THE PRODUCT ELIMINATION DECISION IN ITS MANAGERIAL SETTING

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1. INTRODUCTION

Among the numerous responsibilities of a company's management are the identification and development of products to be marketed. The evolution of the company's product -mix is of vital concern to management because of its strategic implications upon the ability to gain advantage over competitors, the development and deploymet of resources and the achievement of overall objectives. However, given the rapidly changing technological competitive and social environment, the product-mix must be constantly manipulated to reflect these changes if it is to remain in a viable condition. The manipulation of the product-mix involves the addition of new products, the modification of existing products and the elimination of products, no longer contributing towards the objectives.

Historically, major consideration given to the management of product-mix by practitioners and scholars has focused on the developement of new products. The problems of idea generation, development and testing of new products, and the commercialisation process for example, have received extensive attention in the literature[1].

It is the problem of eliminating products from a line which is becoming increasingly recognised as being the most neglected.

"Though unpleasant, product elimination decisions are necessary. In spite

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of the widespread reluctance to recognise it, the viability of a company's product-mix can be just as much a function of paring it as proliferating it." [2]

There has been very little written on the subject of the product elimination and effort directed towards the development of product elimination theory has been minimal. In investigating the area of product elimination, Professor Bell [3] found supporting literature to be sparse.

"Product elimination as a strategy for mature products is a neglected topic in marketing. Some attention has been directed to it in recent years, but interest in the subject lags far behind interest in the development of new products".

However, while the literature on the area of product elimination is sparse, a number of approaches which provide some guidance in this area have been forwarded by a number of writers in recent years[4]. These contributions notwithstanding product elimination theory must be considered in its infancy, and as such, much rémains to be done.

In this article we shall be concerned with some basic issues involved in the product elimination decision. An attempt will be made to (a) place the product elimination decision within the framework of the product planning function; (b) discuss the advantages of the elimination decision; and (c) examine and analyse the most important problems surrounding the product elimination decision.

2. THE PRODUCT PLANNING FUNCTION AND THE PRODUCT ELIMINATION DECISION

While the product is recognised as an economic variable in the literature of economics in the early 30's, the recognition of the concept of product planning and its role in business took place in the early 50's, when the main body of the literature on the subject began to appear. However, the concept of product planning can be traced back to Elder's classification of the principal product problems faced by business firms.[5] Elder classified the principal product planning problems into : (a) Diversification (creation of new products, adaptation of existing products to new uses, adaptation of existing products to changing demand); (b) Simplification (elimination of obsolete products, variety and items, elimination of superfluous varieties and items) : (c) Grading and quality standards ; (d) Identification, brands and trade names ; and (e) Packaging. [6]

Just after the Second World War Phelp made a significant contribution to the concept of product planning. [7] Phelp recognised that products must not be left to

chance and that decisions on a single product have to be conditioned by the company's policy on its entire line. He pointed out that the product planning function cut across the usual functional lines of sales, production and research.

Phelp's book captured Gardiner's imagination, who, as a Vice President of the General Electric Company during the period 1946 - 1951, was the first executive to introduce the product planning concept in Industry, both in philosophy and formal implementation.

Product planning in G.E.C. was fundamentally a marketing activity ; the primary purpose of this function was to try to determine what products customers wanted and will buy now and in the future, rather than what is or becomes technically possible. Industry's acceptance of the concept was rapid, particularly among the larger American companies marketing consumer goods. A partial list of the 'early adopters' includes American Telephone and Telegraph, General Motors, Ford, Hoover.

The introduction of the product planning concept in Industry followed by a flood of writings on the subject. Product planning became a term widely used by authors of books and articles in the literature of management subjects, particularly by exponents of the 'Marketing philosophy'.

Various definitions of the concept are given, while each writer gives particular emphasis to one specific aspect of product planning to the exclusion of others. This has led to some confusion in the literature regarding the nature, scope and organisational status of the product planning function.

An extensive review of the literature on product planning conducted by the author of this article, revealed that there are certain approaches which writers on the subject tend to take. Most writers, including the authors of books dealing specifically with product planning, think of product planning only in terms of new products and give special attention to new product development covering such aspects as : (a) the importance of new products to the long - term profitability and growth of a company ; (b) the stages of introducing new products on to the market, from the search and evaluation of ideas to the planning and market launch; and (c) the managerial and organisational problems of coordinating new product development. [8] Other writers consider product planning as relating to the selection and management of the product - mix, requiring new product additions, eliminations of obsolete and unprofitable products, and modifications in the light of changes in customer demand and competitive enviroment. [9] Finally, a strategic view of product planning has emerged which sees it as an integral part of the strategic planning process, and the basic determinant of the company's marketing and corporate strategy. [10]

However, the confusion in the literature is partly semantic because product planning is not always clearly delineated from other fundamental product related concepts such as 'product policy', 'product strategy', but there are also other reasons. The most fundamental reason is the fact that there is more than one type of product planning depending upon the organisational level at which it is undertaken, and the nature of the activities involved.

