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# Supplier Selection and Development: The Relationship between Small Manufacturing Enterprises and Mass Merchandisers

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*This study examines the results of a program intended to act as a selection tool for mass merchandisers and a development tool for small manufacturers. The evaluation program assessed the management practices and products of potential suppliers. Based on past experience, buyers for mass merchandisers consider small manufacturing enterprises a poor risk as potential suppliers of retail goods. As part of the evaluation process, firms were asked 34 closed-end questions regarding their management practices, and each product was evaluated on 41 specific qualities necessary for the mass merchandising market. Of the 1,690 firms that participated in this project, about 5 percent had their products accepted by a national mass merchandiser. A review of the evaluation data reveals that firms needed high performance in both areas of evaluation to be successful in the marketplace, not just a strong firm or a marketable product. However, each of these areas separately had a statistically significant effect on the success of the product in gaining a retail buyer's attention.*

Much of the research done on small firm survival focuses on the specific factors which seem to predict the early demise of the venture. Begley and Boyd (1986) indicated that this research misses the viability of the mature firm and the factors which, long-term, predict its health in the marketplace. Lussier (1995) found that the factors that are cited are too narrowly focused, lacking a comprehensive framework for examination, echoing the results of an earlier study by Gaskill, Van Auken, and Manning (1993). Corman and Lussier (1991) also found that quite often the factors cited as failure reasons or causes are better defined as symptoms.

From a purchasing standpoint, the buyer-supplier relationship often uses similar litmus tests in establishing long-term business partnerships between firms. Research examining this area often looks at either screening factors or supplier development procedures for the purchasing function. Park and Krishnan (2001) and others have studied various models of the purchasing relationship, but to date this research has not fully examined the small firm purchasing function. They did find that the function is a strategic competency issue for buying firms. Pearson and Ellram (1995) listed selection and evaluation factors, but

the development side of the partnership is left untouched. Dollinger, Enz, and Daily (1991) suggest that minority firms can profit from a greater understanding of how both sides of this partnership (evaluation and development) create a strong and healthy relationship for both parties.

This study attempts to examine the results of a program created for just such a purpose. The program had both an evaluation function for the buyer and a development function for the potential supplier. While this program did not restrict itself to minority firms, it used many of the features called for by Dollinger et al. (1991). The program evaluated small manufacturing enterprises (SMEs) wishing to enter the national mass merchandising market, but it also focused on ways to develop these firms so that they would be more attractive to large retailers in the future. After a review of relevant research in this area, we will examine this program and its results in greater detail.

## Literature Review

Much of the literature on the buyer-seller relationship has focused on supplier selection and evaluation (Pearson and Ellram 1995; Swift and Gruben 2000; Park and Krishnan 2001). Some researchers have also looked at supplier development and the role it plays in building long-term purchasing relationships. These relationships are important to the financial health and long-term viability of the firms involved because of the impact they have on each firm's balance sheet. Studies have shown that the purchasing function alone can account for up to 60 percent of a firm's expenditures (Tully 1995). This review focuses on supplier selection studies that identify important criteria and supplier development articles that offer advice for improving the performance level of potential vendors.

## Supplier Selection Studies

Supplier selection is an important aspect of the purchasing management function because choosing the right supplier and developing a supportive relationship begin the production process (Li, Fun, and Hung 1997). Careful supplier selection has become more critical recently due to shifts in supply chain management. Buyers are reducing their supply base, focusing on long-term cooperative relationships,

and involving suppliers in production design (Abegglen and Stalk 1985; Emshweiller 1991). Buying organizations have realized that goals of lower costs, higher quality, and customer satisfaction are heavily influenced by supplier-controlled product attributes such as price and reliability. Therefore, they are dedicating more resources to building relationships with suppliers that are positive for both sides (Tully 1995).

