is whether firms' export behavior should be formulated in terms of a multi-activity model, incorporating all alternative activities of a firm (developing exports, expanding domestic markets, increasing product lines, etc.), or in terms of a single activity model (developing exports only). Mintz [1967] illuminated this question by analyzing U.S. export data over the course of several business cycles to ascertain the effects of varying economic conditions on U.S. exports. Her findings imply that, except for very short time periods, a single activity model is adequate because a firm can develop an export program by growing; it need not contract its other activities to export. Consistent with Mintz' [1967] findings, all of the following export modeling efforts have been confined to single activity models.

Attempts to formulate export models have tended to focus on three issues: identifying the variables involved, specifying the relationship among those variables at any given time, and specifying the dynamics of that relationship. The latter must be adequate to explain the following empirical findings: three cross-sectional U.S. studies yielded a positive correlation between the length of time firms had been exporting and the percent of their sales exported [Alexandrides, 1971; Tesar, 1975; State of Minnesota, 1975], and a cross-sectional study of the Swedish Government's textile export program found that its success varied directly with the previous export experiences of the firms involved [Olson, 1975]. These studies imply that exporting is a development process.

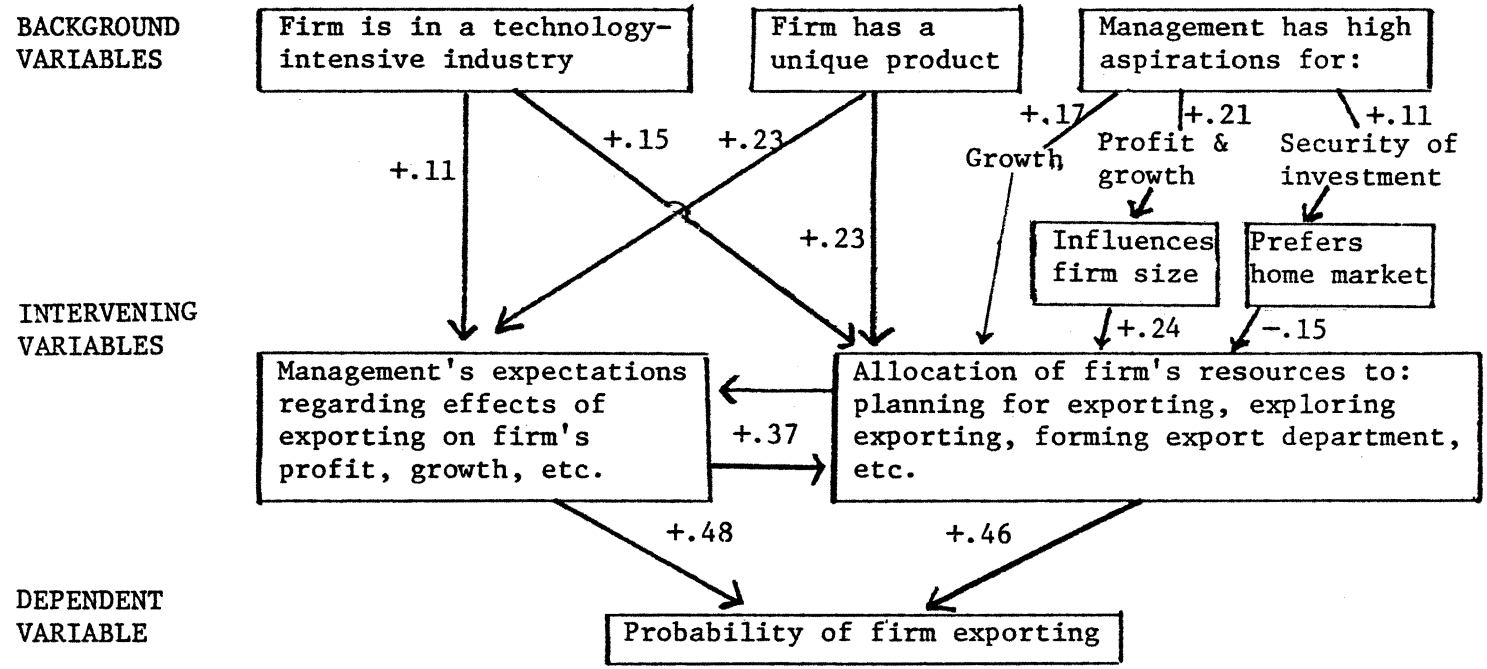
Etgar and McConnel [1976] formulated a static cause-and-effect model in the form of an equation, with independent variables on the right:

$$\text{(i)}\quad B=\phi(E, I, C)$$

where B represents a vector of export related behavioral decisions; E represents a group of internal and external environmental factors (location of markets, technological factors, institutional factors, behavioral forces, economic forces, and legal-political influences); I represents a group of information stimuli (from mass media, personal contacts, and previous experience); and C represents the information processing complex (including learning and choice constructs). The relationship among variables on the right side of the equation, either within groups or between groups, was not indicated, and no empirical test of the model was attempted. However, their model yields inferences that harmonize with observable behavior.