Anthony's[11] framework for planning and control systems can be useful in clarifying the product planning function. According to Anthony there are two different types of planning activities in an organisation. One is labelled *strategic planning* and it is "the process of deciding on objectives of the organisation, on changes in these objectives, on the resources used to attain these objectives and on the policies that are to govern the aquisition, use and disposition of these resources".[12]

The other type of planning labelled *management control* is associated with the ongoing administration of the organisation and it is "the process by which managers ensure that resources are obtained and used effectively and efficiently in the accomplishment of the organisation's objectives".[13]

These two types of planning suggested by Anthony apply equally to the product planning function. Product planning is an integral part of both strategic planning and management control.

As an integral part of the strategic planning process, product planning is a major contributor to the formulation of the company's objectives and policies. Product planning at this level (which may be labelled *strategic product planning*) plays a leading role in determining business scope, in identifying customer classes to be served, in selecting competitive approaches, in deciding technology and product emphasis, and in determining other product related policies such as product range policy, quality policy, design policy, etc. The first application of strategic product planning in the business history was the formulation of a product policy by the Executives of General Motors, which differentiated the General Motors' concept of the market from that of the Ford model T concept. The core of this product policy was based on its concept of mass producing a 'full-line' of cars graded upwards in quality and price.[14]

As an integral part of the management control process, product planning is concerned with the on-going administration of the company's product-lines and involves a regular monitoring of product performance. Product planning at this level (which may be labelled *tactical product planning*) is a major contributor to the establishment of product objectives from overriding

corporate objectives and to the development of product programmes which are appropriate to the products' position in their respective life cycles and which fall within the guidelines established by the company's product policies. The establishment of product objectives and the design of product programms to achieve the company's objectives carried out by the tactical product planning function represent the main elements in the formulation of the company's product strategy. A company may formulate different product strategies depending upon the position of its products in their respective life cycles. Product elimination is a strategy for products in the maturity and decline stage of their life cycles, and the central source of information in selecting products for elimination is the periodic monitoring of product performance conducted by the tactical product planning function. It follows, therefore, that product elimination is very much an application of the tactical product planning function.

However, to be effective and efficient, the product elimination decision - making process should be persued within the framework of the company's objectives and product policies established by the strategic product planning function. For instance, the criteria and the factors to be considered, and the procedures to be used, in identifying and evaluating weak products, should be specified by the company's objectives and policies.

The following policy statement extracted from the policy annual of the American Company 'Indian Head Mills Co' clearly indicates how a top - management policy can provide specific guidance to the product elimination decision.

> "No products are to be kept in the line which cannot be made to provide a profit. It is impossible to make enough on the winners to overcome a loss on the losers. It is not the policy of the company to have a complete line in order to keep a customer happy or provide extra service or convenience. Let the competitors have the losers." [15]

This quoted example of top - management policy statement clearly indicates the desire of the company's management to eliminate products as soon as they become unprofitable, and, consequently to avoid the detrimental procrastination of the elimination decision due to 'customer relationships', or due to the advantages that a 'full - line' is supposed to provide. However, even when the product elimination decision is pursued within a clear framework of objectives and policies, there is no easy path to the making of such a decision. A considerable number of issues and problems are involved which make the elimination of products from the company's line the most troublesome and difficult task in managing the product variable. Before we turn our attention to these individual issues and problems

surrounding the elimination decision, let us first discuss the importance of the elimination decision to the company's operations.

3. HOW IMPORTANT IS THE PRODUCT ELIMINATION DECISION ?

If we accept that the profitable life of a product can be considered in terms of the standard concept of the product life cycle, and if it is assumed that companies are interested in optimising their profitability, then an area of the cycle where this opportunity is being missed, may be the maturity and decline stage of the product's life.

By deciding to eliminate a product rather than let it continue to exist at an unprofitable level of sales, management can (a) eliminate unnecessary costs incurred by retaining the product in the range ; (b) reallocate resources to more profitable efforts ; and (c) maintain a balanced product range which contains enough profit makers to justify the company's investment in the range.

3.1. Eliminate unnecessary costs

The expense of carrying a product which is weak, that is, one which is deteriorating in terms of profitability, sales volume, or contribution to the objectives of the company, goes beyond production costs. No method of financial accounting can adequately report all indirect costs incurred by a weak product which are disappearing in general 'overhead' classes in the accounts. Such costs include : (a) the costs of change - overs in the production lines for short - runs ; (b) handdling costs for small orders ; (c) inventory carrying costs for slow - moving terms.

The importance of product elimination in reducing the level of inventories and, consequently, the inventory carrying costs is illustrated in the following example. The American Optical Company developed an elaborate inventory control system and in the process spotted some extremely slow - moving items. Sales were $ 78 million with a $ 34 million inventory investment. After a six - year pruning of the product - mix, the company increased sales to $ 93 million on an inventory investment of $ 32 million, thus reducing the percentage of inventory to sales from 44 to 34 percent.[16].

3.2 Reallocation of Company's Resources (Opportunity Costs)

The most important costs to the company of failing to actively and efficiently manage the maturity and decline stage of the product life cycle are the opportunity costs.

A weak product is placing a burden on the company's resources, such as funds, facilities and management attention which is disproportionate to its contribution. It may require excessive managerial effort with respect to pricing, sales, distribution and communication, and it may also require an excessive warehouse space which is usually a premium resource for companies selling from stock.

