
Customer account profitability

Customer account profitability can provide a much clearer understanding of the relative profitability of all customers; and the use of it may well prompt a company to seek a more cost effective distribution channel. This is the first of a series of articles in which CAP will be discussed; this article will define CAP and develop a basic model; it will also report on initial research conducted within the food industry to establish the extent to which it is used in management decision making.

The next problem for physical distribution management?

John Gattorna & Dr. David Walters
*Retailing Development Centre,
Cranfield School of Management*

FOR SOME time suppliers and distributors have been fully aware of the economics of distribution: very few have ever been in a position to interpret them in terms of trade discounts. The most commonly acknowledged fact is the relationship which exists between distribution delivery costs and drop size. This is illustrated as Figure 1. The implications of this relationship are easy to see: the larger the delivery, the lower the costs of effecting it. Assuming for the moment that customers are similar distances from the production point then large customers or (which is not necessarily the same) that customers receiving large orders are preferable either to small customers or to those receiving small orders. Clearly there are other factors such as: product mix; number of orders; inventory holding (service level) requirements; order cycle lengths, to name but a few.

Then there are the costs of those activities which are associated with distribution: before the product can be delivered it must be sold and sales costs can also vary by customer/outlet type, they also can account for a significant proportion of "total customer servicing costs". There are cost considerations in the post delivery situation: having sold and delivered the products they then must be "sold through". In each instance whilst these costs are identified they have not, in many instances, been quantified.

Retailers have not been slow to recognise the fact that cost differentials between customer/retailer types exist.



The Harvey Bradfield & Toyer warehouse at Milton, Berks

A few have pointed to the fact that this is in reality a form of subsidisation. The claim is that a large retailing company, operating a number of field depots from which they then service their own retail outlets, offers suppliers the facility to lower their (the suppliers) distribution costs. And further, that they are cross subsidising their (the retailers') competitors due to the fact that the current terms of trade do not reflect the difference.

However, the perceived advantages are not just with the distributor. The manufacturer/supplier has much to gain. First of all C.A.P. can provide a much clearer understanding of the relative profitability of all customers. High volumes may look attractive when viewed against average margins; if the costs can be allocated *on a reliable basis* the picture may well change. In the second instance the use of C.A.P. may prompt the company to seek a more cost effective *distribution channel*. Rather than increase drop size and/or lower the call frequency in an attempt to lower costs (which usually are only partially identified and quantified): the solution may well lie in shifting the distribution activity towards an intermediary (e.g. cash and carry) and lower costs *and maintain customer service* to the small accounts.

The basis of the problem is the tendency for industry to work on average costs rather than marginal costs. Usually average costs imply absorption costing whereas marginal costs imply direct or contribution costing. Provided management can allocate cost on a logical basis absorption costing has much to offer but the literature is replete with examples of cost bases initially assumed to be sound but found to be problematic subsequently.

C.A.P. is not new. But it is only recently that attention has been drawn to its benefits by examples of successful implementation. Scanlon* outlined the theoretical benefits of C.A.P. and presented some practical examples in a recent article. However, to restrict the scope of C.A.P. to:

"Pricing, product costs and discounts, drop sizes and call frequencies, and the distance from the depot",

does not totally deal with the problem.

*Scanlon, B., "The Cost of the Customer", *Management Today*, Nov 76

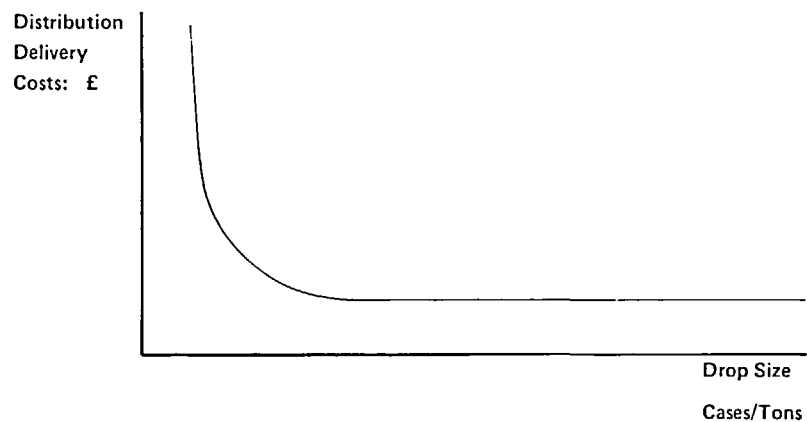
There are marketing and selling costs which can have significant impact.

