

Different perceptions of price/value trade-off between experts and design students

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ABSTRACT: Interviews were conducted with experts in pricing computer peripherals. This article focuses on pricing strategies and value factors for an in-depth exploration. One of the computer peripherals, the mouse, was used as a sample for the interviews with design students, to establish how they gave weight to value factors and price tags. The interviews provided the following results: 1) compared with the experts' value factors on pricing strategies and the students' ranking order on purchasing products, there was no clear difference other than *product cost*; 2) the experts tended to choose easy-to-achieve value factors to differentiate between competitors. They placed the most value on *product cost*, then *production function*, *product appearance* and *quality (durability)*; 3) there were significant differences in the esteem factors that influenced the students' perceptions about high-priced or low-priced products, and their esteem factors on purchasing high-priced or low-priced products; 4) the students emphasised value factors other than *product function*, such as *quality (durability)*, *product operability and interface*, *product appearance* and *ergonomics and comfort*.

INTRODUCTION

The idea of promoting a product to the consumer in a single way is becoming obsolete. The business and the consumer should have the same idea and become friends with each other. The relationship between the business and the consumer has changed from a one-way communication to a two-way reciprocal communication. Consumer need is the centre of marketing. An ideal situation is that the business provides the consumer with what he or she really wants, and establishes a mutually beneficial relationship. The business should not only place emphasis on products and services, but also on the understanding of consumers and the awareness of consumer issues in changing trends and special needs. It is necessary for the business to explore consumer needs systematically and incorporate those needs into products and services that can bring new perspectives to consumers.

Branding is an important strategy for the business sector to escape from price competition. However, the essence of all branding activities relies on products and services reflected by the brand. The increase of brand value and the enhancement of brand competitiveness should return to the basis of promoting a positive experience for the user of products and services. The implication is a human-centred concern for products and services. A careful analysis of the target user's cognitive characteristics and limitations is required to design products and services accustomed to the user. Therefore, the success of branding depends on the market risk, which is the consumer's reflected message from the products and services. In the future, there should be more emphasis on the end consumer's opinions, working out their desired product values and adapting them into product language.

A brand's core benefit proposition could suggest the pricing strategy to be used for market penetration and competitive segmentation. In order to analyse the difference of value factors and pricing strategy on computer peripherals between experts and students, a questionnaire was designed based on literature reviews and expert comments. The purposes of this research were as follows:

- To explore pricing strategies used by experts;
- To compare the difference of value factors between experts and students;
- To use the mouse as an example of a computer peripheral to evaluate the student's value factors under different situations.

BACKGROUND

Pricing Strategy

Pricing is a daily challenge for brand and product managers since it is completely intertwined with product development and management issues. Pricing issues are not simple, but the problems involved in pricing dilemmas can be eased with

a structured strategic approach. Most situations can be considered more logically by matching descriptions of markets with company objectives [1]. Price is a competitive factor and an element of strategy for all high-technology products. The success or failure of many products may depend on their pricing strategy. Yet, pricing strategy is often neglected in many high-technology companies and industries.

It becomes a financial computation instead of a strategic consideration. Marketing managers and product developers sometimes spend only a few days, sometimes only a few hours working on the pricing strategy for a new product. They do not estimate how customers will value the product, project how price will evolve in the market, understand how competitors will price products or consider alternative strategies. In short, they fail to think about price strategically [2].

There are three kinds of pricing strategy as follows [3]:

- Cost-based pricing: adding a standard mark-up to the cost of the product;
- Value-based pricing: using buyers' perceptions of value, not the seller's cost, as the key to pricing;
- Competition-based pricing: consumers would base their judgments of a product's value on the prices that competitors charge for similar products.

Many strategic considerations come into play in determining price. These include: customers, cost, competition, substitutes for the product, legal and ethical constraints. Pricing strategies are situation specific. A strategy that works well in one situation may completely fail in another [4]. Marketing researchers have observed that retailers' pricing strategies and tactics are diverse. Competitor factors explain the most variance in retailer pricing strategy. Only in the cases of price-promotion coordination and relative brand price do category and chain factors explain much variance in retailer pricing. Retailers' pricing strategies can be based on four underlying dimensions: price consistency, price-promotion intensity, price-promotion coordination and relative brand price [5].

Designing an appropriate pricing strategy for a new product is a very challenging task because it involves the complex dynamics associated with the diffusion of the product in a given market. A monotonically declining pricing policy will be optimal for a new product if the price sensitivity is high, or if the discount rate is high, or if both the price sensitivity and the discount rate are moderately high [6].

