STRATEGIC MARKET ENTRY FACTORS AND MARKET SHARE ACHIEVEMENT IN JAPAN

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Abstract. In developing entry marketing strategies for new product markets companies might be advised to target product markets where significant market shares are likely to be achieved. The literature on market share change is reviewed to identify situational and marketing strategy factors associated with market share achievement. Certain hypotheses suggested by this and related literatures were then tested using a database of products introduced into the Japanese market. The results of this analysis indicate that a few key situational and marketing strategy variables account for a large proportion of the variation in achieved market share in Japan.

One of the most crucial decisions faced by managers responsible for the development of an entry marketing strategy for a new market is the choice of the target product market segment or segments. The product market segment chosen is a major determinant of many of the factors that could ultimately influence a company's success, such as customer responsiveness to marketing efforts, market growth rate, product life cycle stage, degree of competition, and rate of technological change. Management must identify a target segment where the creative application of marketing resources will allow it to gain a significant market share. Thus, in choosing between markets and marketing strategies, management is forced to incorporate judgments about the likelihood of market share being gained in the various product markets and under the various strategies being considered. These decisions are particularly crucial for companies targeting markets in foreign countries, which may involve large financial commitments over a significant period of time.

Market share seems to be an important variable to focus on in the choice of product markets given its key role in the strategic marketing planning process

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and its frequent role as the key strategic objective in that process [Jacobson and Aaker 1985]. Some of the early emphasis on market share was the result of evidence of a close relationship between market share and profitability [Buzzell and Wiersema 1981], which was often assumed to be a direct causal relationship. More recent research [Jacobson and Aaker 1985] has suggested that the direct impact of market share on profitability is much lower than had previously been indicated, and that much of the observed correlation between market share and profitability appears to be the result of some third factor or factors. Though this research weakens one of the basic premises for the key role of market share in strategic planning, market share should not be ignored. As Jacobson and Aaker themselves suggest, market share is a relatively visible and easily monitored indicator of the success of the policies management has been following. In fact, Bower and Garda [1985] have suggested that a distinguishing characteristic of "market driven" companies is their use of share rather than volume or profit as the primary measure of success.

Despite the key role of market share in business planning, surprisingly little attention has been devoted in the literature to the strategic factors associated with market share achievement although a considerable amount of empirical research on the impact of marketing mix variables on market share has been reported in the marketing literature [Parsons and Schultz 1976]. While economists have devoted some attention to the overall volatility of market shares in a market, they have generally focused on broadly defined industries and macro independent variables, rather than on the narrower product markets and the micro variables that are typically of greater relevance to managers. This research focuses on the strategic product/market determinants of market share achievement for new entrants.

The basic premise underlying this research is that it may be advisable for companies developing entry marketing strategies to try to identify product market segments where significant market shares are likely to be achievable. The literature review covers the research that seems relevant for the entry strategy decision with particular emphasis on the market share change literature and the particular conditions present in Japan that might impact on hypothesized relationships. Some of the major hypotheses resulting from this review are then empirically tested in the context of capital good and intermediate good manufacturers introducing product lines into Japan. This would seem to provide a stiff empirical test of the hypotheses, since the Japanese market is often viewed as being different and very difficult to penetrate [De Mente 1984; JETRO 1985; McMillan 1985]. Yet many authorities recognize the increasing strategic importance of the Japanese market and the need for North American and European companies to penetrate it, if they are to become, or remain, viable global competitors in their industry [Ohmae 1985; Henzler and Rall 1986]. The results of the empirical analysis are generally supportive of the hypotheses suggested by the literature and indicate that a few key situational and marketing strategy variables appear to account for a large proportion of the variation in achieved market share in Japan.

PREVIOUS RESEARCH

From a strategic marketing perspective managers responsible for entry into a new product market, whether it be an export market or a domestic market, face three decisions: timing of entry, what product market segments to target, and the actual entry strategy. There is limited empirical research bearing directly on these issues.

Timing of Entry

An emerging literature on the advantages and disadvantages of being first into a market, i.e., being a market pioneer (e.g., Glazer [1985]) promises to shed more light on the entry timing issue. An empirical study by Robinson and Fornell [1985] on the relationship between timing of entry and current market share for some 371 mature consumer product businesses in the PIMS (Profit Impact of Market Strategies) database found a strong association between these two variables. At maturity (typically two decades or more after market entry) market pioneers had an average market share of 29%, compared to 17% and 12% for early followers and late followers, respectively. Unfortunately, the PIMS database only provided data on the market and marketing strategy conditions at maturity, not at the time of entry. Thus, this study provides very little guidance with respect to the product market segments that should be targeted and the entry marketing strategy.

Choice of Product Market Segments to Target

In determining which product market segments to target the literature on market share volatility or market share change is useful in suggesting the factors that are or might be associated with market shares shifting between firms. From the point of view of the present research this suggests some variables that might be determinants of market share achievement. One stream of volatility research that has been largely conducted by economists has focused on measures of the overall volatility of market shares in an industry or market over a given period of time.[1] They have been concerned about how market structure influences oligopolistic behavior. The other major stream of research focuses directly on market share achievement or changes in the market share of individual firms or business units and has involved both economists and researchers in marketing. Economists in this stream, such as Shepherd [1979], have tried to relate these changes in market share to various aspects of market structure. The researchers in marketing have usually had a more direct interest in the relationship between certain indicators of the marketing strategy of a firm and changes in its market share. In some cases the same database has been used in both streams of research (e.g., Caves and Porter [1978]; Lillis et al. [1985]).

The research on market share achievement or change and on volatility obviously have a very close conceptual relationship and have often considered the same independent variables. For the purposes of this review the primary focus will be on the market share achievement and change literature with particular emphasis

on how it might apply in the context of North American companies entering the Japanese market.