The goal of supplier selection is to choose the best supplier, or the one who has the highest quality product and service for the customer (Swift and Gruben 2000). Prior research on supplier selection has identified many criteria for determining the best supplier(s). Verma and Pullman (1998) identified quality, delivery reliability, price, and flexibility as critical selection factors for buyers. Pearson and Ellram (1995) found that quality was the number one factor for small and large electronic firms in selecting suppliers, followed by cost, current technology, and design capabilities. St. John and Heriot (1993) suggested that potential suppliers distance themselves from the competition by raising quality above the industry standards, offering unique products, and having excellent design capabilities.

Piercy and Cravens (1997) examined the selection criteria of product, price, service, and relationships to determine what buyers rated as important and what suppliers performed the best. The authors found that buyers preferred quality products and trustworthy relationships the most, and suppliers scored high on both of these items. In general, buyers ranked supplier-related issues such as trust, communication, and a positive attitude higher in importance than product-related issues such as packaging, warranties, and international brand recognition. Wilson's (1994) research also suggested that quality and service have increased in importance as supplier selection criteria, while price and delivery have decreased.

Park and Krishnan (2001) looked at the supplier selection practices of small businesses and found that although managers use objective criteria for supplier selection, their decisions may be influenced by industry factors and personal characteristics. Li, Fun, and Hung (1997) suggested that supplier selection should not be based on just price. The value of the supplier should be measured by the firm's performance on multiple criteria which indicate the total materials cost.

Pearson and Ellram (1995) call for studies that examine the measurement of each selection criteria and different industry studies to determine the criteria value based on the environment. Past selection criteria such as dependable quality, delivery reliability, and large volume production capability represent minimum qualifications for suppliers. Today, buyers are also looking for supportive, long-term relationships with suppliers (St. John and Heriot 1993).

## Supplier Development Studies

While supplier selection is an important, extensively researched purchasing activity, the literature concerning supplier development is sparse. Supplier development involves feedback, where potential vendors learn about their strengths and weaknesses in order to establish or improve a cooperative relationship with a buyer. Traditionally, supplier development has not been a strong point of U.S. firms, but the benefits are evident. Whitman (1996) compared the sourcing strategies of suppliers in the United States and Japan and found that Japanese automakers were much more concerned with maximum efficiency in the supply chain than U.S. firms. The result of this development focus by Japanese firms included lower inventory levels and costs.

Supplier development is not separate from supplier selection but is rather an extension of the purchasing process. Chrysler Corporation recognizes how supplier selection and development blend together. No longer are Chrysler dealers evaluated on sales and service alone; other components such as training and employee development programs are gaining importance. Chrysler wants proactive dealers who implement their own continuous improvement programs in an effort to become high-quality retailers (Jackson 1997).

Self-improvement is a large aspect of supplier development. Donovan (1996) noted that most manufacturers could use a radical change in their supply chain management, and he offered 10 benchmark questions to determine areas that need improvement. All of the questions relate to product quality, price, and order processing. Donovan (1996) stated that firms who reengineer their supply chain within a five-year period could increase their market share and profitability. Flanagan (1994) also suggested that firms should implement cost-reducing and quality improvement initiatives and build supportive buyer relationships to gain a competitive advantage and combat the large buying power of mass merchandisers.

Supplier development is not possible without buyer assistance. Some corporations have implemented purchasing programs to develop new suppliers (Dollinger, Enz, and Daily 1991). These minority development programs are meant to demonstrate social responsibility by the buying organization and stimulate entrepreneurship in the minority community. The transaction cost of a large buyer/small seller relationship is often high; therefore, Dollinger, Enz, and Daily (1991) suggested some actions that the buying organization could take to increase the selection and development of minority suppliers. First, buyers should separate the evaluation and selection aspects of the process. In other words, purchasing employees should not be responsible for both assessing supplier potential and contracting with selected suppliers. Second, buyers should adopt multiple criteria for evaluat-

ing the effectiveness of purchasing programs that benefit special groups and the performance of their purchasing employees. Finally, buyers should use an evaluation process coupled with a feedback process.

