Deterrents to Divestiture

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The deterrent effect of exit barriers, industry struc-
tural traits and competitive posture investments, on the
firm's ability to divest a failing business with ease is ex-
plored, using analyses of these traits and investments.
The influence of these barriers on timely exit decisions
was found to vary according to different types of indus-
tries.

The timely extrication of a firm's resources from a business that is fail-
ing can be a delicate maneuver. Studies by Caves and Porter (1976), Harri-
gan and Porter (1978), and Harrigan (1979) have indicated that where a
thin resale market exists for the assets of a business, or for the business
unit itself, successful divestiture may be particularly difficult to attain.
This immobility is due, in part, to substantial investments the firm may
have made in automated manufacturing processes or other forms of entry
barriers (which may have effectively protected a niche of the firm's busi-
nesses from potential entrants in an earlier period of the business's evolu-
tion) which later constitute "exit barriers." The forces of these exit bar-
riers may be among the major difficulties firms encounter in spinning-off
or discontinuing such businesses because they are economic factors that
can exacerbate the difficulty of retrieving the value of the assets in ques-
tion. Porter (1976) suggested that these barriers could be economic or stra-
tegic in nature and could be identified by reviewing the industry's struc-
tural traits or by reviewing the firm's strategic posture within the affected
market. "Entry barriers," a central concept in the study of industrial or-
ganization economics, are structural traits within an industry that discour-
age entry by new competitors and permit prices to exceed costs by more
than "normal profits" if entry barriers are high (Bain, 1956, 1972; Modig-
liani, 1958; Gaskin, 1971; Caves & Porter, 1977). Exit barriers can dis-
courage exit by existing competitors even where prices are lower than costs
if the exit barriers are high.

The potentially deterrent effect of these structural traits on a particular
firm's business unit would be expected to vary according to the types of

competitive investments the firm made. Differences in firms' asset vintages and densities, as well as in their distribution network relationships, could allow some firms to exit with greater ease than others whose postures include more of the structural traits that had evolved into exit barriers. This study reports on attempts to isolate the effects of these exit barriers.

EXIT BARRIERS

Economic

Other factors held constant, it would be expected that the presence of high economic exit barriers would deter firms' timely exits and result in high opportunity costs being incurred. Economic exit barriers represent factors that will influence a firm to operate its assets even if it earns a subnormal rate of return on them. They can be the costs associated with eliminating a plant (such as the cost of dismantling a chemicals plant and treating the land beneath the plant) or the deterrent effect created by the lack of a resale market for the plant and assets. Their effect is to keep excess capacity that should have been retired. The economic analysis used to determine whether to discontinue investments that are not earning acceptable returns could advise retaining these businesses in which the assets are relatively new and undepreciated until their value has been recovered in operations (through depreciation). Assets that are capitalized can act as deterrents to exit by virtue of the reporting loss they could create if the firm exited before depreciating them.

The economic valuation regarding whether a particular investment should be retained (the abandonment value calculation) compares the (discounted) expected value of continued, future operations (as the numerator) with the expected salvage or sale value available upon exit (as the denominator). If the disposal value of an asset will be low (due to the technological factors explained below), the calculation of whether to remain invested will yield a ratio that is greater than 1 (which would advise continued operations).

Porter (1976) suggested that the factors that influence the "height" of economic exit barriers are predominantly characteristics that relate to the product's manufacturing technology: (1) capital intensity, (2) asset specificity, (3) age of the assets (the extent to which their value has been depreciated), and (4) technological or operating reinvestment requirements. If the expenditures for other types of investments—advertising, R&D, or plant improvements—are not expensed, they too could constitute economic exit barriers in the sense that they might appear as an undesirable reported loss upon disposal when the firm exited.

Economic exit barriers are important because they may deter the firm's timely exit from an industry in which it may be suffering losses. If the value of a firm's fixed and working capital investments will be difficult to retrieve, it would be expected that high economic exit barriers could lock a

firm into prolonged competition at unattractive returns. Other things held constant, it would be expected that if exit barriers are high, competition may be more volatile among the "trapped" participants because their cost structures may encourage them to use price-cutting in order to fill their plants.

Physical assets such as plant, machinery, and inventory comprise the major types of economic assets that could act as exit barriers, although a plant that is shared with another business could also constitute such a barrier. The effect of these assets can be particularly devastating upon the firm's cash flow when small cash expenditures are required each year to keep these assets operating. The firm facing them may elect to bleed to death slowly by remaining invested in a low return business rather than incur the large cash outflows that may be necessary to hurdle these exit barriers.

