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Comparative Product Testing of Colour TV Sets: Use and Effects

Abstract

This article illustrates, with respect to a specific product (colour TV), that from a consumer policy point of view, too few and the wrong kind of people use consumer information, in casu information stemming from comparative product testing.

Interviews were held with 294 buyers. The article reports on the planning period, on the characteristics of consumers using test information, and on the effects of comparative testing information. With these figures as a platform the author discusses consumer policy implications and concludes that the safest way from a consumer point of view is to replace comparative product testing with regulations for production and sale. If this is not possible, new methods and resources to-day almost unheard of will have to be employed in disseminating the information.

This short report is intended to give further strength to an often established fact with important consumer policy implications; the fact that too few people – and the wrong kind – use consumer information. Here, the fact is illustrated with respect to a specific product, at a specific time, in a situation with better access to information than is normally the case, and as regards a specific kind of consumer information, viz., information stemming from comparative product testing.

Background

In 1972, the Danish Governmental Home Economics Council (Statens Husholdningsråd) carried out a comparative test of 12 different brands of colour TV sets. The test concluded that one brand was better than the others, and unmistakable quality differences were found. Prices differed by as much as 100%. The results were published in a 14 pages long article in the Council's monthly magazine "Råd og Resultater," in April 1972. The magazine had at that time a circulation of 40,000 copies. Besides, it is found in all public libraries. Furthermore, Danish newspapers devoted much attention and space to reporting the results, since at that time colour TV was something new and exciting in Denmark.

In March 1973, Danish Gallup made a survey for an international manufacturer of radio and television sets, concerning various aspects of consumer behaviour. In this survey, 5,811 households were interviewed (below, the concepts household and consumer are used interchangeably). The selection of respondents in Gallup's country-wide surveys can be characterized as an area sample of the cluster type with three stages according to the so-called Deming plan. The survey was postal. All in all, 7,567 questionnaires were distributed and 76.8% returned. Compared to national statistics the sample was biased with respect to urbanization and age of household, but not to other characteristics. The sample was corrected by duplication of cards drawn at random from the corresponding groups.

Of the interviewed households, 395 had bought a colour TV set in 1972 (302) or

1973 (93). This report is based upon those 294 interviews carried out after April 1972 where the purchases had taken place after the publication of the above-mentioned comparative product test. In 1972 colour TV was in an introduction phase. Those who had bought a colour TV set had a higher income and were slightly older than the average Dane, and were more likely to be white-collar than blue-collar workers.

Purpose

The purpose of this report is to provide an over-all picture of the effects of the comparative test. How many buyers use this kind of information, made public under the described circumstances? Who uses it? How does comparative product testing fare compared with competing sources of information? How does use of the information affect the users' decisions?

Most earlier research in the area has been concentrated on describing who the subscribers of product test reports are, and not so much on the actual *use* of, and *effects* of, test reports. See, however, Thorelli, Becker, and Engledow (1975) for a study of reported use of product test reports as regards car purchases among subscribers and non-subscribers to consumer journals. Perceived influence of test reports in general has been investigated in European Consumers (1976).

Planning Period

Even though the actual use or perception of information can take place within a very limited time period, it seems reasonable to expect that a certain period of planning the purchase is conducive to the use of information. One may hypothesize that the longer the planning period, the higher the propensity to use product test information.

The distribution of colour TV buyers according to their reported length of planning is given in Table 1.

TABLE 1
Colour TV Buyers' Planning Period

	n	%
One week or less	58	20
About 2 weeks	39	13
About 1 month	47	16
2-3 months	30	10
4-6 months	40	14
7-12 months	20	7
More than 1 year	25	9
Don't know	35	12
Total	294	101

Question: How long time do you think elapsed from the time you had the idea of buying a TV set until you bought it?