It is clear that both evaluation and development should be important aspects of a supplier selection program. However, the costs to firms, even large ones, can be prohibitive. Additionally, many firms are not ready to take such proactive steps, whether or not the company's mission is oriented toward active social responsibility. Often, larger firms may find it simply easier and more efficient to rely on other large firms with established reputations rather than to experiment with smaller manufacturers who are as yet unproven. This study reviews an independent, outside program set up to evaluate small manufacturers as potential suppliers to large mass merchandisers. The program also took on a developmental role for the SMEs in that it used the evaluation results to help these firms understand their weaknesses so that they could begin self-improvement processes to increase their chances of success in the future. In the end, the choice to improve was left to the SME, and the choice of suppliers was left to the retailer. However, it is likely that both were armed with better information after the process than they would have been without it.

## Program Overview

In an effort to help mass merchandisers select more small manufacturing firms as vendors, a program was developed that focused on supplier selection and development. This evaluation program assessed the products and management practices of SMEs that were interested in becoming suppliers to major American mass merchandisers. While the ultimate goal of the process was to determine which ventures were best suited for the mass merchandising market, the program also served as an advising tool for manufacturers by counseling them on their strengths and weaknesses. The program consisted of two evaluations: an assessment of the firm's management practices and an assessment of its submitted product. Each venture was either forwarded or not forwarded to mass merchandiser buyers for their consideration based upon the results of these evaluations. The resulting decision to market the product nationally was made by the merchandiser buyer.

## Firm Assessment

After contacting the program's director, a venture's owner was asked to complete an objective self-assessment of his or her firm's management practices. Each owner was advised that all responses would be independently verified and that fraudulent representations would immediately disqualify their venture from further consideration in the program. Firms were asked 34 closed-end questions

regarding their management practices. Each question had five or six possible responses which were based on prior research or observed practice, and they were ranked for desirability by professional buyers prior to the program. However, when the actual instrument was constructed, the responses were scrambled to reduce respondent bias. The minimum desirable level of compliance was set at the median of the responses available. An example of an item and its responses (listed in ascending order of desirability) is given below:

**Marketing Plan.** Does your firm have a marketing plan for this project?

We do not need a marketing plan for this project.

We have an informal, unwritten marketing plan.

We have an informal, written plan.

A formal, written marketing plan is in progress.

We have a formal, written marketing plan.

The management practice items included on the firm assessment instrument were selected and revised based on generally accepted research conclusions and discussion with potential buyers from the mass merchandiser industry. The program director and his staff researched the literature in this area to find what seemed to be the salient qualities required for success as a small manufacturer. They then approached scholars in each business discipline and further developed the core areas. Finally, they approached representatives of mass merchandising firms to verify the qualities that these professionals deemed appropriate for their firm's suppliers. The final instrument was created based on the management practices distilled in this process, as suggested by previous studies (e.g., Pearson and Ellram 1995). The basic content areas of the firm assessment instrument are presented in Figure 1.

## Product Evaluation

The prospective supplier also had to provide the program with a sample of the product in its final packaging. Independent professional evaluators assessed this product for its potential success in the major retail market. Each product was evaluated on 41 specific qualities necessary for the mass merchandising market. Evaluators then made general assessments of the firm in five areas (production capability, product quality control, marketing capability, engineering and technical capability, and financial capability) and overall assessments of the product and the firm. As with the firm assessment, there were five or six possible responses for each item (along with the option to mark an area as "not applicable"), but the responses were not scrambled because bias was not expected from the trained independent evaluators in this program. The minimum desirable level of compliance was set at the median of the responses available. An example of an item and its responses is given below:

Content Areas	Management Practice	
Marketing Management	Creation and Use of a Marketing Plan	
	Marketing Organization Structure	
	Price Determination Process	
	Market Demand Determination Process	
	Competitive Product Analysis	
	Creation and Use of a Promotional Plan	
	Company Orientation (Customers, sales, profitability, etc.)	
Strategic Direction	Creation and Use of a Mission Statement	
	Creation and Use of Detailed Job Descriptions	
	Openness to Employee Input	
	Type and Quantity of Management Experience	
	Quality Assurance Process	
	Primary Objectives of Company (Return on investment, market share, etc.)	
	Use of Outside Consultants	
	Creation and Use of a Business Plan	
	Existence of a Board of Directors	
	Involvement of the Board of Directors	
	Technical Management	Type and Quantity of Product Testing
		Extent of Research and Development
Manufacturing Technology Upgrade Cycle		
Production Management	Creation and Use of a Management Planning and Control System	
	Delivery Schedule Reliability	
	Quality Control Measures (Including ISO 9000)	
	Creation and Use of a Maintenance Program Schedule	
	Creation and Use of a Cost Containment Program	
	Creation and Use of a First-Piece Approval System	
	Creation and Use of an In-Process Quality Inspection System	
Financial and Accounting Management	Creation and Use of a Continuous Improvement Program	
	Use of Cash Flow Analysis	
	Length of Budgetary Planning Cycle	
	Length of Budget Update Cycle	
	Use of Professionals for Cost Accounting Measures	
	Use of Professionals for Accounting Function Measures	
	Use of Professionals for Financial Planning Measures	

**Figure 1. Common Management Practices Used in This Study**

**Functional Feasibility:** In terms of its intended functions, will it do what it is intended to do? This product:

- Is not sound; cannot be made to work.
- Won't work now, but might be modified.
- Will work, but major changes might be needed.
- Will work, but minor changes might be needed.
- Will work; no changes necessary.

As with the self-assessment instrument, the product evaluation instrument was constructed using a combination of research and practical observation. The product assessment format was essentially a modified version of the seventh version of the Preliminary Innovation Evaluation System (PIES) initially developed by the National Science Foundation as part of the Innovation Centers experiment at the University of Oregon in 1974. Since that time, this structured evaluation format has been used to evaluate more than 30,000 ideas, inventions, and new products in the United States, Canada, and elsewhere. The PIES format was noncorporate in its orientation and contained questions addressing societal, business risk, demand, market acceptance, competitiveness, and commercialization issues. For the most part, only minor changes in wording were needed to shift the focus from ideas and innovations to completed products prepared for the marketplace. The specific areas are shown in Figure 2.

### **Sample**

All of the small manufacturing firms in this sample were independently owned and were not dominant in their industry. A review of the basic demographics of the sample shows that 1,690 of 2,113 potential suppliers (80.0%) completed both the self-assessment and product evaluation portions of the assessment process. Of these 1,690 firms, 321 (19.0%) were female-owned and managed, 1,330 (78.7%) were male-owned and managed, and 39 (2.3%) were not identified by gender ownership or management. Respondents were from all states, with no one region dominating the sample. Racial, ethnic, and other minority information were not kept as part of the main database. No one manufacturing or retail area was predominant, although all firms supplied products exclusively for consumer purchase. Industrial products were not part of this program. Products varied in suggested retail price from inexpensive and/or point-of-purchase to major purchase levels.

### **Methodology**

The instruments used in this program were created following the lead of earlier studies. These methods have since been validated by further research which suggests that the

use of academics and practitioners to create items and their responses is a valid technique. Swift and Gruben (2000) suggest the use of previous instruments to generate items. Their study used acceptable techniques to modify and even eliminate items based on their usefulness for the current study. Pearson and Ellram (1995) used selected criteria from various studies to create a new instrument. They then asked colleagues to review the instrument for content validity and clarity and then distributed the edited document to academics and practitioners for further review. The resulting document was assumed to have content validity based on these procedures. Evans, Feldman, and Foster (1990) used a similar procedure to elicit criteria from professional buyers to establish selection criteria, and they further used an importance Likert scale as measurement rather than a "check Yes or No" scale used by most of the selection studies to date. This scale was found to better represent respondents' beliefs than the dichotomous scale in use by other studies. Li, Fun, and Hung (1997) suggest the use of such scaled criteria and the establishment of a single scale score for each criterion through the use of multiple items averaged to determine that score. This program used academics and professionals to verify, expand, and edit the criteria found through an extensive literature review, and it also used a sliding scale of responses to determine the level of compliance for each criterion. Criterion scores (e.g., marketing management or societal impact) were determined through averaging multiple item scores. Paired samples, independent samples, and regression analysis tests were used to examine the data generated by the program.