The relative height of economic exit barriers may be measured by the costs associated with eliminating a plant or undepreciated assets, or as the opportunity costs incurred by operating a plant and holding inventories beyond the time when performance levels and demand for the firm's products justify this behavior. In this study, high manufacturing, or technology, related exit barriers (those for which the cost of disposal would be more than 10 percent of the firm's reported net income) were expected to be a strong deterrent, particularly where this trait occurred in the presence of other types of factors that also discouraged exit. These other types of investments—advertising, R&D, plant improvements, or goodwill-generating expenditures—could also constitute economic exit barriers (due to reporting losses) if they were not expensed upon occurrence. But they are more likely to constitute "strategic exit barriers," that is, factors defining a firm's strategic posture, which it may be unwilling to sacrifice by exiting prematurely.

Strategic

Deterrents to exit could also emanate from the firm's reluctance to sacrifice the benefits of cumulative, intangible assets which it has created through previous investments. "Strategic" exit barriers could be created by image maintenance goals, customer service obligations, the potential loss of customers or distribution channels, internal synergies between related businesses, shared facilities, or a highly successful market position. These benefits constitute exit barriers when a thin resale market for the business itself makes recovery of these asset values difficult and hence exit impossible due to quasicontractual and other strategic obligations that had once been undertaken and cannot be easily discharged in an adverse market. Caves and Porter (1977) established that the force of intangibles as exit barriers, which had not been recognized previously, could indeed be substantial. They isolated the relative deterrent effect of a number of factors: a high quality image (created by previous R&D, production, or

advertising expenditures) which could be damaged for other products in terminating the business; physical facilities shared with other healthy businesses that the firm preferred to retain; goodwill and loyalty in distribution channels and strong corporate recognition (created by previous marketing expenditures) which could be damaged for other businesses by abandoning the business in question; customer industries possessing strong bargaining positions that, as Porter (1975) has suggested, have relied on the products to be discontinued and that could potentially damage the firm's competitive position in other markets; and a business being of high strategic importance to the firm. (A business is of high strategic importance to the firm in this study if it is the only or major business the firm is in, or if the firm faces the possibility of significant negative repercussions to its other businesses by virtue of its strong and widely recognized former association with the divestiture candidate business.)

Expectations

Even if demand for the products of competitors may be declining, favorable expectations concerning demand for products of an individual could induce that firm to remain invested in the face of adversity. If a firm served a lucrative subset of customers (for example, premium handmade cigars within the otherwise troubled cigar business or rayon filament suit lining fibers within the otherwise beleaguered cellulosic fibers business), it would expect its customers not to switch to other products and hence would not divest assets used to serve the market niche in which demand was expected to remain lucrative. Because firms' expectations were expected to influence the number of firms remaining in an industry, structure was examined in light of competitors' individual expectations that healthy demand would endure for them for a longer time into the future than for competitors.

THE SAMPLE

This study's central hypothesis was that the deterrent effects of exit barriers within various industry environments differ due to their structural variations. The structural and strategic factors that might deter divestiture of a business unit would be most vividly apparent where there are significant reasons for the firm to exit, for example, where demand for the products of an industry has been declining for a protracted time period with little apparent hope for revitalization.

The deterrents to divestiture sketched above were examined by studying the exit decisions of 61 firms that competed in 8 declining businesses during the years 1965-1978. (The businesses studied were: percolator coffee makers, receiving tubes, rayon and acetate, acetylene, cigars, synthetic soda ash, American leather tanning, and baby foods. A subset of the firms studied in these industries did exit during the period under observation.)