It seems called-upon to characterize the planning period as short relative to the importance and price of the product. One fifth of the buyers used a week or less for planning, one third two weeks or less, and one half of the buyers a month or less. Further analysis showed that no particular age or income groups had especially short

or long planning periods. The relationship between the length of the planning period and reported use of comparative testing information is shown in Table 2.

TABLE 2
Planning Period and Use of Comparative Testing Information

Planning period	Used comparative testing information					
	Yes		No		Don't know	
	n	%	n	%	n	%
1 week or less	18	19	36	21	3	13
About 2 weeks	5	5	27	16	2	9
About 1 month	17	18	29	17	1	4
2-3 months	14	14	17	10	2	9
4-6 months	17	18	20	11	5	22
7-12 months	3	1	12	7	3	13
More than one year	10	10	15	9	1	4
Don't know	13	13	18	10	6	22
Total	97	98	174	101	23	96

Question: Did you know about the results of the test of colour TV which was published in the Home Economics Council's journal "Råd og Resultater" before the purchase?

The figures in Table 2 do not support the hypothesis that users of comparative testing information have a longer planning period than non-users. If the analysis is stretched to encompass *all* information sources (data not shown here) it appears, however, that consumers with a planning period of two weeks or less used a smaller number of information sources than those planning over a longer period. Advertisements, especially, were reported to be little used by those with a short planning period. Only 14% of those planning for a week or less reported having used advertisements as an information source compared with 42% of those having planned for two to three months.

Some Characteristics of Consumers Using Comparative Test Information

Table 3 shows the percentages of consumers stating that they had used different sources of information before buying a colour TV set.

TABLE 3
Colour TV Buyer's Use of Different Sources of Information

	n	%
Brochures	106	36
Information from comparative product testing	97	33
Friends and family	96	33
Advertisements	78	27
Shops	71	24
N = 294	448	153

Questions: E. g.: Did anybody in the household notice advertisements for TV sets *before* the buying? Did anybody in the household ask family or friends for advice about what brand to buy? Did anybody in the household visit two or more shops before the TV set was bought?

One third of the consumers claimed to have used information from comparative product testing. We can note, then, that when up-to-date information of this type is available, it is able to compete with other sources of information with respect to *use*. It follows, however, from Table 4 that it does not compete equally well in all consumer groups.

TABLE 4
Use of Comparative Testing Information in Different Income Groups

Income	Used comparative testing information		
	n	n	%
Low	29	6	21
Middle	76	31	41
High	141	47	33
Don't know	48	13	27
Total	294	97	33

Comparative tests are used the most in middle and high income groups. It was also found – but is not documented here – that advertisements were typically used by the middle and high income brackets, brochures by the high income bracket, and person-to-person contacts with friends and relatives by the low income brackets. Because the differences as regards extent of shopping were small among the different income groups, it seems fair to assume that low income groups primarily avoid printed material and must be assisted in their buying process by other means.

A comparison of the use of comparative testing and type of employment showed results of a similar nature, assuming the traditional correlation between type of employment and level of income. Those figures are therefore not given here.

It is also possible to analyze the use of comparative testing information according to age. The results are shown in Table 5.

TABLE 5
Use of Comparative Testing Information in Different Age Groups

Age	Used comparative testing information		
	n	n	%
-29	23	11	48
30-39	53	14	26
40-49	56	34	61
50-59	67	18	27
60-69	47	9	19
70	34	8	24
Don't know	14	3	21
Total	294	97	33

It seems as if the results of the comparative test were most effectively communicated to two age groups, viz., the youngest (under 30) and a middle age group (40-49). These two age groups used the results from the test two and three times as much, respectively, as did the other groups.

The material also allows an analysis according to the job situation of the wife in the family.

Product test information was used above all in families where the wife had a full time job outside the home. It was used in 58% of these households, whereas the corresponding figure for households with wife working inside the house or working partly outside were 28% and 27%, respectively. An explanation could be that these persons are forced to use the most effective way of gathering information, but they are also the heaviest users of brochures and shops, making education a possible explanatory factor. (Unfortunately, level of education was not registered in the survey.)

