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GRAY MARKETING AS AN ALTERNATIVE MARKET PENETRATION STRATEGY FOR ENTREPRENEURS: CONCEPTUAL MODEL AND CASE EVIDENCE

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EXECUTIVE SUMMARY

Gray marketing is said to occur when authentic branded products reach the consumer through marketing channels other than that of the authorized distributor (Weigand 1991). Free-riding was first offered by Tan et al. (1995, 1997) as an alternative explanation for the occurrence of gray marketing. We extend the authors' work to show that free-riding can be an alternative strategy to niching for entrepreneurs contemplating entry into established markets.

Almost exclusively, the existing literature on gray marketing treats the phenomenon as a pricing problem and fails to recognize it as a market entry opportunity for start-up entrepreneurs. The gray marketing strategy is appropriate for start-up entrepreneurs in view of their resource limitations and the risk of being a first-mover in market development. We show in this paper that an entrepreneur can successfully penetrate an established market by following a gray marketing strategy. This is because it can be optimal

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for the incumbent supplier to accommodate the entrepreneur/gray marketer even if the former could force the latter out of the market through aggressive counter actions.

We developed a conceptual model using game theoretic concepts to aid entrepreneurs in understanding the strategic interactions amongst parties involved in gray marketing and to identify the conditions under which entrepreneurs can successfully penetrate a market via gray marketing. The deductive or game theoretic approach, we feel, is most appropriate because gray marketing involves multiple-party interactions and conflicts of interests. As Moorthy (1985) showed, the game theoretic methodology is most suited to analyzing the behavior of market participants in such a situation.

This paper identifies the conditions under which gray marketing would be profitable and sustainable for entrepreneurs. First, by targeting markets that are already well established by the larger firms, the entrepreneurs' risk of failure due to demand uncertainty is reduced. In addition, they need not incur substantial costs for market developmental efforts. Furthermore, the free-riding strategy provides entrepreneurs with the opportunity to enter profitable markets that are currently supplied by larger firms, instead of being restricted to markets ignored or disdained by the latter. Second, entrepreneurs are able to benefit from the second-mover advantages in following the free-riding strategy. As late entrants into the market, entrepreneurs could learn from the experiences of the larger firms and avoid costly mistakes. By imitating the product strategy of the larger firm, entrepreneurs could also achieve cost savings in R&D and product development costs. All these effectively reduce the entrepreneur's cost of entry into the market. Hence, even with limited resource at their disposal, entrepreneurs could still enter the market successfully.

Finally, by following the free-riding strategy, entrepreneurs are able to "nibble" at the market shares of the larger firms. This is possible because of the difficulties and costs faced by the larger firms in countering entries made by the entrepreneurs. Thus, the larger firms are left with little choice but to accommodate the entry of the entrepreneurs into the market. When the costs of countering the entrepreneurs' entry are sufficiently large, the free-riding strategy becomes feasible for entrepreneurs even if they do not posses competitive advantages over the larger firms.

Our paper thus demonstrates that entrepreneurs do have an alternative market entry strategy besides the commonly prescribed niching strategy. It also shows them when such a free-riding strategy would be most beneficial and most likely to succeed. These are further illustrated and supported through two real-life cases involving companies in the luxury cars and cosmetics industries in Singapore. *© 2001 Elsevier Science Inc.*

INTRODUCTION

Entrepreneurs and start-up companies often face resource constraints. They lack financial and manpower resources, do not have wide distribution networks, and do not have the sales volume nor the product range to take advantage of scale and scope economies. All these limit their strategy options (Chaganti 1987; Miller and Toulouse 1986; Wright and Parsinia 1988) and hamper their growth and successes (Vesper 1980; Cooper et al. 1986; Weinrauch et al. 1991; Eden et al. 1997).

The extant literature on business strategies (see, for example, Porter 1980; Grieve-Smith 1990; Collis and Montgomery 1997) often does not specifically address small businesses in that they do not take into account resource constraints faced by start-up companies in their strategy prescriptions (Lee et al. 1999). These researchers often recommend that start-up companies seek out unmet market niches and avoid direct competition with the bigger incumbent firms in order to maximize their chances of success [see, for example, Table 1 of Carter et al. (1994), p. 24–25]. This niching strategy, similar to what Porter (1980) referred to as the focus strategy, is perhaps the one most often advocated in the small business literature (see, for example, Cohn and Lindberg 1972; Kao 1981; Cooper et al. 1986; Rugman and Verbeke 1987/88; Weinstein 1994; Kotler

1996). Furthermore, these researchers seem to suggest that niching is the only strategy option open to entrepreneurs and small start-up companies, given that their limited resources require them to make choices regarding strategy and organizational structure simultaneously (Rugman and Verbeke 1987/88).

This paper proposes that gray marketing can be an alternative market entry strategy for entrepreneurs and small start-up companies. Gray marketing is said to occur when authentic branded products reach the consumer through marketing channels other than that of the authorized distributor (Weigand 1991). In following a gray marketing strategy, entrepreneurs thus provide an alternative channel of distribution that rivals that of the authorized distributor's.

There is a fundamental difference between the niching strategy and gray marketing as a strategy (Lee et al. 1999). In niching, the focus is on differentiation, whereas in gray marketing, the core products parallel-imported are identical. Any "differentiation" of parallel-imported products is essentially peripheral. More importantly, the success of gray marketing relies not on differentiation but on product substitutability. This has been proven theoretically in Lee et al. (1999).

Gray marketing has traditionally been viewed as a problem to authorized distributors (see, for example, Ramirez 1985; Lowe and Rubin 1986; Maskulka and Gulas 1987; Cavusgil and Sikora 1988; Duhan and Sheffet 1988; Armstrong et al. 1988; Weigand 1991). The extant literature has concentrated on identifying the causes of gray marketing and on the types of strategies that authorized distributors can use to overcome this "unfair" competition posed by gray marketers. The predominant view in the literature is that gray marketing occurs because manufacturers discriminate on price and that authorized distributors should always react aggressively to the entry of gray marketers (see, for example, Cavusgil and Sikora 1988; Weigand 1991; Chaudhry and Walsh 1995; Mathur 1995). Under this view, gray marketing cannot coexist profitably alongside authorized distribution (Tan et al. 1997). However, in reality, this is not the case, as it is often observed that authorized distributors continue to coexist with gray marketers even though the former charge a higher price compared with the gray marketers (see Lim 1996b).

Tan et al. (1995, 1997) argued that it is more appropriate to look at gray marketing not as a price discrimination problem but rather as an issue in free-riding and that fighting gray marketers is not always the optimal response for the authorized distributors. One implication of this free-riding perspective of gray marketing is that, as we argue in this paper, the possibility of gray marketing presents an opportunity for entrepreneurs to penetrate an existing market. Such a market entry strategy is particularly suitable for entrepreneurs and small business start-ups, which often face constraints in terms of financial resources, human capital, and marketing expertise and clout.

This paper thus takes the perspective that gray marketing can be an alternative market entry strategy for entrepreneurs and not merely a marketing or legal problem. We present a game theoretic model of gray marketing and investigate its feasibility as a market entry strategy. This represents a new and interesting approach to gray marketing. With insights gained from the game theoretic perspective, we examine two cases of gray marketing to provide empirical validation of our theoretical model. Overall, this paper also contributes to our understanding of new venture strategies for entrepreneurs and small business start-ups.

LITERATURE REVIEW

New Venture Strategies

In the area of new venture strategies, Vesper (1980) noted that there are three main competitive entry wedges. His new product/service entry wedge is similar to the niching or focus strategy where the new venture enters the market with a product/service that is totally differentiated to that currently supplied by the incumbent firms. Vesper (1980) noted that this is rare and that very often the venture fails due to the lack of financial and/or human resource. On the other extreme, Vesper (1980) suggested that entrepreneurs could also enter the market via the franchising route where the product/service of the new venture would then be identical to that offered by the incumbent firm. The firms may subsequently give up their franchising agreement after it has gained sufficient market and product knowledge and experience, but success could prove elusive for such ex-franchisees.

Lying in between these two polar entry wedges is the third main competitive entry wedge of parallel competition. In parallel competition, firms enter the market via "me too" products/services that are only slightly different from those currently being offered by the incumbent firms. This is similar to what Lee et al. (1998) termed as the substitution strategy. For this strategy, the start-up company is advised to offer a differentiated yet substitutable product to maximize the chances that the incumbent firm would accommodate its market entry and hence its probability of success.

