International Market Entry and Expansion via Independent or Integrated Channels of Distribution

Manufacturers introducing an industrial product to a foreign market face a difficult decision. Should the product be marketed primarily by captive agents (company salesforce and company distribution division) or by independent intermediaries (outside sales agents and distributors)? This is an issue of downstream vertical integration. The authors explore the issue through an empirical investigation of distribution channel choice in foreign markets by U.S. semiconductor companies. Using original interview data, they develop scales to measure key variables. With these measures they build a logistic regression model of what factors affect the form of the distribution channel chosen in various foreign markets. The results indicate that integration is associated with the degree of transaction specificity of assets in the distribution function and whether or not the product being introduced is highly differentiated. There is evidence that the product will be sold through whatever channel is already in place, if any. Further, American firms seem more likely to integrate the distribution channel in highly developed industrialized countries (Western Europe) than in Japan and Southeast Asia, which are more culturally dissimilar. Implications for managers faced with a channel choice are explored.

Once a domestic manufacturer decides to introduce an industrial product to a foreign market, a difficult question must be resolved. Should the new product be distributed via a company-owned distribution channel, or is it more efficient to contract distribution to an independent organization? To an economist, this is a question of vertical integration, in which the choice is between primarily captive agents (company salesforce and company distribution division) or primarily independent intermediaries (outside sales agents and distributors). The former option is an integrated channel, which generally affords the manufacturer more control than the latter, which is a non-integrated channel.

To a manager, this is the “make or buy” issue, the company system being the “make” option and the independent channel the “buy” alternative. Robinson (1978) calls these make-or-buy issues “one of the most debated and critical areas in international business” (p. 357). The reason is that ownership gives the entrant control over its international distribution channel, its link to the industrial customer. However, ownership also brings responsibility, commitment, and attendant risks (Ahmed 1977). Channel choices, once made, are often difficult to change. Hence, the question of whether to integrate foreign distribution can have a large and lasting impact on the success of a firm’s international operations.

We explore the intertwined issues of ownership and control through an empirical investigation of distribution in foreign markets by U.S. companies in the semiconductor industry. The products we study first were commercialized in the U.S. between 1955 and
1975 and were immediately or subsequently sold in major overseas market areas. We use the marketing, international management, and economics literatures to generate a list of factors affecting the organizational forms (integrated or independent) chosen by these firms in various foreign markets. Specifically, we model this choice as a function of both production and transaction cost considerations.

In our data analysis we used detailed proprietary information gathered by field interviews about distribution decisions for 94 product introductions in foreign markets. From this information we develop scales to measure critical variables. We then employ the scales to estimate, by logistic regression, the probability that a new product will be introduced via an integrated (rather than independent) channel of distribution.

Our approach is a significant departure from most of the empirical international management literature, which tends toward intensive case studies (e.g., Schellberg 1976) or, alternatively, analyses of single-proxy indicators gleaned from published sources (Caves 1982). Further, we explicitly model the impact of a number of factors taken together. In contrast, empirical research to date generally has considered only one or two factors per study, ignoring or holding constant a broad variety of influences on organizational form (e.g., Coughlan 1985). In most of the international marketing and management literature the researchers do not even ask why the channel assumes a particular form. Instead, the form is taken as given and other issues are examined, such as conflict within the independent channel (Rossen and Ford 1982).

In the next section we use analytical and empirical literature to postulate a model of distribution channel choice. We then describe the data base and how psychometric procedures were used to build scales measuring the variables of interest. Next the model estimation results are reported and discussed. We conclude with discussion and managerial implications.

**A Model of Integrating Distribution in Foreign Markets**

The choice between an integrated or independent distribution channel to serve a foreign market is complex and poorly understood. We cannot capture all the factors that contribute to a particular integration decision, but attempt to describe major, generalizable forces influencing channel selection.

We begin by framing the problem according to transaction cost analysis (Williamson 1981), which posits that a priori the entrant is better off choosing an independent channel. This choice enables the entrant to tap the benefits of a distribution specialist in the foreign market. These benefits include the economies of scale and scope that the independent obtains by pooling the demand for distribution services of several manufacturers. Further, by avoiding integration, the entrant avoids some of the disabilities of bureaucratic governance structures (Williamson 1979), in particular, organizational politics. Market contracting is thought to work well when the market for distribution services is competitive, because a distributor who fails to perform can be replaced. Indeed, it is argued that the threat of replacement alone is sufficient to keep an independent distribution system running well.2

The presumption of the superiority of market contracting is based on the manufacturer’s ability to replace nonperforming distributors. When this ability is diminished, for whatever reason, the impetus to integrate is increased. A proposition derived from transaction cost analysis is that integrated channels are more likely to be used when substantial “transaction-specific assets” accumulate. These assets are specialized knowledge and working relationships built up over time by the agents (either employees or independents) distributing the brand in question (Williamson 1979). These experience-based assets are specialized to the task of distributing the brand. Hence, the manufacturer will face difficulty in replacing the current agent, because any replacement agent must duplicate the experience needed to acquire the assets. In short, the current agent, by virtue of experience, can become highly valuable to the firm. Hence, the firm will be reluctant to terminate the agent, even if the agent is abusing his/her agreement with the firm (“opportunism”).