Scanlon's article suggests that there is an awareness of the benefits (and the problems) of C.A.P. This was confirmed by a "state of the art" survey undertaken by the authors. Specifically, we were interested in finding out how (if at all) manufacturers were attempting to differentiate between the costs of servicing dissimilar retail customers. Our interest in this area was prompted by an awareness of the increasingly different environment in

initial work, and suggest that these break down into Customer Direct Costs and Marketing Overhead Costs.

The Customer Direct Costs include the tangible cost items of: merchandising services instore; bonuses; cooperative promotions, normally identifiable and quantifiable. However, salesmen's activities and their costs are not so easily allocated on a customer basis; clearly volume is one possibility but it is questionable and by no means totally acceptable. The intangible items are much more difficult to deal

FIGURE 1 The relationship between drop size and distribution delivery costs



which the industry had had to operate over the last few years, and in the belief that the C.A.P. facility would help manufacturers devise realistic terms of trade for use in negotiations with retail customers. Implicit in the approach taken was the principle that the costs associated with servicing a particular retailer should be reflected in the terms of trade; this meant in effect a complete departure from "average costings" and the consequent cross-subsidising costs between retail accounts.

An Ideal

Our approach involved us in developing an "ideal" model in which each of the cost items could be considered; this is depicted in Figure 2.

The model starts by considering the product N.S.V. aimed at by applying trade discounts allowed. The objective of the model being to ensure that these reflect the "marketing and distribution service costs" applied to each customer.

We first consider marketing costs, leaving product costs aside for the

with. For example, the opportunity costs of indirect deliveries and the loss of sales through lack of access to stores are difficult to quantify, nevertheless they exist and an attempt should be made to do so. Much the same can be said of national advertising and promotions, field sales management and other similar items, which occur as Marketing Overhead Costs.

Distribution Costs are approached from the point of view of Customer Direct Costs and Distribution Overhead Costs.

Customer Direct Costs include those costs which can be attributed to a customer or outlet call. Cost accounting together with EDP applications are sufficiently sophisticated to allocate delivery and transportation costs. Other aspects are not so easy to deal with and it would appear that inventory holding and order processing (and progressing) costs are two items that are likely to remain as overhead items for some time to come; regrettably these can represent significant proportions of the total distribution costs. Some specific items of

distribution service can be costed by suppliers as and when they arise: the cage pallet is an example where the perceived threat of significant on-costs prompted a great deal of activity among cost accountants, thereby suggesting that when prompted they can be resourceful.

The model is by no means immutable; rather it is put forward as a discussion piece. It is hoped that by constructive discussion the cost allocation problems can be resolved. We

used the model as a basis for our research.