FIGURE 1
Taxonomy of Research Design for Multiple Industry Sites
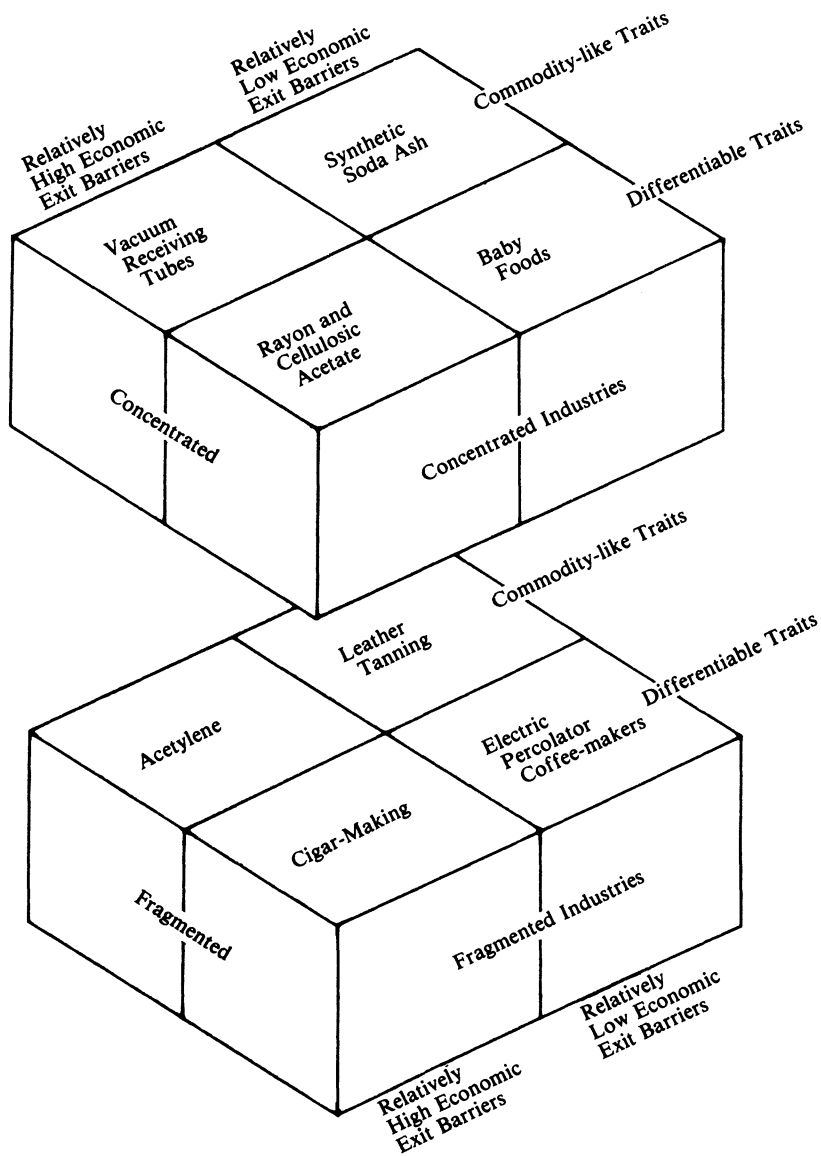**Incorporating Salient Industry Structural Traits**

Figure 1 illustrates the research taxonomy employed to design a balanced sample that would offer the potential of equal numbers of firms possessing the various traits believed to be significant in offering relatively hospitable or inhospitable environments for competition. The firms and

businesses studied were purposely selected to compare high degrees of product differentiation with low differentiation, volatile competitive structures with relatively more stable ones, and high capital intensity (exit barriers) with low ones. (Capital requirements for entry in 1965 were used to approximate exit barrier height.) Data regarding each observation were collected from published documents and supplemented by interviews with the affected business units. Interview subjects provided information regarding customers, height of exit barriers, technologies, and other competitive factors. Evidence of losses was documented by newspaper announcements and corporate annual reports. In many cases, the executives who decided to divest a particular business were available to discuss their decisions and those of competitors.

A universe of declining businesses was generated by studying series of unit sales volume data as reported in the *1972 Census of Manufacturers* (and updated reports), issues of the *Survey of Current Business*, and industry data series from various trade publications. The industry sample was designed to obtain four observations within each of eight structure cells in order to permit the researcher to control for the presence of these structural variables that were (a) observable and (b) believed to be among the most significant factors appropriate for study. Interviews with a total of 36 of the 61 target firms, several suppliers and customer firms, plus industry association representatives provided the data that comprised the sample.

Financial data that would have permitted a more robust test of the hypotheses regarding structural factors and exit barriers explained above are not generally available, until line-of-business reporting data are at last collected and made available to researchers. This data deficiency is troublesome in the study of diversified firms because annual report information and census data necessarily aggregate much of the cost and performance data that might offer insights regarding business unit strategies.

