

**RIVALRY AS SYNERGY?
THE JAPANESE AUTOMOBILE COMPANIES'
EXPORT EXPANSION**

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Abstract. The paper explores “rivalry” and “synergy” arguments to explain the export growth of Japanese auto manufacturers. Previous literature on competitive behavior, including Porter’s [1985] discussion of “good” versus “bad” competitors, is used to develop a conceptual framework and empirical methodology to separate out alternative explanations for the Japanese success. Data on Japanese auto companies’ sales in six different export markets (Europe, North America, Latin America, Asia, the Middle East and Africa) are examined for the period 1959-1987. The sales over the period are decomposed into three multiplicative components: a generic market growth factor, a synergy factor depicting the combined growth for the Japanese cars, and a rivalry factor representing competition within the Japanese strategic group. The data are used to estimate the magnitude of the growth elasticities for each of the three components.

The results show that for most markets the synergy component was the dominant determinant of the Japanese growth pattern.

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The internal rivalry among the Japanese car makers comes out as largely insignificant for their individual market shares (except in the case of Honda). The analysis is replicated for other imports to the North American market with quite different results. For non-Japanese companies in the North American market, the synergy effect was either zero or negative. The paper explores the implications of the findings for competitive strategy and discusses possible future research avenues.

INTRODUCTION

Many Japanese companies operating overseas employ product and marketing strategies that are almost identical. With companies such as Sony and Honda setting the pace, a pattern of "follow-the-leader" has been well documented for a number of industries, including autos (e.g., Sobel [1984]), consumer electronics (e.g., Kotler, Fahey & Jatusripitak [1985]), and motorcycles (e.g., Abegglen & Stalk [1985]). It is a scenario played out everyday in Japan's business news stories, where today the overseas successes of the new luxury cars from Toyota, Nissan and Honda are followed closely, and where "also-ran" Asahi's triumph with its new "dry" beer makes for gleeful comments about the catch-up played by once almighty market leader Kirin. Observers both inside and outside Japan have wondered whether this intense preoccupation with focusing so strongly on competition has not undermined the profitability of many firms. Sony had trouble when its Walkman and Discman were quickly copied by competitors, as had Seiko when its innovative digital watches were soon mass produced by Casio [Johansson 1986]. Intense competition for distribution and market share has virtually eliminated profits in audio and video tape, and Japanese camera makers' attempts to match the Minolta success with its Maxxum model has been a drag on their profits [*Japan Company Handbook* 1989].

These examples bear no witness to the kind of "live-and-let-live" attitudes that in the past were ascribed to the Japanese (e.g., Kotler & Fahey [1983]) and that are sometimes enunciated by Japanese business leaders (e.g., Toyoda [1985]). Instead, the actions of many Japanese companies have been seen as examples of "bad behavior," as a tendency of the Japanese to undercut the health of an industry. Porter [1985] uses Fujitsu's attack on IBM as an example of a "bad" competitor, referring to Fujitsu's "low standards for profitability" and its "strategy that may worsen industry structure by undermining differentiation" [p.217].

Turning to sales, one wonders whether the spectacular overseas market share gains made by a number of Japanese firms in several industries can be explained by sheer competitive strength alone. Competitors engaged in direct battles for market share could not prosper jointly without the presence of some kind of positive synergy. Perhaps this synergy is in fact created by

the massive attack from so many similar Japanese products on foreign markets? This study is an empirical evaluation of the relative strengths of the rivalry and the synergy components for Japanese automobiles in the global market, and their reconciliation. An initial section defines the rivalry concept and a following section discusses its application to the auto market. The paper then defines synergy, outlines its characteristics and causes, and then shows how it applies to the global auto market. The subsequent section integrates the two concepts in an explanation for the developments in the global automobile market. The resulting econometric model combines the two concepts into a joint explanation for the observed sales series for different makes. The empirical data are then introduced, and the estimation results presented and analyzed. The paper ends with two discussion sections, one of the implications for competitive strategy, another discussing further research.

THE CONCEPT OF RIVALRY

Competitive rivalry refers to a situation where two or more firms are engaged in direct competition for the same customers. The act of rivalry involves a monitoring of the competitor's actions, an attempt to neutralize whatever advantage the competitor possesses—often by imitative “me-too” strategies and tactics—and an intense focus on beating the competitor. In terms of outcomes, it can be described as a “zero-sum game” for market share, the gains of one competitor equaling the loss for the other.

The level of competitive “rivalry” is one of Porter's key determinants of industry profitability [1980: Ch.1]. A healthy level of rivalry is presumed to force competitors to be innovative and focus on satisfying customers. It generates customer satisfaction through differentiated products and rapid adoption of new technology, as firms try to stay ahead of competition.

In Porter's view, healthy rivalry involves the deliberate avoidance of direct confrontation in the marketplace. Even though competition always involves a certain amount of rivalry, the individual companies' particular strengths and weaknesses are assumed to make their approach to any given market sufficiently differentiated to avoid excessive competition. When products are undifferentiated, cutthroat competition leads to slashed profit margins—as in the gasoline wars common before the oil crises in the 1970s—and threatens long-term industry viability.

When one competitor tries to imitate or counter every move that the other makes, healthy rivalry turns “excessive.” Excessive rivalry is myopic and destructive, it reduces incentives to engage in innovative activities, and favors companies with strong financial resources or ability to cross-subsidize a weak product from protected cash cows. Excessive rivalry defines what Porter calls “bad” competitive behavior [1985:217].

"Excessive rivalry" is a common complaint against Japanese competition inside Japan. While they generally approve of the innovation gains from rivalry, MITI bureaucrats, company managers, and Japanese newspapers regularly attribute low profit performance to intense competition (see, for example, Toyota [1985]). Even Kenichi Ohmae, usually a champion of Japanese companies, has recently come out against the Japanese price slashing in watches, calculators and compact disc players [1989]. The Japanese at home have worried about the inability of their shipyards and steelmakers to stop adding capacity when world markets declined. In general, many Japanese firms are viewed as too myopic in their intense competitor focus, at home and abroad.

RIVALRY IN THE GLOBAL AUTOMOBILE MARKET

Even though the big Japanese auto companies have not exhibited quite the same intense rivalry as the consumer electronics firms, they are steeped in the same tradition. This is particularly clear in their historical expansion paths. As one company ventured into a new country, others followed with similar products. When Toyota's Beetle-based Corona did well in the U.S., Nissan introduced its B217 copy. The Honda Accord was quickly followed by a restyled Mazda 626, and the success of the Accord in the American market later forced Toyota to develop the Camry specifically for the U.S.