## **Results**

### ***Successful Management Practices***

The firm assessment portion of the program evaluated firm management practices by using 34 items grouped into the following major management categories: marketing management, strategic direction, technical management, production management, and financial and accounting management. Table 1 shows the mean ratings for all firms in each of these categories. The mean statistic was determined by a simple averaging of the responses for each item in the category. The number of items for each category varied from 3 (technology) to 10 (strategic direction), but the numerical range for each item was identical. The most desired response for each item was given the value of five, and the least desired response was given a value of one. The median value, three, was assigned to the response that was marginally acceptable for a potential supplier. Responses with values less than three were considered unacceptable management practices. By averaging responses for each category, an overall assessment of a firm's preparedness in that category could be determined.

Content Areas	Evaluation Criteria	Content Areas	Evaluation Criteria
Societal Impact	Legality of the product	Competitive Capabilities	Perceived appearance
	Product safety		Perceived superiority
	Environmental impact		Perceived durability
	Societal welfare impact		Perceived cost
Business Risk	Functional feasibility	Management Requirements	Market entry ease
	Production feasibility		Competition expectations
	Market readiness		Legal protection
	Capital investment requirements		Technology transfer options
Demand Analysis	Payback period	Overall Venture Assessment	New venture options
	Return on investment		Marketing experience
	Marketing research		Technical experience
	Research and development		Financial experience
Market Acceptance	Market potential	Overall Venture Assessment	Production experience
	Sales potential		In-store promotions
	Demand life cycle		Merchandising potential
	Demand stability		Production capability
Market Acceptance	Product life cycle	Overall Venture Assessment	Quality control measures
	Product line potential		Marketing capability
	Customer attitudes		Technical capability
	Customer learning curve		Financial capability
Market Acceptance	Customer need fulfillment	Overall Venture Assessment	Overall venture readiness
	Demand interdependence		Overall product readiness
	Product benefit awareness		
	Promotional costs		
Market Acceptance	Distribution channels	Overall Venture Assessment	
	Product service		

**Figure 2. Product Evaluation Criteria Used in This Study**

As shown in Table 1, the average firm in the program was best prepared in financial and accounting management. Often, firms chose to use outside professionals to assist with these functions because they were too small to have professionally qualified staff members trained to handle these responsibilities. In general, firms were also relatively well prepared in production management and strategic direction. The mean statistics above 3.50 indicate that the average response was above the marginal (3) response for most items. On the other hand, firms were much less well prepared for marketing and technological concerns. For each of these categories, while the mean is

above 3.00, more items were answered with marginal (or worse) responses than for the former three categories.

Table 2 examines the differences between successful and unsuccessful firms from this program. Success was determined as having the firm's product recommended to buyers for further review. While ultimate success would actually be something similar to having a profitable product on a mass retailer's shelves, the vagaries of the market would make this harder to predict. An excellent product from an excellent firm might be rejected by a mass merchandiser because of an oversaturated market, yet the product could find limited success in a regional or local

**Table 1**  
**Complete Sample Statistics—Firm Assessment Statistics**

Firm Assessment Category	Mean (n=1690)	Standard Deviation
Financial and Accounting Management	3.74	0.93
Production Management	3.56	0.73
Strategic Direction	3.52	0.73
Marketing Management	3.31	0.71
Technical Management	3.15	0.93

Note: Each assessment category is statistically significantly greater than the next at the  $p < 0.01$  level.

marketplace. Besides, this program was designed to educate manufacturers on acceptable management practices and to provide a review process for buyers, not to actually select the products that a mass retailer should have on its shelves nationwide.