We can regard Vesper's (1980) three main competitive wedges as falling on a continuum of substitutability of the new firm's product/service relative to that of the incumbent firms'. Gray marketing can then be viewed as an extreme case of perfect substitutability [or an extreme form of parallel competition in Vesper's (1980) classification] in that the product offered by the gray marketer is sourced indirectly from the same manufacturer who is supplying the authorized distributor. We can also distinguish gray marketing from franchising. In franchising, the franchisee pays the franchiser a fee for the rights to sell the franchiser's product/service and for the benefits derived from the latter's marketing and promotional efforts. In contrast, the gray marketer simply free-rides on an authorized distributor's market development efforts.

Porter (1980) proposed six generic concepts for entry into new businesses. The new firm could "offer a superior product, broadly defined" (p. 350), or discover a new niche. This suggestion is similar to Vesper's (1980) new product/service wedge. According to Porter (1980), the firm could also try to find cheaper ways to manufacture the product or it could piggyback on "established distribution relationships drawn from other businesses" (p. 350). Finding cheaper ways to manufacture a product for start-up companies is not feasible, unless they have access to newer technologies, as they are unlikely to gain from economies of scale of production. Most start-up companies are also unable to piggyback on established distribution if they do not already have established relationships with existing channels of distribution. Porter's (1980) prescription that new businesses "buy into the market by sacrificing returns in the short run" (p. 350) is typically infeasible for small start-up businesses to follow. This is because small start-up companies usually do not have the necessary financial resources to engage in such practices. The last of Porter's six generic concepts for entry is to introduce a marketing innovation that would allow the entrant to overcome product differentiation barriers and circumvent the incumbent's competitive advantage in distribution.

We will now show how gray marketing fits into Porter's (1980) six generic concepts for entry. The product brought in by the gray marketer is not new but is similar to that marketed by the authorized distributor. To force accommodation from the incumbent authorized distributor, the gray marketer is advised to target customers ignored by the authorized distributor and hence to avoid direct competition, as we will argue later in this paper. In this sense, the entrepreneur entering the market via gray marketing is not seeking out a new market but rather one that the authorized distributor had optimally chosen to ignore. Hence, of Porter's (1980) six generic concepts for entry, gray marketing can be regarded as a form of marketing innovation. We propose the use of gray marketing as a novel way for entrepreneurs and small start-up firms to penetrate markets established by larger firms. Using gray marketing, small start-up firms can circumvent the authorized distributors' dominance of the market by offering similar products and hence force the latter to share the market instead.

We can also relate our work here to Drucker's (1993) seven sources of "innovative opportunity."[1] Our proposed perspective of gray marketing is an example of what Drucker (1993) called a "change in perception" that unleashed an innovative opportunity for the entrepreneur to penetrate a market via gray marketing (p. 99–106). The view that gray marketing is an issue in free-ridership implies that distributors would not always retaliate against market entry by the gray marketer. Such a perspective also represents what Drucker (1993, p. 57–68) would consider "an incongruity" between what gray marketing is (an issue in free-riding) and what everybody assumes it to be (the result of price discriminative practices by the manufacturers).

Free-Riding and Its Relevance to Entrepreneurs/SMEs

In economics, the theory of free-riding deals with the costs and difficulties of excluding consumers who benefit from the provision of public goods and services without paying for them (Gwartney and Strong 1992). In the world of business, free-riding can occur in various forms. For example, free-riding is common in business cartels, whereby a cheating member can benefit from the high price charged by the cartel yet not pay the cost in sacrificed output, because it is expensive and/or difficult to enforce cooperation from all cartel members.

Free-riding is also rampant in the form of design rip-offs by firms imitating various attributes of the product of the original manufacturer, without incurring the costs of product development made by the original manufacturer. For instance, Beijing Jeep Corporation, a Chrysler Corporation joint venture in China, found that there are more than 2,000 four-wheel-drive vehicles designed to look nearly identical to its popular Cherokee model (Davis 1994). In this form, the free-riding strategy is also known as the "me-too" or "copy-cat" strategy.

A common form of free-riding in marketing is parallel importing or gray-marketing. Gray marketing is said to occur when authentic branded products reach the consumer through marketing channels other than that of the authorized distributor (Weigand 1991). If this occurs within a national market, it is also labeled as channel flow diversion (Lowe and Rubin 1986) while it goes by the name parallel importing if it occurs in an international context (Maskulka and Gulas 1987). Just like the free-riders of public goods and services who enjoy the benefits without paying for the costs of such goods

[1] The seven sources of innovative opportunity are the unexpected, process need, industry and market structures, demographics, change in perception, incongruity, and new knowledge (Drucker 1993, p. 30–36).

TABLE 1 Benefits of Free-Riding Strategy for Entrepreneurs/Small Start-up Companies

Free-Riding Strategy	Benefits
1. Target established market	• Reduce the risk of failure due to demand uncertainty, as market demand is proven. • Savings from little/no market developmental efforts. • Opportunity for entrepreneurs to enter market, even if there are no market gaps.
2. Exploit second-mover advantages	• Opportunity to learn from first-mover, and hence avoid costly (and to the entrepreneurs, often crippling) mistakes. • Savings from product developmental efforts.
3. Minimize cost of entry	• Reduced resource requirements for entrepreneurs to enter market.
4. Maximize cost of aggressive action by larger firms	• Free-riding strategy is feasible even if entrepreneurs do not possess competitive advantages.

and services, the gray marketer free-rides on the authorized distributor's market development and expansion efforts. The gray marketer taps the market demand and brand image of the product created by the authorized distributor by importing products/brands identical to that of the latter and distributing them in the market created by the latter. In doing so, the gray marketer avoids the costs of market development related to advertising, promotions, and servicing. Gray marketing is legal in many countries including the United States (Cross et al. 1990; Weigand 1991) and Singapore (Pereira 1994).

In all these forms of free-ridership in business, there are certain common characteristics. First, such markets are usually characterized by the presence of a first mover who incurs substantial costs in developmental efforts in the form of sacrificed output, R&D outlays, product innovations, advertising and promotions, and the setting up and maintenance of service facilities. Second, the market is characterized by the imitation of the first-mover's strategy by another party (the free-rider) who stands to benefit from the opportunities created without having to pay for the associated developmental costs. Finally, the first mover faces difficulties and/or costs that make it difficult for it to preempt and/or counter the free-rider.

The free-riding strategy, in its various forms, is most relevant to entrepreneurs/SMEs in several important respects, as Table 1 illustrates. First, by targeting markets that are already well established by the larger firms, the entrepreneurs' risk of failure due to demand uncertainty is reduced. In addition, they need not incur substantial costs for market developmental efforts. Furthermore, the free-riding strategy provides entrepreneurs with the opportunity to enter profitable markets that are currently supplied by larger firms. Second, entrepreneurs are able to benefit from the second-mover advantages in following the free-riding strategy. As late entrants into the market, entrepreneurs could learn from the experiences of the larger firms and avoid costly mistakes. By imitating the product strategy of the larger firm, entrepreneurs could also achieve cost savings in R&D and product development costs. All these effectively reduce the entrepreneur's cost of entry into the market. Hence, even with limited resources at their disposal, entrepreneurs could still enter the market successfully.

Finally, by following the free-riding strategy, entrepreneurs are able to "nibble" at the market shares of the larger firms. This is possible because of the difficulties and costs faced by the larger firms in countering the entrepreneurs. Thus, the larger firms are left with little choice but to accommodate the entry of the entrepreneurs into the market. When the costs of countering the entrepreneurs' entry are sufficiently large, the free-riding strategy becomes feasible for entrepreneurs even if they do not posses competitive advantages over the larger firms.

A CONCEPTUAL FREE-RIDERSHIP MODEL OF GRAY MARKETING

Prerequisites for Existence of Gray Marketing

From the extant literature, we can conclude that for gray marketing to occur, three conditions must be present in the marketplace.

The gray marketer must be able to obtain the product from some other market (Ramirez 1985; Duhan and Sheffet 1988; Armstrong et al. 1988). There must also be few barriers to entry for the importation and distribution of the product. These would include the absence of tariffs and prohibitive transportation costs (Usunier 1993) and market-specific product specification requirements (Cavusgil and Sikora 1988). The gray marketer must also not be faced with the need to modify the product to satisfy different and conflicting legal requirements (Duhan and Sheffet 1988; Cross et al. 1990; Weigand 1991; Kaikati 1993; Cua 1944a, 1944b). The manufacturers' lack of total control over their marketing channels (Maskulka and Gulas 1987) would also facilitate gray marketing.

Finally, no firm will engage in gray marketing unless it is profitable (Lim 1996b). What this means is that the incumbent authorized distributor must be making good profits in the first place, and it is these high profits that make the market attractive to gray marketers. A large mark-up in prices by the authorized distributor opens up opportunities for gray marketers to parallel import even at higher costs than the authorized dealers and yet be able to sell at a lower price and still earn profits (Lim 1996a).