The empirical studies on the factors associated with market share achievement or change which have the most relevance for the present research are those conducted using the PIMS database [Biggadike 1977; Kijewski 1978; Caves and Porter 1978; Buzzell and Wiersema 1981; and Lillis et al. 1985]. Before discussing the findings from this research it is useful to briefly discuss some of the potential biases and limitations of the PIMS database for addressing issues of market share achievement. The mean market share for businesses in the PIMS database has been rising over time as the result of: (1) more "good" than "poor" businesses being in the database; and (2) more businesses implementing a segmentation strategy, which allows firms to report increasing market shares in smaller "served" markets over time [Kijewski 1978, p.3]. With respect to studies of market share achievement and market share changes for individual businesses this suggests that the PIMS database may have two serious drawbacks. The first is a potential selection bias. Since the development of the PIMS data for a business is very time–consuming, a company is unlikely to go to this trouble for a small market share business in a negative growth market unless there is something particularly exciting about its prospects. If this is the case, then businesses with these characteristics in the PIMS database are probably not representative of the universe of businesses in such a position, and one must be careful about trying to draw generalizeable conclusions from this sample of firms. The second potential problem area is the definition of the served market. As Kijewski has noted, the definition of the served market (the basis for the market share measure) is at the discretion of the respondent in the business unit providing the data to the PIMS project. One might expect that the corporate pressures to show gains in market share would be highest for those business units in markets exhibiting no or negative real growth, where sales gains as a result of market growth are nonexistent. Only by showing growing market shares (perhaps as a result of redefining the served market) can the business unit's management demonstrate that they are doing a good job in a difficult environment. Given the difficulty of specifying what the relevant served market is, there is usually considerable flexibility in defining it [Day 1977, p.37]. Thus, the conclusions drawn from any analysis of market share changes using the PIMS database must be tempered by the possible selection biases and the realization that market share definitions may not be consistent from year to year for a particular business coupled with the probability that a change in definition may be systematically related to the real market growth rate.

Caves and Porter [1978] used the PIMS database to examine the determinants of market share instability to increase understanding of how market structure influences oligopolistic behavior. Biggadike [1977] examined forty new PIMS businesses and looked at the relationships between elements of the business and marketing strategies and the financial and market performance of these businesses in the first two and four years after entry. Buzzell and Wiersema [1981] used the PIMS database to examine the effectiveness of various

competitive strategies on the success of individual firms in building share in established businesses. The average annual percentage rate of increase in market share was used as the dependent variable and the effects of such competitive variables as new product activity, relative product quality, price and marketing communications activities were studied using regression analysis. General Electric [Lillis et al. 1985] used a similar approach to develop a set of strategic planning models based on the PIMS database to aid managers in evaluating the reasonableness of their market share goals, given the business' market environment, the proposed marketing strategy and their marketing expenditure plans.

With this background on the potential limitations of the studies based on the PIMS database it is now useful to review some of the findings that have relevance to the choice of product market segment to target.

Market Growth and Product Life Cycle Stage.

The conventional wisdom held by many managers is that market share is easiest to gain in fast-growing markets and at early stages of the product life cycle, because: (1) new customers (end–users and perhaps intermediate customers) are typically entering the market and many of these lack established relationships with suppliers, (2) market growth allows all competitors to grow in terms of absolute sales even while major shifts in market share are occurring between competitors, and (3) some suppliers will underestimate market growth and will be unable to satisfy the demand for their products leading to a loss of market share. The first of these factors is likely to be particularly key in the Japanese context given the strong bond that often develops between companies and their suppliers in Japan [De Mente 1987; Itami 1987]. Such close working relationships are likely to make it particularly difficult for new firms to gain market share in Japan in mature markets. The work of a number of economists using North American data [Hymer and Pashigian 1962; Gort 1963; Heggestad and Rhoades 1976; Vernon 1971; Allen 1981] all provide support for the hypothesis that market share changes are greater in faster growing industries and markets. However, Kijewski [1978], using the PIMS database, found that market share change (in either absolute or percentage terms) was greatest in slow-growing markets. Caves and Porter [1978] found no consistent evidence in the PIMS database for the effect of market growth rate on market share changes. Given the consistent results from the other studies and the limitations of the PIMS database for examining this particular relationship, the Kijewski and Caves and Porter results must be viewed with some skepticism. While the empirical research has examined the relationship between market growth rate and market share change, a similar relationship between product category life cycle stage and market share change would be anticipated given the key role market growth rate usually plays in the product life cycle stage definitions (for example, see Kotler [1984]). With respect to the earlier discussion of entry timing product life cycle stage at entry is an indicator of timing of entry.

Concentration of Demand at the End–User Level.

In the context of entry into a new product market, concentration of demand at the end–user level might help an entrant with a competitive advantage gain

market share, since only a few accounts need to be identified and targeted. However, Caves and Porter [1978] found no evidence that there was a relationship between the number of end–users and market share volatility.

Mobility Barriers.

Mobility barriers, whether barriers to entry or exit and whether they affect the industry or particular strategic groups within an industry, inhibit the deployment or redeployment of resources, and hence could negatively impact the ability to gain market share. Yip using the PIMS database found some evidence that the number of direct entrants achieving a market share of at least 5% was higher in industries with low investment intensity (an indicator of low barriers to entry), but he generally concluded that most types of barriers seldom deterred entrants [Yip 1982a; Yip 1982b].

Concentration.

Concentration plays a central role in most economists' discussions of market share change. When concentration is high, the probability of implicit or explicit coordination of actions is improved. In the case of a new entrant the potential for the existing competitors to coordinate their actions to prevent or slow the penetration of the entrant would be enhanced. As Caves and Porter [1978] have further argued, at very low levels of concentration where the behavior of the firm approaches that under pure competition, the need for coordination declines and market shares are likely to become more stable. Thus, the overall relationship is likely to be an inverted *U*. Gort [1963], Heggestad and Rhoades [1976], Ogur [1976], Caves and Porter [1978], and Allen [1981] found evidence that market shares were less stable as concentration increased.

Asymmetric Strategies.