Williamson (1981) and Klein, Crawford, and Alchian (1978) propose that firms can better monitor and motivate their difficult-to-replace distribution agents (i.e., dampen opportunism) if the agents are employees rather than outsiders. Hence, where task-special-

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1 Coughlan and Flaherty (1983) combine the case study/single-proxy approaches to examine the productivity of marketing channel resources, using a subset of the data used here. However, they consider primarily dichotomous predictors of channel choice rather than scales (as used here), and do not focus on analyzing the predictive ability of the range theories we consider. Coughlan’s (1985) model is concerned only with the impact of differentiation on channel choice, and uses only single-proxy indicators; it also uses just a subset of the data used here.

2 The transaction cost presumption of the superiority of market contracting is in marked contrast to other approaches to the issue of vertical integration of distribution. For example, Stern and El-Ansary (1982) stress the benefits of integration much more than the benefits of independence. Similarly, Coughlan (1985) notes that her analysis “ignores the transactions costs of dealing with marketing middlemen or the specific benefits and services arising out of the use of marketing middlemen” (p. 128). In contrast, our proposition is that middlemen’s advantages are so large as to make them the default option, unless the transactions costs of dealing with independents rise to a high level.
ized knowledge and relationships are important, we expect firms to select integrated distribution channels. In support of this proposition, Anderson (1985) finds the selling function tends to be integrated when two transaction-specific kinds of knowledge are important: brand knowledge and confidential inside information. However, she finds no influence due to several other forms of asset specificity.

The product category’s age also influences channel selection. It is reasonable to expect that older product categories are more likely than newer product categories to be distributed through independent channels, because the older categories are more established and well known. Manufacturers therefore should be able to find a large number of qualified (knowledgeable) independent distribution agents to replace nonperforming agents. This fact in turn tends to encourage good performance on the part of any agent. In accordance with this reasoning, Lilien (1979) studied the channel choice decision by Fortune 500 firms in the U.S. and found a tendency to use independent channels for mature product categories.

Davidson (1982) adds another reason to use independent agents for mature products in foreign markets. In many countries, governments pressure multinational firms to use local agents whenever they are available. Where they are plentiful, as for a well-diffused product, a foreign firm may have difficulty persuading the host government that it needs to set up its own distribution branch.

Service requirements can affect channel selection. Where the firm’s marketing strategy calls for a high level of service (before or after sale), integrating the channel helps ensure that service will be performed (Etgar 1978; Keegan 1984; Terpstra 1983). Though performing service can be specified in contracts with independent entities, ascertaining whether the independent adheres to the contract can be difficult and costly (Jensen and Meckling 1976) because there are few readily available indicators of service performance unless the firm integrates the channel. Giving the distributor employee status grants the firm the legitimate authority needed to monitor an agent’s behavior and adjust rewards subjectively.

Hence, we would expect integrated channels to be used more commonly than independent channels for products with high service requirements. Some limited empirical support is provided by Anderson (1985), who found that employee salespeople are used more commonly than contract independent salespeople for service-intensive products. Though the selling function is only one part of distribution and the sample was confined to U.S. sales, Anderson’s findings may generalize to international distribution activities.

Product differentiation also may influence channel choice. McGuire and Staelin (1983) develop an analytical model of retail channel choice in a duopoly wherein retailers carry only one manufacturer’s product. They conclude that integration (company store) is more profitable for the manufacturer than nonintegration (independent retail store) when consumers perceive the two manufacturers’ products to be highly differentiated (not substitutable). In their analytical model, the reason is that such products do not compete directly. In contrast, nondifferentiated products do compete directly, creating price wars that drain the manufacturers’ profits in integrated channels. If such products are sold through middlemen, however, the manufacturers’ ability to respond to price changes (wage price wars) is inhibited, thereby protecting the manufacturers’ profits. Coughlan (1985) tested this theory using 62 industrial (not retail) distribution choices by 26 electronics firms. The findings support the proposition that highly differentiated products are more likely to be sold through integrated channels.