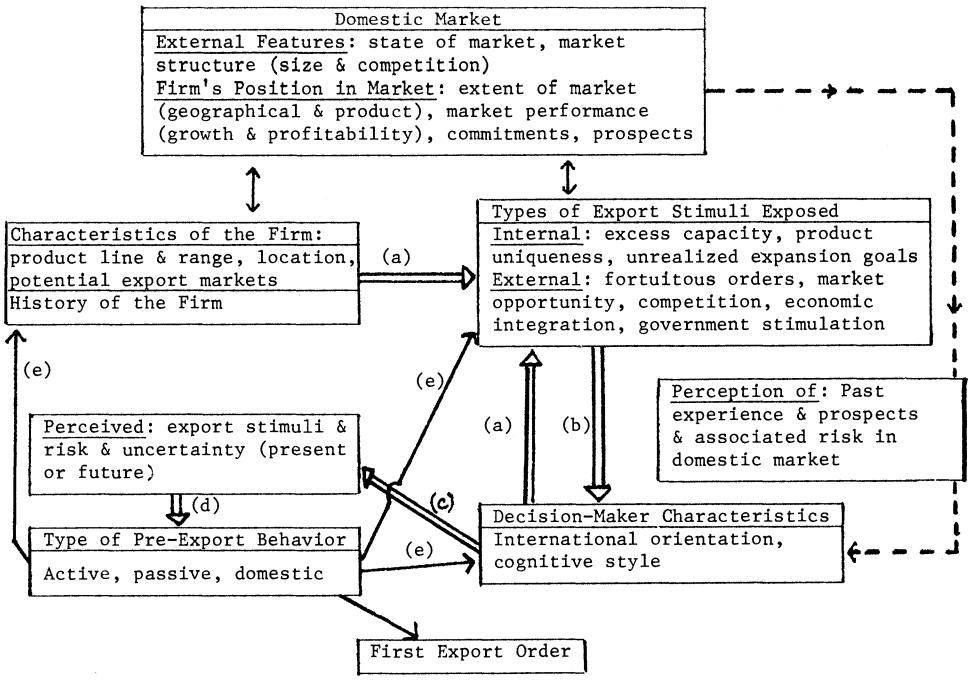
Cavusgil [1976] proposed a static path model composed of both "background" and "intervening" independent variables, as shown in Chart 1.

Chart 1. Cavusgil's path model of a firm's export behavior. Numbers are the bivariate correlation coefficients between the variables connected [Cavusgil, 1976, p. 130].



He calculated the bivariate correlation coefficients for each relationship using Tesar's [1975] Wisconsin data; these are the numbers beside the arrows in Chart 1.

Chart 2. Welch and Wiedersheim - Paul's model of factors affecting the pre-export behavior of a firm [Welch and Wiedersheim - Paul, 1977, p. 4].



(a) Influence exposure to stimuli
(b) Some stimuli are perceived
(c) Determine perception
(d) Influence behavior
(e) Feedback of experience from pre-export behavior

Welch and Wiedersheim-Paul [1977] formulated a model of the pre-export behavior of a firm as shown in Chart 2. It is dynamic in that it incorporates feedback loops and interactions and brings into account a substantial number of basic variables. It tries to interrelate those variables in a flow or sequence sense, but does not explain how they relate functionally. It was not tested empirically, but certain Australian case data were provided that tend broadly to support the model.