Given finite resources of the company, these resources devoted to the weak product are less profitably invested than they might be, if available to produce, promote and distribute either a new product or other existing products of the company. Hence, other attractive opportunities must be neglected.

A weak product is also damaging with respect to the future. Not only may ¡t tarnish the company image and promote dissatisfaction in the marketing channel, but the company may incur additional opportunity costs. By camouflaging the need for new product development and draining necessary resources, a weak product may delay the process of developing new products. Crawford,[17] commenting recently on the most common mistakes regarding the development of new products, admits that the lack of product elimination programmes is one of them.

However, it is not only the weak product which incurs opportunity costs for the company. Even if a product is making a profit contribution and its indirect cost consequences are recognised and considered justifiable, the company may still be better off without the product because of its opportunity cost. The opportunity cost of a product is the profit contribution that a new product could produce, if the effort and resources being devoted to the existing product were redirected. Only if excess capacity exists, or if no new product opportunities are available, can a product escape the burden that opportunity cost analysis impose

The following example illustrates the reference of the opportunity cost concept to the analysis of products and to their consideration for possible elimination.

One of the companies interviewed by the author of this article during his investigation of the product elimination decision-making process in the U. K. engineering industry,[18] indicated that it dropped only the manufacture of one of its products which was making a 'marginal' profit. The company (a medium - sized manufacturer of a wide range of electrical and electronic equipment) sold its production facilities to a smaller competitor who agreed to sell it back to the company which would market it under its own name. The Company's Technical Director told the researcher that this was the best way to finance the development of new products considered to be much more profitable in the long run, and that they purchased the product at a lower price than when they made it themselves.

Of course, this is a special case of elimination, since it concerns only the manufacturing stage of the product but, nevertheless, demonstrates the relevance of the opportunity cost concept to the product elimination decision.

3.3. Maintain a Balanced Product Range

Having too many products increases the company's cost of doing business and having too few permits market opportunities to slip away and results in excess capacity. Both extremes are costly and affect profit adversely.

But the typical problem is having too many products in the line. Companies tend to extend their product-range either on the grounds that they can achieve economies of scale or in response to marketing department pressures. Product lines tend to mushroom and mature and weak products remain in the line regardless of their position in the life cycle because of management attention to new products.

However there are economic trade-off points beyond which any extension achieves diseconomies rather than economies of scale, since an increase in the company's product range is always accomplished at some cost. According to ubiquitousness of the 20/80 principle, 80 % of the effective results are reached from only 20 % of the products. As Kotler has observed : "As the number of products offered by a company increases numerically, the range of management problems seems to grow geometrically." [19]

Product overpopulation spreads a company's productive, financial and marketing resources too thinly. This in turn leads to further problems. Forecasting becomes more difficult and even the mechanics of product-pricing become complex and time consuming. Also, the use of informative advertising as a means of persuasion, particularly by the companies manufacturing shopping goods and industrial goods, may be made difficult where an extensive product-range is being promoted. Moreover, an excess of products in the line not only creates internal competition among the company's own products, but also creates confusion in the minds of customers, since differences among individual products usually diminish as more products are added to a given range.

Planning and controlling a large number of products likewise present serious problems. For instance, management must contend with mutual supply characteristics when planning production schedules, allocating production costs to products and purchasing additional production equipment. Also, as management attempts to spread its efforts over a wide and varied products-mix, its ability to

coordinate and control it is weakened. When a company has only a few products, its management can scrutin ize and control each product's problems are they arise.

It follows, therefore, that too many products in a line upset the balance of the line and create problems which can, to a degree, be lessened if the weakest of these products are eliminated. In fact, by not eliminating products to obtain a proper product-range balance, not only the company's future may soon be jeopardised by an over-abundance of 'yesterday's breadwinners' and an insufficient number of 'today's or tomorrow's breadwinners', but also more opportunities to improve sales and profit figures are missed. As Marvin postulates "When profits fail to keep pace with growth, it's time to check up on the number of products that have been dropped from the range, as well as the number that have been added". [20]

Numerous examples from both consumer and industrial goods companies can be cited to illustrate that careful product elimination to obtain a proper product-range balance can be advantageous.

Hunt Foods Inc., a medium-sized American Canning Company, began to cut back from its approximately thirty lines in 1947. By 1958 it had only three product-lines—fruit cocktail, tomato products and peaches—and a reduction of variety within these lines. This simplification was apparently very successful in view of a sales increase from $ 15 million in 1947 to $ 120 million in 1958. By that time the company was the top brand in tomato sauce, and tomato paste, and second in peaches and catsup. In addition, the company had begun a diversification programme and had acquired some other lines. [21]

Akron's RCA Rubber Company once made a broad line of commercial rubber products which competed with the giants in the rubber industry. The mix included big contracts for rubber floor tilling. The company eliminated much of its market and its existing product-mix and concentrated on the market for rubber flooring and step treads in manufacturing plants, transit systems, and hospitals. The limitation of the company's mix to a few lines has not only increased sales volume, but has measurably improved earnings. [22]

4. ELIMINATION ADVERSION

In view of the importance of the elimination decision to the company's operations, one would suppose that the vast majority of companies will be involved in a systematic elimination of weak products. However, this is not so.