Legal restrictions on foreign direct investment can have a major impact on whether the channel selected to carry a product in a foreign market is integrated or independent (Robinson 1978). Another important influence is the presence of established distribution arrangements (Coughlan and Flaherty 1983; Davidson and McFetridge 1985). If the firm has an integrated channel in place, the new product may be added to the line carried by this channel to utilize fixed assets (e.g., salaried personnel) more fully. Conversely, if an independent channel is already in place, adding the new product may be less costly than installing an integrated channel. In short, firms are likely to introduce a new product through their existing channel.

Integrating distribution is especially likely if the new product is closely (rather than peripherally) related to the firm’s principal business. For such “core” products, the entrant may be more willing to commit resources to distribution to ensure direct contact with customers and greater control over decision making. For peripheral products, however, management may not view the product as important enough or synergistic enough to merit a major resource commitment (Davidson 1982; Davidson and McFetridge 1985).

The strength of the firm’s patent may have an impact on channel choice, though the direction is difficult to specify. A firm with a strong patent is pro-

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3The point is more generally posited by Stigler (1951). He argues that as a market grows in size, parts of the production and marketing processes (e.g., distribution) can be spun off to independent firms simply because of their scale.

*Coughlan considers only de novo entry in a market with established competitors. This restriction eliminates the pressure, mentioned before, to add a product to the portfolio of whatever channel is already in place.
ected and may not worry about information leaking via independent channels to actual or potential competitors (Root 1982). However, patent protection is never ironclad (Davidson 1982). A product sufficiently innovative to warrant an inclusive patent may need further protection in the form of closely guarding all information about the product, as well as access to it (so-called "trade secret" protection). This protection is accomplished best in an integrated channel, where the manufacturer can control distribution activities (including information dissemination) relatively closely.

Competitive behavior may influence an entrant as well. If firms already established in the market have integrated channels, the entrant may wish to have one also. In this way, entrants signal to customers that they, too, are committed to serving that market and are willing to dedicate resources (e.g., personnel) to do so. A game theoretic interpretation of this behavior is that oligopolistic competitors "exchange threats" by imitating the establishment of subsidiaries in each other's markets (Calvet 1981).

The choice of an integrated or independent channel may be influenced by the country being entered (Keegan 1984; Terpstra 1983; Thorrelli 1980). In particular, managing an integrated channel may be more difficult in countries culturally dissimilar to the U.S. because U.S. management techniques may not transfer readily to the foreign environment (Davidson 1982).

In sum, the literature suggests a model of overseas distribution channel choice depending on many factors. In this model, integration of the distribution channel function is more likely

- the greater the level of transaction-specific assets in the salesforce,
- the less mature the product category,
- the higher the service level associated with the product,
- the more differentiated the products in the product class,
- the less prevalent the legal restrictions constraining direct foreign investment,
- when an integrated distribution channel is already in place (the converse is true for the case of a non-integrated channel),
- the more closely related the product to the company's core business,
- the more important the trade secrets relative to patents in protecting the technology,
- the more competitors have integrated distribution channels in the foreign market, and
- the more similar to the U.S. the culture of the country being entered.

We next discuss the operationalization of the model's hypotheses. ⁵

### Data Base Description and Scale Development

The setting of our study is the international semiconductor industry. A National Science Foundation study undertaken in 1978–1980 yielded extensive original interview information on 94 overseas distribution operations that were started between 1955 and 1975. These operations were carried out by 36 U.S.-based firms.

Each structured interview, consisting of both scaled response and open-ended questions, was conducted with a senior executive knowledgeable about the market entry in question. For more complex technology transfers, more than one executive was interviewed (up to six per entry) and their responses were cross-checked until a consistent picture of the transfer was obtained. This consistent picture was treated as one observation. Interviews lasted approximately three hours each and covered a given market entry in considerable detail. This approach enabled the interviewer to probe certain responses and to follow up on questions perceived as ambiguous by the respondent.

On the basis of interview notes, the interviewer coded some of the open-ended responses into semantic differential scales.⁶ Compared to asking the respondent to complete a set of scales, this interview method has the drawback that subjectivity is introduced by the coding step. However, the advantage is consistency across respondents; the interview process attenuates response styles (e.g., yea-saying), thereby standardizing responses. Further, the coding is based on all the relevant questions and probes posed throughout the interview. This rich background reduces subjectivity as well as the possibility that the respondent's answer is influenced by the wording of a particular question and by order effects.

Ideally, several raters would code independently and their inter-rater reliability would be used to assess their degree of agreement. Unfortunately, respondents refused to permit taping or transcription of interviews because of the sensitive and proprietary nature of the information. The interviewer's notes were, of necessity, brief and in the interviewer's "shorthand." Hence, the interviewer coded by the following procedure. Each scale point (rather than just the end points) was marked

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⁵Of course, this model is not a complete representation of all factors that may affect the integration decision. For a complete discussion, including factors that depend on transient circumstances, see Root (1983).

