THE EXPORT DECISION PROCESS: AN EMPIRICAL INQUIRY

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This study profiles export decision-makers in both exporting and nonexporting firms, in terms of their perceptions of the risks and cost/benefit trade-offs associated with exporting, and their reactions to various types of stimuli to export. It concludes an export stimulus (e.g., an unsolicited order from a foreign customer) is a significant but not sufficient condition for a positive export decision, and that important variations between exporters and nonexporters in cost, profit, and risk perceptions may well account for different responses to similar stimuli by these two groups. Present public policies to promote exports are critiqued in light of the findings.

Recent public policy initiatives in the United States focus heavily on foreign trade imbalances and the need for effective "export expansion" programs. Some initiatives have been aimed at restructuring the general economic and commercial environment affecting international competitive relationships.[1] Others have been more "microscopic" and aimed at encouraging American producers to begin or expand export activities. These include tax incentives, improved export financing, reducing transportation costs, and expanding export promotion programs.[2] These assume a particular profile of an export decision-maker, i.e., a rational, economic being consciously seeking to expand profits and/or reduce business risks. But how accurate is this assumption? Are our policy initiatives meaningfully related to attainment of the objective of expanding exports? For example, are the tax benefits of the Domestic International Sales Corporation (DISC) *causing* businessmen to export more? If not, could the net (intended) social benefits of the DISC be deficient in view of the social cost of the deferred tax revenues?

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This study challenges this assumption of "homo economicus" and seeks to profile the export decision-maker by inquiring (1) into his perceptions of the risks and cost/benefit relationships associated with exporting and (2) into his reaction to various hypothesized export stimuli.

This inquiry encompasses the total population involved in the decision process—exporters, both fortuitous and systematic, and nonexporters.[3] It focuses in the following questions:

1. Do decision-makers in the firms being studied systematically initiate investigations of foreign markets, or do exports arise from fortuitous circumstances?
2. Why do some decision-makers make positive export decisions and others negative ones, when, in some instances, the stimuli or impetus to export may be apparently similar?

RESEARCH METHODOLOGY

Business decisions are assumed to be a function of perceived risks and anticipated profits. These include export decisions. If the risks associated with exporting are offset with high profit potential, a positive decision will be made. The rational businessman is assumed to be seeking constantly to expand profits and thus consciously investigates and evaluates exporting as a means to this end. "Internal" stimuli possibly supporting this latter type of activity were identified in open-ended interviews during a prestudy of twenty Tennessee manufacturers and are as follows:

1. Excess capacity
2. Production of a (domestically) seasonal product
3. Entry of domestic competitors into export markets
4. Profit motivation

Other, "external" stimuli were identified in the prestudy which could assume somewhat less objective-oriented behiavior motivation. These are:

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

The prestudy uncovered a variety of perceptions of managers regarding risk and cost/benefit expectations, as well as several managerial "characteristics," or experiences, associated with exporting. These "environmental" factors are:

1. Perception of risk in the export market vs. risk in the domestic market

2. Amount of international travel
3. Level and type of education
4. Expropriations
5. Foreign exchange and related controls
6. Communication barriers
7. Profit perception, domestic vs. export
8. General cost perception; domestic vs. export, plus specific cost variables including:
   a) executive time
   b) packaging
   c) insurance
   d) clerical time
   e) product adaptations
   f) shipping

The stimuli and environmental factors were investigated during interviews with 120 manufacturing firms located in Tennessee. A stratified random sample of fifty decision-makers of exporting firms which began exporting since 1967 and seventy decision-makers of nonexporting firms was selected.[4] The interviews were conducted during the latter half of 1972. The presence or absence of various export stimuli was duly noted during each interview. The different responses of exporters and nonexporters alike were then tabulated and analyzed qualitatively.[5] The opinions and attitudes on environmental factors as they related to export decision-making were recorded on an ordinal scale. Given this type of response, and since the distribution and parameters of the population were not known, non-parametric statistical testing was employed. Specifically, the Kolmogorov-Smirnov Two-Sample test was used to determine whether or not two independent samples had been drawn from the same population or from populations with the same distribution. Also, with Kolmogorov-Smirnov test, direction (i.e., is the experimental group greater than the control group in some way?) can be determined.[6]

ORIGINS OF EXPORT ACTIVITY

Based on the results of this study, as developed from the stratified sample of exporting and nonexporting firms, decision-makers of small and medium-size Tennessee manufacturing firms do not act directly to enter export markets to any large degree. All exporting firms and 54 percent of the nonexporting firms included in the study were exposed to stimuli which were external to the firm. Thus, an external stimulus is a significant but not sufficient condition for initiation of exports.