The Research

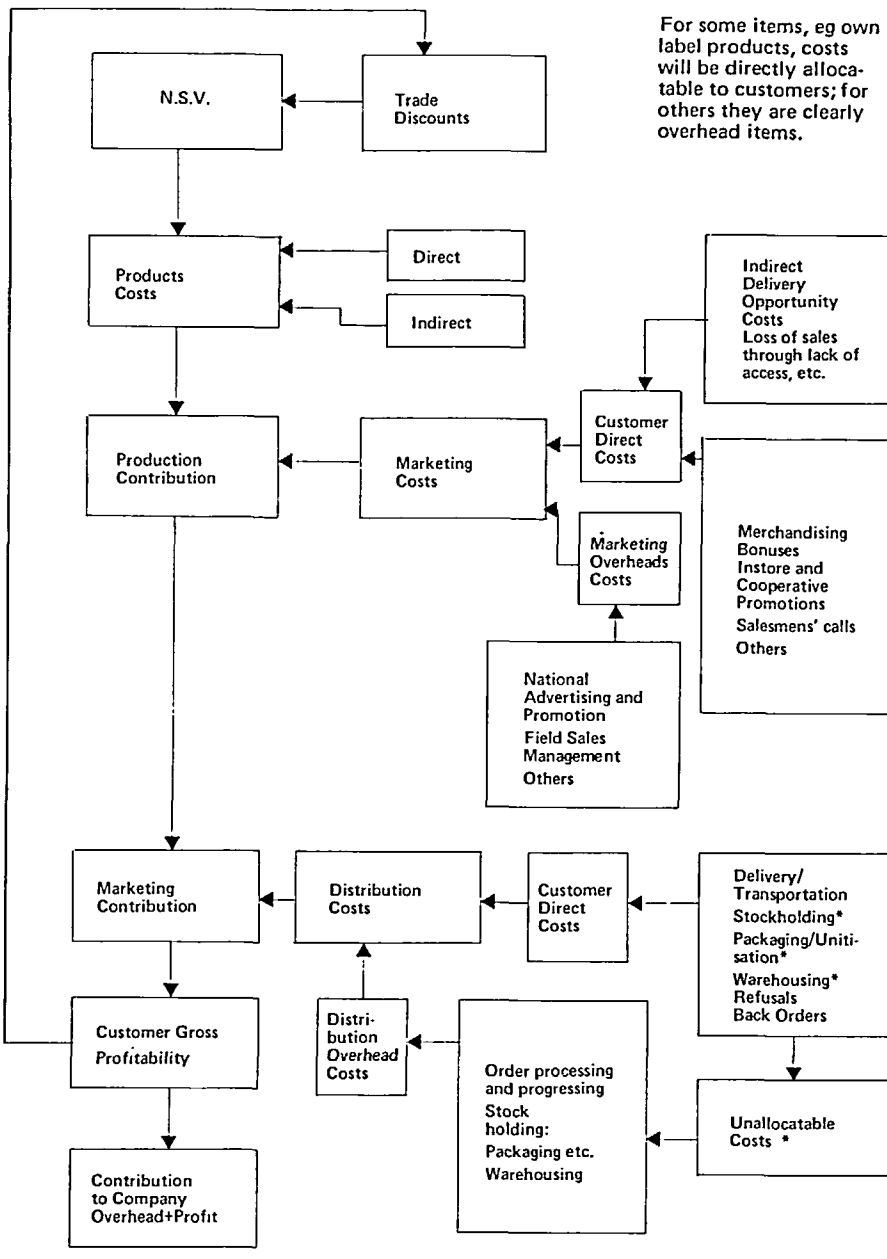
Over twenty companies were approached with the objective of establishing their views on CAP and the extent to which it is used in decision making; first some general conclusions:

1. Virtually all the companies were found to have a growing awareness of the reality of differential

servicing costs across their range of customers. However, their individual philosophies towards what should be done about this and how, varied widely.

2. There were few companies identified as having undertaken substantial work on some form of customer account profitability analysis; two of these had computerised systems, and another was developing a computer model.
3. The companies identified in 2 above all appeared to be making appropriate information available to their sales management for use in sales negotiations.
4. Even those companies which had achieved the sophistication of a computer model appeared to have incorporated several dubious assumptions and equally dubious cost allocation procedures.
5. For many of the residual companies which had not at this stage developed a CAP facility, the justification given was that their level of physical distribution cost expenditures were comparatively small when reviewed in the overall context of marketing costs. This statement tended to be made by companies thinking in terms of physical distribution costs only and not in the wider sense of servicing costs which also include inventory holding, merchandising, and sales force costs.
6. It was particularly significant that in several instances we found that production considerations outweighed physical distribution cost considerations i.e. for reasons of scale economies, large production runs were allowed despite the following cost of holding larger than desirable inventories for relatively long periods. In effect, under this management, the production unit cost apparently decreased, but a corresponding on-cost was added to the distribution function.
7. The general impression we obtained from this exercise was that if anything, our approach was perhaps 12 months too early for meaningful quantitative results to be obtained.

FIGURE 2 Customer Account Profitability: A basic model



Company Visits: A Synthesis of Company Approaches and Views to Customer Account Profitability

1. Companies who use outside carriers for distribution of their goods usually pay for this on a per ton basis at a rate which in effect was averaged across all clients of the particular transport company involved. This is really a quantifiable transport cost element (3% of gross sales value for one company) to which must be added inventory holding and in-store servicing costs to achieve an overall account servicing cost.

2. Another approach being used was to reduce the annual sales forecast down to numbers of unit packs in various size categories and from this generate an expected shipment tonnage for the year. This tonnage is then divided into bulk versus small drop size segments and a standard cost per ton struck for each category.

3. One particular company has managed to lower its distribution costs by 16.5%. Here again, these figures do not include an 8½ weeks average inventory holding. Some £4-£5 million per year is spent on distribution but the production function remains dominant.