⁶There were two interviewers; however, most interviews were conducted by one person, who was also the coder.
with a verbal description as well as a number. The number of scale points was kept small to avoid making fine distinctions subjectively. The interviewer filled out an information sheet for each respondent for each question detailing why the interviewer assigned each code. Then a second coder reviewed these sheets and discussed any ambiguities or disagreements with the first coder. When the first and second coder reached agreement, their consensus became the response used in later analysis.

**Overview of Scale Development**

From these data we derived some single-question measures, as well as several multi-item scales. Scale development was carried out in accord with standard psychometric techniques, as detailed by Nunnally (1978). Each scale served as an indicator of one construct in the model. Each indicator then was treated as an independent variable in a logistic regression, which predicted the probability of using an integrated channel (rather than an independent channel) to distribute a given product upon entering a given foreign market.

A multi-item scale is the sum of two or more variables. Each variable is designed to capture one facet of the construct; taken together as a scale, they form a composite indicator of the construct. The procedure recommended by Nunnally (1978) is to standardize all variables (removing differences in response scale) and compute Cronbach’s alpha to assess measurement reliability. Nunnally (1967) indicates that an alpha value of at least .5 is adequate for basic research, but in apparent reconsideration (1978) suggests .7 is more appropriate. In the empirical literature published in well-recognized marketing journals, 85% of scales meet the .5 criterion and 69% meet the .7 criterion (Churchill and Peter 1984).

We next describe each indicator.

**Transaction-Specific Assets**

Table 1 is a list of the five questions proxying the extent to which transaction-specific assets are involved in distributing the product in question. Cronbach’s alpha is .69, indicating a reasonable level of reliability for exploratory research.

Of interest here is how much the salesperson needs to learn about the product to sell it effectively. It is this learning that is transaction-specific (tailored to the product). Question 1 taps product learning directly by asking how much formal training the firm gives sales representatives. Products with a high learning content tend to be complex and sophisticated; further, such products require considerable education and training on the part of both salespeople and customers (Anderson 1985). Questions 2 through 5 indirectly tap the degree of learning the product demands by assessing the training and background the product demands. Questions 2 and 3 elicit the customers’ training requirements. Questions 4 and 5 tap the background (education and experience) required of salespeople who handle the product.

By itself, no one of these variables covers the domain of transaction-specific product learning. By combining them into a scale with reasonable internal consistency (as evidenced by an alpha of .69), we derive a more accurate measure of the asset specificity that arises in distributing the product in question.

**Product Age**

The age of the product is measured as the number of years between the date of commercialization (not development) of the product in the U.S. and the date of entry into the foreign market in question. By using commercialization as the starting point, we focus on how long the product has been available in the marketplace. This definition is consistent with our interest

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**TABLE 1**: Asset Specificity: Distribution

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<td>1.</td>
<td>How much training at the sales office do you provide to salespeople who handle your product? (0 to 5 scale anchored “no training” and “very high level of training”)</td>
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<td>2.</td>
<td>How much training do you give employees of purchasers at their installation? (0 to 5 scale anchored “very little training” and “very high level of training”)</td>
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<td>3.</td>
<td>How much training do you give employees of purchasers in your U.S. facilities? (0 to 5 scale anchored “very little training” and “very high level of training”)</td>
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<td>4.</td>
<td>How many years of education do you require for sales employees to be qualified to handle this product? (example: bachelor’s degree coded as 16 years of education)</td>
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<td>5.</td>
<td>How much sales experience do you require for salespeople to handle this product? (coded as the number of months of experience required)</td>
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Cronbach alpha = .69
in the product’s commercial maturity rather than how
long it has physically existed.

**Service Requirements**

We measure a product’s service requirements by sum-
mring responses to the following questions.

- Describe the service and maintenance usually
  required by users of your product in this geo-
 graphic area. (0 to 6 scale anchored “no service
  and maintenance” and “extremely high level of
  service and maintenance”)
- How much of the required service and mainte-
  nance do you contract to supply in your typi-
  cal sales agreements? (0 to 5 scale anchored
  “no service and maintenance provided” and
  “virtually 100% provided”)

These two questions, one reflecting the user’s needs,
the other reflecting factory support provided, combine
to indicate how service-intensive the product is.
Cronbach’s alpha is a modest .53. The principal way
to increase alpha is to add more questions. Though
.53 is good for a two-item scale, more questions re-
lating to service intensity would considerably improve
the scale’s reliability (Nunnally 1978).

**Product Differentiation**

Our measure of product differentiation is a dummy
variable coded 1 for components and materials (high
differentiation) and 0 for equipment (low differen-
tiation). In the semiconductor industry, equipment (which
is used to manufacture electronic components) is rel-
atively interchangeable; product differentiation is low.
In contrast, manufacturers differentiate their brands of
components and materials sufficiently that buyers do
not consider them interchangeable; product differen-
tiation is high.