The external stimulus most frequently cited was the unsolicited order from a foreign customer. Eighty-two percent of the exporting firms were exposed to this stimulus. In contrast, 30 percent of the nonexporters received stimuli in this category. Consequently, unsolicited (fortuitous)

orders from foreign customers were found to be the most important individual stimulus influencing the initiation of export activity.

The exporting decision-makers who had received an order from a foreign customer were asked to describe the circumstances under which the order was received. In nearly every instance they had no specific idea why they had received such an order.

The data revealed that other stimuli were not as important as influencing the export decision. These included trade missions and trade fair participation.

Two stimuli—U.S. Department of Commerce and sales agent activity—were found in several instances among *nonexporters*. Of the nonexporting decision-makers, 7 percent, as compared with none of the exporting decision-makers (i.e., prior to the commencement of export activity), had been approached by the U.S. Department of Commerce regarding the benefts of exporting their products. Since no exporting firm indicated this activity influenced its initial decision, the Department's efforts are apparently in vain. Yet, it is probable that these efforts, dating from recent times, are concentrated among nonexporters, thus explaining these findings. It appears, however, that the Commerce Department was unable to get these nonexporters to consider exporting because of lack of interest or possibly other factors.

Export promotion activities by foreign sales agents follow a similar pattern. Over 17 percent of the nonexporting firms received this stimulus, while none of the exporters claimed to have exported as a result of this stimulus. Each of the firms that received this stimulus rejected it because the firm was not interested in what the sales agents had to offer.

No nonexporting firm indicated having reacted to, analyzed, or otherwise "received" any internal stimuli. Of the exporting firms, 21 percent 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 nonexporters alike.

Of special interest, however, is the excess production capacity stimulus. The data indicated only 4 percent of the exporters noted excess capacity as a prime factor in initiating foreign sales. This is corroborated by the fact that the export and nonexport groups had an average excess capacity of 24.0 percent and 24.7 percent respectively.

Various other internal stimuli, such as advertising, travel opportunities arising from exporting, and an international marketing capability were mentioned by a total of six of the exporting firms included in the study as a primary initiating factor.

Appearances are that the study participants did not systematically originate investigations of foreign markets. Exporting came about much more frequently as the result of fortuitous circumstnces.

THE EXPORT DECISION

As already discussed, the second question examined in this study focuses on why some decision-makers make positive export decisions and others negative ones, while the export stimuli may often be similar. One conclusion from the preceding analysis is that stimuli per se are not sufficient in themselves to bring about the initiation of export activities, since as many nonexporters were exposed to the same stimuli as exporters, but with no positive results. The decision to export is therefore made with a combination of the proper stimulus and the proper perception of factors involved in the export process itself.

For example, certain stimuli—namely, an order from a foreign customer and the simple profit motive—were significant factors influencing a positive export decision. But negative decisions also resulted when these stimuli were present. Therefore, other factors must account for the type of decision made.

Table 1 presents a summary of the aforementioned environmental factors thought to influence export decision-making behavior and the accompanying statistical significance levels.

