Staff Paper

The Globalization of Smaller Agri-Food Firms: Concepts, Findings and Prescriptive Recommendations

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Staff Paper 97-22 June 1997

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26 pages

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Introduction

American agri-food firms are competing in a marketplace that is evolving, growing and becoming international in scope. Anecdotal evidence suggests that this trend towards globalization transcends the entire agri-food industry and affects all firms, regardless of size or product mix. The anecdotal evidence also suggests that individual firms, particularly smaller firms, are responding in various ways to this changing environment. Some are remaining exclusively focused on their traditional domestic markets, while others are aggressively pursuing newly perceived opportunities in global markets. Many other firms are somewhere between these two extremes.

This paper first seeks to identify and model the driving forces that are motivating and sustaining the firm-level decisions revealed by this anecdotal evidence. Then, the paper reviews empirical findings from a set of case studies and mail surveys as background for a series of prescriptive recommendations. These recommendations are targeted towards both managers of

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Financial support for this research has been provided by the Michigan Agricultural Experiment Station under the auspices of the Status and Potential of Michigan Agriculture (SAPMA) Project.

Presented at the AAEA's WCC-72 Annual Meeting, Las Vegas, NV, June 11-12, 1997.

firms and to those responsible for setting public policy. They are designed to foster more informed decision making as these individuals assess the "opportunities" global markets present.

The underlying research hypothesis supporting this paper (and its recommendations) asserts that there is a set of necessary and sufficient conditions for a smaller agri-food firm to decide to globalize its scope of operations. These conditions are: (1) perceived effective demand, (2) perceived competitive advantages in the transformation process of inputs into outputs, (3) perceived competitive advantages in the management of transaction costs, and (4) a set of decision rules employed by the firm's principal decision maker that do not impede the globalization process at the firm-level.

As a matter of clarification, the following definitions are provided. "Globalization" refers to any extension of market activity into an international context, including export sales, international joint ventures, foreign direct investments, sourcing of inputs or capital from foreign markets, and/or competing against imports in local markets. "Smaller" refers to firms with annual gross sales of $150 million or less and/or 150 employees (fte's) or less. "Agri-food" refers to those industries and subsectors involved in the production, processing and delivery of food and agricultural products to the end consumer (i.e., "gate to plate").

Literature Review

Relevant published works addressing this paper's topic are found across a broad spectrum of literature within the fields of Management, Marketing, Economics, and Agricultural Economics. Researchers have typically taken one of two general approaches by either (1) identifying why firms globalize or (2) assessing how firms globalize. When addressing *why* firms globalize, researchers have focused on either factor endowments[1-4] or market failures[5-15] as the principal determinants of the process. When addressing *how* firms globalize, researchers have examined (1) the decision processes of firms[16-17], (2) the motivations for choosing particular globalization strategies[18-19], and (3) the key resources within firms that make globalization possible[17,19-22]. This paper provides only a brief, selective synopsis of this literature since more comprehensive reviews are available elsewhere[23-25].

One highlight of this literature is an apparent consensus supporting the proposition that there are three general classes of explanatory variables underlying the globalization process: the characteristics of the firm, the idiosyncracies of the decision maker, and the external "environment" in which the firm must compete. Debate within this consensus simply revolves around issues of the relative importance of each of these classes of explanatory variables and how to make the explanatory variables operational.

A second highlight of the literature is a relatively small set of "predictors" of globalization--explanatory variables which correlate strongly with decisions related to globalization. These include firm size, frequency of receiving unsolicited orders from abroad, perceptions of barriers to entry, and perceptions of risks associated with negotiating sales and collecting payment. Larger firm size and higher frequencies of unsolicited orders correlate positively. Perceptions of barriers to entry and risks of sales correlate negatively.

As others have noted[23], one of the limitations of the literature is that there is little emphasis on specifying the necessary and sufficient conditions for globalization to occur. Even though considerable work has been done on identifying and making operational the three general classes of explanatory variables, determining which of these variables are fundamentally necessary and/or sufficient to initiate and then sustain globalization remains largely an unanswered research question. Further, much of the literature's understanding of the globalization process is built upon empirically identified correlations. Only a limited amount of work has been done to develop an underlying theoretic basis that could provide a context for understanding these correlations and for specifying a general globalization model.