The over-all impression from Tables 3 to 5 is that even though up-to-date, relatively well-promoted, high quality product information was available, only one third of the buyers of a very expensive commodity used this help in arriving at a brand decision. There are four possible explanations for this.

The *first* is that the consumers find that the subject of the information is irrelevant, presumably because they believe that the differences between brands do not lead to important differences in need satisfaction. The *second* is that the consumers do not feel a need for information. They believe that their present knowledge equals what they perceive necessary to make a satisfactory decision. Objectively they may be wrong, but their subjective perception of the information need determines the behaviour. The *third* possible explanation is that the expected costs of acquiring information are too high (e. g., time needed, postponement of buying, physical and psychological strain caused by difficult access or difficulties in understanding). The *fourth* possibility is that the expected value of the information is too small (due to expectations of relevance, and/or comprehensibility, and/or credibility).

Effects of Comparative Testing Information

We have now had a look at the extent of *use* of the comparative testing information in different groups. An even more interesting question, however, concerns the *effect* or *influence* of a source. The only measure we have thereof is the respondent's own opinion. The respondents may not tell the truth (consciously or unconsciously), or their memories may be at fault, but it is a kind of subjective truth that will determine their search for information in the future.

Table 6 shows the percentage of users of a source of information claiming this source to be decisive in choosing a brand.

TABLE 6
Respondents Finding a Source Decisive

Source	Source decisive		
	n	n	%
Friends and family	96	61	63
Comparative product testing information	97	59	61
Shops	71	26	37
Brochures	106	27	25
Advertisements	78	15	19
N = 294	448		

Question: Was the information given to you through . . . decisive for the choice of brand?

From a consumer policy point of view it is encouraging to note that the influence of a source was negatively correlated with the seller's control of the source. It is, however, of little solace to the consumer educator that, for instance, advertisements were used less and exerted less influence than comparative testing (or were at least perceived to do so), since in *absolute* terms comparative testing was used to a limited extent. The percentages of *all* colour TV buyers referring to a source as decisive are seen in Table 7.

TABLE 7
Per Cent of All Colour TV Buyers Referring to a Source of Information As Decisive

Source	Source decisive	Per cent of all buyers
	n	%
Friends and family	61	21
Comparative product testing information	59	20
Brochures	26	8
Shops	27	9
Advertisements	15	5
N = 294	188	64

In Table 4 we saw that the propensity to use comparative test information rises with consumer income, implying that those with the best resources got the most out of the test. Table 8 shows a similar picture with respect to the perceived usefulness of the information.

TABLE 8
Influence of Comparative Testing Information on Choice of Brand in Different Income Groups

Income	Used comparative testing information	Found comparative testing information decisive	
	n	n	%
Low	6	3	50
Middle	31	19	61
High	47	32	79
Don't know	13	5	38
Total	97	59	61

Even in the instance of the low income consumer accepting the cost of the comparative testing information, because of high expectations regarding its value, it often seems that for some reason (the material's complexity or irrelevance) he cannot use it. From Table 8, it is clear that the high income group found comparative testing information decisive more often than did the low and middle income groups.

It may be noted that the trend in Table 8 is opposite to that of advertising, where the corresponding figures are 75%, 43%, and 24%, respectively. There seems to exist a kind of information gap, meaning not only that those consumers with the best resources use the most written material, but also that the less resourceful consumers are the ones most influenced by lower-quality information.

In Table 4, it was shown that for reasons unknown those younger than 29 or between 40 and 49 years of age made the greatest use of product test information. It is therefore interesting to note that these consumers are the ones who *least* often find this source *decisive* (data not shown here). The older age groups avoided comparative testing information (as well as shops and brochures), probably because of the information costs, but *when* they used product test information, it seems to have had a decisive impact (which is not the case with brochures and shops).