Where the competitors in a market use asymmetric strategies, any destabilizing shock, such as the entry of a new competitor is likely to differentially impact the different competitors. Newman [1978] and Porter [1979] have discussed the effect of the presence of these "strategic groups" on company performance. In the context of the new entrant the presence of asymmetric strategies is likely to result in the existing firms having difficulty coordinating their strategies to respond to the entrant, resulting in a greater opportunity for the entrant to gain market share. Caves and Porter [1978] using a crude composite dissimilarity measure to assess the similarity of the reporting PIMS business' strategy to those of its major competitors, found some evidence that market shares did change more in the markets where the competitors used dissimilar strategies.

Entry Marketing Strategy

Product Differentiation.

An entrant into a market with a differentiated offering, providing it is valued by at least some segments of the market, should be in a stronger position to take advantage of any potential for market share shifts. Biggadike [1977] found that firms entering markets with products representing incremental innovations achieved higher relative market shares than those firms entering markets with

products similar to those of the existing competitors. High product quality is believed to be essential for business success in Japan [Simon and Palder 1987], and a firm that is able to differentiate its product on the basis of quality should be in a strong position to gain market share in Japan.

Product Adaptation.

It is generally believed that success in organizational markets in Japan requires the selling firm to adapt its products or product specifications to meet the needs of the Japanese customers (e.g., Linear Technology [1986]). Terpstra [1967] reported support for a similar hypothesis in the context of U.S. firms entering the Common Market. While Linear Technology faced demands for adaptation from potential Japanese customers early in the product life cycle, it could be argued that the need for product adaptation may be more important in mature markets, where the needs of the Japanese customers are well defined and where a strong relationship between the customer and his existing suppliers is likely to exist.[2]

Other Factors

Non–Tariff Barriers.

In the particular context of Japan, a major factor that has impeded the successful entry of foreign firms has been the presence of various non–tariff barriers. No empirical research has directly examined the impact of such barriers on market share achievement.

Table 1 briefly summarizes some of the major anticipated relationships and the empirical evidence emerging from the literature on market share change and achievement. As the first column suggests the majority of the empirical research has focused on the overall changes in share within a market (market share change or volatility). While clearly a market share gain by one firm must by definition be offset by a corresponding loss by another firm or other firms, a firm entering a new market has no share to lose and the potential to gain from any share instability within the market. The second column under summary of evidence indicates how little research has focused on individual firm market share achievement.

RESEARCH DESIGN

Objectives

The objective of the empirical research was to determine if the variables identified in the market share change and achievement literature and some other related variables could partially explain the degree of success (in market share terms) achieved by products introduced into Japan. The research was conducted as part of a Canadian Government–sponsored research project on the activities of Canadian manufacturers of capital and intermediate manufactured goods in Japan. The research project included an exploratory qualitative phase involving depth interviews with about fifteen executives responsible for their company's activities in Japan, and a number of representatives of government

TABLE 1
Summary of Findings from Market Share Achievement or Change Literature

Variable	Anticipated Relationship	Summary of Evidence[c]	
		Market Share Instability or Volatility	Individual Business Market Share Achievement
Timing of Entry			
Early market entry	+[a]		Support
Choice of Product Market			
Market growth	+	Support	No support
Product life cycle stage	−[b]	No research	No research
Concentration of demand	+	No support	No research
Mobility barriers	−	No research	Very limited support
Concentration of competition	−	Support	No research
Asymmetric strategies used	+	Some support	No research
Entry Marketing Strategy			
Degree of product differentiation	+	Some support	Very limited support
Product adaptation	+		No research
Other Factors			
Presence of non-tariff barriers	−	No research	No research

[a]A + sign indicates that higher levels on the variable will be associated with higher market share gains for a firm entering a new market with this characteristic. A − sign indicates the opposite.
[b]The − sign here suggests that an entry late in the product life cycle will be associated with less market share gain.
[c]Overall summary of the evidence. See text for fuller discussion.

agencies involved in export promotion, representatives of trade associations, and the Japan External Trade Organization (JETRO). The research reported here is based on the second quantitative telephone and mail questionnaire phase of the project.

Sample and Research Procedure

To address this objective a series of questions were incorporated into a much broader questionnaire on the activities of the companies in Japan. The questions drew on the results of the literature review and the interviews conducted with the Canadian executives. Unfortunately, space, time and measurement difficulties made it impossible to incorporate all the variables included in Table 1.

The first step in developing a sampling frame was to gather together a list of all Canadian companies believed to be doing business in Japan. Information was gathered from two departments of the federal government, the provincial governments, the press, newsletters, etc. Companies known to be selling consumer products, agricultural or fisheries products, or raw materials were eliminated. The remaining approximately 300 companies were then screened by telephone. The screening interview was conducted with the person in Canada "most knowledgeable" about the company's activities in Japan. The interviewer explained the purpose of the study and asked questions to determine if the company had introduced one or more eligible product lines into Japan since 1970. The year 1970 was chosen as the cutoff year, since personnel changes

and fading memories made it unlikely that accurate data could be gathered for products introduced earlier than that. The interview closed with the interviewer asking the interviewee who would be the person or persons most knowledgeable about the history of the product line or lines introduced into Japan (often the interviewee himself), and determining if that person would be willing to complete an extensive mail questionnaire. As a result of this process 192 product lines were identified. Only five eligible interviewees refused to cooperate in the mail questionnaire phase of the study.

The 187 questionnaires were mailed out in the late summer of 1985. Approximately ten days after the initial mailing a postcard reminder was sent to all the recipients of the questionnaire. About two weeks later a reminder letter and an additional questionnaire were sent to each person that had not responded by that time. This process has been found to have a strong positive effect on response rates [Dillman 1978]. By the cutoff date of the end of October, 120 completed questionnaires had been received. Another 19 respondents wrote or called to indicate that they were not participating in the study, because they had realized on carefully reading the questionnaire or reviewing their records that they did not meet the study's qualification criteria. A further six completed questionnaires had to be eliminated, one because the product line had been introduced prior to 1970 and another five because the questionnaires were based on ineligible product lines. This left an effective sample size of 114 product lines. This represents a conservatively estimated response rate of 68%. Unfortunately only 82 of the 114 eligible respondents to the questionnaire felt able to estimate their product line's share of its served market in Japan in 1985. The served market was defined for the respondents as the part of the total market in Japan where a set of customers have similar requirements for a product or service, and included only those products, customer types and geographic areas in Japan in which the company's product line competed or tried to compete. In order to try to determine if the product lines for which market share was not available differed from those included in the analysis, respondents and non–respondents to the market share question were compared on each of the independent variables used in the analysis reported here, two other variables measuring perceived success of the product line in Japan, and two background company variables, company sales and number of employees. Significant differences ($p < .10$) were found on only two of these variables. Product lines not included in the analysis were more likely to be perceived as higher quality ($p < .07$), and were less likely to have been impacted by non–tariff barriers ($p < .05$). Thus, there did not appear to be major differences between the included and excluded product lines.