An Alternative Model of "Globalization" Decisions

To provide an alternative to the literature's general conceptualization of the globalization process, this paper proposes the following decision model based on fundamental economic principles. This model asserts that there are a set of the necessary and sufficient conditions that must be met before a firm will choose to participate in a globally competitive environment.

First, the decision maker must perceive that there is demand for his or her firm's products in an international market.   Common sense notwithstanding, economic principles assert that market forces tend to equilibrate demand and supply. Without a perceived effective demand, there is little reason to believe a firm would or should produce a sustainable supply.

Second, the decision maker must perceive that the firm has a competitive advantage in its ability to transform inputs into outputs. This implies that the relationships across the firm's production functions, cost curves and production frontiers are such that the firm's products are competitive relative to other products on the market.

Third, the decision maker must perceive that the firm has a competitive advantage in its ability to transact in international markets. Williamson (and many others) have noted that there are costs associated with transactions[26-28]. The implication is that a given firm's governance structure, its ability to negotiate contracts, and in general, its ability to manage the costs of transacting in the market affect overall firm performance.   The decision maker must believe that the firm can mange the costs of transacting in an international market before the firm will choose to compete in that market.

These three "driving forces," as specified, are necessary conditions for firm-level globalization. The fourth factor that completes the set of necessary *and sufficient* conditions are the set of operative decision rules employed by the decision maker. Only when these decision rules support the needed resource trade-offs will the firm actually globalize. Even if there is a known demand and known competitive advantages, the firm will not globalize without the perception that global markets "fit" the goals, priorities and strategic plans of the firm. The entire conceptual model is summarized in Figure 1.

Empirical Findings -- Case Studies

As reported elsewhere[29 -30], a series of case studies and mail surveys were used to collect data and empirically test the proposed model of firm-level decisions about global markets. Only a synopsis of this work is provided here and the reader is referred to the other publications for a more detailed development of the data collection and analysis phases of this research.

The case studies marked the beginning of an empirical research project, and consequently, were designed to be a general, "first pass" appraisal of Michigan's agri-food industry and its prevailing attitudes towards global markets. The cases were not designed to be fully developed, multi-layered profiles of selected firms. Rather, they were limited to on-site, in-depth interviews of a firm's principal decision maker. General impressions and suppositions from these interviews were then used to help design the mail survey discussed below.

The demographic mix of the eight cases included one domestically oriented firm that processed and sold canned fruits and vegetables, a new entrant into export markets that sold food processing equipment, four active exporters, all of which sold food processing equipment, and two food product firms that had once exported but were now re-focused exclusively on domestic markets. All of the firms had been in business for more than ten years.

Conclusions and general themes from the case studies are summarized across the four proposed necessary and sufficient conditions. As is highlighted in this summary, the case studies were used to update and refine the proposed conceptual model. Observations from the interviews also became the basis for several proposed operational proxies of the model's theoretical variables. These proxies were then employed during the mail survey portion of the empirical work. Table 1 summarizes comparisons across the eight cases and four proposed necessary conditions.

Demand: The case studies confirm the proposition that demand is a driving force behind the globalization process. However, to fully understand the influence demand has on the decision to globalize, "demand" as a concept must be de-constructed. Salient dimensions of demand that surfaced during the case studies include latent demand, a decision maker's level of awareness of demand, effective demand, and relative demand.

As decision makers consider market opportunities, one way of specifying these opportunities is in terms of a potential market's latent demand. The case studies indicated that perceptions about undeveloped, untapped markets influenced decisions. For example, a recognition that a given country had a large population and was a net food importer was enough to suggest to some decision makers that there is "latent" demand for his or her firm's products in that country. Such a perception appears to be positively associated with decisions to enter global markets.

Information flows are imperfect in international markets. Knowing that there is demand in international markets, latent or otherwise, is also associated with the decision to globalize; if decision makers are not informed about demand, they cannot act upon it. As has been noted in the literature, monitoring if and how often a firm receives unsolicited orders from abroad is one way of measuring a firm's level of awareness about demand in international markets. But the quality of unsolicited sales inquires vary considerably in terms of actual sales potential. Decision makers must make qualitative judgments about the likelihood a given sales inquiry will translate into a completed sale. Hence, being "aware of demand" implies that decision makers are able to discern "effective" demand, and can filter out frivolous requests. In this way, effective demand is also associated with the decision to globalize, just as actual effective demand experienced by the firm once it begins marketing internationally is associated with the decision to continue to export.