This measure is crude but captures an impor-
tant gross difference in this industry. Coughlan and
Flaherty (1983) and Coughlan (1985) also used this
equipment/other distinction as a proxy for differenti-
tation and found that, as expected, more differenti-
tated products were more likely to be sold through
integrated channels in foreign markets.

**Legal Restrictions**

To examine the impact of legal restrictions on channel
choice, respondents were asked to “describe the im-
 pact of U.S. antitrust law on the form of this trans-
fer.” Their open-ended responses were coded 1 for
“little or no impact on taking equity positions” and 0
for “discouraged you from taking equity positions.”

Similarly, respondents were asked to “describe the
impact of the recipient country’s tariff laws on the form
of this transfer.” Encouragement to take equity was
coded as 1, discouragement was coded as −1, and no
impact was coded as 0.

Respondents uniformly indicated that U.S. anti-
trust law had no impact (1). Further, virtually all re-
pondents indicated that the host country had little im-
 pact (0); several responded that the foreign country
encouraged taking equity (1) and none indicated they
were discouraged from taking equity (−1). Because
of this lack of variation, legal restrictions were not
considered in later analysis. It is likely that firms chose
to not to enter restricted markets. Under these condi-
tions, the problem is considerably simplified.

**Existing Distribution Arrangements**

Given any existing distribution channel, a firm makes
a marginal cost-benefit calculation when choosing a
channel through which to sell a new product: will the
added return of using an integrated channel for the
new product justify the marginal cost? Because estab-
lishing an integrated channel involves significant fixed
setup costs, use of an integrated channel is much more
likely when one is already in place (so that the fixed
setup costs are sunk) than in the case of either de novo
market entry or a previously established non-inte-
grated channel (when the fixed costs have yet to be
incurred and are thus not yet sunk). Similarly, when
a non-integrated channel is already in place in the for-

gn market, the incremental cost of selling a new
product through the existing channel is lower than that
of selling through an integrated channel.

The “distribution channel” was treated as the set
of all units involved in transferring the product from
the manufacturer to the customer (see Lilien 1979).
Some of these units perform only the selling function
(title does not change hands), whereas others take title
(thereby assuming pricing authority), as well as ware-
house, transport, and extend credit.

Dummy variables were used to indicate what, if
any, distribution channel firms had in a market when
they entered with the product in question. If no chan-
nel was in place, the observation is an entry, the de
novo case considered by Coughlan and Flaherty (1983)
and Coughlan (1985). If a channel was in place, the
observation is a case of expansion (rather than new
entry) by the firm, and respondents indicated what
percentage equity they held in the distributing organi-

zation(s). Consistent with Lilien (1979), equity up
to 50% was categorized as an independent channel,
whereas majority ownership (greater than 50%) was
treated as an integrated channel. In this data set, vir-
tually all observations constituting expansion (i.e., in-
volving an established facility) are either 0 or 100%
owned by the entering firm. The low frequency of in-

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Typically, service-intensive products demand considerable backup from the factory, regardless of the channel used to distribute them.
termediate degrees of ownership is consistent with the overall pattern for American firms abroad (Robinson 1978).

**Relatedness to Principal Business**

Respondents indicated whether the product was better classified as “relevant to your firm’s traditional and desired production activities” (coded 1) or as “spinoff technology” (coded 0). This item serves as a measure of relatedness to the firm’s principal business.

**Strength of Patent**

The strength of the entrant’s patent on the introduced product was assessed by three questions.

- For each country for which you have received a patent for this product, please scale the patent according to whether you consider it to be strong or weak. Score 1 through 5 with 5 representing an ironclad patent and 1 representing a very weak patent. (The variable used is the average score across countries.)
- Estimate the cost, in thousands of dollars, required to “invent around” the patent protection you established beginning at the time of your commercialization.
- Estimate the time, in number of months, that a competitor would require to “invent around” the patent protection you established beginning at the time of your commercialization.

Cronbach’s alpha for this scale is a relatively modest .59.

**Competitive Behavior**

The interviews constituted a virtually complete census of one sector of the semiconductor industry. The companies interviewed for each technology produced at least 95% of the market share for that technology. Therefore, it was possible to infer from the pool of interviews the number of an entrant’s competitors that, when the manufacturer entered the market, were already established in the geographic area of entry (e.g., Western Europe) and had an integrated distribution channel there. Hence, our measure of competitive behavior is the number of competitors with integrated channels facing the entrant.