Hypotheses

Based on the earlier discussion and the review of the literature the following hypotheses were tested. The basic premise underlying all of these hypotheses is that firms are more likely to achieve high market shares in a served market, if they select product markets that are likely to be supportive of individual firm market share achievement.

H1: Products introduced into served markets with high growth rates will achieve higher market shares in their served markets.

H2: The earlier in the product category life cycle a product is introduced into the market, the higher the market share achieved.

H3: Products introduced into markets where end–user demand is concentrated will have higher market shares.

H4: Products that are highly differentiated from competitive offerings will have higher market shares.

H5: Products introduced into markets where competitors used asymmetric strategies will have higher market share.

H6: Products introduced into markets where significant non–tariff barriers are present will have lower market shares.

H7: Products modified to better meet the needs of the served market will have higher market shares.

Since the need for product adaptation might well vary over the product life cycle, an additional hypothesis was tested:

H8: The impact of product modification on achieved market share varies with the product life cycle stage at introduction.

Since it was expected that the longer a product line had been marketed in Japan the higher its 1985 market share would be, a variable measuring time since entry was also included.

Operationalization of the Variables

Where possible the operational measures of variables were identical to or, if this was not possible, based on those used in previous research, particularly the PIMS project (see *PIMS Data Manual* [Strategic Planning Institute 1978]).

The dependent variable in the research was the product line's reported market share in the served market in Japan in 1985. Market growth rate (compounded annual) was calculated from data on the size of the served market in the year of entry and in 1985. Product life cycle stage was measured by providing the respondents with definitions of the introductory, growth, maturity and decline stages, and asking them to indicate the stage of development of the product category in Japan at the time of entry. The degree of concentration of demand at the end–user level for the product class was measured using an ordinal five–point scale for the number of end–users that accounted for 80% of purchases of the product category five years after entry or in 1985, whichever came first.

An attempt was made to capture two aspects of product differentiation: quality differentiation of the total product offering and the presence of direct competitors in the market at entry. The measure of degree of quality differentiation was based on the PIMS relative quality measure, which has been reported to be very reliable [Phillips, Chang and Buzzell 1983], by asking the respondent to assess whether his or her company's product and any associated services were

superior, equivalent, or inferior to those of the three leading competitors in Japan. The average rating for the first five years, or the period from entry to 1985 for products introduced since 1979, was used in the analysis. The second measure of product differentiation was the presence or absence of direct competitors (defined as those marketing technologically similar products) in Japan on entry. The absence of direct competitors would indicate a differentiated product. It probably also indicates that the company was a pioneer (first mover) in the Japanese market. The usage of asymmetric strategies by competitors was assessed by asking the respondent to indicate how similar were the marketing strategies of all direct competitors in Japan for the product on a seven-point scale. The absence of direct competitors suggested that very different marketing strategies were being used in terms of at least the product element of the marketing mix, and this situation was coded to indicate asymmetric strategies were being employed. The presence of non–tariff barriers was measured by asking the respondent to indicate on a seven–point scale whether the product's penetration had been slowed or prevented by the presence of non–tariff barriers. The respondent was also asked to indicate if the product line had ever been adapted or modified to help it better meet the needs of the Japanese market. This was a dummy variable. An interaction term for product life cycle stage and modification was developed by multiplying these two variables together. The operational definitions of the dependent and independent variables are summarized in Table 2.

Analysis

The hypotheses suggested by the literature review were tested in two ways. The first approach focused on the bivariate relationships by determining whether the correlations between the independent variables mentioned in the hypotheses and the market share achieved in Japan were significant. In order to examine the hypotheses in a multivariate context and to determine whether the hypothesized variables explained a managerially significant proportion of the variance in achieved market share the following model was estimated:

$$\text{Market share} = f(\text{Market growth rate, product life cycle stage, concentration of end–user demand, relative product quality, presence of direct competitors, asymmetric strategies used by competitors, non–tariff barriers, product modified, product life cycle stage X product modified interaction, time since market entry}).$$

By examining the coefficients for each of the independent variables it was possible to test each of the hypotheses in a multivariate context, i.e., after controlling for the effects of all the other independent variables.

Clearly the model proposed here is somewhat different than the market share change models reported in the marketing literature, which focus on established products and changes in the key marketing mix variables [Buzzell and Wiersema 1981; Lillis et al. 1985]. Since this research is focused on the strategic product–market choice, the focus is on the more general situational and marketing

TABLE 2
Operational Definitions of Variables Used in Study

Variable	Measure
Market share (MS)	Estimate of 1985 market share for product line in served market in Japan.
Market growth rate (MG)	Compounded annual growth rate of served market from year of entry to 1985.
Product life cycle stage (PLC)	Reported stage at time of entry, where 1 – introductory stage, 2 – growth stage, 3 – mature stage, and 4 – decline stage.
Concentration of end–user (CEU)	Number of end–users in Japan accounting for demand 80% of purchases of this product category, where 1 – <10, 2 – 10-24, 3 – 25-99, 4 – 100-999, and 5 – 1000 or more end–users.[a]
Relative product quality (Q)	Rated from the perspective of Japanese customers relative to the three leading competitors in Japan where 1 – inferior, 2 – equivalent, and 3 – superior.[b]
Presence of direct competitors (COMP)	Dummy variable where 0 – no direct competitor present in Japan on entry, and 1 – direct competitor(s) present.
Asymmetric strategies used by competitors (ASYM)	Seven–point rating scale measuring the similarity of marketing strategies at entry. Scale anchored at 1 – marketing strategies very similar, and 7 – marketing strategies very different.
Non–tariff barriers (NTB)	Seven–point rating scale measuring extent to which market penetration had been slowed by non–tariff barriers. Scale anchored at 1 – not at all, and 7 – to a great extent.
Product modified (MOD)	Dummy variable where 0 – product not modified for Japanese market, and 1 – product modified.
Product life cycle stage – product modification interaction (INT)	This interaction term was formed by multiplying PLC and MOD.
Time since market entry (TIME)	Logarithm of number of years to represent diminishing returns to increased time in Japan.