Finally, strong domestic demand is negatively associated with the decision to globalize. This implies that relative demand, in terms of demand in local markets relative to demand in international markets, also influences the decision to market and sell abroad.

Competitive Advantages in Transacting: Like demand, the case studies confirm the proposition that competitive advantages in transacting are a driving force behind the globalization process. But the role of transaction costs in the decision to internationalize is better understood if a distinction is made between (1) the tactical management of the logistics of international transactions and (2) the creation of competitive advantage through the strategic management of international transactions. Logistics (e.g., translating labels into a second language, sales by Letters of Credit, paperwork associated with Customs) had little to no influence on a firm's decision about whether or not to globalize. But the strategic creation of competitive advantage through transacting was associated with both the initial decision to globalize and the firm's ability to sustain their market presence once the globalization commitment was made. Of particular importance was the ability to use a variety of contractual agreements to (1) gain access to targeted international markets, and (2) contain the overall costs of delivering the product to the market so that final prices were not raised to prohibitive, non-competitive levels.

Competitive Advantages in Transforming: The case studies also confirmed that a decision maker's perceptions about his/her firm's products and the competitive advantages resulting from the product's physical attributes are associated with the decision to globalize. In particular, a perception that a product has a competitive advantage resulting from its design and/or features was positively associated with the decision *when* this advantage was perceived to exist in a targeted international market. The perception that the advantage only existed in domestic markets was negatively associated with globalization. A strategy of marketing highly differentiated products also was positively associated with the decision to globalize, although this association was not universally true (i.e., one case had successfully marketed an undifferentiated commodity product in international markets). And finally, the cultural "neutrality" of a product also influenced a firm's decision to globalize. Firms marketing a product that readily transferred beyond its original domestic cultural setting were more likely to be involved in global markets.

Decision Rules: Two general decision rules appeared to guide most of the choices being made about global markets. First, the anticipated profitability of a given venture clearly influenced decisions, although the eight cases indicated firms may only try to achieve some *adequate level* of profits rather than *maximize* them (i.e., satisficing behavior was exhibited). Second, decision makers appear to engage in some type of assessment process of the trade-offs between the gains and losses that would be incurred if globalization is attempted (i.e., decision makers assess the opportunity costs of globalization). For example, potential profits and firm growth from international markets were balanced with potential loss of personal time and/or focus on other ventures and initiatives of the firm. With the eight cases, decision rules favoring profits and growth tended to encourage, or at least not inhibit, globalization.

Empirical Findings--Mail Survey

The mail surveys that followed the case studies provided an alternative means for confirming or refuting the proposed conceptual model and testing the initial findings of the case studies. A random sample of 242 firms were drawn from the target population and sent surveys, of which 112 returned useable responses (a 46% response rate). Sixty-seven of the respondents managed firms that had exclusively domestic-oriented marketing, 37 had been involved in and were interested in continuing their involvement in global markets (at a minimum, they had conducted at least one export sale), and 8 had once been active in international markets but were now re-focusing on U.S. markets. All of the firms were Michigan-based, and met the qualifications of this papers operative definitions of “smaller” and “agri-food.” However, as a way of focusing the data collection associated with the mail survey, a more narrow definition of “globalization” was employed. The mail survey specifically examined whether or not a firm exported its products, using this as a proxy indicator of firm-level globalization. The summary of the analyses of the mail survey data that follows reflects this more narrow focus on exporting decisions.

An a priori assumption supporting this empirical research was that there are at least some smaller agri-food firms that are internationalized. The survey process supported this assumption, indicating that there is a small but growing number of such firms active in export markets. Of the sample population of 242 firms that were initially contacted, 31% were currently exporting their products (n=75). An additional 5% of the firms indicated that they had exported in the past but were now focusing more on U.S. markets (n=11). Another 19% of the firms indicated that they were curious about export markets, even though they had not yet started exporting (n=45).