However, auto manufacturing involves great capital investments, scale returns are important, and the product development periods are long. That is why the copying and matching is sometimes neither exact nor immediate. Nissan's success with its small trucks in the U.S. was quickly imitated by Toyota, and later by Mazda and Mitsubishi. But initially Toyota did not try to emulate the success of Nissan's Z sports car, although Mazda did so successfully (and Toyota's recent restyling of the Celica is aimed at the same target).

There are also automobile design features which reveal the direct rivalry. The introduction of five-speed manual transmissions, the shift to front-wheel drive, and the adoption of multivalve engines were all technical improvements offered by all the Japanese automakers at about the same time. Although Toyota was slow with the introduction of front-wheel drive, it was still ahead of the Europeans, except Volkswagen and Saab which were early proponents.

Other examples of the conscious parallelism between the Japanese automakers also stand out. They all tend to enter in the same size classes—compact and subcompact—despite the fact that other models were available in their home market. As the *Consumer Reports* auto issues document, from the early days the Japanese cars all had similar problems with safety, with interior noise levels, with cramped seats and with a bumpy ride due to their light weight. They were also fuel efficient, accelerated better than most of the competition, and offered as standard such options as tinted windshields

and FM radio, options which were only available at inflated prices in other comparable cars. In the early days, and to some extent still today, if there were problems with getting delivery of one Japanese make, the typical buyer could do almost as well buying from a dealer for another Japanese make.

The explanation for this state of affairs is already well known to most observers. The relatively standardized technology available to all the Japanese firms, coupled with the homogeneous domestic market, lead to similar product lines and a lack of strong differentiation. The key success factors in the auto industry at home rested more in the level of dealer and service penetration and support than in products. But advantages in such factors as distribution are difficult to transfer to export markets. Thus, the Japanese companies, when attacking foreign markets, all seem to target the same market segments and follow the same product positioning script. In their expansion abroad, they exhibited many of the excessive rivalry characteristics typical of Porter's "bad" competitors.

THE CONCEPT OF SYNERGY

The core idea of synergy, simply speaking, is the well-known notion that "the whole is more than the sum of the parts." Benefits to action arise which cannot be attributed to individuals alone, but to the joint actions of a whole group whose members may act independently. In sports synergy is represented by the "team effort." In product line policy synergy may consist of a well-balanced combination of loss leaders and prestige brands. For the purpose of this study, synergy is defined as the resulting performance level for a combined group of separate business firms from the same country, each taking independent marketing actions in a given foreign market.

As conceptualized here, the synergy benefits accrue because of membership in a certain group. If a customer has a positive image of American-made personal computers, Apple stands to gain, but Toshiba will not. However, although group membership based on national origin may seem quite permanent, the advantages and disadvantages of group membership can change over time. The U.S. computer manufacturers need to maintain their image. Synergy, even though of a given type and magnitude in the short run, needs to be nurtured and supported for the long run. How well this is done depends on the combined marketing efforts of the companies in the group and the actions taken by their competitors.

Multinational production poses a special threat to group membership and thus to the synergy benefits. Generally, shifting production overseas weakens the association with the home country. A company can lose the advantages that come with a positive country image and a move overseas can even threaten the equity in the brand [Johansson & Nebenzahl 1986]. Because of this, companies such as Sony and Toyota go to great lengths to ensure that their American-made products are of the same high quality as those made in Japan. The frequent assertions to this effect from Japanese companies

manufacturing in the U.S.—and the recent development of shipments back to the Japanese home market—have clearly very beneficial promotional effects on sales in the United States. Although the companies want to be seen as “good citizens” in the host country, they do not wish their products to be viewed as “American.”

The synergistic effects discussed here are not necessarily something the group members intend to have happen. For example, whether the Japanese firms involved in the consumer electronics market aimed for or even anticipated synergistic effects is not clear, and need not be assumed. The synergy is a joint result arrived at by independent decisionmakers, generally as a “spillover” effect.

SYNERGY IN THE GLOBAL AUTOMOBILE MARKET

There are several potential sources of country-of-origin synergy in the global automobile market. One factor is the made-in label itself. The aura conferred upon a car because of where it was made sometimes carries a significance over and above the make's purely functional characteristics. For example, German cars seem to evoke an “excellent engineering” image among Japanese consumers, while Japanese cars have recently acquired a reputation for reliability that is higher than objective tests would support [Johansson, Douglas & Nonaka 1985].

Another generator of synergy is the success of a country's makes in a leading country. For example, as the Japanese autos penetrated the American market successfully, their chances of acceptance in the European market were further enhanced. The successes abroad are used to the companies' advantage in their promotional efforts. Thus, we learn in American advertisements that Fiat is the largest market share holder in the European market, and, in Japan, that Honda is the leading Japanese make in the United States. The intent of such communication is clearly to build directly on the goodwill from successes abroad.

Under special circumstances compatriot competitors can also help share the cost of developing new markets for a country's products. For example, as the small car market segment's preferences gradually shifted towards front-wheel drive, this type of drive train became standard on more and more small cars from Japan, further reinforcing the shift. The beneficial effect of this type of synergy is naturally enhanced the more similar the cars are. There is also a kind of synergistic role played by product similarity when close competitors fill excess orders, helping to avoid costly investment in overcapacity [Halberstam 1986].

These factors are stressed by Porter as benefits from “good” competitors in a domestic context [1985:203]. Since the Japanese automobiles faced capacity problems and export limits during parts of their expansion abroad, it is likely

that the latter type of synergy also existed between Japanese competitors in foreign markets (compare Sobel [1984:202-04]). The problem with this type of "synergy" is of course that in the short run the firm is losing sales to its competitors—because of the close models. In the longer run, however, the similar makes from the same country will stand a greater chance to lead in the development of new market preferences.

MODELING

To test empirically the relative importance of the rivalry versus the synergy component, a model formulation which incorporates the two explanations simultaneously is very desirable. If a single-explanation "rivalry" model is tested against a separate "synergy" model, one has to rely on rather weak model choice criteria—such as the *R*-square—to choose the correct specification. However, if the model incorporates both phenomena simultaneously, stronger tests—such as a direct *t*-test of the coefficients—can be used to show which component is the dominant one.