Marketers should give thoughtful consideration to how consumers are likely to interpret marketplace actions. Consumers sometimes think about why a certain price is set and that the motive inferred could significantly affect the perceived fairness of the price. Thus, marketing managers should take this perspective and attempt to understand their target consumers. Marketers could then try to avoid actions that are likely to lead to inferences of negative motive [7].

Pricing is a mixture of various elements such as marketing, cost, business strategy, engineering, and economics. Nevertheless, the appreciation of customer requirements is also an important part of pricing strategy. Understanding these elements will be a key to profitability and an effective pricing strategy.

Value Factor

The word value implies both aesthetic and commercial values, and the phrase hints at interpretation and communication [8]. Perceived value is an extremely important concept in marketing and many authors have dealt with it in recent years. Different authors' definitions concerning customer perceived value can be summarised as follows [9]:

- Value for a consumer is related to his/her expertise or knowledge, of buying and using of a product;
- Value for a consumer is related to the perception of that consumer and could not be objectively defined by an organisation;
- The customer's perceived value is a multidimensional concept;
- It presents a trade-off between benefits and sacrifices perceived by customers in a supplier's offering.

Ethical and unethical corporate behaviour could influence the perceived value of a firm's products, and influences the price consumers are willing to pay for that product relative to the competition. Corporate behaviour could influence perceived product value and is likely to influence market choices [10]. The value that customers give to different environmental improvements is incorporated in to a product. This value has been estimated in terms of his/her willingness-to-pay in order to facilitate the integration between the economic goal of the company and the market price of the ecological products. Also, the interaction between the product design and the society has been considered by means of the quantification of the environmental impact and the external costs [11].

Customer service will be as important as, or even more important than, perceived product value in determining customer loyalty and purchase behaviour. Customer service is, indeed, more important than perceived product value in predicting customer loyalty, the amount of money spent in the visit and the range of products purchased [12].

The impact of product and store value on overall shopping trip value and the interrelationship between their utilitarian and hedonic components is also identified. Utilitarian store value and performance-related product value has significant

effects on utilitarian shopping trip value, whereas hedonic shopping trip value is influenced most by hedonic store value and emotional product value [13].

The value of a product reflects the owner(s)/buyer(s)' desire to retain or obtain a product. An individual's level of desire to retain or obtain a product depends on how much the product details and/or its performance agree with the value system of the individual [14]. Therefore, product value is a multi-faceted concept influenced by many variables, which has a very dynamic feature. It is important for companies to determine the optimal combination of attributes and advantages to maximise product value.

METHODS

Expert interviews and a questionnaire were used to explore the difference between pricing experts and design students in their sense of product price and value. Seventeen product value factors were generated through the discussion with pricing experts, as listed in Table 1. They were categorised into three groups: production and manufacture, service and psychology and product design.

Three manager level experts were interviewed. Each of them had work experience of between ten and fifteen years in the sales of computer peripherals. Their experience in pricing or sales was more than five years. The interviews were to understand the experts' pricing strategies for pricing computer peripherals and their responses were used as the basis for developing the subsequent questionnaire.

Table 1: Three groups of value factors.

No.	Value factors
	<i>Production and manufacture</i>
1	Product cost
2	Product function
3	Product origin
4	Quality (durability)
5	Environmental material
	<i>Service and psychology</i>
6	After sales service
7	Maintenance convenience
8	Retail outlet publicity
9	Product specification and use
10	Award and promotion
11	Touch before buying
	<i>Product design</i>
12	Product operability and interface
13	Product appearance
14	Product packaging
15	Ergonomics and comfort
16	Material and texture
17	Product color

A questionnaire based on the interviews was designed to conduct a survey of design students. The questionnaire emphasised four major parts: *value factors*, *esteem values*, *the difference between value and price* and *value and price of a computer peripheral*. The questionnaire referred to a computer mouse that was selected by the experts to stimulate the student's perception under various conditions. There were 140 questionnaires issued and 116 valid samples were generated.

RESULTS

Ranking of Product Value Factors

There was a significant difference in *product cost* between the experts' and the students' esteem product value factors (see Figure 1). The experts regarded it as the most important factor, while the students placed it as the least important aspect. The reasons were as follows:

- The experts emphasised product cost because it served as the basis of product pricing in many cases. There was a fierce competition in the industry of computer peripherals. The production cost margin was getting smaller and smaller. When the cost went higher than expected, the product introduction process would be forced to cease.
- The students did not understand product cost and were nowhere near to it. They did not care about product cost but stuck to their own demands and economic affordability.