Discussion and Conclusions

The author perceives the relation between seller and consumer mostly as a conflict of interests, and assumes that the consumer is the weaker part in this conflict. Therefore the general question for consumer policy is how to strengthen the position of the consumer (especially the low resource consumer), i. e., how to help the consumer to a better need satisfaction.

Research results such as the ones presented here are useful for consumer policy if they can be used to diagnose problems or to hint at solutions. In casu the figures presented are useful if they can give us an idea of the utility of product testing information, or hint at some of the difficulties in stimulating the use of this kind of information.

In addition, they can inspire further reasoning and speculation, and be used as a platform for ideas and conclusions beyond the ones based on traditional statistical analysis. The discussion and conclusions in this section are not based exclusively on the figures reported – which alone do not justify some of the most general conclusions – but also on other research results concerning use of consumer information, theories of consumer behaviour, and theories of mass communication.

From the outset of this study it was presumed that the direct effect of product testing information is limited. Furthermore it was assumed that there exists a gap in its use between high resource groups and low resource groups (resource referring to, e. g., education, income, and employment).

The first result obtained in this study was that, seen in relation to the importance of the product, most consumers seemed to spend relatively little time on the brand and buying decision. Furthermore it was apparent that if the use and effect of product test information was limited, it was not due to the length of the planning period. Teaching the consumer to prolong the planning period will therefore not necessarily strengthen the effect of comparative product testing.

Thereafter it was demonstrated that product test information was used as much (or little) as other sources of information (when up-to-date test data were available). Normally this kind of information is considered high quality information and the best possible help for the consumer, but two thirds of the consumers did not use this device, and the one third doing so was typically high resource households, who need it the least.

Considering the use of other information sources by different groups it was concluded that the low resource groups, to a certain degree, seemed to avoid printed material, and therefore must be assisted by other means. Most likely, these groups are better helped by regulations (e. g., legally prescribing the demands as to product quality) than by more information about an ever-increasing number of products.

It is encouraging to notice that the influence of an information source on the buying decision declined the more the source was controlled by the seller. Still, one must be aware that product test information did not decisively influence the buying decision of 80% of all colour TV buyers. These people preferred to trust earlier experience or to seek advice from friends or family.

Again, the immediate conclusion is a suggestion to try to help the (weak) consumers by other means than information. If for some reason this conclusion is not acceptable (e. g., due to political ideology), then the consumer educator must find out how to extend the use of product test information. The data reported give no clear cut solution to this problem. However, a tentative interpretation combined with theories of information use (Sepstrup, 1977) suggests some possibilities.

Firstly: Consumer educators may have a (correct) idea about what is necessary for the consumer to know. But the first contact with the (weak) consumer has to be established by giving him the information which *he* perceives to be important. The starting point must not be the product, nor the consumer educator's ideas, but *the consumer's actual choice criteria*. Only in addition to providing information concerning these salient consumer criteria, can one cautiously insert other advice.

Secondly: The consumer may not feel a need for information. If this is the case, basic education is necessary to change the perception of the need for information, because nobody will use information – and consequently cannot be helped through information – if he feels no need for it. This strategy should, however, be used sparingly because it means continuing the principle of letting the consumer have the burden of finding his way through the product jungle by spending a lot of time and energy on reading the road signs.

Thirdly: It is obvious that the costs of using product test information must be lowered considerably, e. g., through easier access and better comprehensibility. The results of comparative product testing must be announced through advertisements or by direct mail to selected groups, and the conclusions must be direct and explicit. If – e. g., for economic reasons – methods of this kind are impossible it is illusory to think that people are helped by dissemination of product test information.

To pay justice to product testing it must be remembered that it has indirect effects which are not measured in a study like this. Product testing may influence the manufacturers and the teachers of home economics and stimulate mass media treatment of consumer questions. However, it should also be remembered that this investigation was carried out under the best possible conditions for proving a positive effect of product test information, as brand new data were available when the respondents bought their colour TV set.