**Country of Entry**

Dummy variables were created to represent the region (Western Europe, Japan, or Southeast Asia) where the entry occurred. Of the 94 entries represented here, 36 were in Western European countries, 33 in Japan, and 24 in Southeast Asia. The one remaining entry, to Australia, was classified with Western Europe because of cultural similarity. These three regions were selected because there are substantial differences between them and a reasonable degree of similarity within them (Ronen and Shenkar 1985).

**Estimation Results**

Our hypotheses about the factors leading to integrated (rather than independent) channels were tested via logistic regression, estimated by the method of maximum likelihood. In logistic regression the dependent variable is binary (0,1; in our case independent or integrated, respectively). Once the model has been estimated, the predicted values are probabilities (of integrating, in our case). The predicted proportion of integrated product introductions follows the logistic model \[ \exp(U)/(1 + \exp(U)) \], where U is a linear function of our independent variables.

Problems of this nature are frequently handled via discriminant analysis, a well-accepted and useful procedure. Logistic regression, however, has two advantages: (1) it is more robust to violations of underlying assumptions (Press and Wilson 1978) and (2) the coefficient divided by its standard error is asymptotically interpretable as a t-statistic (Domenich and McFadden 1975). In contrast, the confidence intervals of discriminant coefficients are uninterpretable (Crark and Perreault 1977). Results are reported and compared for both logistic regression and discriminant analysis.

Table 2 is the correlation matrix of independent variables, which gives no indication of major multicollinearity problems. Further evidence of lack of multicollinearity is given by the stability of the coefficients in the stepwise estimation logistic regression procedure. Beginning with a full model (all independent variables included), we deleted terms if they failed to improve the fit of the data to the model at a confidence level of .15. The coefficients of the remaining terms were not greatly affected by the stepwise deletion process.

Table 3 shows the estimated logistic regression coefficients at the final step. Of 11 terms in the initial model, five were deleted. The deleted terms were the strength of the firm’s patent protection, the age of the product (time since commercialization), the number of competitors using integrated channels that the entrant faces when introducing the product, the product’s service requirements, and how related the product is to the firm’s principal business.

The remaining six terms form a model that fits a logistic curve reasonably well, as indicated by the C. C.
TABLE 2  
Correlation Matrix of Independent Variables

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<td>.00</td>
<td>.46</td>
</tr>
<tr>
<td>J</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.00</td>
<td>1.00</td>
</tr>
<tr>
<td>K</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.00</td>
</tr>
</tbody>
</table>

A = transaction specificity of assets  
B = product’s degree of relatedness to principal business of entrant  
C = service requirements  
D = strength of patent protection  
E = age of product (number of years since commercialization)  
F = number of competitors using integrated channels facing entrant  
G = product differentiation  
H = existing distribution arrangement is integrated (dummy)  
I = existing distribution arrangement is independent (dummy)  
J = Japan dummy  
K = Southeast Asia dummy  
N = 94

TABLE 3  
Logistic Regression Estimation Results

<table>
<thead>
<tr>
<th></th>
<th>Coefficient</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transaction specificity of assets</td>
<td>.90</td>
<td>2.25</td>
</tr>
<tr>
<td>Age of product</td>
<td>—*</td>
<td>—*</td>
</tr>
<tr>
<td>Service requirements</td>
<td>—*</td>
<td>—*</td>
</tr>
<tr>
<td>Product differentiation</td>
<td>1.21</td>
<td>3.06</td>
</tr>
<tr>
<td>Existing distribution arrangement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Integrated</td>
<td>1.13</td>
<td>2.03</td>
</tr>
<tr>
<td>Independent</td>
<td>-.59</td>
<td>-1.58</td>
</tr>
<tr>
<td>Product’s degree of relatedness to principal business of entrant</td>
<td>—*</td>
<td>—*</td>
</tr>
<tr>
<td>Strength of patent protection</td>
<td>—*</td>
<td>—*</td>
</tr>
<tr>
<td>Number of competitors using</td>
<td></td>
<td></td>
</tr>
<tr>
<td>integrated channels facing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>entrant</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Region of entry</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Japan</td>
<td>-.59</td>
<td>-1.67</td>
</tr>
<tr>
<td>Southeast Asia</td>
<td>-.72</td>
<td>-1.92</td>
</tr>
<tr>
<td>Constant</td>
<td>.56</td>
<td>.83</td>
</tr>
</tbody>
</table>

C. C. Brown goodness-of-fit chi square = 3.174, 2 d.f.,  
p = .205  
Correct classification rate 82%  
*Deleted.

Brown goodness-of-fit chi square statistic. Small chi square values and large p values indicate a good fit, contrary to the usual interpretation of p values. The fact that our model achieves a p value of .205 indicates a reasonable fit (albeit room for improvement).