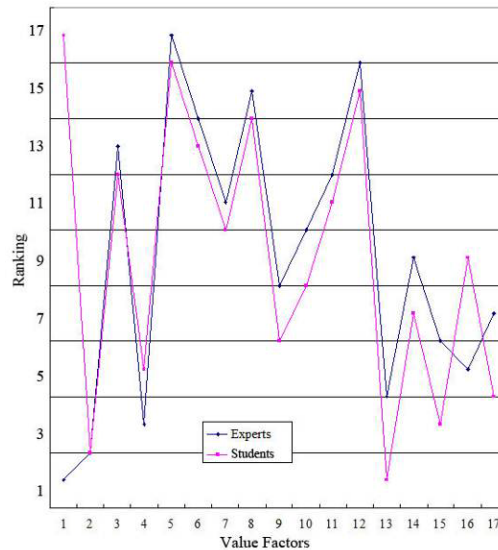


Figure 1: Results of esteem value factors.

Apart from *product cost*, all experts selected *product function* as one of the most esteem value factors. The performance of product function could enable a product to make a breakthrough in the market. The experts also emphasised *quality (durability)* and *product appearance*, which were also appreciated by the students. Product appearance was easier to differentiate than product function and quality (durability) was essential to the fulfilment of product function. The three experts selected similar factors in high-priced and low-priced categories:

- High pricing strategy: all experts put *product appearance* in the front row, followed by *product function* and *quality (durability)*. A beautiful product could stimulate a high-value sensation.
- Low pricing strategy: it was essential to reduce *product cost*. Other visual factors such as *product appearance* and *product packaging* were also important in making a low pricing strategy.

Product Esteem Value Factors

Three value structures were investigated through the questionnaire: *students' esteem value factors (V1)*, *price higher than expected factors (V2)*, *willingness for higher price factors (V3)*. The result of V1 indicated that the students emphasised *product function* the most (Mean=6.0, SD=0.96909) while they emphasised *award and promotion* the least (Mean=3.931, SD=1.36238). The respondents were more interested in the use and function of a mouse than its fame and publicity. The results are listed in Table 2.

Table 2: Esteem value factors.

	Factors	Mean	SD
2	Product function	6.0000	0.96909
4	Quality (durability)	5.9828	1.02136
15	Ergonomics and comfort	5.9741	1.18293
16	Material and texture	5.9397	1.12125
12	Product operability and interface	5.8103	1.16405
13	Product appearance	5.7672	1.11400
17	Product color	5.5345	1.21176
11	Touch before buying	5.5000	1.28198
9	Product specification and use	5.3276	1.27023
7	Maintenance convenience	5.1466	1.51660
6	After sales service	5.0086	1.59071
3	Product origin	4.9310	1.36238
8	Retail outlet publicity	4.6207	1.27624
14	Product packaging	4.5086	1.29545
1	Product cost	4.3793	1.39350
5	Environmental material	4.2586	1.27259
10	Award and promotion	3.9310	1.36238

When the price was higher than the respondents' expectation (V2), the most likely factor was *ergonomics and comfort* (Mean=5.9310, SD=1.01059); the least likely factor was *product origin* (Mean=2.8966, SD=1.48839). The factor most likely to increase the respondents' willingness to purchase a higher priced product (V3) was *ergonomics and comfort* (Mean=5.9569, SD=1.02484). The factor most likely to decrease the respondents' willingness to purchase a higher

priced product was *product origin* (Mean=2.7155, SD=1.41302). The results of V2 and V3 were similar, which indicated that *ergonomics and comfort* stimulated a positive effect, while *product origin* stimulated a negative effect (see Table 3).

Table 3: Results of V2 and V3.

	Factors	V2		V3	
		Mean	SD	Mean	SD
1	Product cost	5.0172	1.28525	3.9310	1.33008
2	Product function	5.6552	1.03926	5.3448	1.29952
3	Product origin	2.8966	1.48839	2.7155	1.41302
4	Quality (durability)	5.6379	1.11431	5.8707	0.94667
5	Environmental material	5.1638	1.22257	4.6983	1.33332
6	After sales service	4.9052	1.62576	5.2241	1.44515
7	Maintenance convenience	4.8362	1.54325	5.2328	1.44076
8	Retail outlet publicity	5.1724	1.43421	4.3793	1.44255
9	Product specification and use	4.5776	1.40280	5.1293	1.35474
10	Award and promotion	5.4655	1.21892	4.5948	1.47429
11	Touch before buying	4.4397	1.51105	5.2155	1.42528
12	Product operability and interface	5.5517	1.17470	5.8190	1.15419
13	Product appearance	5.6034	1.20057	5.4655	1.39833
14	Product packaging	5.3190	1.26902	4.6034	1.43181
15	Ergonomics and comfort	5.9310	1.01059	5.9569	1.02484
16	Material and texture	5.9138	0.94702	5.7414	1.26574
17	Product color	5.4052	1.25094	5.2069	1.45970