Free-Ridership Model

The free-ridership model of gray marketing by Tan et al. (1995, 1997) provides us with more precise conditions under which gray marketing would be profitable and sustainable as a market entry strategy. The model, as mentioned earlier, is also better able to explain the gray marketing phenomenon than the traditional price discrimination approach. We will provide a brief description of the game theoretic model of gray marketing here. Game theoretic methods are used because, as shown by Moorthy (1985), this methodology is most suited to analyzing the behavior of market participants in such a situation.

Consider a market situation where we have an authorized distributor and the entrepreneur/start-up company is contemplating entry via gray marketing. Because we are talking about gray marketing, the product brought in by the gray marketer is the same product as that currently offered by the authorized distributor. The product is defined by a price–warranty combination (P,w). While we used the term warranty, w is broadly defined to include both warranty and the before- and after-sales services provided by the distributor/gray marketer.

For ease of illustration and without loss of generality, we use the degree of consumer risk adversity to segment the market into two groups of consumers. Type 1 con-

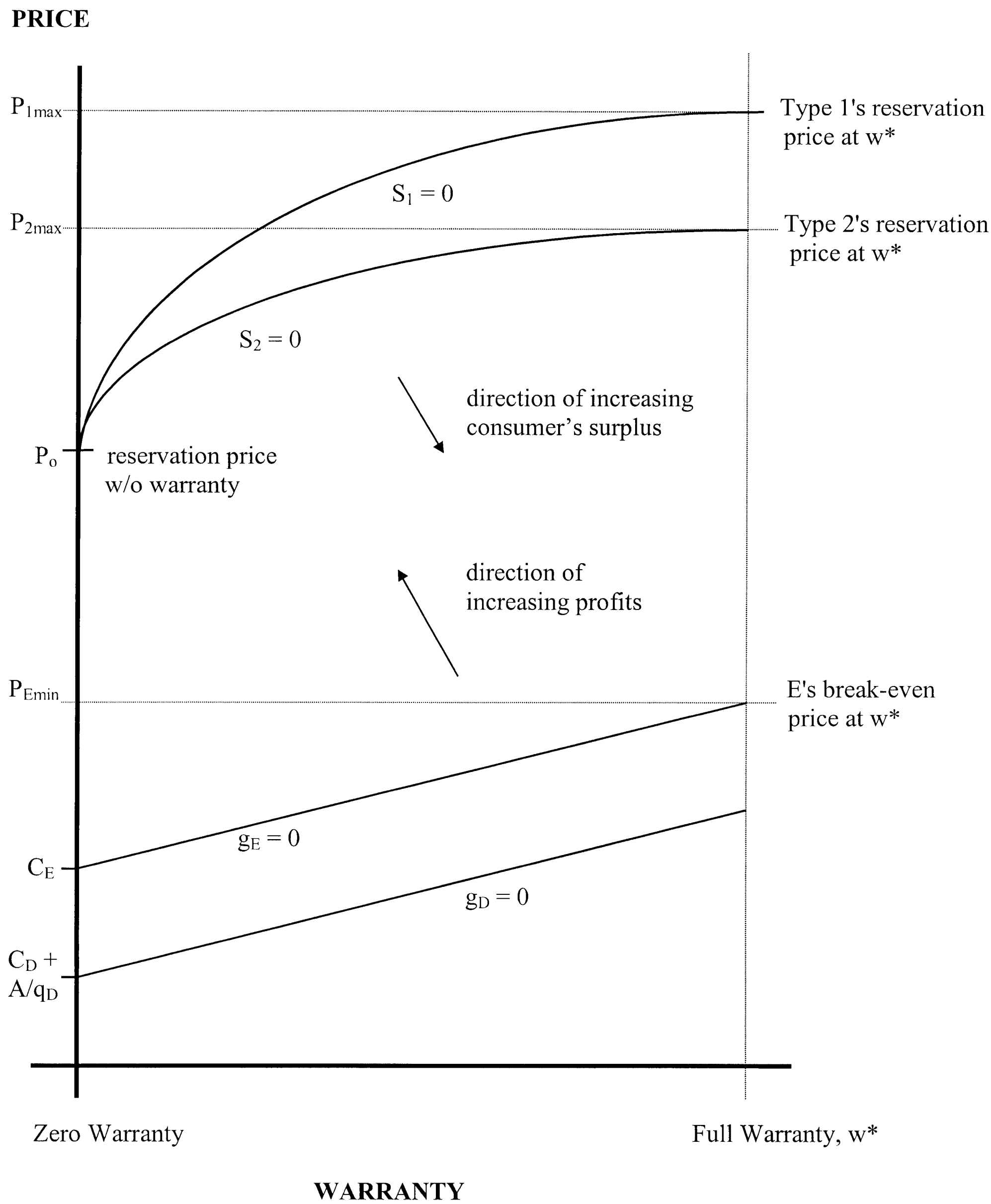

FIGURE 1 The strategy space in (P,w) for the incumbent authorized distributor (D) and the entrepreneur/gray marketer (E).

sumers are more risk averse than the type 2 consumers in that type 1 consumers are willing to pay a higher price (P) than type 2 consumers for the same level of warranty protection. Figure 1 shows the relative positions of the indifference curves of these two types of consumers in the (P,w) space.

Consumers in the model self-select (Moorthy 1984) themselves into either of the two segments. The segments in our model are, therefore, not water tight. Hence, segment leakage á la Gerstner and Holthausen (1986) is not an issue in our model. Type 1 consumers are not any more averse to a bargain than type 2 consumers. They are all willing to pay extra for a higher level of warranty protection. The only difference is that the prices they are willing to pay for incremental levels of warranty are different. Otherwise, both types of consumers are similar. They buy from whoever gives them a better consumer surplus.

Given a set of products {(P,w)} that offers the purchaser nonnegative surplus, the consumer self-selects and buys one unit of the product, which maximizes his surplus. There is no repeat purchase and total demand in the market is equal to (Q). This in turn is a function of the amount of advertising, (A), done and paid for by the authorized distributor. The term advertising here is used very broadly to include any form of investment in promotional efforts that increase market demand. Following the convention in advertising research, we assume that there is a diminishing return to advertising. A fraction (b) of total demand (Q) consists of the more risk-averse type 1 consumers.

Both the authorized distributor (D) and the gray marketer/entrepreneur (E) maximize expected profits by the choice of appropriate strategies in {(P,w)}. The expected cost of warranty is equal to the product (fw) for both distributors where f denotes the probability of product failure. The authorized distributor obtains his products directly from the manufacturer at a unit cost C_D, while the entrepreneur/gray marketer gets his product indirectly through an authorized distributor from another market. The gray marketer's per unit cost of the product is C_E, where C_E may be larger or smaller than C_D. The authorized distributor, by virtue of his distributorship status with the manufacturer, is responsible for market-creating activities, which include advertising, promotions, and other marketing actions. He has control over the level of advertising. However, he cannot prevent consumers from buying the product from the parallel importer because consumers self-select who to buy from.

The authorized distributor first decides on the level of advertising (A) to build up market demand, which is observed by the parallel importer (see Figure 2 for the game theoretic model). Then, both distributors choose (P,w) simultaneously. The authorized distributor generates primary market demand for his product by his promotional efforts, while the gray marketer chooses not to engage in any advertising. Instead, he chooses to free-ride on the advertising efforts of the authorized distributor. This is consistent with the popular view in the marketplace, among the authorized distributors, that the parallel importer "is a parasite who has done nothing to build a brand" (Slomski 1986, p. S-19) but merely "rides on the coat-tails of our advertising, . . ., our services and our sales force, all of which are working to build our name" (Jervey 1983, p. 62). They also do not have to set up stores, employ promoters, or engage in costly brand advertising (*The Straits Times* October 7, 1994). All these mean that, because the gray marketer do not have to incur substantial advertising and promotion costs, and very little in the way of manpower costs, they are able to sell their products at prices below that of the authorized distributor and still reap handsome profits (Jervey 1983). Note that the gray marketer does not engage in market creating activities in his advertising and promotion campaigns. He merely promotes his company and free-rides on the market-creating activities of the authorized distributor.