Further evidence of fit is given by the model’s classification rate (“hit rate”) of 82% overall (94% of the integrated channels, 82% of the independents). This rate should be compared with the rate expected by chance, which, by the proportional chance criterion (Morrison 1969), is 54%. However, this difference must be interpreted with caution, as the same data that were classified were also used to estimate the model, creating an upward bias in the model’s hit rate.

The remaining terms all have the hypothesized sign. Transaction specificity of assets is associated positively with integration (coefficient of .90). This finding indicates that products requiring the development of specialized skills and working relationships in order to be distributed tend to be handled by company channels rather than independent organizations.

Products that are more differentiated (less substitutable) also tend to go through integrated channels (coefficient of 1.21). This finding replicates and extends the results of Coughlan and Flaherty (1983) and Coughlan (1985). Their conclusion, that product dif-
ferentiation is associated with channel integration, proves to be robust in the presence of other variables (i.e., survives the stepping procedure and retains a positive direction in the final model). Further, the finding holds outside the context of de novo entries (when the entrant has no experience in the market).

An important issue is whether the foreign commercialization of the product constitutes a new market entry for the firm or a market expansion, that is, whether there was not or was a distribution facility in place. This distinction—entry versus expansion—has a powerful impact on channel choice, as shown by two dummy variables. The coefficient of the first dummy variable (1.13) shows that if a firm already has an integrated channel, it tends to add a new product to its integrated distribution channel. The coefficient of the second dummy (−.59) indicates that if a firm has an independent channel in place, it adds the new product to it. In short, where entry is not de novo (market expansion rather than market entry), firms tend to add products to whatever channel (integrated or independent) is already in place, if any. In other words, once a firm has a distribution structure in place, it tends to expand by pyramiding new products onto the structure.

Finally, the region does seem to have an effect. In comparison with entries into Western European markets, product introductions are less likely to be via integrated channels in Japan (−.59) and Southeast Asia (−.72). This finding is consistent with the argument that firms are less likely to exert operating control and more likely to delegate to local firms in countries whose cultures are very different and unfamiliar to the foreign firm.

To assess the robustness of these results, the model was estimated via stepwise discriminant analysis. That the results are substantially similar suggests the findings are not highly sensitive to the logistic specification and maximum likelihood estimation of the logistic regression model. The discriminant model does differ in one respect, however. The country dummies, which are marginally significant in the logistic regression model, fail to enter the discriminant analysis model. Nonetheless, the discriminant model correctly predicts 73% of the sample (80% of the integrated cases and 61% of the independent cases).

An advantage of discriminant analysis is that the jackknifed classification rate can be estimated readily by the U method. The U method affords an analytical estimate of the classification rate that would be obtained via the jackknife procedure. In a jackknife procedure, observations are classified by a discriminant function computed from all data except the observation being classified. This procedure reduces the aforementioned upward bias when one is classifying the same data used to estimate the model. Hence, the jackknifed rate comes closer to the classification rate of a new sample. Here, the jackknifed classification rate of 70% compares favorably with the 54% expected by chance, which suggests that the model successfully discriminates between integrated and independent channels.

Integrating Distribution: Discussion and Managerial Implications

The results lend support to several complementary approaches to the choice of distribution channels for products introduced in foreign markets. The neoclassical economic approach emphasizes achieving scale economies and fully utilizing lumpy indivisible inputs. Consistent with this rationale, in instances of market expansion we find manufacturers tending to add their new products to their established channels (if any), thereby more fully utilizing the relationships they have developed with independent organizations or the distribution branches they have installed in the host country. Interestingly, these scale effects override whether the product is related to the firm's principal business or to its periphery.

Our results indicate that entrants tend to pyramid their products within a channel, thereby cementing their current arrangements and raising exit barriers (Caves and Porter 1977). The “inertia” entrants display in adding to existing arrangements underscores the importance of selecting the appropriate channel in the first place. Should this choice prove inferior, the entrant becomes vulnerable to new competition, which can elect the more appropriate channel for the product class without incurring switching costs. Interestingly, extensive research on how managers actually make these critical strategic decisions (Kobrin et al. 1980; Robinson 1978) indicates that the decision making process is often nonsystematic and based on little information. One of the primary reasons is that managers operating outside the familiar domestic settings have few guidelines to use.

Consistent with transaction cost analysis is the finding that entrants use integrated channels for prod—

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9We estimated our model with only de novo entries and the results were substantially similar to those obtained with the full sample of market entries, reported in Table 3.
10In both cases, de novo entry is contained in the intercept term.
11Western European markets are contained in the intercept term.
12The U method estimate is an option in the BMDP analysis package.
ucts whose distribution entails asset specificity. These products have a common profile: they require the distribution agent to undergo considerable training to learn about the product. This finding is consonant with Lilien’s (1979) that complex technical products tend to be distributed through integrated channels.