The analytical model should not only accommodate the possible joint presence of rivalry and synergy in the development of the sales in a foreign market of a brand. Since the effects of the two components will only be revealed gradually, the model should fundamentally be based on the growth pattern over time, both in terms of the evolution of the overall market size and the changes in the competing firms' market shares.

The synergy factor can be modeled as the gain in market share for the Japanese group as a whole. By contrast, the alternative hypothesis about the negative effects of interfirm rivalry can be tested by analyzing the movements in each company's respective share. If the increase in one company's share is accompanied by a decrease in the share of another Japanese firm, the intense rivalry has the negative effect one would expect from "bad" competitive behavior. If, on the other hand, one company's market share increases are accompanied by increases for the other companies in the same group, the synergy effect is the dominating factor.

A logical starting point is the decomposition of sales Q_{ijt} of competitor i from country j at time t in a given foreign market as the following identity:

$$Q_{ijt} = I_t \times S_{jt} \times M_{ijt}, \quad (1)$$

where

- I_t = is the total industry sales for the regional market at time t ,
- S_{jt} = is the combined market share of all the national competitors from country j competing in the regional market at time t ,
- M_{ijt} = is the subnational market share of brand i among its competitors from country j at time t .

For example, Toyota's sales in the United States in 1978 can be decomposed as: 600,000 units = 12.3 million autos sold \times 10.6% Japanese share \times 46% Toyota's subnational share.

Model (1) is an extension to international marketing of a primary demand/market share model often used in the market response literature (see, e.g., Hanssens, Parsons & Schultz [1990]). The equation allows us to track the evolution of foreign sales of any competitor i and to explore the three sources of sales growth or decline:

- industry sales: if the foreign market is expanding (because of an increase in buying power of its consumers, for example), any exporter to that market may benefit from that expansion;
- synergy: if national competitors benefit each other, their combined market share in the foreign market will increase and become a source of sales growth for each individual competitor;
- rivalry: to the extent that national competitors are rivals for the same customers, they will take share from each other in the foreign market, and this will be reflected in rising or declining sub-national market shares.

In order to measure the relative importance of these sources of sales growth, the model needs to be formulated in terms of the rate of change over time in each of its components. Though several mathematical specifications of these change processes may be used, we propose to estimate growth by an exponential trend formulation which is flexible and easy to interpret.

In the case of the industry sales, for example, this exponential function can be written as follows:

$$I_t = bt^r e^{u_t}, \quad (2)$$

where b is the base sales level, r is the growth elasticity and u_t is a white-noise error term. This is a flexible formulation that allows for accelerating, decelerating, or zero rate of change.

This model does not explicitly incorporate the traditional structural determinants of automobile demand, such as disposable income, price level expectations and business cycle patterns. Similarly, actions of individual firms with respect to advertising expenditures, new model introductions and increased dealer networks are not formally modeled. These causal determinants are rather seen as driving the resulting sales patterns, and the model basically decomposes these sales into three separate components. In other words, since the explanatory variables also evolve over time, the exponential growth model can be viewed as a time-series summary of these causal patterns. For example, if the income elasticity of automobile demand is high and income rises, then—*ceteris paribus*—the estimated growth elasticity of industry sales will be high.

In interpreting how this formulation reflects the synergy and the rivalry forces, the key parameters are the estimated growth elasticities for each of the components in (1). For example, take the synergy component in (1), the

S_{jt} term. Here the parameter of interest is the growth elasticity of country j 's share in the market over time. Mathematically, the growth equation for country j 's share is

$$S_{jt} = ct^s_j e^{v_{jt}}, \quad (3)$$

from which the estimate of s_j can be seen to be the desired growth elasticity:

$$s_j = \delta \log S_{jt} / \delta \log t, \quad (4)$$

the typical definition of elasticity in economic theory.

If the elasticity estimate of s_j is greater than one, country j 's market share in the foreign market is growing at an accelerating pace. If the estimated parameter lies between 0 and 1, the growth is positive but slackening off. Negative values indicate a declining national share for country j , at an accelerating pace if the coefficient estimate is less than -1.

The same formulation can be used for all the components of the identity in equation (1). We can estimate growth elasticities for overall sales of the make Q_{ijt} , industry sales I_t , national market share S_{jt} and competitor subnational share M_{ijt} . If we denote these elasticities q_{ij} , r , s_j , and m_{ij} , respectively, they can be combined into an attractively simple equation which mirrors model (1) directly:

$$q_{ij} = r + s_j + m_{ij}. \quad (5)$$

This result is easily verified algebraically (see Hanssens, Parsons & Schultz [1990], p. 192).

The simplicity of this result makes the model particularly appropriate for empirical analysis. The key growth parameters can be estimated as the parameters of the loglinear trend regressions

$$\log I_t = \log b + r \log t + u_t \quad (6)$$

$$\log S_{jt} = \log c + s_j \log t + v_{jt} \quad (7)$$

$$\log M_{ijt} = \log d + m_{ij} \log t + w_{ijt}, \quad (8)$$

where the dependent variables are log industry sales in the foreign market, log market share for country j , and log firm i 's market share among its competitors from country j , respectively. Running these separate regressions, we obtain directly comparable estimates of the three sources of growth.

Two complicating econometric issues arise when estimating these models. First, as always with time-series data, there is no guarantee that the chosen model will result in completely uncorrelated residuals. To handle this problem

we will expand the specification with an additional parameter λ in the error term to capture first-order autocorrelation in the residuals. The estimating equation thus becomes (using I_t as an example):

$$\log I_t = \log b + r \log t + 1/(1-\lambda L)u_t, \quad (9)$$

where L denotes the lag operator (so that, for example, $Lu_t = u_{t-1}$). This autoregressive specification can be easily estimated using an iterative OLS procedure as implemented on, for example, the SAS software system (PROC AUTOREG).

Another econometric complication is that the growth elasticities may not be structurally stable over time. This could be the case if, for example, the sales evolution of a brand followed an S-shape over a long period of time. We accommodate the possibility of changing growth parameters by estimating the models separately for the first half and the second half of the longitudinal sample and making comparisons.

In conclusion, we operationalize our concepts of synergy and rivalry in foreign markets by decomposing a firm's sales as the product of industry sales, country market share, and competitive subnational share. We formulate a set of flexible growth models for each component and estimate the model parameters by an iterative least squares technique which controls for autocorrelated residuals. A longitudinal split-half analysis provides a test of structural stability of the results.