The results in Table 2 illustrate that forwarded firms were those that were better prepared across the board. The mean response for each category was statistically significantly higher for forwarded firms than for nonforwarded firms. Successful firms reported above-marginal (3.50 or above) averages for practices for each category, while unsuccessful firms reported the same level of professionalism for only one category: financial and accounting management. Earlier results seemed to indicate areas for concern about this study's participants and their marketing and technology management performance. The results in this table seem to identify this weakness as the responsibility of the unsuccessful SMEs alone. Successful firms reported more sophisticated management practices than unsuccessful firms for all items in this self-assessment with one exception: delivery schedule reliability. For this one item, there was no discernible difference in the responses of these two types of firms.

### **Successful Product Characteristics**

The product evaluation portion of the program assessed product readiness for mass merchandising through 41 items grouped into the following categories: societal impact, business risk, demand analysis, market acceptance, competitive capabilities, and management requirements. This assessment process was completed by independent evaluators reviewing product characteristics and documents filed by firm executives in the program application process. Table 3 shows the mean results for each category for all participating firms. As with the self-assessment process, the mean statistic was determined by a simple averaging of the responses for each item in the category. The most desired response for each item was given the value of five, and the least desired response was given a value of one. The median value, three, was assigned to the response that was marginally acceptable for a potential product. Responses with values less than three were considered unacceptable product characteristics. By averaging responses for each category, an overall assessment of a product's readiness in that category could be determined.

The results in Table 3 show that business risk was judged positively by the program's evaluators and that the societal impact of submitted products was not seen as a major concern. The average product was not seen to have many potential legal or social liabilities, and its profit potential was judged, on average, to be helped by functionality, production feasibility, low capital costs, and low resource requirements. Evaluators rated the usefulness of the products relatively well, but they found greater problems in other areas. While market acceptance was judged positively, demand was judged to be marginal, and participating firms' competing capabilities were judged negatively. In other words, the products themselves might fill a potential consumer need well, but the demand levels for the products and the ability of firms to compete against entrenched larger manufacturers were suspect. SMEs had little management experience in producing these items in

**Table 2**  
**Firm Assessment Statistics by Forwarded (Success) Status**

Firm Assessment Category	Forwarded (Successful) (n=539)		Not Forwarded (Unsuccessful) (n=1151)	
Financial and Accounting Management	4.11	0.66	3.57	0.99
Production Management	3.87	0.65	3.42	0.72
Strategic Direction	3.87	0.59	3.36	0.74
Marketing Management	3.61	0.66	3.17	0.69
Technical Management	3.53	0.88	2.97	0.91

Note: Successful firm statistics are statistically significantly greater than unsuccessful firm statistics at the  $p < 0.001$  level.

**Table 3**  
**Complete Sample Statistics—Product Evaluation Statistics**

Firm Assessment Category	Mean (n=1690)	Standard Deviation
Business Risk	4.29	0.54
Societal Impact	4.07	0.36
Market Acceptance	3.41	0.44
Management Requirements	3.12	0.47
Demand Analysis	3.00	0.51
Competitive Capabilities	2.96	0.43

Note: Each assessment category is statistically significantly greater than the next at the  $p < 0.01$  level.

the large quantities required by a mass merchandiser, and they faced a demand curve for their products that was often flat or on the decline. Further, given the inexperience and small size of these SMEs, their competitive capabilities were poor against larger firms producing the same or similar products. Their products were often too similar to popularly accepted products or were not distinctive enough to be viewed as different or better than their potential competitors. Firms that were unsuccessful often found themselves making a newer version of a mousetrap, but they were unable to distinguish the superiority of their product to other cheaper versions already on the market.