Though we did not measure the importance of relationships, we speculate that complex products also require the development, deepening, and specialization of working relationships in order to be distributed effectively. The specialized learning and these relationships constitute transaction-specific assets, which figure prominently in Williamson’s explanation of why organizations choose to perform a function internally (make) rather than contract with outsiders (buy).

Our results indicate that where these assets arise in international distribution, entrants elect to use the distribution agent rather than write a contract with an independent party. Presumably, they do so because employee status facilitates the monitoring of these difficult-to-replace agents. Further, entrants then can use legitimate authority and a broad range of subtle incentives to influence their agents’ behavior.

The results also support the widespread belief that firms are somewhat hesitant to manage integrated operations in cultures that are very foreign to the managers of the multinational firm. Such caution appears warranted. The successful, efficient operation of an integrated distribution channel demands significant managerial and financial resources and capabilities even in the domestic setting that management knows. In settings unknown to management, successfully managing an integrated distribution channel is even more demanding.

What do the findings mean for managers? One important managerial implication is that there are high costs to making an incorrect initial channel decision when entering a foreign market. Our evidence indicates that once such a decision is made (whether right or wrong), it tends to be reinforced over time as new products are sold through established channels. If the “wrong” channel form is set up upon initial market entry, high costs of changing the channel face the firm. This possibility emphasizes the importance of taking a long-run, dynamic view of marketing channel choice rather than settling on an alternative that meets transient criteria (such as convenience or availability). The empirical evidence only reinforces the long-held institutional view that marketing channel choice is a significant investment that should not be made lightly (Becker and Thorelli 1980). We also find support for McGuire and Staelin’s (1983) proposition that differentiated products are more likely to be integrated. Their model is developed under a variety of restrictions, leading the authors to caution that “to confront our models to empirical data would be premature” (p. 190). Our results suggest otherwise.

**Conclusions and Implications**

The lack of impact of several other factors on channel choice is striking, notably the unimportance of service requirements. This finding is in contradiction to prior empirical work in the domestic (U.S.) setting (Anderson 1985). However, we caution that these nonsignificant findings have at least three explanations. First, the insignificant variables were the ones with the weakest measures (low reliability or single-item measures). Because measurement error attenuates correlation ( Nunally 1978), it is not surprising that these factors are correlated only weakly with channel choice. Second, our sample size (94) is not large, particularly for maximum likelihood estimation. Thus statistical power, the ability to detect a variable’s influence on another variable, is reduced. Third, the fact that we restrict our analysis to industrial products and one industry undoubtedly reduces the amount of variation in our data.

The fit of the model, though good for basic research, indicates need for improvement. Future research may find improvement not only by developing better measures, but also by including variables not covered here. One such variable is the company’s overall level of international experience (our measure, the existence of a distribution arrangement, is crude and specific to one market and one function). Much of the international management literature indicates that experienced firms are more willing than inexperienced firms to make international resource commitment (Stopford and Wells 1972).

An interesting variable we did not consider is the size of the market being entered. These data are extremely difficult to obtain (Kobrin et al. 1980 note that many firms do not try to estimate market sizes because it is such an arbitrary exercise). Davidson and McFetridge (1985), studying the overseas transfer of innovative technologies, find the effect of characteristics of the country being entered to be minor (indeed, largely insignificant). In their study, as in ours, product features and the firm’s existing arrangements are the more prominent influences. Nonetheless, market size may influence integration decisions.

Further research is needed to develop knowledge of what drives a firm’s methods of introducing its products to foreign markets. One approach would be to include other explanations for international channel choice, such as the firm’s expectations and level of risk aversion and the availability of qualified distribution agents. Another would be to study joint ven-
tures as an alternative to either integrated or independent channels.

Clearly, our work is exploratory and subject to limitations. Nonetheless, Curhan, Davidson, and Suri (1977) note the extreme difficulty of obtaining any data about a firm’s international operations, particularly at the division or product level. Our data, though somewhat crude, do afford some insight about launching a product in a foreign market—an important strategic issue in international management. In particular, we find indications that entrants tend to

- reinforce channel choices by adding new products to their current channels,
- erect a protective, restrictive governance structure around the distribution of complex, sophisticated products that require an investment in learning,

- integrate the distribution of products whose differentiation protects them from price competition,
- distribute substitutable products through independent middlemen, who bear the brunt of the price competition common to such products, and
- use middlemen when introducing products to non-Western markets.

Lilien (1979) argues that modeling the decisions of recognized, established firms (as we do here) can provide a useful benchmark for future decision making. If so, our findings may be of considerable value to managers faced with the complex task of selecting an international channel of distribution for a new product.

REFERENCES


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