Carlson [1975] suggested that the internationalization process of firms follows a more-or-less learning curve. Johanson and Vahlne [1975] suggested that internationalization develops from a series of incremental decisions. These propositions are consistent with a stages theory of the export development process. That is, stimuli induce a firm to move to a higher export stage; the experience (learning) gained from that stage alters the firm's perceptions, expectations, managerial capacity, etc.; new stimuli then induce the firm to move to the next higher export stage; and so on. This might be thought of as S → O → R type behavior (where S is the stimuli, O is the organism, and R is the response) with a feedback loop from R to O, which creates conditions for the next stage.[3] The Uppsala School [Olson, 1975; Johanson and Wiedersheim-Paul, 1975]

conceptualized the export stages as: no permanent export, export via agent, export via sales subsidiary, and, in some cases, production in a foreign subsidiary; and they presented evidence supporting such a model. Bilkey and Tesar [1975] formulated a stages model to which the following generalized multiple regression equation was fitted—the coefficients differed at each stage because of the experience gained from the preceding stages—

$$\text{(ii)} \quad A = a + bE - cI + dF + eM$$

where: A is the firm's export activity for the stage in question; E is management's expectations regarding the benefits of exporting after it has been developed; I is the inhibitors (mainly serious infrastructural and institutional obstacles) that management perceives to initiating exporting; F is the facilitators (unsolicited orders, information, subsidies, infrastructural and institution aids, etc.) management perceives to initiating exporting; and M is the quality and dynamism of the firm's management plus the firm's organizational characteristics that affect exporting.[4] Small case letters are coefficients. The model involves the following export stages, which are derived from Roger's stages of the adoption process [Rogers, 1962, pp. 81-86].

One. The firm is unwilling to export; it would not even fill an unsolicited export order—because of apathy, dislike of foreign activities, busy doing other things, etc.

Two. The firm fills unsolicited export orders, but does not explore the feasibility of exporting.

Three. The firm explores the feasibility of exporting. (This stage may be omitted by the receipt of unsolicited export orders.)

Four. The firm exports experimentally to one or a few markets.

Five. The firm is an experienced exporter to those markets.

Six. The firm explores possibilities of exporting to additional markets.

And so on.[5]

Questionnaires from 423 Wisconsin manufacturing firms were classified according to the above stages, and step-wise multiple regressions of the type shown in Equation ii were calculated for each of three stages. The results differed greatly. Movement from Stages One and Two to Stage Three was only partly explained (R^2=.241). The major correlates were *directly* with whether management planned for exporting, and *directly* with management's impression of the firm's competitive advantages. *No* relation was found with management's expectations as to what exporting would contribute to the firm's profits, growth, etc., nor with management's perception of inhibitors (serious obstacles) to exporting. Movement from earlier stages to Stage Four correlated (R^2=.69) *directly* with whether the firm received an unsolicited initial export order; *directly* with the quality of the firm's management; and, to a small extent, *directly* with the firm's size. Again, there was *no* correlation with management's expectations as to what exporting would contribute to its firm, nor with management's perception of export inhibitors. The percent of sales exported by Stage Five firms correlated (R^2=.70) *directly* with management's perceptions of the gains from exporting, *inversely* with the number of perceived inhibitors to exporting, and *inversely* with the quality of the firm's management.

An important problem in the above models is the huge number of variables that influence the export behavior of firms. One possible solution is to incorporate every variable directly; none of the above analysts did that. A second possibility is to combine the variables into categories, and then to construct a model composed only of those categories; both Etgar and McConnell (Equation i) and Welch and Weidersheim-Paul (Chart 2) followed this approach. A third possible solution is to combine the variables into nonintercorrelated composites, as Bilkey and Tesar (Equation ii) have done. A

fourth possible solution is to relate the variables into background and intervening variables, as Cavusgil did (Chart 1). The latter possibility seems to be the least ambiguous. Another important problem is to dynamize a model adequately. Both Etgar and McConnell (Equation i) and Cavusgil (Chart 1) limited themselves to static models which could be dynamized if expanded properly. Welch and Wiedersheim-Paul (Chart 2) formulated a dynamic model employing feedback loops, but it is vague and could be difficult to implement. Both the Uppsala School and Bilkey and Tesar (Equation ii) formulated dynamic models by employing stages of development. These can be conceived of as sequential alternations in the direction of cause-and-effect equations. Thus, the initial Equation ii direction would be from right-to-left, moving the firm to the next higher export stage. The experiences (learning) involved in carrying out that stage would reverse the cause-and-effect flow from left-to-right, affecting the firm's expectations, perceptions, know-how, etc.—i.e., change the coefficients on the right side of the equation. With adequate stimuli, the cause-and-effect flow of the revised equation next would be from right-to-left, leading the firm to a still higher export stage; and so on. Bilkey and Tesar [1975] empirically examined only three right-to-left cause-and-effect flows. Logically, both the feedback loop approach and the alternating cause-and-effect equation flow approach come to the same result. The latter is fairly easy to implement.