DATA

The primary database covers annual passenger car sales (in units) for the postwar period between 1959 and 1980 for the leading car manufacturers in major world regions.¹ This was the period of export expansion and foreign market penetration for the Japanese automobile manufacturers (in 1981, the voluntary restrictions in the U.S. market were agreed to). To compare with the Japanese firms, other countries' auto manufacturers are also included for the North American market. We select a subsample of manufacturers for which a sufficiently long history of international car sales is available and aggregate national markets to the major world regions of North America, South America, Europe, Africa and the Middle East.

The selected manufacturers are :

Japan	Datsun, Mazda, Toyota
Germany	Audi, BMW, Mercedes, Opel, Porsche, Volkswagen
United Kingdom	Austin, Jaguar, MG, Triumph
France	Citroen, Peugeot, Renault, Simca
Italy	Alfa Romeo, Fiat, Lancia
Sweden	Saab, Volvo

While this list of car makers is no longer accurate due to name changes (e.g., Datsun to Nissan), mergers (e.g., Austin, MG and Triumph into British Leyland) and the emergence of powerful new competitors (e.g., Honda), it is a good representation of the global automobile market in the period under study.

A second database was developed for the period 1978-1987, one which included the Honda make from Japan. Honda is a latecomer to automobiles, having focused on motorcycles in the early years, and it was not until the mid-1970s that it became an important player in the global market. From the outset Honda's target markets have been located overseas, especially in the U.S., and its domestic market share did not become significant until well into the 1980s. The Honda case is special in that the company does not follow the imitative strategies alluded to for the other Japanese automakers. Honda therefore provides a useful test of the hypothesis that imitative rivalry leads to synergistic benefits. It is also useful as a test of the notion that the synergy is particularly important in the early stages of market penetration.

HYPOTHESES

The main hypotheses relate to the primary database, excluding the Honda make. Based on the previous conceptual discussion, we would expect the Japanese companies to exhibit greater elasticities for their synergy component than for the individual rivalry components. Even though their rivalry has been very intense and direct, the hypothesis is that the synergy benefits outlined previously will dominate the in-fighting among Japanese brands.

By comparison, we would expect the synergy component for the other foreign manufacturers to be less prominent. While they all can be expected to exhibit both synergy and rivalry effects, the direct internal rivalry is less than for the Japanese and thus the spillover to a synergistic effect is diminished.

For the German cars, there is some reason to expect "German engineering" to be a factor generating a positive synergism. But the great differentiation between the different makes would make a strong synergy effect unlikely. The separate niches that the German cars have targeted would also suggest that rivalry is lower. Therefore, overall shifts in sales of a make are expected to be less attributable to its German association, either positively or negatively.

By analogous reasoning, we would expect the synergy component to be somewhat significant but negative for the British, the French and the Italian cars, because of the general reputation of these cars and their relatively poor showing in the U.S. market during the period analyzed. Significant rivalry elasticities among the manufacturers would vary in sign depending upon which company is the stronger (positive rivalry elasticity) and which is weaker (a negative elasticity). We have no specific a priori hypotheses at this level of detail.

Finally, the two Swedish makes could be expected to show significantly positive synergy, with Saab and Volvo targeting similar segments.

Constructing specific hypotheses for the several market areas covered goes beyond the purpose here—these markets are better seen as replications of the U.S. analysis of the Japanese. There were unofficial limits on Japanese imports to Italy, France, and the U.K. during the period observed, and this could be expected to inflate the synergy component for the European market. The competitive situation clearly varied between countries (in the Middle East the Israeli boycott kept some makes off the market, for example) and the stage of the product life cycle differed considerably.

The test of the stability of the coefficients—a split-half analysis of the U.S. data for the pre- and post-1970 periods—can alternatively be interpreted as a substantive test of a country-of-origin life cycle effect. When a country's manufacturers start exporting to a given market, customers might be inclined to judge product performance by their stereotype of the country-of-origin. As several brands enter, customers gradually come to learn the distinguishing features of the different brands, and the effect from the "made-in" association can be expected to diminish. Under this scenario, one would hypothesize that the Japanese synergy coefficient would be greater in the pre-1970 period, while the rivalry elasticities may be showing the opposite tendency.

This tendency for the synergy to erode over time should also show up in the Honda data for the 1978-87 period, as Japanese market penetration had by then already been achieved. Furthermore, once an automaker with less imitative strategy enters, we would expect the strong synergy component to dissipate more quickly. With Honda in, the rivalry effect should become more similar to that of the other foreign car makers, with greater emphasis upon the company-specific gains.

ESTIMATION RESULTS

We first describe the sources of the 1959-80 sales growth for the Japanese competitors in the North American market and compare the findings to the European manufacturers in the same market (Table 1A through 1F). Next we present the results for the same Japanese competitors in five other world markets (Table 2). The result tables give the least-squares estimates of exponential growth using model (9), along with an indicator of statistical significance and the obtained *R*-square. We do not report the autoregressive parameter λ , as it has no substantive meaning in this context. Suffice it to say that λ was significant in a majority of the cases, indicating that the correction for autocorrelation was indeed necessary.

The overall sales growth of the three major Japanese auto exporters in the US between 1959 and 1980 was explosive. As shown in Table 1A, the key contributor to this growth was the Japanese national share, with an estimated

TABLE 1A
Sources of Growth:
Japanese Automobiles in North America

Competition	Growth Elasticity (R^2)		
	Industry	National Share	Subshare
1959-1980			
Mazda	1.65(0.73) ^a	20.31(0.98) ^a	7.06(0.85)
Nissan	1.65(0.73) ^a	20.31(0.98) ^a	-2.09(0.87) ^a
Toyota	1.65(0.73) ^a	20.31(0.98) ^a	1.63(0.71)
Pre-1970			
Mazda	3.23(0.86) ^a	30.64(0.94) ^a	-14.53(0.64) ^c
Nissan	3.23(0.86) ^a	30.64(0.94) ^a	-2.20(0.66)
Toyota	3.23(0.86) ^a	30.64(0.94) ^a	3.95(0.59) ^a
1970-1980			
Mazda	0.61(0.10)	6.01(0.82) ^a	9.79(0.47)
Nissan	0.61(0.10)	6.01(0.82) ^a	-0.85(0.25)
Toyota	0.61(0.10)	6.01(0.82) ^a	-0.66(0.21)

^asignificant at $p < .01$

^bsignificant at $p < .05$

^csignificant at $p < .10$

elasticity of 20.31. In contrast, the U.S. industry share growth elasticity for this period was only 1.65. Changes in brand share positions were relatively minor, with only Nissan experiencing a statistically significant decline of -2.09. This negative rivalry elasticity suggests that Nissan gradually lost ground to the other Japanese makes, especially in the pre-1970 period (as the split-half results show). Toyota was consistently stronger, while Mazda fared poorly initially and then caught up very well.