Consider the following comments by experts who have researched the involvement of American Industry with product elimination :

"The vast majority of companies including some of the most progressive ones in Industry, have not established orderly procedures for pruning their products." [23]

"The chemical industry has not been pursuing a rational, knowledgeable or effective course in deleting products from their lines. In fact, four-fifths of the firms surveyed had no abandonment policy at all." [24]

"Product Elimination policies and practices of 96 of the nation's largest manufacturing firms are for the most part unstructured, unsophisticated and ineffective." [25]

A recent research survey on the product elimination decision conducted by the author of this article in the United Kingdom,[26] indicated, among other things, that :

1. The elimination of weak products is one of the main problems of the product planning function of the companies surveyed and that whereas modifications to existing products and extention to the range are the positive aspects of changes in the product-mix, variety reduction and product elimination are the negative aspects.

2. Only a tiny minority of British companies have any formal procedures for ridding themselves of weak products.
What factors might explain such an apparent deficiency?

5. SOME PROBLEMS SURROUNDING THE ELIMINATION DECISION

There are, in fact, a number of problems and difficulties that lead to a procrastinating, reluctant, half-hearted approach to elimination decisions, most of which are rooted either in the lack of appropriate financial information or in 'ostrich' attitudes, inside and outside the company, towards product elimination.

5.1. Lack of Appropriate Financial Information

The test of whether a product is to be kept in the range must, of course, depend very much on the financial return from it, not only today's return but the return which is to be expected over the next few years.

Product profitability analysis is the first step in detecting weak products. However, product-based profitability measures expressed in terms of return on

sales, return on investment, gross profit margin, or profit contribution, are only as meaningful as the identification and allocation of costs associated with generating the appropriate product related revenues.

Under the full-costing techniques (total absorption costing) both net and gross margin, are arrived at after deducting the fixed element of manufacturing and marketing overheads, which, for the multiproduct company, are based upon the allocation across products in proportion to some other factors, such as direct labour hours, direct labour wages, etc. Allocation of these charges are generally arbitrary, and not a true measure of the costs associated with a specific product. Different methods of allocation will commonly lead to different rankings of products in terms of profitability. Moreover, fixed overhead costs are not pertinent for the product elimination, since they are sunk costs and are not affected by the elimination decision. As Dean[27] points out :

> "The main economic difference between dropping and adding a product is, of course, sunk costs. Deletions that are decided upon solely on the basis of net profit with no consideration given to the fact that costs are sunk can lead to short-run losses."

However, even if direct costing producers are utliised which require the separation of fixed and variable costs in order to determine the contribution that a product makes to fixed overheads and profits, profitabiblity measures may still suffer. Contribution measures resulting from direct costing procedure are insufficient in that many products labelled profitable in this manner may have incurred considerable marketing related expenses. As Sevin[28] has put it strongly :

> "Manufacturers and wholesalers generally do not know accurately the marketing costs and the profit (or loss) contribution of each of their products, customers, sales territories and other segments of their business."

Marketing costs, often reffered to as 'Sales and Administration Overheads' are indeed allocated against products or product group profit centres. Usually, however, these costs are arbitrarily allocated against products in proportion to some other factors such as sales volume, turnover value, etc.

It is commonplace to find that in many consumer-goods companies promotional and distribution costs are equal or exceed production costs, and a number of examples are cited in the literature which indicate that marketing profitability / costs analysis can reveal that products which appear to be profitable in conven-

tional accounting statements, are, in fact, unprofitable.[29] The point of importance here is that the logic and methods of traditional manufacturing related accounting procedures need to be extended into the realm of marketing. These procedures dealing with the recognition, classification, and allocation of marketing related costs, such as 'cost of holding stock', 'inventory control', 'order handling', 'packing and shipping', 'transportation', 'selling', 'advertising', 'order routine and billing', are referred to variously as marketing productivity analysis, distribution cost accounting or segmental analysis.[30] These procedures are an integral part of what is termed 'Contribution Accounting', whereby all manufacturing and marketing out-of-pocket costs (direct costs) functionally related to a product are allocated to it. Product related revenues minus such costs reveal the contribution each product makes towards overheads and profits.

Despite the significant impact that 'contribution accounting' can have in improving product-profitability measures and, consequently, product evaluation and elimination decision-making, cannot be viewed as a panacea. The 'contribution accounting' is complicated with operational difficulties.

First, there are inevitable burdens surrounding weak products that cannot be characterised as measurable direct costs. Costs incurred by weak products such as costs of changeovers in the production lines for short-runs, handling costs for small orders, and inventory carrying costs for slow moving items, are usually indirect and are seldom reflected in expenses actually allocated to these products. As a result the profit contribution of weak products may be artificial.

Second, if a company is working close to capacity and scarce resources bottlenecks are appearing, contribution alone is not sufficient to measure product performance. A product may generate a high contribution rate, but because it requires a considerable amount of some scarce economic 'factor of production' (key factor) e. g. materials, labour, machine capacity, etc., it is in fact, less profitable and, consequently, less desirable than other products in the range with relatively lower contribution rates but with much less requirements in terms of these scarce units of key factor.