[a]Measured 5 years after entry for those products introduced prior to 1980, and in 1985 otherwise.
[b]For first 5 years in the market for products introduced prior to 1980, and in period through 1985 otherwise.

factors included in the proposed model. In addition, most of the companies made extensive use of trading companies or other Japanese partners, who made many of the basic marketing decisions for Japan (e.g., price, marketing communications). The Canadian firms had only limited information on these variables.

The model was estimated using multiple regression analysis. For two of the variables included in the model, market growth rate and the degree to which asymmetric strategies were used by competitors at the time of market entry, there were a significant number of missing values (21 and 18, respectively), since some respondents did not have the required data. Missing data was handled by substituting the mean of the variable, as computed from the cases with non–missing values. The ordinal variable product life cycle stage was tested using dummy variables in each regression model to see if there were significant nonlinearities in its relationship with 1985 market share. None were found.

RESULTS

The achieved 1985 market share in the sample ranged from 0% to 100% with a mean value of 23.2%. The correlation matrix for the variables included in the model is shown in Table 3. As the results in Table 3 suggest, only one of the hypotheses, *H3* was clearly not supported on the basis of the simple correlations. The anticipated negative correlation (−0.38) between the conceptually related variables market growth rate and product life cycle stage (since higher numbers for product life cycle stage corresponded to more mature markets) where market growth rate was likely to be lower suggested that multicollinearity was potentially a problem. In addition, the interaction term was highly correlated with product modification and moderately with product life cycle stage.

In a preliminary regression analysis run, it was apparent that one variable, concentration of demand among end–users, was not significant, although it had the expected sign and was almost significant at the $p < .10$ level. Therefore this variable was omitted from the final model. The product life cycle stage variable and the interaction term were also not significant, but this lack of significance was largely due to the multicollinearity in the data. These two variables were retained for further analysis. The results for this model are shown in the first column of Table 4. Overall, the model provided a good fit to the data with an adjusted R^2 of 0.46.

Market growth rate had a significant positive coefficient, suggesting that firms introducing products into markets that had experienced fast growth achieved higher shares of their served markets in Japan. All other things being equal a firm introducing a product into a market that grew at 20% per year achieved a 2.9% higher market share than one introducing its product into a market growing at 10% per year. High relative product quality was only marginally significant ($p < .10$) in the regression, although the magnitude of the coefficient suggested that on average a movement from inferior to equivalent, or from equivalent to superior, was associated with about an 7.5% increase in market share. As hypothesized, the presence of direct competitors in the target market at the time of entry was associated with about a 10% lower 1985 market share. The greater the degree to which competitors in the served market were using asymmetric strategies, the greater the achieved market share in 1985. As expected, the 1985 market share was lower for those products where non–tariff barriers were believed to have slowed penetration. Ideally, this variable should have measured the perceived existence of non–tariff barriers, and this would have allowed a direct test of the effect of the perceived existence of non–tariff barriers on actual market share achievement. Finally, the longer the product line had been available in Japan, the greater the 1985 market share.

Product life cycle stage, product modification and their interaction term should be discussed together. As Regression 1 in Table 4 suggests, the inclusion of all three variables in the model results in only the product modification variable coefficient being significant. A visual presentation of what the coefficients for

TABLE 3
Correlation Matrix

Variable	MS	MG	PLC	CEU	Q	COMP	ASYM	NTB	MOD	INT	TIME
Market share (MS)	1.00										
Market growth (MG)	.43***	1.00									
Product life cycle stage (PLC)	−.37***	−.38***	1.00								
Concentration of demand (CEU)	−.15	−.03	−.02	1.00							
Product quality (Q)	.35***	.17	−.21*	−.24*	1.00						
Competition (COMP)	−.44***	−.32**	.42***	.12	−.32**	1.00					
Asymmetric strategies (ASYM)	.49***	.24*	−.32**	.08	.32**	−.53***	1.00				
Non-tariff barriers (NTB)	−.18*	.07	−.03	.09	−.09	.13	−.14	1.00			
Product modification (MOD)	.30**	.09	.09	−.11	.17	.09	−.04	.15	1.00		
Product life cycle stage × product modification (INT)	−.02	−.14	.55***	−.08	−.03	.30**	−.18	.15	.78***	1.00	
Time since entry (TIME)	.22*	−.27*	−.16	.02	−.12	−.11	.19	−.19*	.06	−.09	1.00

*$p < .05$ (one-tailed test)
**$p < .01$ (one-tailed test)
***$p < .001$ (one-tailed test)

TABLE 4
Results of Regression Analysis of Factors Associated with 1985 Market Share

	Regression		Regression 2	
Variable	Coef.	Beta	Coef.	Beta
Market growth (MG)	28.65 (2.70)***	0.26	29.12 (2.79)***	0.26
Product quality (Q)	7.50 (1.31)*	0.12	7.43 (1.31)*	0.12
Direct competition present (COMP)	−10.46 (−1.55)	−0.16	−10.80 (−1.63)*	−0.16
Asymmetric strategies (ASYM)	3.09 (2.38)**	0.23	3.14 (2.44)**	0.23
Non-tariff barriers (NTB)	−2.23 (−1.67)**	−0.14	−2.16 (−1.65)*	−0.14
Product life cycle stage (PLC)	−1.60 (−0.31)	−0.04	—[a]	—
Product modification (MOD)	26.78 (2.26)**	0.43	28.95 (3.03)***	0.46
PLC × MOD interaction (INT)	−5.03 (−0.78)	−0.17	−6.47 (−1.44)*	−0.22
Time since entry (TIME)	6.83 (1.79)	0.17	6.86 (1.81)**	0.17
Constant	−46.89		−49.88	
R^2	.52		.52	
R^2 (adjusted)	.46		.47	
Overall F	8.63 ($p<0.0001$)		9.82 ($p<.0001$)	