These results provide strong evidence that the synergy factor dominated the rivalry factor in Japanese export expansion paths on the North American continent. The split-half analysis confirms these results. While the Japanese national share growth elasticity was lower in the 1970s, it was still the dominant source of growth. Thus, even as the foreign market penetration approaches saturation, the synergy effect continues to prevail.

The synergy coefficient for the German automakers is surprisingly negative in the post-1970 years, neutralizing an earlier positive synergy effect (Table 1B). Interestingly, the rivalry coefficients increase in magnitude over the two time periods. Opel and VW were the losers in the post-1970 period with Audi, BMW and Mercedes the winners. According to these results, the "German engineering" synergy seems to have dissipated by the 1970s, replaced with a negative association possibly due to the problems with the U.S.-produced Rabbit [Sobel 1984].

A weak but consistently negative synergy reflects the British automakers' loss of share in the U.S. during the period (Table 1C). Only MG seems to

TABLE 1B
Sources of Growth:
German Automobiles in North America

Competition	Growth Elasticity (R^2)		
	Industry	National Share	Subshare
1959-1980			
Audi	1.65(0.73) ^a	-0.07(0.76)	41.69(0.89) ^a
BMW	1.65(0.73) ^a	-0.07(0.76)	11.58(0.88) ^a
Mercedes	1.65(0.73) ^a	-0.07(0.76)	3.63(0.87) ^b
Opel	1.65(0.73) ^a	-0.07(0.76)	-6.68(0.10)
Porsche	1.65(0.73) ^a	-0.07(0.76)	3.86(0.90) ^a
VW	1.65(0.73) ^a	-0.07(0.76)	-1.87(0.80) ^a
Pre-1970			
Audi	3.23(0.86) ^a	6.26(0.90) ^a	-9.39(0.95) ^a
BMW	3.23(0.86) ^a	6.26(0.90) ^a	0.36(0.52)
Mercedes	3.23(0.86) ^a	6.26(0.90) ^a	-5.11(0.82) ^b
Opel	3.23(0.86) ^a	6.26(0.90) ^a	1.43(0.32)
Porsche	3.23(0.86) ^a	6.26(0.90) ^a	-2.96(0.85) ^a
VW	3.23(0.86) ^a	6.26(0.90) ^a	0.81(0.46)
1970-1980			
Audi	0.61(0.10)	-9.08(0.96) ^a	18.65(0.82) ^a
BMW	0.61(0.10)	-9.08(0.96) ^a	16.58(0.91) ^a
Mercedes	0.61(0.10)	-9.08(0.96) ^a	12.27(0.96) ^a
Opel	0.61(0.10)	-9.08(0.96) ^a	-38.55(0.35) ^c
Porsche	0.61(0.10)	-9.08(0.96) ^a	6.24(0.86) ^a
VW	0.61(0.10)	-9.08(0.96) ^a	-4.79(0.88) ^a

^asignificant at $p < .01$

^bsignificant at $p < .05$

^csignificant at $p < .10$

have had some competitive advantage over the period, with Austin spectacularly bad after 1970. These results are entirely in line with the prior expectations. Similarly, the expected negative French synergy is confirmed (Table 1D). There is a strongly negative rivalry coefficient for both Citroen and Simca, cars which fared poorly in the U.S. during this period. The gains were recorded by Peugeot, particularly in the post-1970 period. Note that, because the base shares for the two losers were so small, the numerical values of their elasticities are much greater than the corresponding gain by Peugeot.

As for Italy, the synergy coefficient estimates are insignificant throughout (Table 1E). The rivalry coefficients show a change in sign between the two periods for both Alfa Romeo and, in particular, for Lancia, reflecting improved competitiveness over time. The strength of the rivalry coefficients relative to the insignificant synergy coefficients suggests that the hypothesized negative evaluation of "Italian cars" as a whole is incorrect. Similarly, the "Swedish" effect is weaker than expected, as is the rivalry between the two

TABLE 1C
Sources of Growth:
British Automobiles in North America

Competition	Growth Elasticity (R^2)		
	Industry	National Share	Subshare
1959-1980			
Austin	1.65(0.73) ^a	-2.16(0.57) ^a	-28.61(0.80) ^a
Jaguar	1.65(0.73) ^a	-2.16(0.57) ^a	0.17(0.01)
MG	1.65(0.73) ^a	-2.16(0.57) ^a	2.35(0.69) ^a
Triumph	1.65(0.73) ^a	-2.16(0.57) ^a	0.42(0.14)
Pre-1970			
Austin	3.23(0.86) ^a	-2.64(0.46) ^c	-1.45(0.45)
Jaguar	3.23(0.86) ^a	-2.64(0.46) ^c	-0.55(0.29)
MG	3.23(0.86) ^a	-2.64(0.46) ^c	2.86(0.51)
Triumph	3.23(0.86) ^a	-2.64(0.46) ^c	-1.05(0.25)
1970-1980			
Austin	0.61(0.10)	-5.22(0.64) ^b	-74.54(0.77) ^b
Jaguar	0.61(0.10)	-5.22(0.64) ^b	-0.51(0.25)
MG	0.61(0.10)	-5.22(0.64) ^b	0.47(0.08)
Triumph	0.61(0.10)	-5.22(0.64) ^b	2.53(0.34) ^c

^asignificant at $p < .01$

^bsignificant at $p < .05$

^csignificant at $p < .10$

makes, Saab and Volvo (Table 1F). Nevertheless, the synergy for the Swedish cars is significantly positive when the entire period is considered, with a slight rivalry edge for Volvo.

In sum, European exporters to North America experienced far smaller synergy factors than the Japanese, in some cases even negative synergy. The growth elasticities for the five other exporting countries ranged from -5.74 for France to $+3.24$ for Sweden. However, as we have seen, these low values did not prevent some individual brands from realizing significant sales growth in North America.