Export Profiles

Two analysts sought to profile both exporting and nonexporting firms as a means for identifying potential exporters among firms that are not yet exporting. Differences in their findings seemingly can be explained by differences in the data they gathered. Snavely, Weiner, Ulbrich, and Enright [1964] found that the most important characteristics in which their sample of Connecticut current exporters exceeded the never exporters were (rank-ordered): one or more of the firm's products were patented; the firm served the entire U.S. market; the firm held sole rights to the patents it used; management was willing to study foreign markets; and the firm utilized a combination of selling techniques rather than only one. The most important characteristics in which the never exporters exceeded the current exporters were (rank-ordered): the firm regarded its small size as a barrier to exporting; the firm sold directly to buyers; the firm utilized only personal selling; and the firm had only a local market. Cavusgil [1976] found that 96% of Wisconsin firms with the following characteristics exported: had very favorable expectations regarding the effect of exporting on the firm's growth; planned for exporting; had gross sales greater than $1 million; and had favorable expectations regarding the effects of exporting on the firm's market development. Alternatively, only 5% of the firms with the following characteristics exported: had neutral or unfavorable expectations regarding the effects of exporting on the firm's growth; did *not* systematically explore the feasibility of exporting; and placed a low value on growth.

Weiner and Krok [1967] tested Snavely, et al.'s profile by using it to identify potential exporters in the Greater Hartford area. The latter were placed in contact with foreign buyers who were interested in their products. It was assumed that such export connections would be sufficient to induce the profiled potential exporters to begin exporting. However, none of those firms consummated a single export sale during the time period of the study—which Weiner and Krok interpreted as a failure of Snavely's profile approach. Unfortunately, no one questioned whether the nondevelopment of exports by those profiled firms was necessarily due to a lack of foreign market contacts. Possibly other obstacles to exporting were involved. Possibly the time frame of the study was too short. The negative results obtained are far from definitive.

CONCLUSIONS

The forementioned research findings lead to three major conclusions regarding the export behavior of firms. One is that exporting is essentially a developmental process. This may be conceptualized either as a learning sequence involving feedback loops or as export stages. Second, equation coefficients tend to differ from one stage of the export process to another. This can be illustrated by using the previously listed export stages as a framework for integrating the various empirical findings. The probability of a Stage Two firm entering export Stage Three (exploring the feasibility of exporting) seemingly depends very much on the firm's international orientation, on its management's impression regarding the attractiveness per se of exporting, and on its management's confidence in the firm's ability to compete abroad. The probability of a firm entering export Stage Four (becoming an experimental exporter) is primarily a function of: whether the firm receives unsolicited exports, and the quality and dynamism of its management. Up to Stage Four in the firm's export development process, management's expectations regarding short-term gains from exporting or of perceived obstacles to exporting probably are of little importance. However, for firms in Stage Five (experienced exporters) the situation changes. Then, the percent of sales exported is primarily a function of management's expectations regarding the effect of exporting on the firm's profit, growth, etc., and on the inhibitors (serious obstacles) management perceives to exporting.

Such a formulation suggests that compositional differences could explain the contradictory findings among analysts regarding the relation of (a) short-term expectations concerning profit and growth, and (b) perceived export inhibitors with (c) whether or not firms export. If a large portion of the exporters were in Stage Five (experienced exporters) and a large portion of the nonexporters were in Stage Three (had explored the feasibility of exporting), then the relationship logically would have been positive—because nonexporters had some awareness of the problems involved. However, if a large portion of the exporters were in Stage Four (experimental exporters) and a large portion of the nonexporters were in Stages One and Two (had not explored the feasibility of exporting), then, logically, no meaningful relationship would have been found. The reason is that such nonexporters would have had no clear opinions about what exporting would mean for their firm's short-term profits or growth, nor would they be aware of existing inhibitors (serious obstacles) to exporting.

A third conclusion is that export profiles *can* be formulated; they are potentially very useful, but they should be used in conjunction with export behavior models to achieve their potential. That is, properly developed export profiles (along the lines pioneered by Snavely, et al. [1964] and by Cavusgil [1967]) could be used by government export promotion agencies, by banks, by export agents, and so on, to identify nonexporters with a high potential for becoming exporters. Limited resources for export promotion—loan funds, export management assistance, export training, foreign market information, etc.—then could be concentrated on the high export potential firms. The considerations (or variables) used for making such profiles must be the same as the operating agencies can obtain from client firms. If certain theoretically important considerations cannot be obtained by operating agencies (e.g., because they involve confidential information), the profiles should be formulated from obtainable correlates of those considerations. However, merely identifying firms with a high export potential would not be sufficient for an export promotion program. The operating agencies still would need to ascertain how much export response during a specified time frame could be expected from alternative export stimulation projects. Behavioral functions would be necessary for this purpose. They should apply to the same type of firms (with respect to export process, type of industry, etc.) as were used to develop the export profiles.