In this study, for example, the relevant unit for analysis was the strategic business unit (SBU) that used plants and other competitive resources dedicated to that particular business unit within a larger, diversified firm. Individual profit center data were not available. Only slightly more than half of the 36 competitors interviewed were willing to supply disguised financial figures of the type that would have been necessary to draw stronger conclusions than those presented from this study. A number of observations were not adequate for significant statistical analysis. Therefore, a relative scaling—low (.00) to high (.99)—for each of the factors investigated was produced by questioning the industry participants and observers described above regarding their perceptions of the relative height of these barriers for each industry competitor. Interviews, telephone conversations, follow-up letters, and revisions of preliminary drafts describing these barriers by the participants themselves provided revised estimates in a Delphi-like procedure until ratings for the 61 competitors' structural

contexts were developed. The variables employed were moderately collinear in some cases but can suggest some conclusions regarding the effect of relative heights of structural factors faced by firms in this sample.

THE MODEL

Specifications

The relationship of the industry traits and strategic posture factors sketched above to the likelihood that a firm would divest this business could be specified in a model using a binary dependent variable, the decision whether to exit (where exit = 1). In an ordinary least squares specification of this model, the coefficients of the independent variables (b_i) may be interpreted to represent the relative percentage contributions to the likelihood that exit would occur. The model could be stated in the following form:

$$y = a + b_i x_i + e$$

where $y =$ likelihood of exit and the structural and corporate inducements and deterrents to exit (x_i) are as follows: (a) a high quality product image; (b) the presence of a strong customer industry (whose patronage for other products might be lost by discontinuing the products of the business in question); (c) facilities shared between businesses where one of the businesses is a candidate for divestiture; (d) good distribution channel relationships and strong brand or corporate identification (created through previous expenditures for promotional activities and advertising); (e) economic exit barriers related to the manufacturing technology and its physical assets; (f) a favorable expectation that demand for the products of the business unit considered for divestiture will endure for a favorable period into the future; and (g) the incurrence of substantial losses from operations. Divestiture is also expected to be deterred if the business is of high strategic importance to the firm. The discussion which follows describes the harmonic mean of the alternative coefficients generated for each respective factor tested.

Predictions

Table 1 (presenting results for 61 firms' behaviors) indicates that divestiture will be deterred by the relative influences of a number of factors. (The numbers in parentheses discussed in the text represent harmonic means of the estimated parameter value under discussion. These numbers, which may be interpreted as relative percentage contributions to the firm's propensity to exit, were calculated from the values shown for the several alternative specifications offered. For example, in Table 1 the harmonic mean

TABLE 1
Regression Analysis on Exit[a]

Alternative Specifications of the Model of Exit Behavior	Coefficient of Multiple Determination (R²)	High Quality	Strong Customer Industry	Shared Facilities	Promotion/ Advertising Barriers	Manufacturing/ Technology Barriers	Favorable Industry Environment	Losses	High Strategic Importance	Constant
1.	.555	-.2623 (.0107)	-.2374 (.0245)	-.3256 (.0015)		-.3833 (.0007)	-.3209 (.0017)	.3231 (.0022)		1.1629 (.0001)
2.	.503	-.2841 (.0088)	-.1412 (.2019)	-.2501 (.0222)	-.1930 (.0620)	-.3736 (.0016)	-.4008 (.0002)			1.2744 (.0001)
3.	.475	-.2905 (.0116)	-.2324 (.0451)	-.3109 (.0048)		-.2955 (.0139)		.3964 (.0005)	-.1101 (.3189)	.9883 (.0001)
4.	.448	-.2541 (.0241)	-.3221 (.0050)	-.2262 (.0325)			-.2584 (.0175)	.3146 (.0063)		.8648 (.0001)
5.	.401	-.2754 (.0188)	-.2246 (.0574)	-.1530 (.1741)	-.1957 (.0812)		-.3380 (.0024)			.9815 (.0001)
6.	.367	-.2775 (.0200)	-.2685 (.0234)	-.2056 (.0647)			-.3352 (.0030)			.9624 (.0001)
7.	.3421			-.3001 (.0113)		-.4350 (.0007)	-.4743 (.0001)			1.1063 (.0001)
8.	.3127		-.2645 (.0259)		-.2428 (.0339)		-.3989 (.0005)			.8594 (.0001)
9.	.2935	-.4256 (.0004)		-.2685 (.0274)		-.3359 (.0090)				.9618 (.0001)
10.	.2679			-.3056 (.0144)		-.3809 (.0040)		.4045 (.0013)		.7299 (.0001)
11.	.2542	-.4090 (.0010)		-.1153 (.3384)	-.2337 (.0524)					.7250 (.0001)
12.	.2525	-.3875 (.0024)	-.1668 (.1957)			-.2058 (.1086)				.8007 (.0001)