It should also be noted that the study took place in Denmark. The EEC-study mentioned earlier (European Consumers, 1976) tells that of the nationalities in the EEC the Danish consumers are the most critical ones, they are the ones who are most aware of the existence of consumer information and the most frequent users of this information. Therefore the results cannot be neglected as a special Danish phenomenon.

The final recommendation based upon this report becomes, therefore, in most cases to replace comparative product testing with regulations of production and sale. One should require minimum standards with respect to quality and functioning; set an upper limit to the use of resources in manufacturing and using the product and to

the pollution caused by its use and disposal; issue minimum requirements for the information contained in advertisements, stores, and on goods, as regards product characteristics, price, perishableness, etc. If such regulations are not acceptable, product testing results must be disseminated by using methods almost never applied today and resources almost unheard of.

References

- European Consumers: Their interests, aspirations, and knowledge on consumer affairs* (1976). Brussels: Commission of the European Communities.
- Sepstrup, P. (1977). *Consumption of mass communication – construction of a model of information consumption behaviour*. Aarhus: Aarhus School of Business Administration and Economics. Working paper (Skriftserie E: 8).
- Thorelli, H. B., Becker, H., & Engledow, J. (1975). *The information seekers*. Cambridge, Mass.: Ballinger.

Zusammenfassung

Vergleichende Warentests von Farbfernsehgeräten: ihre Verwendung und Auswirkung. Der Beitrag zeigt am Beispiel eines Produktes, daß Informationen aus vergleichenden Warentests unter verbraucherpolitischem Gesichtspunkt von zu wenigen und auch von den falschen Verbrauchern verwendet werden. Die mitgeteilten Ergebnisse beruhen auf Interviews mit 294 Käufern von Farbfernsehgeräten und umfassen die Planungsphase, die Besonderheiten der Verwender von Testergebnissen unter den Käufern und die Effekte von Warentestinformationen.

Die Ergebnisse lassen vermuten, daß ein bestimmter Planungszeitraum vor dem Kauf der Verwendung von Informationen förderlich ist. Tabelle 1 zeigt die Länge des Planungszeitraums, die wohl als kurz im Verhältnis zur Wichtigkeit und zum Preis des Produktes gelten kann. Dabei gibt es keine Besonderheiten bei bestimmten Alters- oder Einkommensgruppen. Auch läßt sich aus Tabelle 2 keine Unterstützung für die Hypothese herleiten, Benutzer von vergleichenden Testinformationen würden ihren Kauf länger vorbereiten als Nichtbenutzer. Allerdings dürften Verbraucher mit einer Planungsperiode von bis zu 2 Wochen insgesamt weniger Informationen, gleich welcher Art, nutzen, als solche mit einem längeren Planungszeitraum.

Nach Tabelle 3 gab ein Drittel der Verbraucher an, vergleichende Warentestinformationen benutzt zu haben. Wenn also aktuelle Informationen vorhanden sind, können sie unter dem Gesichtspunkt der Verwendung folglich mit anderen Arten von Informationen ohne weiteres konkurrieren. Nach Tabelle 4 gilt dies jedoch nicht für alle Verbrauchergruppen gleichermaßen. Vielmehr lehnen Gruppen mit geringem Einkommen gedruckte Informationen vermutlich ab und sollten deshalb andere Kaufentscheidungshilfen erhalten.

Tabellen 3 bis 5 zeigen, daß lediglich ein Drittel der Käufer eines sehr kostspieligen Gutes bei der Markenwahl von einer gut eingeführten hochwertigen Produktinformation Gebrauch machte. Dafür werden vier mögliche Erklärungen geboten: (a) Verbraucher halten die Informationsinhalte für unwichtig; (b) Verbraucher empfinden kein Bedürfnis nach Informationen; (c) Verbraucher erwarten zu hohe Kosten und Mühen bei der Informationsbeschaffung; (d) sie erwarten von der Information einen zu geringen Nutzen.