IMPLICATIONS

The research summarized in ths paper represents a new development in microeconomics that is completely different in purpose, concept, and methodology from classical and neoclassical economic theory. The conceptual framework of the latter is rational

profit maximization. The conceptual framework of the research reviewed here is behavioral consistency. Properly developed behavioral functions and export profiles seemingly could yield insights far beyond those provided by the classical-neoclassical economic models. Even the limited number of export studies to date provided the following useful inferences.

Government Policy Inferences

First, for maximum success, export stimulation programs should be tailored to the export development position of the firms to be stimulated. If formulated in terms of the export stages presented this means that: (1) experienced exporters (Stage Five firms) would tend to be stimulated to increase exports by devaluating the currency and by removing perceived obstacles to exporting; (2) nonexporters in Stages Two and Three would tend to be stimulated to begin exporting (enter Stage Four) by being provided with export orders (perhaps by developing Japanese-type trading companies) and with managerial assistance (e.g., export extension programs and export consulting services); (3) firms that have made no export efforts would tend to be stimulated to explore the feasibility of exporting (enter Stage Three) by programs propagandizing the attractiveness of exporting (trade association meetings, advertising, public meetings, etc.) and through international education within schools. The latter includes foreign language training, student exchange abroad, international business education, and so on. A second government policy inference is that profile studies can be undertaken to ascertain identifiable characteristics of firms in each export stage. This could help officials of the government programs to target their export stimulation efforts with reasonable precision.

Managerial Inferences

Export management should, first, be keyed to the firm's position in the export development process, which from the firm's perspective is a learning process. A firm that has never exported, logically should, at first, concentrate on gaining basic export experience. The literature suggests that this can be accomplished best by starting with the psychologically closest markets—for most U.S. firms that is Canada; for most Swedish firms that is Norway; etc. As success is achieved in such markets, the firms should extend exporting to the next psychologically closest foreign market, and so on. Then, as adequate experience is gained, the firm should focus on markets that it considers the most attractive and develop them in depth. Eventually this may involve establishing production facilities abroad—a step beyond exporting in the firm's internationalization process. A second managerial inference is that the motivation for exporting probably should be the firm's long-term growth and development rather than short-term profit. A third managerial inference is that management could match its firm's own profile with the profiles of successful exporters as a guide to its export potential. Middle management might find this a useful means for eliciting top management's support for export development. A final managerial inference is that the quality of management probably is the greatest single determinant of a firm's export success.

FOOTNOTES

1. Thus far no analyses have been made as to whether the firms' total exports as a percent of total sales differed after having foreign affiliates from before.

2. Psychological distance is ". . . the sum of factors preventing the flow of information from and to the market. Examples are differences in language, education, business practices, culture, and industrial development." [Johanson and Vahlne, 1977, p. 24.]

3. Langston [1976] observed that much research seeks to explain why two groups of firms in a given country producing the same product have differing export behavior—one group exports and

the other does not. In the S→O→R conceptualization, both groups are subject to the same external stimuli; the difference is in the organism (attitudes, interests, expectations, know-how, etc.).

4. Equation ii is consistent with the Marshallian theory of the firm. The latter is rooted in classical economic theory, which in turn implicitly assumes a stationary state [Schumpeter, 1961, pp. 562-4, 571, 965, 966]. E is management's expectations regarding the contribution of exporting to the firm's profits, growth, etc., *after* exporting has been developed as a going activity, whereas I and F are the inhibitors and the facilitators *management* perceives to the process of developing exporting into a going activity.

5. The export stages listed by the Uppsala School [Olson, 1975; Johanson & Wiedersheim-Paul, 1975] and by Bilkey and Tesar [1975] need to be integrated, possibly as follows:

Uppsala School's stages	*Bilkey and Tesar's stages*
No permanent export	Stage Two
Export via agent	Stage Four
Export via sales subsidiary	Stage Five
Production in a foreign subsidiary	Stage Five

i.e., Bilkey and Tesar's Stage Five may need to be subdivided.

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