[a]Parenthetical figures represent levels of significance, the probability indicated in using the student's t value for testing the null hypothesis that the parameter equals zero.

value for "losses" was calculated from the four estimated parameter values presented. Several alternative specifications of the model are presented by adding and deleting individual factors in order to demonstrate the joint effects of the factors as well as the relative magnitude of their influences on an exit decision. The firms contained in each subsample are varied according to the research taxonomy presented in Figure 1.) These factors are: (a) an image of high product quality (–31 percent); (b) the presence of a strong group of customers (–25 percent); (c) facilities shared with other apparently healthy businesses (27 percent); (d) good distribution channel relationships and strong product identification created through previous expenditures for promotions and advertising (–21 percent); (e) economic barriers related to the manufacturing technology and its physical assets (–38 percent); and (f) a strong expectation that demand for this business unit's products will endure for a favorable period in the future (–35 percent). The presence of one or more of these factors will deter timely exits. The incurrence of losses will increase the relative likelihood that a firm would divest a declining business unit (35 percent). The tables interpreted below also indicate that where losses were a significant factor, the relative weight of this variable frequently equalled or exceeded the relative deterrent effect of other individual structural factors.

Table 2 summarizes correlations that existed between the factors tested in the sample of 61 firms operating declining businesses. This table suggests that strategic exit barriers are generated by the firm's investment decisions and operating policies. Relatively high product quality, the establishment of promotional and advertising capital, and a history of providing customers with desirable products create conditions that could act as exit barriers by making firms unwilling to abandon these intangible assets. The variables presented here are highly statistically significant and their signs are as expected.

The interactions of these structural factors were explored by subsetting the sample according to the attributes that defined the research taxonomy. The relative influence of differing degrees of strategic importance (the business was a major contributor to total sales of, or closely identified with, the firm) was also explored. Again, the incurrence of losses encourages exit, but some structural traits do constitute formidable exit barriers.

The sample of declining business was bifurcated into those firms facing relatively high economic exit barriers related to manufacturing technologies and those firms whose economic exit barriers were low. In Table 3, and others that follow, identical specifications of the model for each subset are presented to show the changes in the relative magnitude of these factors' effects on exit decisions. Variables are added to or subtracted from the specification in an attempt to suggest, not merely the best-fitting model, but also how the presence or absence of some of these variables affected the others.

Table 3, which summarizes the relative influences of variables that were significant to the exit decision, indicates that in the case of the subset of

TABLE 2
Correlation Coefficients of Predictive Variables

	High Product Quality	Strong Customer Industry	Shared Facilities	Promotion/ Advertising Barriers	Manufacturing/ Technology Barriers	Favorable Industry Environment	Losses	High Strategic Importance
High product quality	1.000							
Strong customer industry	.257	1.000						
Shared facilities	.021	-.137	1.000					
Promotion/advertising barriers	.068	.183	.237	1.000				
Manufacturing/technology barriers	-.011	.258	-.304	-.015	1.000			
Favorable industry environment	.224	.021	.012	-.004	-.185	1.000		
Losses	-.088	.138	.039	-.156	.093	-.271	1.000	
High strategic importance	.354	.299	-.046	.380	.237	.048	-.058	1.000

TABLE 3
Exit Behavior in Businesses Where Economic Exit Barriers Are High Compared with Businesses Where Economic Exit Barriers Are Relatively Low[a]

Alternative Specifications of the Model of Exit Behavior		High Quality Image	Strong Customer	Shared Facilities	Promotion/ Advertising Barriers	Favorable Environment	Loss	Highly Strategic	Constant	Coefficient of Multiple Determination (R^2)
1.	High				-.3838 (.0034)	-.4559 (.007)			.6624 (.0001)	.3625
	Low				-.0963 (.6590)	-.5037 (.0318)			.9111 (.0001)	.2707
2.	High			-.3408 (.0110)		-.5194 (.0003)			.7097 (.0001)	.3263
	Low			-.2000 (.5576)		-.4364 (.0959)			1.000 (.0016)	.2777
3.	High			-.3489 (.0410)	-.4354 (.0100)				.8435 (.0001)	.3214
	Low			-.0386 (.8679)	-.0401 (.8643)				.2923 (.0918)	.0049
4.	High	-.4840 (.0009)	-.1724 (.2477)						.6335 (.0001)	.3024
	Low	-.1628 (.5442)	-.1977 (.4474)						.7326 (.0006)	.0887
5.	High						.2890 (.0405)	-.3728 (.0075)	.4432 (.0003)	.2526
	Low						.5658 (.0338)	-.0356 (.8794)	.4413 (.0090)	.2608
6.	High		-.2272 (.1386)			-.4102 (.0045)			.6573 (.0001)	.2473
	Low		-.2788 (.1842)			-.5240 (.0202)			1.0144 (.0001)	.3409
7.	High					-.3750 (.0152)	.1667 (.2723)		.4167 (.0007)	.2278
	Low					-.5247 (.0072)	.5864 (.0074)		.7284 (.0001)	.5349