TABLE 1

Factors Hypothesized to Influence Export Initiation: Exporters vs. Nonexporters

Factor Being Tested	Is There A Significant Difference?	Kolmogorov-Smirnov Approximation of Chi-Squared
Risk	Yes	$X^2_{(2)} = 7.88$; $p<.02$
International Travel	No	$X^2_{(2)} = .04$; $p>.95$
Education Level	Yes	$X^2_{(2)} = 7.48$; $p<.05$
Expropriations	No	$X^2_{(2)} = .18$; $p>.90$
Foreign Exchange Problems	No	$X^2_{(2)} = .75$; $p>.70$
Communications	Yes	$X^2_{(2)} = 19.61$; $p<.001$
Profit	Yes	$X^2_{(2)} = 28.01$; $p<.001$
General Cost	Yes	$X^2_{(2)} = 36.46$; $p<.001$
Executive Time	Yes	$X^2_{(2)} = 19.61$; $p<.001$
Packaging	Yes	$X^2_{(2)} = 26.88$; $p<.001$
Insurance	Yes	$X^2_{(2)} = 42.00$; $p<.001$
Clerical Costs	Yes	$X^2_{(2)} = 10.5$; $p<.01$
Product Adaptations	Inconclusive	
Shipping Costs	Yes	$X^2_{(2)} = 37.91$; $p<.001$

Source: Personal Interviews.

The negative export decision is made of basically the same stimuli and decision variables. Why, then, did one group decide to export and the other group decide not to export, especially since 48 of the 70 nonexporters stated that they could export? The answer lies in the decision variables. Table 2 presents an analysis of these variables.

TABLE 2

Comparison of Weighted Mean Responses of Significant Export Decision Variables Between Exporters and Nonexporters[a]

Variable	Exporters Mean Response[b]	Non-exporters Mean Response[b]	Difference	Signif-icance Level
Risk	4.08	4.86	− .78	p<.02
Profit	4.26	3.01	+1.25	p<.001
Education	3.92	3.23	+ .59	p<.05
Communications	4.76	5.77	−1.01	p<.001
Costs	3.84	5.84	−1.96	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	− .99	p<.001
Clerical Time	4.92	5.67	− .67	p<.01
Shipping	4.58	6.06	−1.48	p<.001

Source: Personal Interviews.
[a] There were 50 exporters and 70 nonexporters in these groups.
[b] These responses were allowed on a seven point ordinal scale.

Exporters had a higher weighted mean level of profit perception than did the nonexporters. The exporting decision-makers' mean response was 4.26 on a seven point ordinal scale that ranged from "considerably less than domestic" to "considerably greater than domestic," which is somewhat greater than "equal to the domestic" profit response category. Nonexporters had a mean response of 3.01, which for all practical purposes is a "less than domestic" response category.

Exporting decision-makers very nearly averaged out as college graduates with a 3.92 weighted mean response. A response level of 4 is a Bachelor's degree response. The nonexporting decision makers' mean response is 3.23, which is slightly greater than the "some college" response.

The perception of risk by the two groups is different. The exporting decision-makers felt that the risks involved in exporting were slightly higher on the average than risk domestically at a mean resonse of 4.08. This compared to the nonexporters' response of 4.86, which is almost one ordinal frame greater than the exporters' responses. Although the exporters felt risk to be greater in exporting, they did indicate that this risk was significantly less than the level indicated by the nonexporters.

The nonexporters have a higher negative weighted mean perception in every cost variable than do the exporters.

Risk analysis is equally significant when comparing the perceptions of nonexporters and exporters (prior to initiation of exports) who were exposed to the same stimuli. Table 3 presents the results of this analysis on the same basis as presented in Table 2.

TABLE 3

Weighted Mean Responses of Significant Export Decision Variances for Exporters and Nonexporters Receiving Unsolicited Orders from Foreign Customers

Variable	Exporters[a] Mean Response	Nonexporters[b] Mean Response	Difference	Level of Significance
Risk	4.07	5.26	−1.19	p<.001
Profit	4.15	2.95	+1.20	p<.001
Education	3.83	3.23	+ .60	p<.05
Communications	4.66	5.86	−1.20	p<.001
Costs	3.71	5.76	−2.05	p<.001
Executive Time	4.34	5.76	−1.42	p<.001
Packaging	4.68	5.62	− .94	p<.001
Insurance	4.07	5.33	−1.26	p<.001
Clerical	4.83	5.90	− .37	p<.10
Shipping	4.56	6.14	−1.50	p<.001

Source: Personal Interviews.
[a] There were 41 exporting firms included in this table.
[b] There were 21 non exporting firms included in this table.

Exporters had a higher profit perception and a lower risk perception by over one response category than did the nonexporters. The difference between the groups for level of education, although slight, is significant.