The per unit profit of the authorized distributor, before taking into account the advertising cost, is $g_D(P,w)$, which is equal to $[P - C_D - fw]$. For the entrepreneur/gray marketer, his per unit profit is $g_E(P,w)$, or $[P - C_E - fw]$. Notice that the marginal profits are the same for both distributors (see Figure 1). The maximization problem faced by

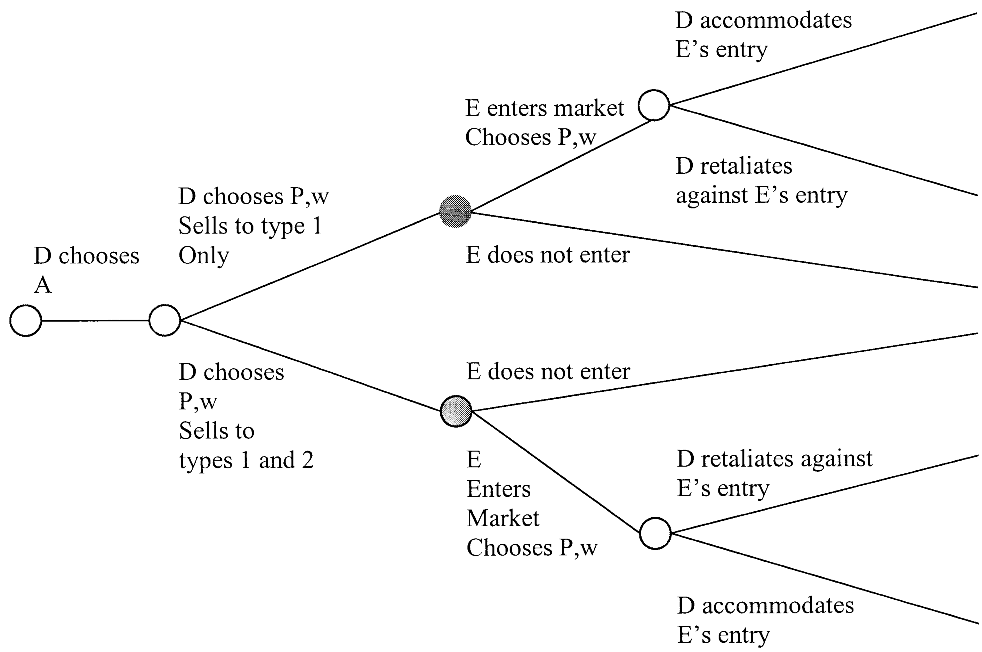

FIGURE 2 The sequential game played by the incumbent authorized distributor (D) and the entrepreneur/gray marketer (E)

the authorized distributor is one of determining the level of advertising, the price, and the warranty and after-sales service package for the product so as to maximize his profits. The entrepreneur/gray marketer, on the other hand, has to decide on what price (P) and warranty (w) to set, after observing the level of market demand, so as to maximize his profits. A priori, we cannot say whether the authorized distributor and the entrepreneur/gray marketer will end up choosing the same (P,w).

Game Theoretic Analysis and Lessons for Entrepreneurs

From the analysis of our free-riding model of gray marketing, a number of interesting lessons for entrepreneurs can be drawn.

The sustainability of the free-riding strategy through gray marketing depends on the market coverage strategy of the incumbent larger firm(s) in the markets that the entrepreneur/small start-up company is contemplating entry via gray marketing, as Figure 3 illustrates.

> *Proposition 1.* If the authorized distributor optimally chooses to practice mass marketing by catering to the various types of customers, his optimal response to entry by the entrepreneur through gray marketing is to fight by engaging the latter in a price war.

Formal proofs of all propositions are attached as an appendix to this paper. The logic of this proposition can be articulated as follows.

When the incumbent authorized distributor practices mass marketing, his optimal product positioning is (P_{2max}, w*) as shown in Figure 1. As he is selling to both types

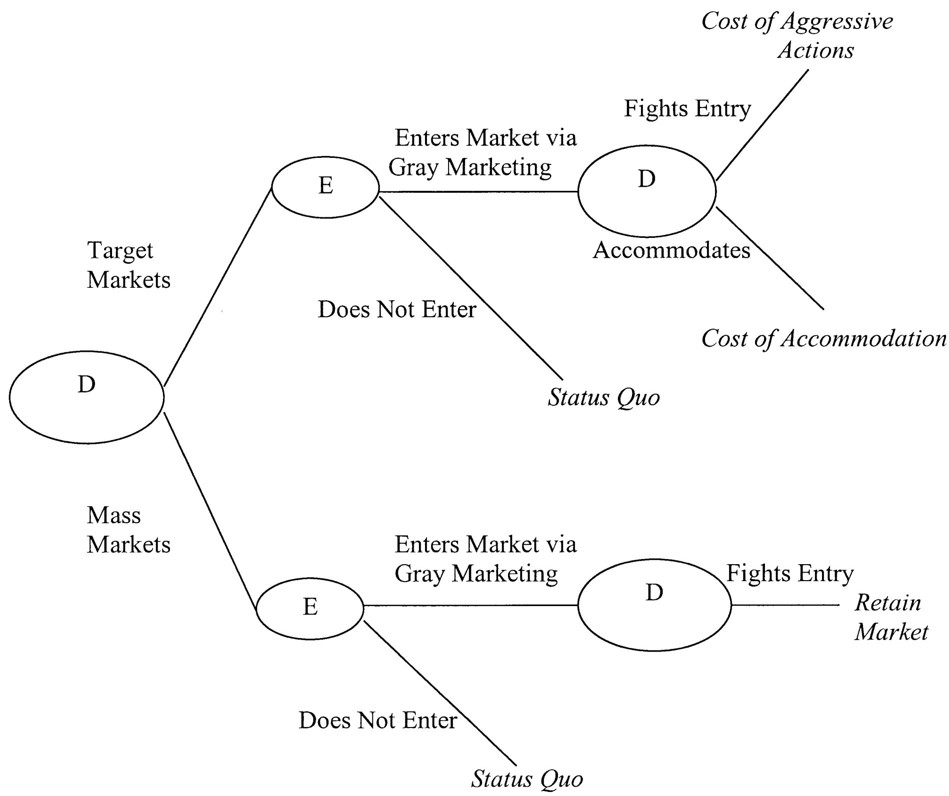

FIGURE 3 Game in extensive form of the competitive interactions between the incumbent authorized distributor (D) and the entrepreneur (E) who follows the free-riding (gray marketing) strategy.

of consumers, any attempt by the entrepreneur to enter the market via gray marketing, will be met with aggressive counteractions by the authorized distributor (Proposition 1). If the larger firm does not fight the entrepreneur's entry into the market, then it will suffer substantial losses in market shares to the entrepreneur. The loss in market share by the larger firm arises from the entrepreneur's offer of a price discount (d) on its parallel imported goods. From Figure 1, we can see that both types of consumers would gain higher consumer surplus by buying from the entrepreneur/gray marketer, because (P_{2max}-d, w*) provides greater consumer surplus compared with (P_{2max}, w*), and at (P_{2max}-d, w*), both their consumer surplus functions (S_1 and S_2) are positive. Faced with the severe loss of sales to the gray marketer, the larger firm is left with no choice but to fight the entrepreneur's entry, using its size and cost advantages. The larger firm can set his price at P_{Emin}-d, which is just below the break-even price for the gray marketer (see Figure 1), and force the latter out of the market. The free-riding strategy through gray marketing is therefore not feasible for the entrepreneur unless he possesses a cost advantage over the larger firm, which is unlikely because of his lack of economies of scale as a new entrant to the market. Hence, as a general rule, entrepreneurs should not enter the market through gray marketing when the authorized distributor practices mass marketing.

Proposition 2. If the authorized distributor optimally chooses to practice target marketing by catering only to the more risk-averse customers, his optimal response is to accommodate the entrepreneur/gray marketer who chooses to target the less risk-averse consumers with lower price and warranty coverage.

The underlying logic of Proposition 2 is as follows. When the incumbent authorized distributor practices target marketing and positions its product as a premium one to certain segments of the market comprising more risk-averse consumers, then free-riding is feasible for the entrepreneur. In this case, the entrepreneur can free-ride on the market development efforts of the incumbent firm through gray marketing and cater to the less risk-averse segments of the market, which have hitherto been neglected by the incumbent supplier. How the authorized distributor will react to the entrepreneur's entry depends on the payoffs associated with fighting, versus that associated with accommodating, the entrepreneur's entry, as Figure 3 illustrates.

If the larger firm chooses to fight the entry by the entrepreneur, then it will incur a cost for the aggressive actions undertaken. This arises from a reduction in the larger firm's profit margins on its sales to its targeted segments, as it wages a price war to drive out the entrepreneur. However, if the incumbent authorized distributor chooses to accommodate the entrepreneur's entry, then it will incur a cost of accommodation. This arises from lost sales suffered by the larger firm, due to the fact that some of its target consumers switch to parallel imports. The incumbent authorized distributor thus faces a dilemma. It suffers losses regardless of whether it chooses to fight or to accommodate the entrepreneur's entry. However, if the entrepreneur/small start-up company targets only the less risk-averse customers, then the cost of accommodation faced by the incumbent authorized distributor can be minimized. This may be so, to the extent that the authorized distributor will tolerate the entrepreneur's entry, as the loss in sales has a smaller impact on profits compared with that due to a price war waged to drive out the entrepreneur. It is precisely because the cost of aggressive actions can far exceed that of accommodation that entrepreneurs can successfully enter markets that are served by authorized distributor, via gray marketing to "nibble" at the latter's market share.