[a]Figures in parentheses indicate levels of significance, the probability indicated in using the student's t value for testing the null hypothesis that the parameter equals zero. Mean likelihood of exit in businesses – economic exit barriers – high = 33.33%. Mean likelihood of exit in businesses – economic exit barriers – low = 57.89%.

firms facing high economic exit barriers: (a) strategic exit barriers could interact with economic exit barriers to discourage divestiture (with a harmonic mean for this table of –37 percent); (b) shared physical facilities exerted a deterrent effect similar to the presence of high manufacturing technology-related barriers (–48 percent); (c) the establishment of distribution channel relationships and a distinctive product image (through advertising) exerts a stronger deterrent effect where economic exit barriers are high (–40 percent); and (d) only the expectation of enduring demand is a significant deterrent regardless of the height of economic exit barriers (43 percent and 49 percent, respectively). As expected, the incurrence of losses exerts a stronger encouragement to divest a declining business unit if economic exit barriers are relatively low (57 percent as compared with 28 percent). The other factors tested were not significant deterrents if the physical exit barriers were not substantial deterrents.

Table 4 compares the effects of the structural factors on exit. The sample has been partitioned into firms whose declining products could be significantly differentiated and firms whose products were commodity-like in nature and may be only slightly differentiated (perhaps by service offerings). This grouping indicates that if the products could be significantly differentiated: (a) economic exit barriers due to manufacturing technologies (a harmonic mean of –37 percent) could be overcome by the incurrence of losses (44 percent), but neither factor was significant if the products were commodity-like; (b) facilities shared with nondeclining businesses exerted a particularly strong deterrent effect on businesses whose products were commodity-like (–42 percent) but were not significant in the sample possessing differentiable products; and (c) the image of relative product quality acted as a significant deterrent in both groups, although it was particularly strong in the commodity-like group for which there were few bases to distinguish one firm's product from another's (–75 percent), where personal service, speedier delivery, or some other extrinsic attribute would be valued as an attainment allowing one vendor of undifferentiated products to gain an advantage over others.

Table 5 summarizes the results of specifications tested for a sample of firms whose declining business units had been of high strategic importance and for those whose business units were of relatively low strategic importance. This positioning indicated that for companies whose businesses were of high strategic importance (a) an image of high product quality was a relatively strong deterrent (–36 percent) to exit and (b) the presence of a strong customer group exerted significant pressures on the firm not to divest (–54 percent). Losses were a relatively low inducement to exit; moreover, they were not statistically significant in these specifications, indicating that if the firm already perceived a business to be strategically important, the presence of exit barriers further deterred exit even if the firm suffered losses.

For companies whose businesses were of relatively low strategic importance, the difficulty of disentangling shared facilities (–42 percent), the

TABLE 4
Exit Behavior in Businesses Where Products Are Differentiable Compared with Exit Behavior in Businesses Where Products Have Commodity-Like Traits[a]

Alternative Specifications of the Model of Exit Behavior	High Quality Image	Strong Customers	Shared Plant Facilities	Promotion/ Advertising Barrier	Manufacturing/ Technology Barrier	Loss	Constant	Coefficient of Multiple Determination (R^2)
1. Differentiable			-.1747 (.2573)		-.3826 (.0273)	.4458 (.0031)	.5409 (.0105)	.3030
Commodity-Like			-.4856 (.0212)		-.1975 (.3302)	.2716 (.1939)	.9300 (.0002)	.2984
2. Differentiable	-.3395		-.1914 (.2401)		-.4153 (.0239)		.8951 (.0005)	.2318
Commodity-Like	.0192 (.1481)		-.4017 (.0554)		-.1538 (.4309)		.9915 (.0001)	.3135
3. Differentiable	-.5128	-.0727 (.7807)			-.3159 (.0545)		.7587 (.0125)	.2013
Commodity-Like	-.3222 (.0278)	-.3500 (.2025)			-.0001 (.9999)		.7500 (.0002)	.2333
4. Differentiable	-.7500 (.0467)	-.0931 (.7311)					.5324 (.0613)	.1081
Commodity-Like	-.2986 (.0477)	-.3500 (.1516)					.7500 (.0001)	.2333
5. Differentiable	-.7500 (.0412)		.0296 (.8548)	-.1203 (.4449)			.3373 (.0231)	.0168
Commodity-Like			-.3889 (.0776)	-.2500 (.3640)			.8889 (.0001)	.2445