As noted above, 112 completed surveys were returned. Analyses of the data base generated by these returned surveys consisted of cross-tabulations, a qualitative assessment of responses to a set of open-ended questions about entering and exiting export markets, a maximum likelihood logistic regression model using variables derived directly from survey questions, factor analyses of survey responses, and a second maximum likelihood logistic regression model using factor scores from factor analysis as the independent variables of the regression model. Conclusions derived from each of these analyses support the proposed set of necessary and sufficient conditions.

Cross-tabulations indicate that there are clear differences between exporters and non-exporters, and that these differences are manifested in all facets of the proposed driving forces of the internationalization process. Exporters and non-exporters respond differently in how they differentiate their product, and larger firms tended to be exporters (both possible proxies for competitive advantages in transforming). Exporters and non-exporters also differed in their self-assessments of how well they *would/can* manage international transactions (a proxy for competitive advantages in transacting), in their assessments of the potential sales in export markets (a proxy for perceived demand for the firm's products), and in the decision makers' exposure to broader market experiences in both the U.S. and abroad (proxies for the decision makers' priorities for their firms, the supporting decision rules associated with the chosen priorities and the subsequent motivations influencing the choices being made).

The qualitative analysis of the responses to the survey's open-ended questions provided further confirmation of the proposed model. Using their own words and at complete liberty to identify what they considered most relevant to their own decisions about exporting, the respondents listed essentially the same set of general issues and concerns as would be the case if the proposed driving forces are, in fact, central to the decision to globalize.

To see if the survey data could confirm the findings of prior research, the analysis of the data base included a limited dependent variable model with four independent variables: the globalization status of the firm's customers (i.e., Are the firm's customers exporting?), the classification of the firm by number of employees (i.e., Does the firm have less than 25, or 25 or more full time employees?), the frequency the firm receives unsolicited sales inquires from abroad (Does the firm *never, occasionally, or often* receive these orders?), and the decision maker's perceptions about whether or not transacting in international markets *would be/is* a problem with international sales. These four independent variables were used in a logistic regression equation with the firm’s export status (exporter/non-exporter) as the dependent variable. The findings, summarized in Tables 2 and 3, confirmed that a limited number of variables with high correlations to the dependent variable are good predictors of a firm’s export status.

As an alternative to this model, factor analysis was used to incorporate a wider array of variables from the survey data base. This analysis “loaded” twenty-three survey questions onto the following six factors:

Factor 1--transacting advantage

Six questions addressed perceptions about potential problems with specifying terms of sale, guaranteeing payments, enforceability of agreements and other contractual legalities in international markets.

Factor 2--demand

Five questions asked about perceived potential for growth, sales, market share, and demand in international markets.

Factor 3--transformation advantage

Five questions addressed how the firm differentiated its product in terms of price, substitutability, breadth of customer base, degree of customizing of products sold, and uniqueness of overall product design.

Factor 4--motivations

Three questions addressed the frequency of receiving unsolicited sales inquires from abroad, percentage of customers who are exporting, and geographic scope of U.S. marketing efforts.

Factor 5--quality

Two questions addressed how the firm differentiated its product in terms of quality and available features.

Factor 6--relationships

Two questions addressed customer relations in terms of customer awareness of the firm's products and the ability to establish long-term relationships with customers in international markets.

The conclusions from the factor analysis suggests that there are six underlying common factors that can explain a firm's choice about whether or not to export. These six factors have large loadings for sets of questions that focus on transaction costs, demand, transformation costs, motivations, product quality, and customer relations, respectively. By figuratively grouping similar factors (i.e., the factor that represents transaction costs with the factor that represents customer relations, and the factor that represents transformation costs with the one for product quality), the six factors collapse to a four "component" model that is very similar in basic structure to the proposed conceptual model of how firms make decisions about globalizing their firm’s scope of operations.

The maximum likelihood logistic regression model that uses scores from the factor analysis substantiates this observation. As is reported in Tables 4 and 5, the logistic regression model using the factor scores has comparable predictive accuracy and robustness as the base logistic regression model.