In our model (see Figure 1), when the authorized distributor chooses to optimally target only the type 1 consumers, he would choose the positioning (P_{1max}, w*). As such, his market share q_D is equal to bQ. This allows the entrepreneur to enter the market via gray marketing and target the type 2 consumers by positioning at (P_o, 0). From Figure 1, we can see that the type 1 consumers would be indifferent to the product offerings represented by (P_o, 0) and (P_{1max}, w*). Hence, given that this is the case, the authorized distributor will not lose his type 1 consumers to the entrepreneur, and, hence, he will accommodate by leaving the gray marketer alone (Proposition 2).

When the authorized distributor optimally chooses to practice target marketing by catering only to the more risk-averse customers, entrepreneurs can profitably enter the market via gray marketing as long as they differentiate their product offerings and target only the ignored market segments. This is sustainable because the authorized distributors would optimally choose to accommodate such gray marketers. This, however, is in direct contrast to the standard prescription of fighting gray marketers given by proponents of the price-discrimination perspective of gray marketing (see, for example, Cavusgil and Sikora 1988; Weigand 1991; Chaudhry and Walsh 1995; Mathur 1995).

Notice (see Corollary 1) further that the gray marketer's price is lower than that of the authorized distributor ($P_o < P_{1max}$), although the gray marketer does not have a cost advantage relative to the authorized distributor ($C_E > C_D + A/bQ$). Hence, the corollary follows.

> *Corollary 1.* The entrepreneur/gray marketer charging a lower selling price does not necessarily imply that he has a cost advantage over the authorized distributor.

Figure 1 is drawn with the authorized distributor having a cost advantage over the gray marketer, as represented by the fact that the $g_D = 0$ curve is drawn below the $g_E = 0$ curve, and that ($C_E > C_D + A/bQ$). When the authorized distributor optimally chooses to position at (P_{1max}, w*), the entrepreneur's optimal response is to position at (P_o, 0). At (P_o, 0), the entrepreneur's cost is C_E, while at (P_{1max}, w*), the authorized distributor's cost is (C_D + A/bQ + f w*). Hence, as long as $P_o > C_E$, then it does not matter whether $C_E > (C_D + A/bQ + f\,w^*)$, or $C_E \leq (C_D + A/bQ + f\,w^*)$. This means that it is not important whether or not the entrepreneur has a cost advantage over the authorized distributor in order for the former to successfully follow the gray marketing strategy. As long as there are less risk-averse consumers who are only willing to pay a discounted price, and it is profitable to serve this segment, gray marketing is a feasible strategy alternative for entrepreneurs. This is important, because we would expect the entrepreneur to face resource constraints and be disadvantaged in terms of cost (Lee et al. 1999). Hence, we have Corollary 2:

> *Corollary 2.* It is not important that the entrepreneur/gray marketer has a cost advantage over the authorized distributor to successfully follow the gray marketing strategy.

Indeed, the choice of the entrepreneur to position at (P_o, 0) is a strategic one in that such a position allows him to maximize profits by free-riding on the marketing efforts and services provided by the authorized distributor. It is thus important to note that observations about gray marketers often keeping operating costs low (for example by offering little or no warranty/services and by locating in nonprime locations) do not imply that a cost advantage is a necessary or a sufficient condition for successful gray marketing. This brings us to Corollary 3:

> *Corollary 3.* Observations that entrepreneurs/gray marketers operate at low cost do not imply that a cost advantage is a necessary, or a sufficient, condition for successful gray marketing.

The above discussion shows that for gray marketing to be profitable and sustainable, not only must the product/brand be well established, known, and accepted by consumers, the incumbent authorized distributor must also be practicing price skimming and target marketing. These conditions and the earlier three prerequisites are summarized in Table 2. It serves as our checklist for entrepreneurs who are contemplating market entry by following the free-riding strategy via the gray marketing route.

CASE STUDIES

The luxury car and cosmetics industries in Singapore provide good illustrations of how entrepreneurs can successfully enter a market via gray marketing and acquire a share of the growing markets for these products when the six conditions identified in Table 2 are present.

Cycle and Carriage (the authorized distributor for Mercedes Benz cars in Singa-

TABLE 2 Conditions for Profitable and Sustainable Gray Marketing

Criteria	Condition
1. Availability	The gray marketer must be able to obtain the product/brand from some other markets.
2. Distribution barriers	There must be few barriers to entry for the importation and distribution of the product.
3. Product/brand image	The product/brand must be well established, known, and accepted by consumers.
4. Market size	The market must be sufficiently large to be profitably supplied.
5. Market coverage strategy of authorized distributor	The authorized distributor practices target marketing, catering to risk-averse consumers.
6. Price margins	The authorized distributor practices the price-skimming strategy, maintaining high price margins for its products.

pore) competes against many small-scale gray marketers in the market for Mercedes-Benz cars, while B&N Fragrance and Cosmetics Pte Ltd (a gray marketer) has successfully gained a foothold in the cosmetic industry through gray marketing. Both the parallel importers of Mercedes-Benz cars (*The Straits Times* February 1, 1999) and B&N (Lim 1996b) pay more for their products than the authorized distributors, which run counter to the traditional price-discrimination perspective of gray marketing.

Case 1: Cycle and Carriage

The Setting

Cycle and Carriage (C&C) is 24.6% owned by Jardine Strategic and a leading Singapore-listed company. The company is a premier motor vehicle distributor with operations in Singapore, Malaysia, Australia, New Zealand, Thailand, Vietnam, and Myanmar. The brands of cars it distributes, and for which it is the exclusive distributor in Singapore, include Mercedes-Benz, Mitsubishi, Mazda, Proton, Hyundai, Chrysler, Audi, and Kia.

As the sole distributor, C&C had over the years invested heavily in promotions, sales, and after-sales service to build up the premium brand image and demand for Mercedes-Benz cars in Singapore. The company was so successful in its market development efforts that the Mercedes-Benz is one of the two best selling cars in Singapore, the other being Toyota. However, the Mercedes-Benz line of premium cars is also facing severe competition from gray marketers in Singapore. The company has seen its market share shrink due to parallel imports[2].

In Singapore, parallel imports accounted for 5.5% of the Mercedes-Benz cars sold in 1995. This doubled to 11 percent of the 1,128 units of Mercedes-Benz cars sold in

[2] Demand for cars far exceed the supply of cars in Singapore. This is because the government regulates the supply of cars via a quota system that prespecifies the number of new cars allowed on the road each month. This constraint on supply applies equally to all the distributors for all makes of cars, including the parallel importers. Gray marketing, however, occurs only in certain segments of the car markets such as that for Mercedes-Benz cars. Those who buy their Mercedes-Benz cars from the gray marketers also have to wait for their cars, although the wait would be shorter given that there are fewer buyers in the queue. Hence, supply shortages by itself is inadequate as an explanation for the continued presence and profitability of parallel importers of Mercedes-Benz cars in Singapore.

Singapore in the first three months of 1996, and this figure is expected to increase even further in the years ahead (Lim 1996b).

C&C's success in developing the market for the Mercedes-Benz line of cars is also the source of its gray marketing problem. The brand is prestigious and well known for its product quality. The market demand for Mercedes-Benz is substantial, with many Singaporeans aspiring to own a Benz, as many consider it a symbol of success. The demand for Mercedes Benz is so strong that, at one stage, buyers had to endure a waiting period of up to eighteen months for purchase delivery.[3] The least expensive model of Mercedes-Benz costs more than S$200,000, making it affordable only to rich and affluent Singaporeans, and according to its 1996 Annual Report, C&C had an after-tax profit of S$134.1 million.

The market for Mercedes-Benz cars, therefore, has all the conditions for the occurrence of parallel imports (see Table 3). In addition, there are no artificial barriers to the importation and distribution of cars in Singapore provided the car meets local roadworthy standards. Furthermore, gray marketers have no problems getting supplies of the car from other markets (Nathan 1993) because Mercedes Benz cars are globally distributed. Parallel importing is also legal in Singapore (Nathan 1993; Pereira 1994).