[a]Figures in parentheses indicate levels of significance, the probability indicated in using the student's t value for testing the null hypothesis that the parameter equals zero. Mean probability of exit where products are differentiable = 28.94%. Mean probability of exit where products are commodity-like = 60.87%.

TABLE 5
Exit Behavior in Businesses of High Strategic Importance to Firms Compared with Businesses of Low Strategic Importance[a]

Alternative Specifications of the Model of Exit Behavior		High Product Quality	Strong Customer Industry	Shared Physical Facilities	Promotion/ Advertising Barrier	Manufacturing/ Technology Barrier	Favorable Industry Environment	Losses	Constant	Coefficient of Multiple Determination (R^2)
1.	Important	-.3882 (.0044)	-.6157 (.0010)	-.1804 (.2047)					1.0412 (.0001)	.4691
	Not Important	-.1078 (.6491)	.0309 (.8595)	-.4797 (.0150)					.8950 (.0001)	.2496
2.	Important	-.3256 (.0149)	-.5000 (.0034)			-.1686 (.2954)			.9419 (.0001)	.4583
	Not Important	-.4913 (.0903)	.1391 (.5067)			-.2530 (.2567)			.7581 (.0002)	.1064
3.	Important		-.5175 (.9949)		.2275 (.1085)		.1100 (.4354)		.6875 (.0005)	.3632
	Not Important		-.0507 (.7374)		.4819 (.0127)		-.4069 (.0132)		.8863 (.0001)	.3889
4.	Important			-.1515 (.3873)		-.4242 (.0431)	-.3636 (.0265)		.8333 (.0044)	.2575
	Not Important			-.4196 (.0160)		-.2925 (.0735)	-.4236 (.0155)		1.1988 (.0001)	.4175
5.	Important	-.3581 (.0271)		.0074 (.9642)	.0790 (.6246)			.3758 (.0149)	.3725 (.0375)	.1953
	Not Important	-.1869 (.3648)		-.3524 (.0503)	.4812 (.0143)			.1370 (.4630)	.9528 (.0001)	.4008
6.	Important			-.3758 (.0149)	.3597 (.0417)				.7709 (.0001)	.0457
	Not Important			.0489 (.7882)	.1038 (.5595)				.1006 (.5160)	.5058
7.	Important			-.4848 (.0034)		-.2001 (.1794)		.4514 (.0050)	.8494 (.0001)	.1455
	Not Important			-.0707 (.7001)		-.4040 (.0756)		.2121 (.2469)	.5353 (.0376)	.4601

[a]Figures in parentheses indicate levels of significance, the probability indicated in using the student's t value for testing the null hypothesis that the parameter equals zero. Average likelihood of exit where business is LOW = 58.06% – mean of dependent variable; average likelihood of exit where business is HIGH = 23.33% – mean of dependent variable.

TABLE 6
Harmonic Mean—Rankings of Relative Influences upon the Likelihood of Exit

	Reputation of High Product Quality	Strong Bargaining Position of Customer Industry	Physical Facilities Shared With Nondeclining Business	Barriers Created by Previous Promotion or Advertising Expenditures	Manufacturing or Technology Related Barriers	High Expectations of Favorable Industry Environment	Losses (Positive Sign)	Business of High Strategic Importance
Aggregate sample of 61 firms	4	6	5	7	1	3	2	(a)
Sample facing high economic barriers	1	(a)	5	3	—	2	6	4
Sample facing low economic barriers	(a)	(a)	(a)	(a)	—	2	1	(a)
Sample's product could be significantly differentiated	3	(a)	(a)	(a)	2	—	1	—
Sample's product was commodity-like in nature	1	(a)	2	(a)	(a)	—	(a)	—
Sample's business is of high strategic importance	4	1	(a)	(a)	2	3	(a)	—
Sample's business is of low strategic importance	1	(a)	3	2	6	4	5	—

(a) = not significant in this specification.

loss of a high quality reputation (–49 percent), and the potential loss of benefits from promotional and advertising investments (–43 percent) acted as relatively strong deterrents to exit, each exerting a relatively stronger deterrence than did the force of suffering losses from operations (41 percent).