A comparison of the two logistic regression models shows that they generate very similar results, suggesting that the overall conceptual model is robust and substantiated by the survey data. A relative advantage of the “factor” model is that it incorporates a much broader set of input data from the mail survey, and in this way, provides a more comprehensive specification of the critical indicators of a firm's propensity to globalize. Further, the factor model also offers prescriptive superiority over the four-variable base model. When the goal of the research is to provide managers with insights that lead to more informed decision making, the base model is relatively limited. Specifically, the implications of the base model are that before managers of small agri-food firms can globalize their firm’s scope of operations, they need to first (1) expand the size of the firm, (2) wait until the firm receives an unsolicited order from abroad, (3) wait until one or more of the firm’s customers become exporters, and (4) change their perceptions about the manageability of transaction costs in international markets. As summarized below, the “factor” model provides a relatively more applicable and relevant set of recommendations.

Prescriptive Recommendations for Managers

Managers of smaller, agri-food firms can use the findings of the overall analysis to help them make more informed decisions about international marketing (e.g., how best to respond to unsolicited sales inquires from abroad). Both the case study and factor analysis findings provide initial confirmation that the globalization process is driven by a limited number of independent determinants--namely demand, competitive advantages and operative decision rules specific to the firm. If a manager would like to begin exporting, these findings suggest that attention must first focus on these determinants.

For example, with an unsolicited order, the manager should attempt to assess the sales potential of both the inquiring buyer and the latent market potential of that buyer's domestic market. Will the sale be a one-time event or will it evolve into recurring orders? In order to spread the costs of learning to export to a particular country, does the potential to develop a broader client base exist in that country? Along with these demand issues, the manager needs to assess his/her firm's ability to create and sustain competitive advantages in these markets. Determining why the potential buyer is soliciting a foreign supplier and what product characteristics specific to the manager's products led to the unsolicited sales inquiry can be means for assessing potential competitive advantages in transformation. Identifying other Michigan firms that have exported to the potential buyer's country and the type of contractual agreements with which the buyer is familiar can be means for assessing potential competitive advantages in transacting. Finally, the manager should assess how well the potential sales fit with the overall objectives of the firm, that is, does filling the export sale meet the objectives and performance criteria used by the manager? After all, not all sales are the same.

An alternative “mode of entry”is to monitor the marketing practices of current customers. Identifying current customers that are themselves entering global markets is a key first step for a manager interested in international markets. By continuing to supply customers as they globalize, a manager can position his or her firm to “ride the coat-tails” of customers into new, global markets.

If a manager would like to sustain export activities already initiated, these findings suggest that efforts should focus on maintaining and enhancing the firm's competitive advantages in its targeted international markets. Examples of these types of strategies include: (1) using the established "beachhead" to gain the confidence of other potential customers (i.e., a machine that is "up and running" or a food product that can be tasted in-country is a much more competitive sales message than a catalog picture with a written description), and (2) building on lessons learned about what types of contractual agreements work within a given market's context as contracts are negotiated with new customers (i.e., the manager must see each export sale as a learning experience that can be drawn upon to create competitive advantages in managing transactions and their costs).

Prescriptive Recommendations for Policy Makers:

Policy planners in Michigan can use these findings to gain a greater understanding of the role of international marketing relative to both the current status and future potential of the state's agri-food industries. These findings suggest that a small but growing number of agri-food firms are exporting their products. However, these findings also suggest that policy prescriptions that assert *all* firms should start exporting are ill-advised since exporting is not sustainable without specific conditions in place.

At the federal- and state-level, policies can facilitate the creation of competitive advantages in both transformation and transacting, relative to producers in other states, other exporting countries and the home countries of targeted export markets. Likewise, policies and programs can be implemented that enhance both demand for products and an awareness of this demand. A very limited set of specific examples include:

* Government agencies as information clearing houses: Of particular importance would be efforts to link companies who are considering exporting to a given country with other companies that have already done business there. An additional need exists for helping coordinate information flows through a subsector's vertical chain of companies. If one company of a vertical chain has already globalized, opportunities exist for that company's suppliers and customers to follow it into these new markets.

* Export Enhancement Programs: EEPs that target smaller firms would encourage them to develop demand in international markets and sustain these smaller firms during start-up periods as they create a client-base with enough "critical mass" to make exporting economically viable. Unlike smaller firms, large corporations have the "deep pockets" to sustain such efforts. But as a rule smaller firms are not publicly-held, and consequently, are less sensitive to expectations for short-run (i.e., quarterly) profits (i.e., they have a competitive advantage with their operative decision rules). Further, smaller firms need less absolute sales volume to create the needed critical mass--any given level of sales will comprise a larger portion of total sales for a smaller firm relative a larger firm. These factors indicate policy makers

could get considerable returns for their investments in EEPs if they were targetted towards smaller firms.