Significant differences existed between value factors V1, V2 and V3, as listed in Table 4. If the price of a product was higher than expected, the respondents would contribute it to *product cost*. However, they were uninterested and unwilling to pay more for a higher cost product. The result indicated that the concept of cost existed in the respondents' mind but did not increase their acceptance for the product.

Table 4: Post hoc of value factors.

	Factors	Type	Type	Average Variance	P
		V1	V2		
1	Product cost	V1	V2	-0.63793	0.002
		V1	V3	0.44828	0.040
		V2	V3	1.08621	0.000
2	Product function	V1	V3	0.65517	0.000
3	Product origin	V1	V2	2.03448	0.000
		V1	V3	2.21552	0.000
4	Quality (durability)	V1	V2	0.34483	0.040
5	Environmental material	V1	V2	-0.90517	0.000
		V1	V3	-0.43966	0.033
		V2	V3	0.46552	0.022
8	Retail outlet publicity	V1	V2	-0.55172	0.011
		V2	V3	0.79310	0.000
9	Product specification and use	V1	V2	0.75000	0.000
		V2	V3	-0.55172	0.008
10	Award and promotion	V1	V2	-1.53448	0.000
		V1	V3	-0.66379	0.001
		V2	V3	0.87069	0.000
11	Touch before buying	V1	V2	1.06034	0.000
		V2	V3	-0.77586	0.000
14	Product packaging	V1	V2	-0.81034	0.000
		V2	V3	0.71552	0.000

Note: only factors with P<0.05 were listed

The respondents emphasised *product function* but were not willing to pay more for a product with better function. The respondents cared about *product origin*. If a product was made in Taiwan, there was no significant difference. If it was made in China, there was a significant difference. The respondents were willing to pay more for a product made in Taiwan. They did not appreciate products made in China. The respondents valued *quality (durability)* but did not regard it as a factor for higher price. Although the respondents did not care about the use of *environmental material* on a product, they were willing to pay more for it and regarded it as a reason for a higher price. The respondents did not emphasise *retail outlet publicity* and were unwilling to pay more for a product from a well-known outlet. However, they

agreed that it was a reason for a higher price. *Product specification and use* was acknowledged by the respondents. They were willing to pay more for it but did not regard it as the reason for a higher price. *Award and promotion* did not score highly in the survey but the respondents believed it to be the reason for a higher price. They were more willing to pay more for it. The respondents did not regard *touch before buying* as a factor for a higher price but they valued it and would be willing to pay more for it. *Product packaging* was a factor for a higher price, but the respondents did not value it and were unwilling to pay more for the product.

CONCLUSIONS

There was no significant difference between the experts' pricing strategies and the students' esteem values except *product cost*. The result indicated that the experts' pricing strategies were similar to the students' esteem values. The experts would take the students' opinions into consideration while pricing. However, some factors valued by the students such as *product appearance* and *ergonomics and comfort* did not particularly influence the experts' pricing strategies. Visual and utilitarian related factors could not dominate pricing completely. *Product cost* and *product function* were still the most important pricing factors.

Overall, the esteem factors in the experts' pricing strategies were still in the framework of a *cost-based strategy*. The experts mainly used it as their core pricing strategy and would take the students' opinions into account. They would complement it with a *value-based strategy* to set and plan their product lines and prices. The experts tended to choose easy-to-achieve value factors to differentiate from competitors. They valued *product cost* the most, then *production function*, *product appearance* and *quality (durability)*.

The respondents' attitude towards different value factors was not the same and differed in various situations. There were significant differences on esteemed factors influencing the students' feeling for high-priced or low-priced products, and their esteemed factors on purchasing high-priced or low-priced products. They emphasised on value factors other than *product function*, such as *quality (durability)*, *product operability and interface*, *product appearance*, *ergonomics and comfort*.

This article analysed the difference of esteem value factors between the experts and the students. The result could signify pricing experts' and the students' strategic decision, which could be used as a reference for product pricing in the future. The pricing strategists would not make an assumption on the students' psychology and could achieve a more precise result in pricing. Furthermore, designers could use the result as an important tool in product development by providing a more definite direction for product line planning.

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