The most dramatic difference between the groups is in cost perception. General cost perception varies between the groups at over two ordinal response categories. The level of perception concerning all of the cost

variables is signifiantly higher in the nonexport group than in the export group.

A comparison of the differences in the weighted mean responses from Table 2 to Table 3 reveals that differences are greater between the groups in all categories except for clerical costs. The largest difference between these tables is in risk perception, which increased from a difference of -.78 to -1.19.

From this analysis, further support is given to the fact that the export stimulus is a significant but not sufficient factor to the positive export decision.

It is thus evident that the perceptions of profit, risk, and cost factors are significantly different between the groups. These differences may very well account for the different effects that similar stimuli have on individual firms.

IMPLICATONS FOR POLICY

This research has been an exploratory study. As such, the primary purpose was to discover significant variables, discover relations among the variables, and lay a groundwork for later, more systematic and rigorous testing of hypotheses. Since these are the primary goals of any exploratory research, statements about possible public policy conclusions are somewhat tenuous. The research did, however, suggest points at which implications for public policy can be made.

From the results presented above, any policy aimed at promoting exports among small and medium-size manufacturing firms should be designed to increase profit perception and to reduce risk and cost perceptions of nonexporting firms. To accomplish this, an educational program should be undertaken to present the factors involved in the export process as such actually exist, not as they are perceived. For example, shipping costs are often not relevant in export sales because the merchandise is sold f.o.b. plant. As was depicted in Table 1, the nonexporting decision-makers felt that shipping costs were "considerably greater than domestic." Seemingly, these perceptions can be reduced or eliminated through an effective educational process.

Also, the value of education concerning what is actually involved in the export process is evident in the "after export experience" responses of the exporting firms. After export experience, these decision-makers increased their profit perception and decreased their perceptions of risk in all the cost factor categories.

Questions may arise concerning which agencies should perform this educational service. There appears to be no obvious conclusion on which agencies are most effective in export education. The results attained in this study tend to show that college and university education was an important factor in the positive export decision. Certainly, it would not be possible to transport the decision-maker from the firm to the classroom for a college education. However, the colleges and universities in a

region can play an important role in the export education process by conducting periodic one or two-day seminars on exporting. An effective seminar of this type should include successful exporters selected from small and medium-size manufacturing firms.

Other groups can be effective in this sort of education. The U.S. Department of Commerce periodically holds export workshops throughout the United States. Business groups sponsor export-related organizations for the purpose of export expansion. The Middle Tennessee Exporters Round Table and the Middle Tennessee Regional Export Expansion Council are examples of these. These groups, however, tend to attract exporters whose purpose is to exchange problem situations and how these situations have been handled.

This study indicates export promotion policies must go further than education in the export process and must provide a means of getting an appropriate export stimulus to a firm with export capability. Trade leads do not appear to be a satisfactory means of accomplishing this. An actual order for a product appears necessary to evoke the desired action. One method being used to secure orders from foreign buyers is via the establishment of state or federal trade offices overseas. The purpose of these offices is to secure initial export orders for U.S.-based firms.

However, once an order has been secured, the potential exporters must be assisted with this order to its completion. One suggestion to provide this assistance is for the federal or state governments to finance the initial sale for the potential exporter. Also, government should provide on-site expertise, in the person of a trade consultant, to assist in the execution of the export sale and the training for future sales.

From the results obtained in this study, the DISC does not appear to be provoking much interest or enthusiasm among small and medium-size exporting firms. Only 18 exporting firms had even heard of DISC. Of these, only 2 firms had begun using the DISC legislation to their advantage. Evidently, the exporting decision-makers do not understand the objectives and workings of DISC legislation. These same decision-makers indicated that they were motivated by profit. DISC enhances profits. Why, then, are there so many apparent rejections of DISC? The answers given by the 16 decision-makers who had heard of DISC but had made no moves to incorporate this tax deferral instrument into their corporate structure sheds some light on this. The answers were about evenly distributed among these three responses:

1. I don't understand "DISC."
2. Our international sales are too small.
3. You've got to pay taxes sometime.

The most apparent inference is that some education work is clearly necessary among small and medium-size manufacturing firms about the form and purpose of DISC legislation. Also, there appears to be some necessity to revise the DISC legislation to equalize the advantages between the

large and small and medium-size firms. To illustrate the "problem" of the latter—an investment of $2,500 (the DISC cost) requires a relatively large amount of foreign sales to generate an acceptable rate of return on the investment. Consider the following example:

Let S	=	foreign sales
M	=	marginal profit rate
MS	=	profit contribution of foreign sales
MS/2	=	tax rate (assumed 50 percent rate on ordinary income)
MS/4	=	DISC deferred tax rate
K	=	cost of capital
K(MS/4)	=	yearly rate of return
Assume K	=	.10 and
M	=	.20

Break-even analysis shows that, based on these assumptions, an annual export sale of $500,000 is required.[7] Is this level of export activity frequently anticipated by "new exporters," i.e., those typically receiving an unsolicated sales order from abroad?

The institution of state-supported trade missions for the specific purpose of obtaining a first-hand view of the opportunities to sell products abroad appears to be valuable in spite of the results obtained above. When travel to foreign countries is for business purposes, more observations of export opportunities are made. By controlling the purpose of the trip, the results should be favorable in the direction desired—export risk perception and cost perception reduction and an increase in profit perception. The control of the trip should include accompaniment by trade specialists who will help in the securing of an order and the follow-up on the order to completion.

[1]Examples of such are the 1971 and 1973 dollar devaluations and the variety of trade-related issues embodied in the proposed Trade Reform Act of 1973. For documentation on the recommendations of the Act, see Bureau of Public Affairs, Office of Media Services, U.S. Department of State News Release, "President Nixon's Trade Reform Act of 1973," April 11, 1973.

[2]For more specific examples, see *DISC: A Handbook for Exporters,* U.S. Department of Treasury, January 1972, p. 3; *U.S. Foreign Trade: A Five Year Outlook with Recommendations for Action*, U.S. Department of Commerce, April 1969, especially pp. 6 and 10; and *United States International Economic Policy in an Interdependent World: Report to the President submitted by the Commission on International Trade and Investment Policy*, July 1971, Washington, D.C., pp. 8-9.

[3]Nonexporters have been traditionally excluded from studies on export decision-making. See James Kent Pinney, "The Process of Commitment to Foreign Trade: Selected Smaller Indiana Manufacturing Firms" (unpublished Ph.D. dissertation, Indiana University, 1968); Satirious G. Moussouris, "Export Horizons of Greek Industries" (unpublished doctoral dissertation, Harvard Business School, 1967); and Jose R. de la Torre, "Exports of Manufactured Goods from Developed Countries: Some Micro-Economic Considerations" (a study for the Inter-American Development Bank, 1970). The one study which has included exporters and nonexporters did not focus on the export decision, but rather emphasized the influence of firm size on a decision-maker's thinking. See Michael R. Granat and Feliksas Palubinskas, "Small Firms Can't Cut Red Tape, Balk at Exporting Because They're Small," *The Marketing News*, September 15, 1972, pp. 3 and 5.

[4]The sample was drawn from a prepublication issue of *The Tennessee Directory of Manufacturers* (Nashville: State of Tennessee, Staff Division for Industrial Development, 1973). No particular industry was favored, but obvious nonexporting firms, such as bakeries, were dropped from the sample, as also were (by intent) large firms, i.e., those with 1,000 employees or more.

[5]The perceptions of the exporting decision-makers, both before and after the commencement of exporting, were also recorded during each interview. Differences were found to exist between these "before and after" perceptions, but, although certainly important, the analysis of these differences is outside of the major focus of this report. (The "after" responses are the ones used in the text.)

[6]For further information on the appropriateness and application of the testing technique employed, see R.J. Senter, *Analysis of Data* (Atlanta: Scott, Foresman and Co., 1969), pp. 206-7, and Sidney Siegel, *Non-Parametric Testing for the Behavioral Sciences* (New York: McGraw-Hill Book Company, 1956), p. 127.

[7]See Renato Ramirez, "DISC: Benefits and Costs," *Louisiana Business Review*, November 1972, pp. 3-4 for further discussion of this subject.