The Gray Marketers

Most of the gray marketers of the Mercedes-Benz cars are small independent operators like Inimk Singapore (Nathan 1993), AIM Car Traders (Leong 1994), and Olympic Auto (Lim 1996b). They can only afford to import a few units of the luxury cars at prices higher than those paid by C&C at any one point in time (*The Straits Times* February 1, 1999). However, because of good profit margins and strong demand, the market is still attractive to the gray marketers, despite the small sales volume of each of these gray marketers. As gray marketers, they do not invest in setting up repair and maintenance facilities, nor do they engage in market-development activities.

Rather, in order to attract sales for the parallel imported Mercedes-Benz, the gray marketers follow a standard formula of offering a more competitive package than that offered by C&C. For the same model of Mercedes-Benz with standard product features as that offered by C&C, the gray marketers not only charged a lower price but also offered some peripheral features in lieu of after-sales services. Take, for example, the E-class series that the parallel importers brought into Singapore. These have two front electrically adjusted seats and an electric roller blind for the rear windscreen, features that are not available on the E-series cars that are brought into Singapore by C&C, and are priced competitively to that brought in by C&C (Leong 1995).

Most potential buyers of the Mercedes-Benz choose not to purchase from the gray marketers, despite the better value offered on the parallel imports. Potential buyers still buy the Mercedes-Benz directly from C&C. These will be the more risk-averse consumers who perceive that C&C, being the authorized distributor, is better equipped to

[3] There is another reason why supply shortages, by itself, cannot fully explain the continued presence of gray marketing. When there are supply shortages (as in the case of the Cabbage Patch Kids), parallel importers would import the products in short supply and sell at a higher price, and not a lower price (Duhan and Sheffet 1988; Tan et al. 1997, p. 49). Moreover, even when the waiting time at C&C has been reduced drastically (for some models there is zero waiting time), gray marketing of Mercedes-Benz cars still persists (*The Straits Times* February 1, 1999). If supply shortages is the cause, gray marketing should cease when the supply shortage problem is removed.

TABLE 3 The Markets for Mercedes-Benz Cars and Cosmetics in Singapore and How They Relate to the Conditions for Profitable and Sustainable Gray Marketing

Criteria	C&C Case	B&N Case
1. Availability	Mercedes-Benz cars are available from dealers in other countries as the cars are distributed internationally.	Supplies come from distributors in the Middle East and Europe and also from some of the authorized distributors.
2. Distribution barriers	There are no import restrictions as long as the cars meet road-worthiness standards. C&C cannot legally prevent parallel imports.	There are no import restrictions on cosmetics. Parallel importing is legal.
3. Product/brand image	C&C has invested heavily over the years to build up the brand image of Mercedes-Benz cars. The car has become a status symbol.	Cosmetic companies have invested heavily in advertising and promotions to build up their brand names.
4. Market size	Demand for Mercedes-Benz cars far exceeds supply. It is one of the best selling brands of car in Singapore.	The market size is large and estimated at S$200 million in 1994.
5. Market coverage strategy of authorized distributor	C&C targets the high end and status conscious consumers. Consistent with the requirements of the target market and to fulfill its obligations under product warranties, C&C has established repair and maintenance facilities and engaged qualified personnel, guaranteeing the availability of good after-sales service to its consumers.	Mainstream cosmetics are distributed via full-service cosmetic counters that carry the full range of products, catering to a target segment that demands good sales services and continued product availability.
6. Price margins	C&C practices price skimming. It had an after-tax profit of S$134.1 million in 1996.	Cosmetic companies adopt a high margin pricing strategy.

provide reliable sales and after-sales services. Some customers might want to be absolutely sure that they would not be placed on a lower priority when it comes to servicing their car by buying from C&C instead of from the parallel importers (Leong 1994). Hence, to these buyers, the ease of mind that comes from the knowledge that their Mercedes-Benz is imported and supported by C&C is worth the premium charged by C&C.

On the other hand, there are consumers who will buy the parallel imports. These will be the less risk-averse consumers who also value the extra features and/or the shorter waiting period offered by the gray marketers, but without extra cost. In return for getting the car ahead of others in the queue for Mercedes-Benz delivery and at a cheaper price, these consumers are willing to undertake such risks as foregoing the maintenance services provided by C&C and/or bearing the uncertainty of the availability of warranty services. This is because, as the sole distributor, C&C has a monopoly on all authorized service centers for Mercedes-Benz cars in Singapore.

The gray marketers thus cater to a group of consumers who have hitherto been neglected by C&C, while free-riding on the market development efforts of C&C. Gray marketers of the Mercedes-Benz are able to thrive despite efforts by C&C to counter them. As free-riders, it is never the intention of the gray marketers to compete head-on with the authorized distributor. To the parallel importers of Mercedes-Benz cars, it does not make economic sense to fight with C&C, which is financially stronger. Instead, the parallel importers try to be competitive by offering lower prices to compensate for their lack of after-sales services. For instance, Mr. Sebastian Lee, director of Olympic Auto, which parallel-imported Mercedes Benz cars, was reported to have said "It doesn't make sense to fight with a giant. All we can do is to be more competitive and provide better prices" (Lim 1996b).

C&C's Response to the Challenges Posed by Gray Marketers

Concerned over the strides gray marketers are making, C&C took several actions to counter gray marketing. It advertised in the local newspapers, saying that it could guarantee that its cars had not been tampered with and warned that warranties other than those it issued would not be honored. However, this tactic backfired when the Land Transport Authority in Singapore announced that it understood from the German manufacturer of Mercedes-Benz cars that Mercedes-Benz cars carried a worldwide warranty against manufacturing defects (*The Straits Times* August 12, 1996).

It had also been rumored that C&C might use price to try to wipe out parallel imports of the Mercedes-Benz. This rumor arose because the company had recently adopted a low price for its long-awaited new E-series car, which was S$15,000 less than what a gray marketer was charging (Leong 1995). Such a deep price cut would be effective in deterring parallel imports, as evidenced by the experiences of other authorized distributors in tackling parallel imports into their markets (Tan 1998). However, given that this reduced C&C's profit margins, it was not surprising that the low price offer was only for an introductory period. C&C even felt it necessary to deny publicly that it was engaging the gray marketers in a price war.

C&C's options for deterring parallel imports are limited (Nathan 1993). The company could only resort to threats like negative advertising, withdrawal of warranty services, and/or discriminating against parallel imports in terms of providing maintenance services (*The Straits Times* August 12, 1996). However, as the forgoing discussion showed, the success of these action in deterring parallel imports was limited in that C&C was not able to eradicate the gray marketers.

This case demonstrates the feasibility of entrepreneurs entering markets currently served by larger firms. The entrepreneurs could free-ride on the market developmental efforts of the larger firm while at the same time enjoying some form of immunity from punitive actions undertaken by the larger firm. The latter arises because the larger firm has more to lose, in terms of total revenue, given that it sells more cars than the small-scale gray marketers.

Case 2 B&N Fragrance and Cosmetics Pte Ltd

The Gray Marketer

B&N Fragrance and Cosmetics Pte Ltd (B&N) is the largest parallel importer of cosmetics in Singapore. With many women in Singapore buying cut-price cosmetics, B&N, which started off as a small-time cosmetics store in 1993, has now grown into a chain with 11 outlets all over Singapore and a turnover of S$30 million in 1995 (Lim 1996b).

B&N sourced most of its products from the United States. However, it is also believed that many gray marketers like B&N have also obtained supplies from distributors in the Middle-Eastern countries who cast off stock and from bankrupt perfumeries in Europe whose stocks are auctioned off (*The Straits Times* October 7, 1994).

To capture market shares in the fragrance and cosmetics market, B&N follows a simple strategy of price cuts. The discounts which B&N offers can be up to 50% of the retail price offered by listed retailers. For example, a consumer pays S$35 to S$38 for a Christian Dior lipstick at the cosmetics counters in department stores, but at B&N, they pay only S$19 or S$20. Despite giving such deep discounts, B&N still enjoys a 25 to 40% profit margin (*The Straits Times* October 7, 1994).

As opposed to what proponents of the price discrimination perspective of gray marketing will conclude, B&N was not able to source for their products at a cost lower than that of the authorized distributors'. Rather, it was able to price lower because of the cosmetic companies' high mark-ups on their products. For example in the case of Chanel and Estee Lauder's lipsticks, they cost B&N S$16 each (the estimated manufacturing cost is about US$0.50 each). B&N can sell them at S$22-S$24 each and still make a profit (Lim 1996a). At these selling prices, B&N's lipsticks are still much cheaper than that charged by the authorized distributors, because the authorized distributors' listed prices are about S$34 each. Although the authorized distributors paid less for the cosmetics imported, they had to pay department stores a huge sum for display on premium space. On the other hand, by having their own discount stores at nonprime locations, it cost B&N only S$6 per square foot, instead of the S$30 per square foot typically charged by department stores. B&N is thus able to pass the savings to the consumer (Lim 1996a) by charging lower retail prices.