Table 4 compares the evaluations of successful and unsuccessful firms. As with the firm assessment process, successful firms were found to receive higher ratings than unsuccessful firms. Successful firms submitted better-prepared products with better market possibilities than did products from unsuccessful firms. All categories, with the exception of societal impact, were judged higher for successful firms than for unsuccessful firms. Apparently, the societal impact of these products was judged to be relatively minimal, and few legal, safety, or environmental

problems were considered likely with the average product. Successful firms were supplying a product that was superior in almost every aspect to those supplied by unsuccessful SMEs. This attention to all the details (rather than focusing on one characteristic or market-oriented quirk [e.g., a trendy name or fleeting consumer preference]) seemed to be a major success factor.

### Combined Strength

Conventional wisdom, practical experience, and academic research have shown that the most successful SMEs are those with well-managed firms and excellent products. Weaknesses in either or both decrease the chances of success. This study focused on determining the importance of each of these to the success of participating firms in this program.

Regression analysis was used to determine the effect of the major independent variables (firm management and product characteristics) on the dependent variable (forwarding status). Because both independent variables are hypothesized as important to success, an interactive effect was added to the analysis (firm X product). The results of this analysis are shown in Table 5. The strongest effect was found in the combined variable, with firm assessment and product characteristics providing secondary explanatory information. The combined variable explained 23 percent of the variation, and the other two variables added 5.5 percent to the adjusted r-square. The total 28.5 percent was significant at the  $p < 0.001$  level.

### Discussion

It can be argued that the use of forwarding status as a proxy for success borders on a self-fulfilling prophecy in that only the best ventures would have been forwarded to buyers for review in any case. Poorer ventures would have been rejected (and therefore identified as unsuccessful) as a result of the assessment ratings, so defining success as

**Table 4**  
**Product Evaluation Statistics by Forwarded (Success) Status**

Firm Assessment Category	Forwarded (Successful) (n=539)		Not Forwarded (Unsuccessful) (n=1151)	
	Mean	Standard Deviation	Mean	Standard Deviation
Business Risk (*)	4.51	0.50	4.19	0.53
Societal Impact	4.09	0.35	4.07	0.36
Market Acceptance (*)	3.60	0.40	3.32	0.43
Management Requirements (*)	3.43	0.43	2.98	0.42
Demand Analysis (*)	3.24	0.48	2.90	0.49
Competitive Capabilities (*)	3.08	0.39	2.90	0.43

Successful firm statistics are statistically significantly greater than unsuccessful firm statistics at the  $p < 0.001$  level where marked (\*).

**Table 5**  
**Regression Analysis—Prediction of Forwarded Status**

Independent Variable	R	R-Square	Adjusted R-Square	R-Square Change	Significance Of Change
Firm Assessment X					
Product Evaluation	0.481	0.231	0.230	0.231	0.001
Firm Assessment	0.530	0.281	0.280	0.050	0.001
Product Evaluation	0.534	0.286	0.284	0.005	0.001

successfully navigating through the program could be a bit self-serving. There is some truth to this concern, but other proxies might not actually serve the research better. In truth, the use of this criterion is not a poor choice. Piercy and Cravens (1997) suggest that performance evaluations such as the ones used in this study are similar to those used by buyers worldwide. They also suggest that the level of performance generally correlates well to the actual selection choice made later by larger firms. They also suggest that buyers using this set of criteria for selection tend to have higher performance levels themselves in the marketplace.

Why not use other conventional measures such as profitability, longevity, or even market success of the evaluated product? Measures of success were actually a part of the evaluation process (e.g., the financial stability of the firm and the success of the product on local or regional markets were both items in the assessment instruments). Additionally, while records were kept on whether the product actually made it to a mass merchandiser's shelves, use of that variable in a regression analysis was found to add little to the explanatory strength of the model. While on-shelf products showed the same level of difference in quality of firm and product compared to rejected products, they showed very little difference to other forwarded products that did not make it to a mass retailer's shelves. Only environmental impact, product appearance, and selling price showed significant differences in product characteristics, and only firm focus on quality and intensity of board of director involvement were significantly different in the firm assessment process. However, the actual mean differences in these variables were relatively insignificant.