CAP is being calculated and used for negotiation and budgeting. Direct costs (delivery, contract merchandising services, selling costs etc.) and indirect costs (distribution overhead, sales management, administration) are allocated by computer model according to pre-determined criteria. Priority is given to achieving economic production runs to the exclusion of optimum stock levels.

4. Perhaps the most sophisticated approach to CAP is that involving defining the various options open to a retailer, any of which can be had for a certain premium over and above a basic price list. So accounts off-shore, or which have a poor pallet recovery performance, or require cage pallets and/or price-marking, or a merchandising service etc., have certain costs added to the basic price list. This enables the manufacturer to monitor the "contribution" provided by each retail account.

5. A company with annual distribution costs of £16m uses a programme which compiles operating costs on a weekly basis but these are individual drop and average costs, and the assumption is made that a 100%

service level is being achieved. The programme operates on a depot/regional basis and the report gives period (weekly, monthly, i.e. as selected) reports on radial delivery costs. These when added to trunk costs can give the company accurate *transport costs* to any outlet. Product mix differences can be accounted for.

6. Another company has developed a system for allocating transportation costs on a customer/outlet type basis. They are now looking at the problems of allocating sales and marketing costs. Sales and sales management costs are seen as problems from an allocation point of view.

7. This company reported the fact that it had already initiated its own study but would not release details. It did pass comment on the fact that although distribution cost differentials were important, other differentials were more so. These were given as: selling cost differentials, customer working capital requirements and product mix requirements. Broad cost differentials were given; direct deliveries were some £10-£20 cheaper. The main cost variability is trunking distance from factory location rather than order size and this can range from £3 to £10 and the direct delivery cost differential saving ranges from £13.00 maximum to a minimum of £6.00 per ton.

8. Another company interviewed considered there was limited impact for distribution and customer servicing costs to work through on discount rates. Some cost differentials were given but these were suspect as they appear low. However, one contributory factor could well be the high fixed cost of the depot system, some 88% of total costs.

9. One company has seriously considered implementing structured discount rates to reflect distribution service-cost differentials. Currently additional discounts are given according to order size but these only coincide by accident with the true differentials involved. The distribution costs considered omit inventory carrying costs, distribution overhead and order communication costs. Some direct delivery cost differentials were given. These suggest a minimum of 6p per case to a maximum of 58p per case, the average being 32p per case. The range discrepancy is caused by the fact that there is a single plant ser-

ving the U.K. Indirect deliveries were more expensive with the largest indirect delivery estimated at 6p per case above the highest direct delivery, holding steady over a wide range but increasing sharply at the lower order end of 40p.

10. Another company with its own study underway relies upon Distribution to play an active part in deciding upon trading terms. This is an atypical solution. In the analysis costs not included are inventory carrying costs, order processing and communications, customer servicing and sales accounting. This company has identified cost savings by type of "channel" used to service customers. These comprise:

1. Direct – via factory warehouse – bulk
2. Indirect – through depot system – palletised large
3. Indirect – through depot system – palletised small
4. Indirect – through depot system – non-palletised

Current discounts are related to customer turnover. At the lower end the company considers discounts to be too generous, thereby subsidising smaller customers. It is considered that for historic reasons and market competition, the move towards more realistic structured discounts may take some time.

11. This large company was surprisingly backward in this area. Inadequate resources in the distribution area were seen as the major problem. The company accepts that cross subsidisation exists but has not quantified the extent to which it exists. Nevertheless, the customer discounts include implicit allowance for those customers recognised as being easier to service than others. Scant cost data provided suggests that customer distance from manufacturing units overrides other factors.

Conclusion

Much appears to be going on in the development of CAP systems. Equally much remains to be done. The authors intend to pursue the topic by assembling information on cost allocation techniques in relevant areas. Eventually it is hoped that we will be in a position to present industry with an applicable approach to Customer Account Profitability. Progress will be reported in future issues of RDM ●

This article has been cited by:

1. Michael J. Thomas. 1986. Marketing Productivity Analysis: A Research Report. *Marketing Intelligence & Planning* 4:2, 2-71. [\[Abstract\]](#) [\[PDF\]](#)
2. John Gattorna. 1978. Channels of Distribution Conceptualisation: A State-of-the Art Review. *European Journal of Marketing* 12:7, 469-512. [\[Abstract\]](#) [\[PDF\]](#)