

Planned Pricing  
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Toshiyuki Mochimoto proposed quality deployment for market pricing (QDm)(1), which basically is grounded on the formula:

Product value  $P = Q \times \text{price}$

Quality coefficient  $Q \leq 1.0$

This formula represents an idea of competitive quality that corresponds to price and using this formula, the author will show a planned pricing process.

In this treatise the author will use an example shown in the planned quality setting table for cigarette lighters in Table 1. The prices for one's own company and other firms have been set for explanatory purposes. In this example, the degree of importance determined by users should be used and the author will apply a ratio obtained by dividing the degree of importance shown in five scales by the sum of scores for the extent of importance.

[Process]

- (1) Overall quality will be sought from the sum obtained by multiplying the quality level for one's own and other firms by the degree of importance.
- (2) Quality coefficient  $Q'$  will be sought by making the highest overall quality one (1).  $Q'$  is obtained by dividing each comprehensive quality by that whose value is largest (4.30 in this case).
- (3) The price for each company  $S$  will be entered. The price for a new product (planned quality) will be  $x$ .
- (4) The reciprocal ratio for price, in other words  $Q''$ , will be sought by dividing each price by the lowest price (95 yen in this case).
- (5) The product of  $Q'$  and  $Q''$  ( $Q' \times Q''$ ) will be sought.
- (6) Relative cost performance RCP will be sought by making the maximum product (0.822 for Company X in this case) one (1), in other words by dividing the product by 0.822.
- (7) The largest marginal price for a new product that enables obtaining cost performance comparable to Company X's product, which has the highest cost performance level among the existing products =  
$$0.822 = 95/x$$
$$= x - 95/0.82 = 115.$$

In short, if the new product is priced at 115 yen or less, it will have cost performance superior to those of other firms. In actuality, from a strategic viewpoint, the new product will be priced at 115 yen or less, taking other circumstances into account.

- (8) The value for  $S \times Q^R$  will be sought. This indicates that if the planned price for one's own company's product is set at 115 yen, the value for Company X's will be only 110 yen and that for Y's a mere 81 yen.
- (9) Consideration when the planned cost is set at other values: for instance, if the new product price is set at 110 yen, similar calculations will show that the price for Company X's product is 106 yen and that for Company Y's 78 yen. This shows that the new product is fully price-competitive if marketed at 110 yen, the same as the current price for Company X's product.

Table 1: Planned Pricing Table

Required quality	Degree of importance	One's own firm	Other firms			Planned quality
			Company X	Company Y	Company Z	
Lights a cigarette without fail	0.21	4 (0.84)	5 (1.05)	3 (0.63)	4 (0.84)	5 (1.05)
Easy to use	0.21	3 (0.63)	4 (0.84)	3 (0.63)	3 (0.63)	5 (1.05)
Can be carried with assurance	0.17	4 (0.68)	4 (0.68)	4 (0.68)	4 (0.68)	4 (0.68)
Can be used for a long time	0.12	3 (0.36)	3 (0.36)	3 (0.36)	3 (0.36)	3 (0.36)
Well designed	0.17	3 (0.51)	4 (0.68)	2 (0.34)	3 (0.51)	4 (0.68)
Owner becomes attached to it	0.12	3 (0.36)	4 (0.48)	3 (0.36)	4 (0.48)	4 (0.48)
Overall quality	1.00	(3.38)	(4.09)	(3.00)	(3.50)	(4.30)
Quality coefficient Q'		0.786	0.951	0.698	0.814	1.00
Price S (yen)		100	110	95	105	x
Price ratio Q''		0.95	0.864	1.00	0.905	95/x
Q' × Q''		0.747	0.822	0.698	0.737	95/x
Relative cost performance RCP: Q <sup>R</sup> ≤ 1		0.909	1.00	0.849	0.897	1.00
S × Q <sup>R</sup>		91	110	81	94	x=115
Price S		100	110	95	105	110
Price ratio Q''		0.95	0.864	1.00	0.905	0.864
Q' × Q''		0.747	0.822	0.698	0.737	0.864
CP		0.865	0.951	0.808	0.854	1.00
S × Q <sup>R</sup>		89	105	78	90	110

## Bibliography

- (1) Toshiyuki Mochimoto: "Value Production Method – Strategic Mangement and TQM"; Hakuto Shobo, 1999
- (2) Toshiyuki Mochimoto (1998): "A new View point for Quality - Practical Application of QDm - "; WISC98 incorp. ISQFD '98 Sydney (3-6 Aug.)