Note: Beta is the standardized regression coefficient. The number in parenthesis is the t-statistic.
[a]Not included in this regression.
*$p<.10$ (one-tailed test)
**$p<.05$ (one-tailed test)
***$p<.01$ (one-tailed test)

these three variables imply is given in Figure 1 by plotting predicted market shares (for the purposes of this figure the mean values of all the other independent variables are used). These results suggest that product modification results in much higher market shares particularly for products introduced early in the product life cycle. Product modification seems to be associated with higher achieved market shares even for products introduced in the decline stage, but the absolute and percentage differences are smaller. One must, of course, be wary about making a causal interpretation of this coefficient, since it is quite possible that companies that have achieved a higher market share in Japan for whatever reason may be more likely to modify their products.

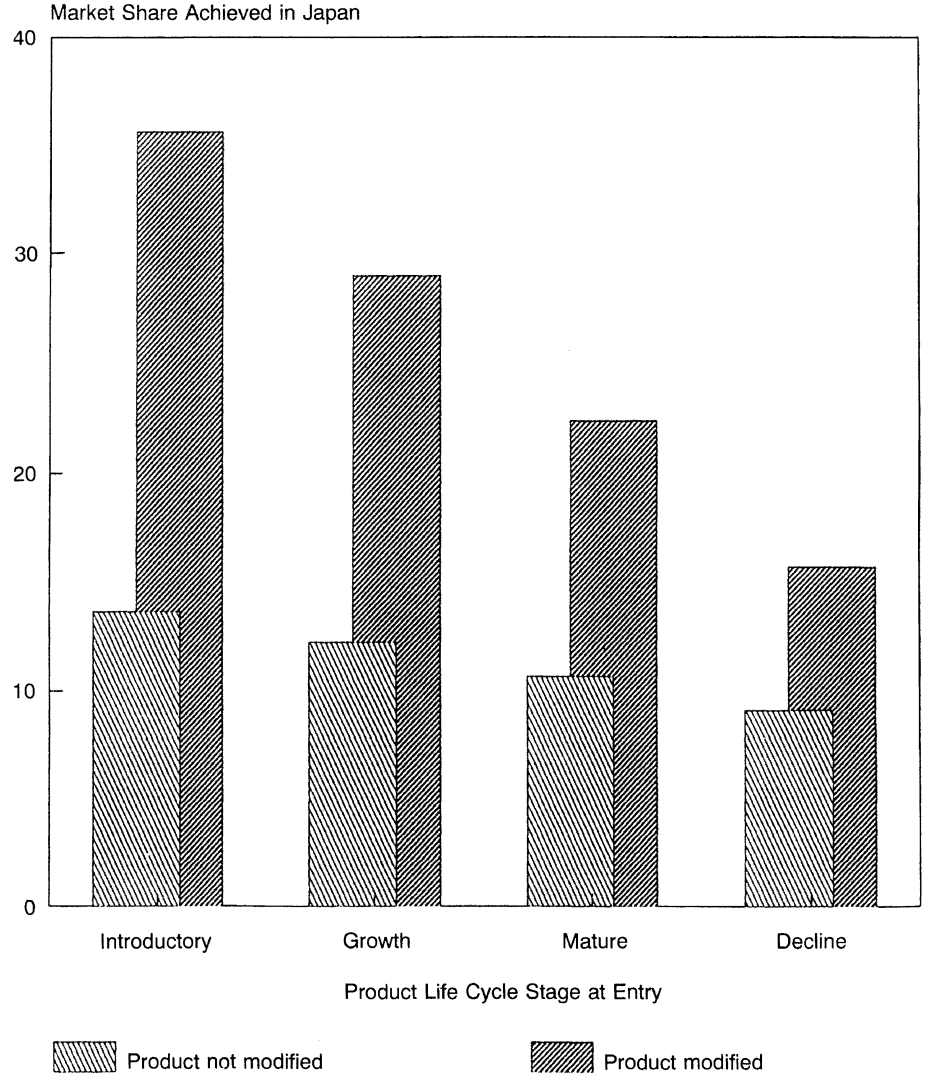
Since the main effect of product life cycle stage seems weaker than the interaction effect the model was reestimated with the product life cycle stage main effect omitted. When this is done the interaction term is marginally significant (see Regression 2 in Table 4).

DISCUSSION

Limitations of Study

A major concern in any study like this one is the representativeness of the sample included in the study. Every reasonable attempt was made here to

FIGURE 1
Predicted Effect of Product Life Cycle Stage and Product Modification on Market Share Achievement



identify all Canadian product lines introduced into Japan in the eligible product categories between 1970 and 1985, where the product line was still available in Japan. Thus the study involves only "surviving" product lines. It was not believed to be feasible to identify and gather information on all product lines introduced into Japan during this period due to the discontinuance of many unsuccessful product lines and the dispersal and departure of many of the individuals most knowledgeable about those product lines. A wide variety of public and private sources were used to generate an initial list of companies and a major effort was made to qualify and "clean" the list by telephone calls. However, some product lines were undoubtedly missed despite these efforts, but we believe the number to be small. In order to generate a reasonable

sample size for analysis purposes a fifteen–year time horizon was adopted. Undoubtedly this introduced some noise into the data as a result of unavailable records, fading memories and turnover of personnel, and noise in the data would tend to attenuate the results making it more difficult to observe significant relationships. But such a trade–off was deemed to be necessary. The present study did use subjective, self–report measures of the served market and market share. However, the use of subjective measures of served market (which are also used in the PIMS project) is certainly more appealing in the context of this research than the use of ones based on standard industrial classification codes, that have serious limitations for this kind of research [Scherer 1971; Day 1977]. Given that this study was one where individual respondents' data would remain completely confidential even from other managers within their own organization, the respondents probably felt under less pressure than in the PIMS research project to define the served market or exaggerate achieved market share to demonstrate strong performance.