Third, projected cost and profit contributions rather than past costs and profit contributions are the ones more relevant for managerial decision-marking in general and product elimination in particular. Obviously, a product with projected negative profit contribution is, at least by this standard, a genuine prospect for elimination.

Finally, the evaluation of a product's performance should involve the oppor-

tunity costs rather than actual costs of committing scarce corporate resources.

However, neither the burdens surrounding the weak products nor the projected costs and opportunity costs are easily estimated and as a Professor Lawrence[31] has put it : "Unfortunately, there may be two or three years' work by a team of cost accountants before a company can establish realistically which are its profitable lines".

5.2. Ostrich Attitudes

Apart from the lack of appropriate financial information, there are also situations where the persistence of weak products can only be explained by the presence of 'Ostrich Attitudes'.

First, there is a lack of top management interest and participation regarding the elimination of weak products. This becomes obvious, if one considers that most companies have not developed a well thought-out policy for handling their weak products.

Second, there is often an unfounded optimism regarding weak products. Here, management believes that the poor performance is due to economic or market factors which, in time will improve. This optimism forces the management of the company to think of elimination as something that should be done but "can wait until tomorrow'. Such an attitude is reinforced by the fact that elimination of products is not ordinarily tied into a deadline which must be met.

Third, the elimination of products is bound to disturb the organisation's status quo, since it implies adjustment in the practices of a number of departments within the organisation, including Marketing, Manufacturing Purchasing, Finance, R& D and sometimes Personnel. However, management tends to be content with the status quo and, consequently, tends to avoid decisions that may bring organisational disturbances. This attitude results in the lack of interdepartmental coordination regarding the elimination of weak products.

Fourth, sentimentality can be a very important factor and may explain the slow decay of weak products. As Alexander[32] has expressed it, "putting products to death—or letting them die—is a drab business and often engenders much of the sadness of a final parting with old and tried friends." The elimination of long standing members raises the fear that the company will not be the same without these products, particularly if these productds helped the company to prosper and grow. J. Leahy[33], Vice-President, Professional Products Division, Black

and Decker Manufacturing Co. has recently stated that : "The hardest thing in the world is to kill a product." However, this is more so far the person in the organisation who brought the product into being in the first place, or the one who was responsible for its first big order. This person will seldom be willing to pull the switch on its final execution, and if he/she is in top management, everyone in the organisation must be sure that they have done everything possible to make the product a continuous success story.

Fifth, influence of groups inside or outside the company with vested interests tend to perpetuate weak products. Those in the organisation whose interests are directly affected by the elimination decision naturally believe that they must defend a product's performance or even disguise its weaknesses. The resistance may spring from any level of organisation and from any functional area. 1) Salesmen are particularly reluctant to see old products withdrawn. As long as a product generates any sales, the field salesman is not willing to allow it to disappear. Older products are often easier to sell—at least to some customers—and they certainly require less study and effort. 2) Manufacturing people may also oppose the elimination of a weak product, using the argument that despite the fact that the product s a small seller, it is being worked into the production plan. Any change to this plan, it will be argued, is bound to affect the overall productivity in the short-term. i3) The Personnel department may be reluctant to see products deleted from the range, particularly in the instances where personnel may have to be shifted or released. 4) Even the Finance people whom one would normally expect to be on the side of those suggesting the elimination using arguments about the utilisation of scarce resources, may oppose the elimination of products. Their argument might be : "Granted that this product does not make as much contribution to our overheads as the average for the entire range, nevertheless, it is making a contribution which could not be replaced when the product will be eliminated." Of course, the customer may object too. To him a new product often translates into extra expenses, never mind the supposed advantages. Furthermore, the new product may not be compatible with his needs.

6. RETENTION RATIONALE

Having discussed the basic problems that lead to a reluctant approach to the elimination decision, we now turn our attention to some logical reasons (arguments) for retaining weak products in the range, most of which are rooted in managerial perceptions and attitudes.

6.1. Product Rejuvenation

Sometimes a weak product is retained in the range because management may believe that the product can be creatively revitalised. It may think that the fault lies in the marketing programme which the company can revive or it may feel that the sales could be stimulated through product modification. There are, in fact, various methods of rejuvenating a stagnating or weak product : a) Reduce costs and lower price; b) Increase price; c) Shift in promotion mix; d) Shift distribution strategy; e) Provide more service to customers; f) Follow the leasing route; g) Development of new markets and applications for the product; h) Improve product design.