Table 6 summarizes the relative importance of the structural factors tested upon the likelihood that a firm would divest its declining business unit. (Harmonic means calculated from the coefficients of statistically significant independent variables are the basis of this ranking.) Losses were either not statistically significant or were of a lesser magnitude than another factor in five of the seven samples tested.

Table 7 summarizes the differences in mean values of exit for each of the sample subsets examined. From Table 7 it will be seen that firms in the subsample facing relatively low economic exit barriers or producing commodity-like products were most likely to exit. Businesses held by firms to be of relatively low strategic importance were also relatively more likely to be divested. These findings substantiate the likelihood that exit barriers do indeed exist—barriers that could deter a firm suffering losses within a declining industry from making a timely exit.

TABLE 7
Comparisons of the Mean Values of Exit for Various Partitioned Samples

	Average Likelihood of Exit (Percent)
Total sample	41.0
Relatively high economic exit barriers	33.3
Relatively low economic exit barriers	57.9
Differentiable product traits	28.9
Commodity-like product traits	60.9
High strategic importance	23.3
Low strategic importance	58.1

LIMITATIONS OF THE FINDINGS

Given the nature of the data gathered in this study of exit barriers and firms' strategies (multiple-site interview data supplemented by library research), the study and its findings are subject to limitations regarding what can be known about a particular firm's divestment decision. The 61 observations of firms' behaviors, which were reconstructed from interviews and published information, could misrepresent behavior if another factor not measured herein were actually operative.

In a study in which there are many structural variables that interacted with each other and there are substantial differences between firms' strategic postures and initial conditions (conditions before many competitors considered exit as a response to declining demand), one must be conservative regarding the degree of confidence with which the interpretations presented can be asserted. The data seem to indicate that certain factors are

significant in predicting exit more frequently than others. These variables are the factors presented herein. The presence (or absence) of some of the structural factors detailed above does seem to correlate with the expected presence of exit behaviors and the firms' actions in overcoming them.

The factors tested in the predictive model represent the most significant specifications regarding the likelihood of exit. Many other factors were tested; some of them were found to be highly correlated with the presence or absence of exit. These included: R&D related barriers (-.41); a strong perceived difference between competitors' products (-.37); customer and distribution channel goodwill barriers (-.32); high advertising expenditures (-.32); high recognition of a competitors' corporate logo (-.30); image of technological leadership (-.30); and relatively low operating costs (-.30). Some of these individual factors are proxies for each other and for variables in the specifications tested. They are not included in the specifications due to collinearity with other predictors. Also, other types of specifications were tested (such as weighted least-squares and the nonlinear cumulative logistic function), which did produce higher coefficients of multiple determination, but the corresponding beta values of the independent variables were also more difficult to interpret operationally. The other specifications, in general, agreed in sign and statistical significance with those of the predictors in this study.

CONCLUSIONS

The findings of this study, which concentrated exclusively on behavior in declining industries, differs from the findings of Caves and Porter (1976) regarding manufacturing or technology in related exit barriers. They did not find a statistically significant pattern with respect to these factors. The exit models of the present study indicate that the presence of high economic exit barriers consisting of durable and specific assets could be a highly significant influence on behavioral outcomes by decreasing the likelihood of an early exit. Thus, one could infer that high manufacturing exit barriers could lead to lower than average profits when demand for a business's products declines. This study's findings regarding the influence of intangible exit barriers concur with the findings of significance in the Caves and Porter study. As with tangible asset investments, promotional or distribution goodwill and other intangible assets do constitute significant exit barriers by acting as a structural trait that could also influence the performance of competitors in a declining market by delaying their exits.

The implications of these findings suggest that firms will want to plan their exits at the time of entry into a business. Given short life cycles for new products, it is not unreasonable to make provisions for the efficient removal of excessive capital from low or negative growth businesses when contemplating investment. This field of study can help the practicing strategist to assess the dynamics of the firm's competitive position with greater

insights concerning the future barriers present investments can create. Specific operating guidelines for strategists facing declining industries are offered elsewhere (Harrigan, 1980).

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