Interessanter noch als die Nutzung von vergleichenden Warentestinformationen ist deren Wirkung. Tabelle 6 zeigt den Prozentsatz jener Verwender einer Informationsart, die diese als für die Wahl einer Marke ausschlaggebend angaben. Aus der Sicht der Verbraucherpolitik ist es ermutigend, daß eine Informationsart um so einflußreicher ist, je weniger sie von den Verkäufern beeinflusst werden kann. Absolut gesehen, werden vergleichende Warentestinformationen allerdings in enttäuschend geringem Maße genutzt. Tabelle 7 zeigt den Prozentsatz aller Käufer, die eine Informationsart als entscheidend betrachten.

Aus Tabelle 4 ergibt sich ein Anstieg der Verwendung von vergleichenden Warentestinformationen mit steigendem Einkommen. Ähnliches zeigt sich aus Tabelle 8 hinsichtlich der empfundenen Nützlichkeit der Information. Auch wenn Verbraucher mit niedrigem Einkommen die Kosten für vergleichende Warentestinformationen inkaufnehmen, können sie sie oft aus mehreren Gründen nicht verwenden. Da der Trend in Tabelle 8 genau gegenläufig verläuft zu dem für werbliche Informationen, scheint eine Informationslücke in zweifachem Sinne zu bestehen: je besser Verbraucher wirtschaftlich ohnehin gestellt sind, desto mehr machen sie Gebrauch von hochwertigen schriftlichen Informationen; andererseits ist der

Einfluß minderwertiger Informationen um so größer, je schlechter die wirtschaftliche Situation der Verbraucher.

Der Autor gelangt zu der Empfehlung, daß vergleichende Warentest weitgehend ersetzt werden sollten durch staatliche Eingriffe wie beispielsweise Mindestanforderungen an Qualität, an Funktionsweise, an Energieverbrauch und an Umweltbelastung, oder durch Begrenzung der Anzahl von alternativen Warenmarken, kombiniert mit Mindestanforderungen an Informationen über diese Marken in der Werbung, an Preisinformationen oder an Verfalldaten. Erweisen sich solche Regelungen als nicht durchsetzbar, müssen neuartige Methoden der Verbreitung von vergleichenden Warentestinformationen entwickelt und verwendet werden.

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Testing the Efficiency of Comparative Testing

A Comment on the Paper by Sepstrup

Several studies in recent years (e. g., GfK, 1974; Thorelli, Becker, & Engledow, 1975; Raffée, Schöler, & Grabicke, 1975; Stiftung Warentest, 1976) have tried to assess the effectiveness of comparative testing information; usage rates and the perceived importance of the information for buying decisions usually being the main indicators. Sepstrup's paper is an interesting addition to this since it presents data which were obtained from buyers shortly after the purchase, in a situation where up-to-date tests were actually available. However, Sepstrup's article also makes clear that a satisfactory methodology for the evaluation of consumer policy programs in general and comparative testing information in particular, has not yet been developed, and that results like those presented by Sepstrup are therefore open to various interpretations. In the following, I will argue that Sepstrup's far-reaching conclusions are not justified by his data, and that the results presented by him are in fact quite encouraging for the test-makers.

Reliable Data on Buying Behaviour – An Impossibility?

The fact that the impact of comparative testing is usually not analysed in the context of a specific purchase is probably due to the difficulty in getting a sufficient number of buyers interviewed shortly after the test was published. Similar studies in the marketing sciences have solved this by cooperating with dealers who supply names and addresses of consumers. However, this is not always possible and probably becomes difficult if it is to be done on a broader or even representative scale. The other method, used in the study presented by Sepstrup, is to have a large representative sample and hope for a sufficient number of buyers among the respondents – a hope which is usually justified only for products which are