Let us examine the first four methods which are concerned with changes in the product's marketing mix.

a) Reduce costs and lower price. Cost reductions become necessary as soon as rival products appear on the market and continue to be so throu ghout the subsequent stages of the product's life cycle, especially at the saturation stage where profits are already on the downswing and, in many cases, approaching zero Successful cost reductions, without reducing the value of the product may be a good means of curing an ailing product. Successful cost reduction activities may make it possible for a company to lower the ailing product's price and gain a competitive edge over rivals. However, decreasing the price may be good tactics if the existing demand curve is elastic. If the demand curve is inelastic, a price decrease would be disastrous; lower total revenues would result and the increased number of units that would be produced and marketed might increase total costs, thereby causing lower total profits.

b) Increase price. Since the product's profitability is one of the primary criteria for the product elimination decision, the possibility of increasing the product's profit contribution by a price increase is a rather basic consideration in reviving a weak product. However, any increase in the product's price presupposes a knowledge of (1) the product's elasticity of demand, (2) the market structure in which the company operates and (3) the product's price cross elasticities of demand with other products in the range. Such a knowledge will assist management to determine how far it can go and the probable impact on company profits of various price changes.

c) Shift in promotion mix. Revising the promotional mix is another possible tactic to which some attention could be devoted. Perhaps the use of another advertising or sales promotion medium will increase sales; different copy

might be more effective; the timing of insertions can be changed. The promotional expenditures may be increased particularly for those offerings that have not received sufficient past promotional support. This, of course, assumes that the sales of the product are sufficiently responsive to additional promotional expenditure.

d) Shift distribution strategy. Another way of arousing a dormant product is to channel it through a different distribution system. Management needs to ask itself if the product needs any channel of distribution; in other words, whether sales can be increased by eliminating middlemen and having the company undertake the selling effort itself, or whether sales can be increased by using middlemen as opposed to direct selling. If it can be ascertained that the currently employed channels are doing a casual job of selling the product in question, management may wish to consider this tactic.

6.2. Product-Line Scope

Even when a weak product cannot be revived it may, nevertheless, be retained in the range because of management's desire to offer a 'full-line' to the customers, or because of the alleged contribution the weak product makes to the sales of the company's other products.

The management's desire to carry a 'full-line' may be grounded in corporate 'image' and 'prestige' reasons. In this case, the company strives for the 'prestige' that a 'full-line' is supposed to engender. Hurst[34] describes this phenomenon in the following terms : "There is at least one dog in every manufacturer's line, but it stays there year after year because the company feels that the losses incurred by having a 'hole' in the product-line would be greater than the costs of keeping the 'dog'. Basically, this is because every company is striving to attain or maintain a position of dominance in its industry, and the indusrty leader is ordinarily expected to carry a full-line."

However, management's desire to offer a complete line to the customers may also be grounded on reasons of customer patronage. In this case the company strives to satisfy those customers who like to obtain all they need from the same supplier. In fact, customers, particularly in the industrial market, often prefer to buy all they need from a single source instead of spreading their purchases over multiple sources.[35] This is more so when customers regard a group of items as a product system. This situation leads to the argument that a weak product should beretained in the line because it assists the sales of the company's other products. Products are often associated in the marketing process and the sale of one is

helped by the presence of another in the range which might be a 'loss leader'. According to Kotler[36]: "The weak product may provide the salesman with an entree to important accounts. It may be used as a bait to attract prospect inte rest inlooking at the rest of the line".

When elimination of a product forces a customer who buys all, or a large part of his requirements of a group of profitable items from the company to turn to another supplier for his needs of the dropped product, he might shift some or all of his other patronage as well. The Marketing manager of a leading British textile machinery accessories manufacturer, interviewed by the author of this article during his research, asserted that, "profitability is sometimes insignificant compared to the satisfaction of customers as they might desert us if we do not offer them a complete line".

It follows, therefore, that it is sometimes wise for management to retain in the range a no-profit item in order to hold sales volume of highly profitable products. This, of course, should be done after a careful analysis which, in a case where the stakes are high enough, could involve marketing research to discover the extent to which customers' purchases of profitable products are, in fact, associated with that of the no-profit item. Although the analysis may not be precise enough, it will, nevertheless, supply an order-of-magnitude idea of interlocking patronage situation.

6.3. Cost and Profitability Considerations

If none of the previous reasons exist then the retention rationale may be that the sales volume of the weak product covers more than the out-of-pocket costs and therefore it assists in the defrayal of overhead expenses.

A large proportion of the costs of the average multi-product company are, or behave like, overhead or joint expenses. Almost inevitably, several of the products in the range are made of common materials, with the same equipment and by labour force which is interchangeable. Furthermore, most of the company's marketing efforts and expenses are devoted to selling and distributing the whole range rather than individual products.

This means that a large part of a company's costs must be assigned to products on some basis (arbitrary or not) and when a product is removed from the range many of these costs remain to be reallocated to the products that stay in the range, with the result that they may become of doubtful profitability.

However, a note of caution on this argument has been given by Alexander [37] who suggests that : "Management should not cast a bilious eye on all arguments that a questionable product be kept in the mix because it helps to defray overhead and joint costs. Down the road at the end of series of decisions to retain such a product lies a mix entirely or largely composed of items each busily 'sopping up' overheads, but few or none contributing anything to net profit."