Firms which were forwarded but were not accepted for a mass retailer's shelves were also encouraged to pursue other channels of distribution such as local or regional retailers or specialty merchandisers (such as sporting goods stores or pharmacies). Even those firms that were successful in gaining a place on a mass merchandiser's shelves were counseled to pursue other channels as well. Further, many of the rejected products were not necessarily turned down because they were low quality or because

the SMEs producing them were poorly managed. Often the products were attempting to enter a saturated mass market (how many new dish detergents could mass retailers carry?) or were trying to enter mass markets when specialty markets were a better outlet. A follow-up study of these program participants is planned to determine their current state of operations and profitability and to see the long-term effects of the educational aspects of the program.

Finally, the results of this study confirm previous research which suggests that multiple factors affect the success of SMEs. Both the firm and the product need to be of superior quality for SMEs to be successful, and this is especially true for firms wishing to enter the mass merchandising market. Each has its own effect on success, but the regression model resulting from this study suggests that there is an interactive effect of the two variables. Again, SMEs need to spend time ensuring that both the firm and the product are of superior quality if they want to find even moderate success in today's marketplace. Retailers are interested in placing quality products on their shelves, but they are also interested in doing business with quality suppliers that can become long-term partners. Poorly run firms, no matter how good their products, are unlikely to find larger retailers willing to take the chance of entering partnerships with firms that may be unable to provide those products on a consistent basis with consistent quality.

## Conclusions

This study examined the results of a program intended to act as a selection tool for mass merchandisers and a development tool for small manufacturers. The evaluation program assessed the management practices and products of potential suppliers. Prior to assessment, it is important to note that, based on past experience, buyers for mass merchandisers considered SMEs a poor risk as potential suppliers of retail goods. They estimated that only 1 out of 300 SMEs who contacted them had a viable venture (a strong firm and a potentially successful product) (Udell, Atehortua, and Parker 1995).

One of the goals of this program was to help SMEs become more successful in reaching a mass merchandiser's shelves with their products. The conventional wisdom from academics and practitioners alike was that a venture needed a well-managed firm and a marketable product to be considered in a supplier partnership with a large retail corporation. Even then, the chances of success were about 1 in 300. Using the results of almost 1,700 participants in this program, we can theorize that the conventional wisdom was correct: a well-managed firm or a marketable product alone cannot secure a partnership. Both are critical. But even having both is not a guarantee of success. Of the 25 firms (1.5% of the total participants) that initially had high ratings for both the firm and the product, only 2 (8%) actually made it to the retailer's shelves. While the majority of accepted products came from firms that initially had low ratings for either the firm or the product or both, the acceptance rate for these firms was in the 4 to 5 percent range. Excellent firm-product combinations had about twice the chance of being accept-

ed by mass merchandisers. Even this conclusion is conservative. Those firms with poor initial ratings had to make changes before they secured acceptance.

Almost one-third of the SMEs participating in this program (32.7%) were judged suitable for review by the merchandisers, and about 1 in 6 of these suitable firms (15.3%) ultimately were accepted as suppliers. Even though about 95 percent of all participating firms were ultimately rejected either by the program or the buyer, the 1-in-20 success rate compares favorably to the 1-in-300 rate cited earlier as a buyer's expected acceptance rate. Even acknowledging that the program participants were possibly the best 20 percent of potential suppliers to the merchandiser, the acceptance rate is still more than 1 percent, about three times higher than would otherwise be expected. Thus, this program seems to function well as a supplier selection tool that aids mass merchandisers in choosing quality vendors and as a supplier development tool that helps small manufacturers identify their strengths and weaknesses in the purchasing process.

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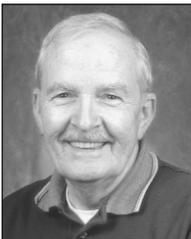
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