* Patent protection: At the federal-level, aggressive pursuit of patent protection in the international community would help protect a company's competitive advantages in transformation.
* Incentives for consolidators: Consolidators who supply the commissaries of U.S. diplomatic communities overseas are already exporting, albeit to a known (and in some ways, captured) demand. Policies could be structured that encouraged (even subsidized) these marketers to take advantage of economies of scale and ship additional goods overseas for the explicit purpose of being sold to general public markets in host countries.
* Training Programs: Support education efforts to train managers of smaller firms in how to assess the three driving forces within the context of their firms, and to formulate strategies and tactics for an expanding, more globalized marketplace.

Conclusions

This paper has (1) presented a conceptual model of decision making within a smaller, agri-food firm as it assesses global marketing “opportunities, ” (2) summmarized empirical research designed to test the validity of this conceptual model, and (3) specified the implications of these findings for both managers and policy makers. The over-riding conclusion of the paper is that there are a limited number of necessary and sufficient conditions that determine if and when a firm can globalize its scope of operations. These conditions are : (1) perceived effective demand for the firm’s products, (2) perceived competitive advantages in the transformation process of inputs into outputs, (3) perceived competitive advantages in the management of transactions costs, and (4) a set of decision rules employed by the firm's principal decision maker that do not impede the globalization process at the firm-level. Management and policy that reflect an understanding of these conditions will be more informed, sustainable, and sensitive to the economic and market forces of today's competitive global marketplace.

Table 1. Comparisons of Case Studies: Classification of Firms by Firm-specific Status of Proposed Necessary Conditions for Globalization

Necessary Conditions:	Experienced Active Exporter (n = 4)	New Entrant (n = 1)	Former Participant (n = 2)	Domestic (n = 1)
Perceived Demand	yes	yes	yes	no
Perceived Competitive Advantages:				
In Transformation Costs	yes	yes	no	no
In Transaction Costs	yes	yes	yes	yes
Motivated by Decision Rules	yes	yes	no	no

Table 2 Parameters & Test Statistics, Logistic Regression, "Base" Model, SAPMA Globalization Study & Mail Survey, Jan/Feb, 1996.

Var.	B	S.E.	Wald	df	Sig	R	Exp(B)
CUST	1.27	0.59	4.55	1	.033	.137	3.55
EMPLOY	1.01	0.64	2.52	1	.112	.062	2.75
INQOFT	5.04	1.53	10.9	1	.001	.256	154.6
INQSOM	3.27	1.09	9.00	1	.003	.227	26.25
TCPROB	-1.81	0.96	3.54	1	.060	-.107	0.16
TCNEUT	-0.64	0.88	0.52	1	.470	.000	0.52
Constant	-3.40	1.24	7.55	1	.006		

Table 3 Observed & Predicted Values for Dependent Variable, "Base" Logit Model, SAPMA Globalization Study & Mail Survey, Jan/Feb, 1996

	Predicted		Percent Correct
Observed	non-exporter	exporter	
non-exporter	60	7	89.55%
exporter	5	32	86.439%
		Overall	88.46%

Table 4 Coefficients & Test Statistics, Logistic Regression, "6 Factor" Model, SAPMA Globalization Study & Mail Survey, Jan/Feb, 1996.

Var.	B	S.E.	Wald	df	Sig	R	Exp(B)
FAC1	.73	.35	4.32	1	.038	.134	2.08
FAC2	-.96	.40	5.93	1	.015	-.174	.38
FAC3	-.82	.37	4.87	1	.027	-.149	.44
FAC4	2.47	.53	21.40	1	.000	.387	11.87
FAC5	-.91	.41	4.92	1	.027	-.150	.40
FAC6	-.93	.45	4.31	1	.038	-.133	.39
Constant	-1.07	.35	9.19	1	.002		

Table 5 Observed & Predicted Values for Dependent Variable, "6 Factor" Logit Model, SAPMA Globalization Study & Mail Survey, Jan/Feb, 1996.