The argument that a weak product assists in the defrayal of overhead expenses is valid only to the extent that there are no more lucrative opportunities which the company can easily exploit in order to utilize the unused capacity freed by the elimination of the weak product. In the absence of more alternative ventures the company would be letter off adopting an 'a little is better than nothing' attitude by keeping this allegedly weak product in the short-run, until more profitable uses of the present facilities are made possible. Here again, as Dean [38] warns: "this sort of short-run consideration can lead to serious errors if it is projected too far in the future. Presumably, the growth of more profitable products should soak up the excess capacity that produces these incremental profits (contributions to overheads) and the continual stream of candidate products may in the long-run produce a greater contribution to overheads than the old product that is retained because of its incremental showing."

However, unless another product is available to replace the weak product, the elimination of such a product might affect the profitability of other products in the range, at least in the short-run. This is more so for the industrial-goods companies which generally incur higher investment costs for each product compared with the consumer-goods companies. The termination of a product in the industrial field is bound to disturb the company's cost and profit structure.

7. CHARACTERISTICS OF THE IN DUSTRIAL MARKET AND THEIR EFFECTS ON THE PRODUCT ELIMINATION DECISION

The various issues and problems pertaining to product elimination discussed in the preceding sections apply equally to consumer and industrial goods companies.

However, industrial goods and markets have certain common characteristics which not only create the distinction of the market, but also form the basis of marketing policy and influence any decisions taken by a company in this field, the elimination decision being no exception. Consequently, it would be quite appropriate to recall some of the principal characteristics of the industrial market and to examine their effects on the product elimination decision.

7.1. Nature of Demand for Industrial Products

a) Derived demand

With many industrial products the demand is directly dependent on the rate of usage which may be several stages from the initial purchaser. The end-market demand, from which the industrial demand is derived, may also be many-sided and not confined to any one market. Companies may contribute part of the finished product or, perhaps, only the packaging. The demand for capital equipment, for example, is largely dependent or the prospective demand for the goods (industrial consumer) which this plant will be capable of producing.

Inevitably, therefore, the dependency of derived-demand products on factors outside the control of those marketing such products makes the forecasting of demand (which is, particularly for the high-cost and infrequently purchased capital equipment, irregular and comes in discrete lumps rather than a continuous flow) very difficult. This can have a considerable effect on the elimination decision, as the company may have received very few orders for a certain product recently, and as such it is being considered for elimination. The possibility though of obtaining one or two large orders in the future has to be given a great deal of consideration, as the cost of dropping the product now may be the future loss of a very lucrative order and/or customer.

b) Elasticity of Demand

Classical economic theory postulates that as price falls demand tends to rise and vice-versa; the extent of this movement is termed the elasticity of demand and is graphically indicated by a downward sloping curve.In consumer markets, price reductions are designed to attract an immediate response, but market behaviour in industrial products is different. In general, industrial products with derived-demand characteristics do not benefit from relatively small price reductions. The demand for several industrial products tends ts show a reverse elasticity in the shortrun; hence, industrial marketers are seldom able to expand demand significantly, merely by reducing price. This can have an indirect effect on the elimination decision in the sense that a company cannot effectively revitalise and/or extend the life of a weak product and, therefore, make the elimination decision unnecessary, through price reductions.

c) Concentration Factors

Transactions covering the supply of industrial goods and services tend to be more specialized than in consumer markets. In addition, the actual number of buyers for specific products is smaller and a degree of monopsony can easily

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become established. In fact, industrial markets are often dominated by a relatively limited number of enterprises with aggregate sales accounting for the bulk of industry sales in specific markets. Buyers in these large companies yield considerable power in purchasing a wide range of products, thus enhancing the importance of individual orders and /or customers.

This importance of each order or customer generates the necessity for maximum compatibility, between what the customer wants or needs and what the company can offer, and has its effects naturally on the elimination decision the company in this situation can make. Here, the supplying company may produce a product that may, by itself, be making an insufficient contribution to profit and, in other intsances, would be dropped. The large customer though, may demand that this product be manufactured along with the rest of his requirements, otherwise the company will not obtain the order.

7.2. Nature of Industrial Products

Compared with many consumer products, industrial products tend to be complex and sophisticated and tend to be manufactured to third party specification. These specifications may be in the form of the product being able to perform within certain tolerances of pressure temperature, breaking strains, etc., and can have an influence on the product elimination decision.

Any changes in these specifications, which are widely accepted standards and commercially obligatory, will make it necessary for a company whose products are subjcts to such specificaticns, to eliminate those products affected by the changes and replace them with new ones.

7.3 Special Trading Practices

a) Reciprocal Trading

The previously mentioned trend towards large customers and orders, has led to a growing tendency to reciprocal trading. This term is often used to describe bilateral and multilateral purchasing agreements between companies which may influence some industrial markets. Reciprocal trading involves the idea of selling through the order book of the purchasing department, in the other words, if company X is buying goods from company Y and company Y is a potential customer for company X's products, then X uses this fact as a lever to sell to company Y.

Despite the fact that reciprocity may create economic and even legal problems,[39] it prevails among a large number of manufacturing companies. It was found that reciprocity was a factor in buyer-seller relations in about half of the companies participating in a survey conducted by Purchasing Magazine.[40] Also, James'[41] investigation into the purchasing habits of twenty-six companies in the West of Scotland area, has shown that of the twenty-six companies interviewed only four could be said to be unaffected by reciprocal pressures.