The Cosmetic Industry

The battle for the cosmetics business in Singapore, which was worth S$200 million a year in 1994 (*The Straits Times* October 7, 1994), is intense. Several major brands have reported lower sales at department store counters because of stiff competition from gray marketers such as B&N. A sales manager of one cosmetics firm even complained about the free-riding behavior by consumers. At one of its stores, some customers sought free advice from her counter and then used their mobile phones to call a B&N outlet nearby to find out if stocks were available (*The Straits Times* October 7, 1994). As a result, many cosmetics companies had to reduce their number of sales counters in the department stores because of poor sales.

Mainstream cosmetics are distributed in Singapore via staffed cosmetic counters in major department stores. Such counters are brand-specific, carry the entire product line, and offer customers advice concerning the type of products most suitable to them based on factors like their skin type and nature of their problems. The companies also engage in heavy advertising and promotion on the local television stations and in popular magazines and daily newspapers. B&N operates like a discount store. It does not provide consultations to customers, nor do they carry the entire range of products. For example, B&N does not carry all the available colors of lipsticks. It also does not carry the full product range of the various brands of cosmetic products. For example, B&N might only stock lipsticks from a particular brand but not products from its fragrance, face powder, and make-up lines. Its customers have to settle for a reduced variety of product choices. What is more, they even have to select their cosmetics from display bins. This shows that B&N's customers are less risk-averse in that they do not feel the need to seek the advice of beauty consultants engaged by authorized distributors, nor do they complain about the limited choice in terms of product variety and range.

In summary, the cosmetics industry has all the conditions we identified earlier (see Table 2) that would make entry via gray marketing sustainable and profitable for the entrepreneur (see Table 3).

The Responses from the Authorized Distributors

Gray marketers will continue to exist in Singapore, despite strenuous efforts by sole distributors and cosmetic firms to get rid of them, as long as there is money to be made (Lim 1996b). The authorized distributors have resorted to strong-arm but legal tactics to maintain their market shares against their much smaller competitors. These include negative advertising about parallel imports, choking off supplies from overseas sources, lawsuits, harassment, price wars, and even defamation of gray marketers (*The Straits Times* August 12, 1996), which makes it difficult for entrepreneurs to enter the market via gray marketing.

An important lesson from all these is that, even though a price war is effective against parallel imports, many authorized distributors are reluctant to wage a price war even if they possess a cost advantage. This is because the cost of waging a price war outweighs the cost of accommodating the gray marketers by sacrificing some market share. Instead, the authorized distributors prefer to take less costly actions in their attempts to deter parallel imports, as we have described above.

To counter the tactics of the authorized dealers, gray marketers have to continuously source for new supplies even if their present ones look secure (Lim 1996b). The executive director of B&N, Mr. Thian believes it is difficult to choke supply in the cosmetics business, as there will always be somebody willing to sell to the gray marketers (Lim 1996b). Thus, it appears that, instead of taking on the authorized distributors, parallel importers could survive and do well by exploiting the reluctance of the former to fight market entry by the latter. Perhaps this is why Mr. Thian urges coexistence with the authorized distributors as "It's not to anybody's benefit if we fight back" (Lim 1996b).

Recognizing the futility of fighting against the gray marketers, some authorized dealers have adopted the strategy of "if you can't beat them, join them" (*The Straits Times* October 7, 1994). These dealers have approached the gray marketers to distribute their products instead. For instance, Mr. Thian has said that more than 70% of the distributors of major cosmetics brands now supply stocks to B&N to sell at discounted prices (Lim 1996b). The fact that the authorized distributors are able to supply the gray marketers also strongly suggest that the cost of the products to the former cannot be higher than that which the parallel importers pay for the products sourced elsewhere. This further refutes the price discrimination explanation as the cause of gray marketing.

B&N started as a small gray marketer but grew into a chain of eleven stores. This is a typical case of the chain-store paradox (Selten 1978). The cosmetics firms had no choice but to accommodate the entry of parallel importers like B&N and its stores. Although the authorized dealers paid less for their cosmetics, they had to pay the department stores for display in premium space. This, together with high marketing and advertising expenses, makes the authorized distributors reluctant to wage a price war against the gray marketers. This explains why authorized distributors for brands like Chanel and Estee Lauder would only lower their lipstick prices from about S$34 to S$28 each but not to the level of S$24 each as charged by gray marketers (Lim 1996b).

This case shows that free-riding pays for a firm like B&N, which started as a small enterprise but which could take a portion of the lucrative market previously dominated by bigger incumbent firms. As in the case of Mercedes-Benz cars, gray marketers of cosmetics are able to free-ride on the brand image created by major cosmetics firms. In addition, the gray marketers are also able to free ride on the information services provided by cosmetics dealers in the major department stores.

CONCLUSION

It is more appropriate and useful to view gray marketing as an issue in free-riding. Following this particular perspective on gray marketing, we show that gray marketing can be an alternative market entry strategy for small businesses and entrepreneurs. These businesses usually face resource constraints. They are also not in a position to reap the advantages of being the first mover in the market. Instead, they should try to capitalize, via gray marketing, on the market development efforts of the larger firms and their reluctance to counter aggressively entries into their market when their optimal strategy is to target the more risk-averse segments of the market coupled with a price-skimming strategy.

In this paper, we identified the conditions for successful market penetration via gray marketing (drawn from the extant literature on gray marketing and supplemented by the free-ridership model of gray marketing). The two case studies (C&C and B&N) provide empirical illustrations of how entrepreneurs can successfully penetrate a market through gray marketing when the six conditions identified in Table 2 are satisfied. In both case studies, the authorized distributors did not retaliate aggressively against the entry of the gray marketers as predicted by Proposition 2. Furthermore, the fact that gray marketing persisted in these markets provides indirect support for Proposition 1. That gray marketers can sell at a lower price even though their costs of sourcing the product are higher than the authorized distributors' (*The Straits Times* February 1, 1999; Lim 1996b) provides support for Corollary 1.

Finally, although we have no empirical evidence to verify whether or not the gray marketers in both cases have a cost advantage over the authorized distributors, this is not important under the free-ridership perspective (Corollaries 2 and 3). Even if gray marketers in both cases have a cost advantage over the authorized distributors, they would not price aggressively to threaten the survival of the authorized distributors. This is because, as free-riders, the gray marketers' survival depends on the continued investments by the authorized distributors in market development efforts. The price discount offered by gray marketers is thus a way for them to demarcate the market between the risk-averse and the less risk-averse consumers. On the other hand, the price discrimination perspective would suggest that gray marketers use their cost advantage to undercut the authorized distributors' prices, even to the extent that the authorized distributors are forced to exit the market. The two cases showed the co-existence of the gray marketers with the authorized distributors, and the persistence of the gray marketing problem, consistent with the free-ridership perspective of gray marketing.

REFERENCES

Armstrong, L., Holstein, W.J., and Cuneo, A.Z. 1988. Now Japan is feeling the heat from the gray market. *Business Week* (March 14):16–17.

Carter, N.M., Stearns, T.M., Reynolds, R.D., and Miller, B.A. 1994. New venture strategies: Theory development with an empirical base. *Strategic Management Journal* 15(1):21–41.

Cavusgil, S.T., and Sikora, E. 1988. How multinationals can counter gray market imports. *Columbia Journal of World Business* 23(4):75–85.

Chaganti, R. 1987. Small business strategies in different industry growth environments. *Journal of Small Business Management* 25(3):61–68.

Chaudhry, P.E., and Walsh, M.G. 1995. Managing the gray market in the European Union: The case of the pharmaceutical industry. *Journal of International Marketing* 3(3):11–33.

Cohn, T., and Lindberg, R.A. 1972. *How Management is Different in Small Companies.* New York: American Management Association.

Collis, D.J., and Montgomery, C.A. 1997. *Corporate Strategy: Resources and the Scope of the Firm.* Chicago: Irwin.

Cooper, A.C., Willard, G.E., and Woo, C.Y. 1986. Strategies of high-performing new and small firms: A reexamination of the niche concept. *Journal of Business Venturing* 1(3):247–260.

Cross, J., Stephans, J., and Benjamin, R.E. 1990. Gray markets: A legal review and public policy perspective. *Journal of Public Policy and Marketing* 9:183–194.

Cua, G. 1994a. Telecom unit cracks down on parallel imports. *Business Times* (September 15):2.

Cua, G. 1994b. Motorola issue prompts CASE to speak up for parallel imports. *Business Times* (September 20):2.