On the positive side the sample included in the study proved to be extremely cooperative. A response rate of over 68% is excellent for this kind of study and suggest the sample is likely to be quite representative of the population of product lines identified. A high percentage of the respondents volunteered additional information through handwritten comments on the questionnaire or in accompanying letters indicating considerable involvement in the study. While only 82 of the 114 responding companies (72%) were able to provide market share data allowing them to be included in the analysis reported here, there did not appear to be major differences between the included and excluded products. It should be noted that this still represents an overall response rate of almost 50%.

These results can probably be safely generalized to Canadian firms in the sectors included in this study, and the results are likely to be generalizeable to a wider range of North American product lines introduced into Japan.

Implications of the Results

The above results are generally supportive of the hypotheses suggested by the literature review. *H1* was strongly supported, suggesting that products introduced into a high growth served market are more likely to achieve high market shares. This provides further support that the results from studies based on the PIMS database that use market share change as a key variable should be treated with some skepticism. *H3*, which dealt with concentration of end–user demand, was not supported in this study. This finding is consistent with the results reported by Caves and Porter. The hypothesis dealing with product differentiation, *H4*, received only marginal support. Products that were introduced into markets where there was no direct competition on entry (although it often soon arrived) achieved significantly higher market shares than those introduced into markets where there was direct competition. This finding is consistent with the Robinson and Fornell [1985] finding that market pioneers generally attain higher market shares than later entrants. There was also support for the

other operationalization of product differentiation, which dealt with differentiation in terms of overall product quality. Introduction of the new product into product markets where asymmetric marketing strategies were being employed was associated with greater achieved market share. Thus, *H5* was supported. *H6*, the hypothesis dealing with non-tariff barriers, was also supported but, as noted earlier, the measure used had limitations.

While *H2* was supported by the correlation analysis, there was no significant main effect due to product life cycle stage, apparently due to its collinearity with market growth rate and the product life cycle stage – product modification interaction term. However Figure 1 shows a nonsignificant decrease in market share with product life cycle stage at introduction for products that were not modified and a strong downward trend for modified products. This latter pattern was significant when the product life cycle stage main effect was omitted from the model (i.e., Regression 2). The impact of product modification on market share achievement is unequivocal in both regressions—modified products were associated with significantly higher achieved market shares. Thus *H7* was strongly supported. In summary, only one of the eight hypotheses (*H3*) did not find any support in this study.

From a managerial perspective the results of this study are very encouraging. By carefully choosing the target product market, and hence selecting a market and competitive environment that provide the potential for market share change, and ensuring that a competitive advantage can be achieved in the targeted segment, the probabilities of success of companies introducing products into new markets should be enhanced. The variables included in the final model explained almost 50% of the variation in achieved 1985 market share of capital and intermediate manufactured goods introduced by Canadian companies into Japan between 1970 and 1984.

Entry timing appears to be a crucial strategic decision. Product markets should be targeted when they still have the potential for high market growth. This usually will mean entry at an early stage of the product life cycle, perhaps as the pioneer, when new users are entering the market and or new applications of the product are still being developed. This may mean for some North American firms a change from their traditional sequential strategy of first targeting North America, then Europe, and finally Japan [Henzler and Rall 1986]. This research also suggests that where possible firms try to identify product markets where there is no, or limited, direct competition. This has frequently been part of the entry strategy of Japanese companies entering North America. Sanyo, when it entered the major appliance market in North America, initially targeted the small under–the–counter refrigerator segment, where none of the large U.S. major appliance manufacturers had a presence [*Business Week* 1980]. Where direct competition is present it may be useful to target product markets where asymmetric marketing strategies are, or could be, employed. The results also support the rather obvious point that, where possible, companies should try to avoid product markets where non–tariff barriers are likely to be major factors, since their presence did seem to be associated with lower market shares. However, while non–tariff barriers did impact on success

in Japan, they were a less important factor than some of the more traditional marketing variables. This finding is consistent with the subjective feelings of a sample of Japanese managers and German expatriate managers in Japan, who recently rated institutional barriers in Japan as being less important than marketing barriers in entering the Japanese market [Simon 1986; Simon and Palder 1987].

Companies that had shown a willingness to modify their products to meet the particular needs of the Japanese market had substantially higher market shares in 1985. But again, this is one variable about which one must be particularly careful about making casual attributions.

While several hypotheses that emerged from the market share change literature found support in this research, some other factors that have a potential relationship with market share change were also mentioned in the literature review, but were not empirically tested in the present study. This is one obvious area for future research. There are also a number of other variables that may be linked to market share achievement that have received little attention in the marketing or economics literature. For example, it may be useful to decompose the market growth rate into the sources of growth. A product market segment where the growth rate is or could be driven by new users using the product in new applications might be a much more promising target for market share gains than one where the growth is being fueled by the expansion of existing users using the product for existing applications. In the latter case most users will have already established bonds with suppliers making the task of the entrant more difficult. Japanese consumer electronics companies have repeatedly taken advantage of new users and/or new applications in their drive for market share in North America. Similarly, attention to customers' ease of switching suppliers in different product market segments may have obvious targeting implications for a new entrant. Thus, the examination of potential product market targets from the perspective of the potential to gain market share may give both the researcher and the manager new insights about market entry strategies.

CONCLUSIONS

One premise on which this research was based was that companies entering new product markets might be wise to target those product markets where market share is likely to be easy to gain. The economics and marketing literature on market share change and volatility was then reviewed and a number of marketing and situational variables that have been found to be associated with market share change were identified. The hypotheses based on this review were then tested in the context of a sample of Canadian product lines that had been introduced into the Japanese market since 1970. The results of the analysis were generally supportive of the hypotheses. From a managerial point of view this research has important implications for those developing entry strategies for new international markets. It suggests that a few marketing and situational variables having to do with the choice of target product market, timing of

entry, and the marketing strategy adopted explained almost 50% of the variation in achieved market share of the product lines included in the study. By making some judicious choices on these dimensions managers should be able to improve their chances of success (in market share terms), when entering new markets. It is also encouraging that hypotheses largely developed out of theoretical and empirical work in North America appear to be supported by the experience of Canadian companies entering the Japanese market. Thus, the same basic principles apply in a market that is often viewed as being very different.