Reciprocity can have a large effect on a company's elimination decisions. Under reciprocal arrangements, co-operating companies may be forced to continue their unprofitable productas its elimination may disfavour them vis a-vis their customer-suppliers who would probably break the tacit agreement. Under these circumstances, elimination of the weak product is justified only if the benefits exceed the loss that would be incurred in case the reciprocal arrangements were broken.

b) Inertia between Buyer ond Supplier

The induetrial market has a built-in danger of inertia which renders the market less perfect and the industrial buyer less rational than is normally alleged. Studies conducted in the industrial buying behaviour field by James[42], Wind[43], Buckner[44] Cunnigham and White[45], and Kennedy[46], provide clear evidence that there is a substantial amount of inert situations, source loyalty and low-search behaviour in the industrial field.

The inertia and low-search behaviour of the industrial buyers involved in the above-mentioned studies, is not necessarily due to their current suppliers being the optimum but merely that their suppliers are not inducing sufficient dissatisfaction amongst their customer buyers to initiate a search routine. In fact, once a supplier has shown his worthiness to the buyer and built up a relationship with him (often over several years) it becomes increasingly difficult for an outsider to break this situation. The reason for this is largely the risk the professional buyer will be taking by changing from a proven supplier to a totally unknown quantity.

The marketing implications of inertia are quite clear. The company, to whom it has been established in favour, must maintain it by inhibiting search behaviour by his regular customers and, consequently by generating satisfaction and ensuring that their perception of cost and effort of search will not bring commensurate returns of benefits.

However, maintenance of inertia can limit the freedom of the company in the range of products and services it provides and, hence, have an influence over any

elimination decision the company may wish tc carry out. In fact, if a company has established an inert situation with a large organisation, it is not going to endanger this relationship by curtailing the manufacture of certain products, rather it will continue to manufacture what the customer wants. Consequently, a proportion of the company's product range policy and hence elimination decisions, may be almost completely decided for it by the cuetomer. The elimination of a product can be a course of dissatisfaction and may stimulate a search by the company's customer(s) for alternative sources of supply.

8. CONCLUDING NOTES

This article dealt with some basic issues involved in the product elimination decision. This decision, despite its obvious importance and benefits to management, is generally not emphasized in the industry and it appears to have been beset by managerial procrastination. Thus, companies are missing out an excellent opportunity to improve their profitability and sales, and as Bell [47] notes: "this is a fairly well accepted fact of marketing life". Why should this be?

There are, of course, a number of reasons, most of which are rooted either in the lack of appropriate information, or in Ostrich attitudes such as 'fear about lost volume', 'resistance to change', 'sentimentality', etc. As a result, companies tend to eliminate products either on a piecemeal basis, as in instances where the product's losses become so conspicuous that it is obvious even to the most entrenched supporter of the product that is must go, or on a crisis basis precipitated by such events as a financial setback, a persistent sales decline, mounting inventories, or rising costs.

This approach to product elimination can explain the emergence of product elimination as the product strategy of the 70's. Faced with a deteriorating marketing environment which brought about 'squeeze on profits', and high costs of financing inventories of slow-moving items that put many industries in a 'turmoil', management was forced to scrutinise not only existing product lines, but plans for new product ventures also.

A relatively recent United States poll of 93 industrial companies found that 63 per cent intended to eliminate slow moving items and 23 per cent said they would reduce the number of sizes and colours [48]. These words have been followed by pruning actions in a number of companies :

"In its pursuit of higher profits General Electric Company has dropped blenders, fans, heaters, humidifiers, and vacum cleaners. Shell Chemical Company

is ending production of styrene butedience rubber isoprene rubber and fertilizer (ammonia, uria and ammonium sulphate). Philco-Ford Corporation has eliminated 50 per cent of its colour TV screen sizes and 40 per cent of its refrigerator models. Grow Zellerbach Corporation and other papermakers have cut their lines by as much as 60 per cent" [49].

The fact that the recession of the 70's led companies to adjust their strategies and rationalise their product-lines implies that the position of the trade cycle has an influence on the elimination decision and that the value of product eliminationbecomes apparent when profits become more difficult.

However, this may not be so. The companies which hesitate to eliminate when the marketing environment is favourable can generally justify a similar attitude towards change when the marketing environment worsens and the trend cycle is in downturn. In these conditions orders are more difficult to obtain and the risk of actually losing orders by refusing to meet special needs will be inflated. This problem was found to be prevalent in one of the companies interviewed by the author of this article during his research [50].

The Marketing Executive of this particular company, which is leading papermaking machinery manufacturer, asserted during the interview that :

"During the present hard times elimination of products is out of the question. Such an action is not going to solve our problems. On the contrary, we are seriously thinking of bringing back products eliminated a few years ago in order to secure orders".

Product elimination, therefore, is not to be treated as an isolated action to abandon products when profits become difficult, but rather it should be an on-going managerial function. Even if we accept that product elimination makes sense and is successful when a company is in trouble, it also makes sense to suggest that product elimination ashould be done as a matter of course.

Axing weak products promptly rather than belatedly can cut costs, free-up resources an improve margins.

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