The dominance of synergy in Japanese international sales growth is replicated to some extent in other markets, as shown in Table 2. Growth in national share accounted for the bulk of Japanese auto sales increases in Europe and the Middle East. Industry sales growth was a statistically significant factor in these markets but individual competitor share was not significant in a majority of the cases. Judging from the few significant rivalry coefficients, Toyota's gains in Asia were countered by losses in Europe, Mazda gained significantly against its compatriots in Europe and Latin America, while Nissan fared less well. Overall, however, industry sales emerge as the most consistent source of Japanese export sales growth in less developed markets (Africa, Latin America), whereas synergy is the primary source in more mature markets (Europe, North America).

TABLE 1D
Sources of Growth:
French Automobiles in North America

Competition	Growth Elasticity (R^2)		
	Industry	National Share	Subshare
1959-1980			
Citroen	1.65(0.73) ^a	-5.74(0.78) ^a	-23.11(0.84) ^b
Peugeot	1.65(0.73) ^a	-5.74(0.78) ^a	5.35(0.89) ^a
Renault	1.65(0.73) ^a	-5.74(0.78) ^a	-0.50(0.30)
Simca	1.65(0.73) ^a	-5.74(0.78) ^a	-32.17(0.91) ^a
Pre-1970			
Citroen	3.23(0.86) ^a	-12.61(0.89) ^a	3.18(0.46) ^b
Peugeot	3.23(0.86) ^a	-12.61(0.89) ^a	1.10(0.16)
Renault	3.23(0.86) ^a	-12.61(0.89) ^a	-1.26(0.29)
Simca	3.23(0.86) ^a	-12.61(0.89) ^a	1.99(0.31)
1970-1980			
Citroen	0.61(0.10)	0.82(0.26)	-64.59(0.81) ^a
Peugeot	0.61(0.10)	0.82(0.26)	5.65(0.71)
Renault	0.61(0.10)	0.82(0.26)	0.00(0.28)
Simca	0.61(0.10)	0.82(0.26)	-66.77(0.82) ^b

^asignificant at $p < .01$

^bsignificant at $p < .05$

^csignificant at $p < .10$

To check on the interpretation of the results in Tables 1 and 2, the more recent database, covering 1978-87 was then used to replicate the analysis in Table 1 for the Japanese makes. Again, the objective with this analysis was to examine whether the Japanese synergy component was weakened over time and by the entry of Honda, with its less imitative strategy. The resulting coefficient estimates are given in Table 3.

As the estimates in the table demonstrate, the synergy coefficients among the Japanese are decidedly lower in the 1978-87 period. The results are in fact remarkably different from those of the earlier time periods. Only in the North American market did the previous results hold up, with the synergy, although lower than before, still greater than the individual rivalry elasticities. Apart from North America, Europe is the only market with a significant synergy effect. In four of the market areas, the synergy is in fact negative, suggesting that the Japanese as a group lost market share between 1978-87. This is striking when compared to the results in Table 2.

Honda made significant inroads against the other Japanese makes in all of these markets except Europe. Looking at net export *sales* growth (summing the elasticities in Table 3 horizontally) only Honda achieved positive results in all markets. This growth, however, came at the expense of Nissan and Toyota in Africa, Asia, the Middle East and Latin America and also at the

TABLE 1E
Sources of Growth:
Italian Automobiles in North America

Competition	Growth Elasticity (R^2)		
	Industry	National Share	Subshare
1959-1980			
Alfa Romeo	1.65(0.73)	2.39(0.73)	-0.52(0.61)
Fiat	1.65(0.73)	2.39(0.73)	0.02(0.51)
Lancia	1.65(0.73)	2.39(0.73)	-2.08(0.63)
Pre-1970			
Alfa Romeo	3.23(0.86) ^a	-2.58(0.50)	-1.88(0.42)
Fiat	3.23(0.86) ^a	-2.58(0.50)	0.29(0.40)
Lancia	3.23(0.86) ^a	-2.58(0.50)	-53.91(0.88) ^a
1970-1980			
Alfa Romeo	0.61(0.10)	0.87(0.19)	6.27(0.77) ^b
Fiat	0.61(0.10)	0.87(0.19)	-0.84(0.63) ^b
Lancia	0.61(0.10)	0.87(0.19)	67.86(0.69) ^b

^asignificant at $p < .01$

^bsignificant at $p < .05$

^csignificant at $p < .10$

expense of Mazda in Africa and the Middle East. In terms of *market share*, Honda grew faster than any of the other Japanese companies in North America, Africa, and the Middle East, and only marginally slower than Mazda in Asia and Latin America. The success of Honda suggests that differentiation away from the group can still be a successful strategy, given that the firm is already a member of the leading group of companies. But it also demonstrates how the synergy effects can be dissipated.

DISCUSSION OF THE FINDINGS

Before spelling out the implications of these results, it is important to recognize the limits of the methodology used. As with most nonexperimental statistical analysis, the results depict correlational associations, not causal linkages. In this study, we have made the implicit assumption that the three-way partitioning of the market in equation (1) reflects a certain hierarchy of brand choice in the automobile market. In particular, the decomposition of the sales suggests that customers first choose on the basis of the country-of-manufacture, and then select one make within that evoked set. This is a necessary assumption in our methodology, one which is maintained throughout, and thus not tested.

There are strong, conceptual reasons for accepting the assumed model. The realism of the two-step process is supported by its similarity to the well-known market partitioning scheme developed by the Hendry corporation

TABLE 1F
Sources of Growth:
Swedish Automobiles in North America

Competition	Growth Elasticity (R^2)		
	Industry	National Share	Subshare
1959-1980			
Saab	1.65(0.73) ^a	3.24(0.82) ^a	-0.45(0.20) ^c
Volvo	1.65(0.73) ^a	3.24(0.82) ^a	0.13(0.21) ^b
Pre-1970			
Saab	3.23(0.87) ^a	2.65(0.59)	0.20(0.13)
Volvo	3.23(0.87) ^a	2.65(0.59)	2.20(0.13)
1970-1980			
Saab	0.61(0.10)	0.01(0.05)	-0.05(0.09)
Volvo	0.61(0.10)	0.01(0.05)	0.00(0.09)

^asignificant at $p < .01$

^bsignificant at $p < .05$

^csignificant at $p < .10$

[Kalwani & Morrison 1977]. According to this system, the consumer often goes through a sequence of steps making successively finer and finer discriminations between alternatives before arriving at final choice. Furthermore, other writers have suggested that the sequential process might well be a correct description of the U.S. car market (see, for example, Kotler [1988], pp. 284-86). In particular, the question as to whether to "buy Japanese" seems to have been very salient in the U.S during the period analyzed (see, for example, Sobel [1984]; Abernathy et al. [1983]; Johansson [1985]).