NOTES

1. See Ryans [1987] for a review of the market share volatility literature.
2. The author is grateful to an anonymous reviewer for making this suggestion.

REFERENCES

Allen, Bruce T. 1981. Structure and stability in gasoline markets. *Journal of Economic Issues*, 15 March:73-94.

Biggadike, Ralph. 1977. Entering new markets: Strategies and performance. Working Paper 77-108. Cambridge, Mass: Marketing Science Institute.

Bower, Marvin & Robert A. Garda. 1985. The role of marketing in management. *The McKinsey Quarterly,* Autumn:34-46.

Buzzell, Robert D. & F.D. Wiersema. 1981. Successful share–building strategies. *Harvard Business Review,* 59 January–February:135-44.

Business Week. 1980. An appliance boom that may not last. March 10:79-87.

Business Week. 1987. Japan is building a cosy lead in laptops. February 23:128-33.

Caves, R.E. & M.E. Porter. 1978. Market structure, oligopoly, and stability of market shares. *Journal of Industrial Economics,* 26 June:289-313.

Day, G.S. 1977. Diagnosing the product portfolio. *Journal of Marketing,* 41 April:29-38.

_____. 1986. *Analysis for strategic market decisions.* St. Paul, Minn.: West Publishing Company.

De Mente, Boye. 1987. *How to do business with the Japanese.* Lincolnwood, Ill.: NTC Business Books.

Dillman, Donald. 1978. *Mail and telephone surveys: The total design method.* New York: John Wiley and Sons.

Glazer, A. 1985. The advantage of being first. *American Economic Review,* 75 June:473-80.

Gort, Michael. 1963. Analysis of stability and change in market shares. *Journal of Political Economy,* 71 February:51-63.

Heggestad, A.A. & S.A. Rhoades. 1976. Concentration, and the firm stability in commercial banking. *Review of Economics and Statistics,* 58 November:443-52.

Henzler, Herbert & Wilhelm Rall. 1986. Facing up to the globalization challenge. *The McKinsey Quarterly,* Winter:52-68.

Hymer, S. & P. Pashigian. 1962. Turnover of firms as a measure of market behavior. *Review of Economics and Statistics,* 44 February:82-87.

Itami, Hiroyuki. 1987. *Mobilizing invisible assets.* Cambridge, Mass: Harvard University Press.

Jacobson, Robert & David A. Aaker. 1985. Is market share all that it's cracked up to be? *Journal of Marketing,* 49 Fall:11-22.

JETRO. 1985. *Selling in Japan: The world's second largest market.* Tokyo: JETRO.

Kijewski, Valerie. 1978. Market share strategy: Belief vs. actions. *The PIMSLETTER on Business Strategy.* Cambridge, Mass.: The Strategic Planning Institute.

Kotler, Philip. 1984. *Marketing management: Analysis, planning and control* (fifth edition). Englewood Cliffs, N.J.: Prentice-Hall.

Lillis, Charles, James Cook, Roger Best & Del Hawkins. 1985. Marketing strategy to achieve market share goals. In Howard Thomas & David Gardner, eds., *Marketing strategy and strategic management,* 181-92. Chichester, U.K.: John Wiley and Sons.

Linear technology. 1986. Case and Publications. University of Western Ontario, London, Canada.

McMillan, Charles J. 1985. *The Japanese industrial system.* Berlin: de Gruyter & Co.

Newman, Howard H. 1978. Strategic groups and the structure–performance relationship. *Review of Economics and Statistics,* 60 August:417-27.

Ogur, Jonathan D. 1976. Competition and market share instability. Staff Report to the Federal Trade Commission, Washington, D.C.

Ohmae, Kenichi I. 1985. *Triad power: The coming shape of global competition.* New York: Free Press.

Parsons, Leonard J. & Randall L. Schultz. 1976. *Marketing models and economic research.* New York: Elsevier–North Holland.

Phillips, Lynn W., Dae R. Chang & Robert D. Buzzell. 1983. Product quality, cost position and business performance: A test of some key hypotheses. *Journal of Marketing,* 47 Spring: 26-43.

Porter, M.E. 1976. *Interbrand choice, strategy, and bilateral market power.* Cambridge: Harvard University Press.

_____. 1979. The structure within industries and companies' performance. *Review of Economics and Statistics,* 61 May:214-77.

Robinson, William T. & Claes Fornell. 1985. Sources of market pioneer advantages in consumer goods industries. *Journal of Marketing Research*, 22 August: 305-17.

Ryans, Adrian B. 1987. Market share volatility. *Review of Marketing,* 135-61. Chicago: American Marketing Association.

Scherer, F.M. 1971. *Industrial market structure and economic performance.* Chicago: Rand McNally and Co.

Shepherd, William G. 1979. *The economics of industrial organization.* New Jersey: Prentice–Hall.

Simon, Hermann. 1986. Market entry in Japan: Barriers, problems and strategies. *International Journal of Research in Marketing,* 3(2):105-15.

_____& Dick Martin Palder. 1987. Market entry in Japan — Some problems and solutions. *Journal of Marketing Management,* 2(3):225-39.

Strategic Planning Institute. 1978. *The PIMS data manual.* Cambridge, Mass.: SPI.

Terpstra, Vern. 1967. *American marketing in the common market.* New York: Praeger.

Vernon, John M. 1971. Concentration, promotion, and market share stability in the pharmaceutical industry. *Journal of Industrial Economics,* 19 July: 246-66.

Yip, George S. 1982a. *Barriers to entry.* Lexington, Mass.: Lexington Books.

_____. 1982b. Gateways to entry. *Harvard Business Review,* 60 September–October: 85-92.