	Predicted		Percent Correct
Observed	non-exporter	exporter	
non-exporter	56	5	91.80%
exporter	7	30	81.08%
		Overall	87.76%

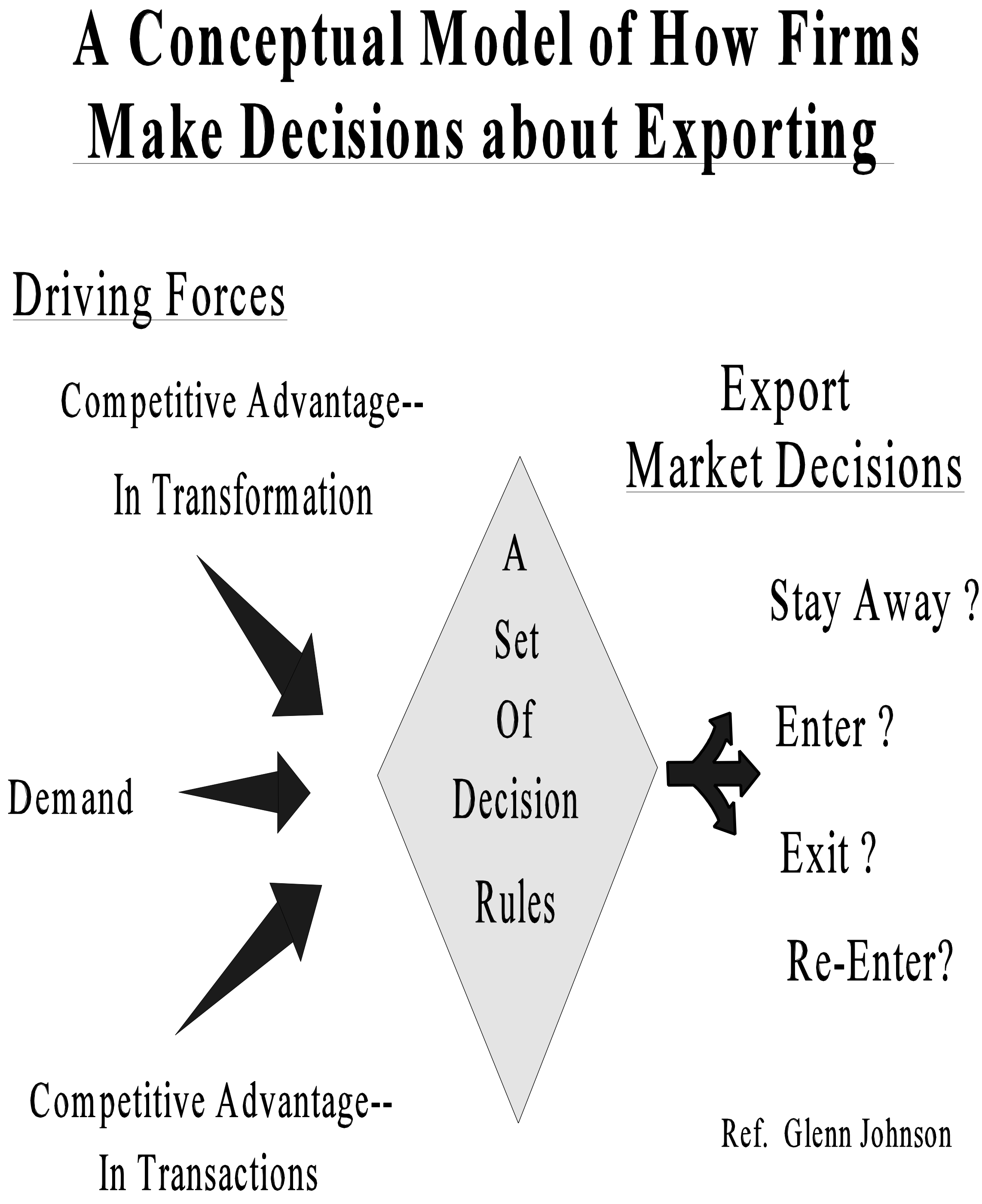
A Conceptual Model of How Firms Make Decisions about Exporting
Driving Forces
Competitive Advantage--
In Transformation
Demand
Competitive Advantage--
In Transactions
A
Set
Of
Decision
Rules
Export
Market Decisions
Stay Away ?
Enter ?
Exit ?
Re-Enter?
Ref. Glenn Johnson

Figure 3[31]

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