In any case, for the synergy component, the realism of this two-step process assumption is not crucial. The resulting elasticity estimates will still depict a synergistic country-of-origin effect for the country's manufacturers, regardless of its actual cause. However, the rivalry coefficient is more problematic.

The difficulty with the rivalry coefficient is that an individual make's sales growth (or decline) may be related more to makes from other countries than to its own country. As a case in point, VW sales decline may have had more to do with the Japanese competition than with other German makes. If so, the rivalry coefficient for VW in Table 1 would be interpreted simply as evidence that its sales are inversely correlated with other German car makers' shares. Since they targeted different segments—and thus did not rival each other directly—the implication that BMW and Audi were beating VW may be erroneous.

As a limited empirical test of the appropriateness of our market structure assumption, we analyzed the small car market separately to see how robust our results are. Selecting those competitors who were primarily small car makers, regardless of country-of-origin, we reran the North American analysis for

TABLE 2
Sources of Growth:
Japanese Automobiles in Foreign Markets
(1970-1980)

Competition	Growth Elasticity (R^2)		
	Industry	National Share	Subshare
Africa			
Mazda	4.35(0.71) ^a	1.98(0.31)	-1.76(0.18)
Nissan	4.35(0.71) ^a	1.98(0.31)	1.51(0.44)
Toyota	4.35(0.71) ^a	1.98(0.31)	-0.67(0.22)
Asia			
Mazda	1.62(0.56) ^b	3.64(0.45)	-6.71(0.43)
Nissan	1.62(0.56) ^b	3.64(0.45)	-1.00(0.12)
Toyota	1.62(0.56) ^b	3.64(0.45)	3.23(0.43) ^b
Europe			
Mazda	2.51(0.85) ^a	9.64(0.83) ^a	3.13(0.66) ^c
Nissan	2.51(0.85) ^a	9.64(0.83) ^a	1.14(0.25)
Toyota	2.51(0.85) ^a	9.64(0.83) ^a	-2.66(0.75) ^a
Middle East			
Mazda	11.79(0.84) ^a	11.30(0.83) ^a	3.86(0.39)
Nissan	11.79(0.84) ^a	11.30(0.83) ^a	-2.85(0.33) ^c
Toyota	11.79(0.84) ^a	11.30(0.83) ^a	1.06(0.08)
Latin America			
Mazda	5.64(0.78) ^a	1.33(0.27)	3.40(0.64) ^a
Nissan	5.64(0.78) ^a	1.33(0.27)	-2.28(0.36) ^c
Toyota	5.64(0.78) ^a	1.33(0.27)	1.41(0.25)

^asignificant at $p < .01$

^bsignificant at $p < .05$

^csignificant at $p < .10$

the entire period 1959-1987. The results are given in Table 4. As can be seen, all the small car makers except the Japanese lost share during this period, and Volkswagen was in fact hurt less than most other European makes. The table thus reinforces the earlier results. Allowing for the omission of the domestic small cars, and the relative arbitrariness in defining the "small car segment," the results in Table 4 show that the Japanese gains depicted in Table 1 were basically not due to a generic shift to small cars in the U.S. market but to a pro-Japan shift.

This result is striking in that it shows how little the Japanese gains owed to generic factors such as the two oil crises. These companies were not scoring "easy" victories in a market shifting towards small cars anyway. Also, the results raise the question of what the European auto companies were doing—the small car market had been theirs for a long time, and these results suggest that they perhaps focused too much on their own European market.

TABLE 3
Recent Sources of Growth:
Japanese Automobiles in North America
(1978-1987)

Competition	Growth Elasticity (R^2)		
	Industry	National Share	Subshare
North America			
Honda	1.41(0.96) ^a	4.16(0.91) ^a	2.88(0.85) ^a
Mazda	1.41(0.96) ^a	4.16(0.91) ^a	1.08(0.14)
Nissan	1.41(0.96) ^a	4.16(0.91) ^a	-2.79(0.81) ^a
Toyota	1.41(0.96) ^a	4.16(0.91) ^a	-0.14(0.08)
Africa			
Honda	3.30(0.93) ^a	-12.98(0.87) ^a	15.15(0.91) ^a
Mazda	3.30(0.93) ^a	-12.98(0.87) ^a	-1.92(0.06)
Nissan	3.30(0.93) ^a	-12.98(0.87) ^a	-2.40(0.27)
Toyota	3.30(0.93) ^a	-12.98(0.87) ^a	0.39(0.23)
Asia			
Honda	3.66(1.00) ^a	-7.79(0.81) ^a	11.71(0.70) ^a
Mazda	3.66(1.00) ^a	-7.79(0.81) ^a	12.50(0.64) ^b
Nissan	3.66(1.00) ^a	-7.79(0.81) ^a	-5.86(0.38) ^c
Toyota	3.66(1.00) ^a	-7.79(0.81) ^a	-3.32(0.36) ^c
Europe			
Honda	2.99(1.00) ^a	2.34(0.57) ^b	-0.21(0.09)
Mazda	2.99(1.00) ^a	2.34(0.57) ^b	0.61(0.14)
Nissan	2.99(1.00) ^a	2.34(0.57) ^b	-1.39(0.54) ^b
Toyota	2.99(1.00) ^a	2.34(0.57) ^b	1.21(0.27)
Middle East			
Honda	5.21(0.90) ^a	-12.70(0.76) ^b	9.17(0.54) ^b
Mazda	5.21(0.90) ^a	-12.70(0.76) ^b	-12.06(0.69) ^a
Nissan	5.21(0.90) ^a	-12.70(0.76) ^b	3.08(0.40) ^b
Toyota	5.21(0.90) ^a	-12.70(0.76) ^b	-0.56(0.25)
Latin America			
Honda	3.25(0.82) ^a	-6.83(0.50) ^b	6.71(0.35) ^c
Mazda	3.25(0.82) ^a	-6.83(0.50) ^b	7.81(0.39) ^c
Nissan	3.25(0.82) ^a	-6.83(0.50) ^b	-4.88(0.36) ^c
Toyota	3.25(0.82) ^a	-6.83(0.50) ^b	2.35(0.18)