Davis, B. 1994. U.S. plans to probe piracy in China, raising possibility of trade sanctions. *The Wall Street Journal* (June 28):A-2.

Drucker, P.F. 1993. *Innovation and Entrepreneurship: Practice and Principles.* London: Harper Business.

Duhan, D.F., and Sheffet, M.J. 1988. Gray markets and the legal status of parallel importation. *Journal of Marketing* 52(3):75–83.

Eden, L., Levitas, E., and Martinez, R.J. 1997. The production, transfer and spillover of technology: Comparing large and small multinationals as technology producers. *Small Business Economics* 9(1):53–66.

Grieve-Smith, J. 1990. *Business Strategy* (2nd edition). Cambridge: Basil Blackwell.

Gwartney, J.D., and Strong, R.L. 1992. *Economics: Private and Public Choice.* Orlando: Harcourt Brace Jovanovich.

Jervey, G. 1983. 'Gray market' hits camera, watch sales. *Advertising Age* (August 15):3, 62.

Kao, R.W.Y. 1981. *Small Business Management: A Strategic Emphasis.* Toronto: Holt, Rinehart & Winston.

Kaikati, J.G. 1993. Don't crack the Japanese distribution system—Just circumvent it. *Columbia Journal of World Business* 28(2):35–45.

Kotler, P. 1996. *Marketing Management: Analysis, Planning, Implementation, and Control* (9th edition). Upper Saddle River: Prentice Hall.

Lee, K.S., Lim, G.H., and Tan, S.J. 1998. Competitive market penetration strategies for entrepreneurs – Lessons from SMEs in Asia, *Paper* presented at the UIC/AMA Annual Research Symposium on Marketing and Entrepreneurship, Hong Kong (June 12–13).

Lee, K.S., Lim, G.H., and Tan, S.J. 1999. Dealing with resource disadvantage: Generic strategies for SMEs. *Small Business Economics* 12(4):299–311.

Leong, C.T. 1994. Cheaper luxury cars soon through AAS' direct import service. *The Straits Times* (September 30):1.

Leong, C.T. 1995. C&C's new E-class Mercedes Benz is priced lower. *The Straits Times* (December 14).

Lim, L.H. 1996a. Parallel imports: Copyright owners fight back. *The Straits Times* (August 12): 31.

Lim, S.J. 1996b. Co-exist, not confront, urge parallel importers. *The Straits Times* (August 16).

Lowe, L.S., and Rubin, M. 1986, Grey markets' channels of distribution. *Business Journal* (Fall): 40–43.

Maskulka, J.M., and Gulas, C.S. 1987. The long-term dangers of gray-market sales. *Business* 37 (January–March):25–31.

Mathur, L.K. 1995. The impact of international gray marketing on consumers and firms. *Journal of Euromarketing* 4(2):39–59.

Miller, D., and Toulouse, J. 1986. Strategy, structure, CEO personality and performance in small firms. *American Journal of Small Business* 10(3):47–62.

Moorthy, K.S. 1984. Market segmentation, self-selection, and product line design. *Marketing Science* 3(4):288–307.

Moorthy, K.S. 1985. Using game theory to model competition. *Journal of Marketing Research* 22(August):262–282.

Nathan, D. 1993. German-made Mercedes offered but not from C&C. *The Straits Times.*

Porter, M. 1980. *Competitive Strategies.* New York: The Free Press.

Pereira, B. 1994. New law ensures continued import of cheaper goods. *The Sunday Times* (August 8).

Ramirez, A. 1985. Blue vs. gray: IBM tries to stop the discounters. *Fortune* (May 27):79.

Rugman, A.M., and Verbeke, A. 1987/88. Does competitive strategy work for small business? *Journal of Small Business and Entrepreneurship* 5(3):45–69.

Selten, R. 1978. The chain store paradox. *Theory and Decision* 9(2):127–159.

Slomski, A.J. 1986. Importers see red over gray market. *Advertising Age* (July 21):S–19.

Tan, C. 1998. Overtaking the 'grey' bikes. *Business Times* (April 9).

Tan, S.J., Lim, G.H., and Lee, K.S. 1995. Gray marketing: A new perspective. In *Proceedings of the Seventh Bi-Annual World Marketing Congress (Melbourne, Australia)*, VII(II): 9:27–9:32.

Tan, S.J., Lim, G.H., and Lee, K.S. 1997. Strategic responses to parallel importing. *Journal of Global Marketing* 10(4):45–66.

The Straits Times 1994. Parallel importers make cosmetics firms see red. (October 7):44.

The Straits Times 1996. Copyright owners' tactics to reclaim market. (August 23):31.

The Straits Times 1999. C&C regains some lost ground. (February 1):47.

Usunier, J. 1993. *International Marketing: A Cultural Approach.* New York: Prentice Hall.

Vesper, K.H. 1980. *New Venture Strategies.* Englewood Cliffs: Prentice Hall.

Weigand, R.E. 1991. Parallel import channels—Options for preserving territorial integrity. *Columbia Journal of World Business* 26(1):53–60.

Weinrauch, D.J., Mann, O.K., Robinson, P.A., and Pharr, J. 1991. Dealing with limited financial resources: A marketing challenge for small business. *Journal of Small Business Management* 29(4):44–54.

Weinstein, A. 1994. *Market Segmentation: Using Demographics, Psychographics, and Other Niche Marketing Techniques to Predict and Model Customer Behavior.* Chicago: Probus Publishing Company.

Wright, P., and Parsinia, A. 1988. Porter's synthesis of generic business strategies: A critique. *International Management* 30(3):20–23.

APPENDIX

Proof of Proposition 1

From Figure 1, we note that the authorized distributor is optimally positioned at (P_{2max}, w*) in the absence of gray marketing. The gray marketer, in order to get any market share and still be profitable has to position himself either on the $S_2 = 0$ curve or in the area between this curve and the $g_E = 0$ curve (see Figure 1). His optimal product positioning is given by (P_{2max}-d, w*), for some $d > 0$. However, this would mean that he is stealing customers from the authorized distributor. Both the type 1 and type 2 consumers would prefer the gray marketer's product represented by (P_{2max}-d, w*) over that of the authorized distributor as represented by (P_{2max}, w*).

To prevent the loss in market share, the authorized distributor would react by fighting the entry of the gray marketers. To do so, he would have to lower his prices. He can afford to do this if he has a cost advantage vis-à-vis the gray marketer. This is because, if the authorized distributor has a cost advantage (as represented by the fact that the $g_D = 0$ curve is drawn lower than the $g_E = 0$ curve in Figure 1), he can then set his price at (P_{Emin}-d, w*) and drive the gray marketer out of the market.

If the gray marketer cannot get access to a large quantity of the product and/or his supply is sporadic, then the loss to the authorized distributor would be small. However, if the gray marketer can get access to a large and regular supply of the product, he would inflict a huge loss on the authorized distributor. The latter's optimal response is therefore to fight the gray marketer, making entry via gray marketing neither profitable nor sustainable.

Proof of Proposition 2

Given that the authorized distributor chooses (P_{1max},w*), any decision by the unauthorized distributor in which he offers (P′,w*) where P′ is less than P_{1max} would draw customers away from the authorized distributor. This is because at such a price, the type 1 consumers who are currently buying from the authorized distributor get strictly positive surpluses. In order not to lose his market share, the authorized distributor is thus forced to engage the unauthorized distributor in a price war that the latter cannot win.

The same logic applies to any choice of (P,w) that falls on or below the $S_1 = 0$ indifference curve. To avoid antagonizing the authorized distributor, the unauthorized distributor has to cater to the currently ignored segment of the market. This happens to be the type 2 consumers. However, the unauthorized distributor cannot offer (P_{2max},w*) or any other (P,w) along the $S_2 = 0$ indifference curve as that would attract the type 1 customers and the authorized distributor's wrath as well. The only possible choice for the unauthorized distributor is to offer (P_o,0), and caters only to the type 2 customers. The assumption here is that faced with (P_o,0) and (P_{1max},w*), the type 1 consumer chooses (P_{1max},w*).

Hence, the optimal reaction from the authorized distributor is to accommodate the gray marketer if the latter chooses to position at (P_o,0). In this case, the authorized distributor does not lose any of its existing customers. The authorized distributor would also not enter the previously ignored market segment given that not selling to this segment was the optimal choice in the absence of the gray marketers in the first place.

This means that when the authorized distributor practices target marketing by selling only to the more risk-averse consumers, there is room for the gray marketer to enter the market. Entry via gray marketing is sustainable as long as the gray marketer/entrepreneur differentiates its product offering and targets only the ignored segments of the market.