^asignificant at $p < .01$

^bsignificant at $p < .05$

^csignificant at $p < .10$

In sum, the intense rivalry between the Japanese companies seems to have had little or no negative effect on individual company sales, counter to the notion of what "bad" competitive behavior leads to. These are companies whose strategies are directly patterned on what competitors are apt to do and who closely monitor every competitive move by other Japanese firms in the marketplace—and who then attempt to obliterate whatever competitive

TABLE 4
Synergy and Rivalry Among Small Cars:
North American Market
(1959-1987)

Competition	Growth Elasticity (R^2)		
	Industry	National Share	Subshare
Austin	1.82(0.74) ^a	4.37(0.90) ^a	-35.32(0.90) ^a
Fiat	1.82(0.74) ^a	4.37(0.90) ^a	-2.67(0.55) ^b
Mazda	1.82(0.74) ^a	4.37(0.90) ^a	22.28(0.96) ^a
Nissan	1.82(0.74) ^a	4.37(0.90) ^a	13.65(0.97) ^a
Opel	1.82(0.74) ^a	4.37(0.90) ^a	-21.98(0.56) ^a
Renault	1.82(0.74) ^a	4.37(0.90) ^a	-9.04(0.92) ^b
Simca	1.82(0.74) ^a	4.37(0.90) ^a	-42.06(0.94) ^a
Toyota	1.82(0.74) ^a	4.37(0.90) ^a	16.52(0.95) ^a
Volkswagen	1.82(0.74) ^a	4.37(0.90) ^a	-6.74(0.90) ^a

^asignificant at $p < .01$

^bsignificant at $p < .05$

^csignificant at $p < .10$

advantage those moves might have led to. In the process they have jointly dominated many domestic competitors, suggesting that in the auto industry the synergy effect has been by far the dominant factor in export sales.

The European competitors, by contrast, exhibit much lower synergy effects, reflecting their more differentiated strategies. Relying on their individual effectiveness seems in many cases to have made them easy targets for the massive attack from the Japanese. It is of course quite farfetched to suggest that the competitors from a given country should have "banded together" and developed a more consistent offering, in particular since the makes were, if not "well established" at least not newcomers to these markets. Judging from the empirical results, however, one cannot help but wonder.

Whether a more "British" set of cars would have fared better than the four included in Table 1C depends of course on the imputed quality of the country-of-origin. On this count one has to be pessimistic, given the historical record of the British car industry. The quality consciousness and manufacturing prowess of the Japanese companies suggests that it takes something more to generate a positively significant country synergy effect (Womack, Jones and Roos [1990]).

The results for the period 1978-87 are different from the ones for the earlier period. They show in fact how it was possible for Honda to use a differentiation strategy to its advantage once Japanese market penetration had been achieved. As has been well documented elsewhere, the Honda company is a maverick in Japan, with an unusually high degree of entrepreneurial flair and individuality (see, for example, Sakiya [1982]). It is clear that the company has been able to draw upon the specific Japanese strengths and

still generate a differentiated product line that is not based on imitative strategies (see also Sakakibara and Aoshima [1989]).

But the Honda success does not necessarily negate the beneficial effects of synergy, particularly at an early stage of market entry. By the time the Honda cars appeared, the Japanese cars had already penetrated many markets and were well accepted. Thus Honda was able to compete directly against its compatriots, not with similar cars (as Subaru and Isuzu are doing without much success), but with differentiated cars that offer both Japanese strengths and unique styling and design.

It is also important to recognize that the existing Japanese companies, including Toyota and Nissan, have stayed true to their basic strategy, now imitating—and thus endorsing—the new Honda styling and design. Even though Honda aims to be unique with cars such as the Accord and the Acura Legend, its Japanese competitors make the task quite difficult. The imitative strategies may in fact help explain the fact that the synergy in the North American market in the most recent period is still larger than the rivalries. Honda, it should be kept in mind, has clearly targeted the U.S. market ahead of other markets (see Sobel [1985]) and one would expect its differentiation strategy to show most impact in the North American market. The fact that the Japanese synergy is still high there suggests that the other Japanese firms are able to ride along on Honda's coattails by copying its innovations.

FURTHER RESEARCH

The experience in the auto industry as reported here may or may not be replicated in other industries, and thus we cannot draw general conclusions from this particular study alone. However, it is difficult to attribute these results to any special factors in the auto industry, and it seems quite likely that the same scenario has been repeated in other industries, including many consumer electronics markets, copiers, and cameras. Of course, further research is necessary to assess this more thoroughly.

We would suggest that such further research takes a direction which is not purely empirical but also attempts to refine the methodology proposed here. As has been noted already, despite the attractive features of the model employed in the present study, there is a fundamental ambiguity underlying the interpretation of the rivalry coefficient. One could visualize an extended methodology where the rivalry results derived from least squares estimation are further tested against alternative specifications. In particular, we think there is promise in testing alternative market partitions, drawing on the methodology employed in the Hendry system (see Kalwani & Morrison [1977]).

On the theoretical side, there is clearly more work to be done on relating the implied Japanese strategies to existing strategy prescriptions. For example, the presented findings do not rely on any assumptions about the companies' strategic behavior except the manifested internal rivalry in product

and marketing policies. Whether this is intentional or even conscious parallelism is not an important issue for the empirical work presented here. There is little doubt, however, that the overriding strategic intent of the Japanese companies matters for their behavior. If, as Hamel & Prahalad [1989] argue, the Japanese companies aim for dominant presence in the global market, one might naturally ask whether the internal rivalry is the only—or the most effective—avenue to reach that goal.

Further research is also needed to evaluate the potential of possible counter-strategies, defenses against a synergistic attack. As Western firms become alerted to the dangers, they tend to adopt some of the same pro-active strategies developed by the Japanese. Does this diminish the danger of being overrun? Some companies attempt to join forces with a Japanese company in order to have at least “one of them” on their side. Such cooperative strategies are of course already common in the auto industry—Ford and Mazda, GM and Toyota, Volkswagen and Nissan, to name a few tie-ups—and it is important to study how effective such solutions are.

Further research also needs to recognize that many of the defensive strategies represent alternative ways of breaking down mobility barriers between strategic groups. One wonders if all companies can become more or less “Japanese,” and, if so, will the Japanese synergy perhaps be dissipated? In the end one would also wonder if this is a gain for us as consumers, or whether we are to look forward to a repeat of the old times when all competitors were “good.”

NOTE

1. The main database for this study was provided by Mazda North America. It was supplemented by information obtained from Toyota Motor Company and from various issues of *The World Automotive Market*, published by Automobile International in New York.

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