

# ***Consumer Organizations and Promotion of Sustainable Energy Consumption: Comparative Product Quality Testing and its Impact***

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## **1 - SYNOPSIS**

This paper reports selected preliminary results of an ongoing survey on consumer organizations. It analyzes comparative product quality testing and its potential impact on promotion of energy efficiency.

## **2 - ABSTRACT**

The paper provides an overview on consumer organizations in OECD and high income developing countries, in particular with regard to their consumer information activities. It focuses on a review of comparative product testing of selected electrical home appliances and on test reports in consumer interest magazines. The paper analyzes the relative weights allocated to the different product quality criteria, including energy efficiency. Based on the above the paper reflects on the role that consumer organizations can play in the promotion of “green consumerism” and sustainable energy consumption, in particular with regard to the residential sector.

## **3 - INTRODUCTION**

### **3.1. Background and objectives**

Advancing commercialization of societies has brought with it the formation of a growing number of local and national consumer interest groups. Today, *Consumers International*, the largest federation of consumer organizations and agencies worldwide, counts 243 member organizations in over 110 countries (1). Individual organizations greatly differ in their membership and organization, their sources of financing and government sponsorship, their work methods, activities and relative political influence. However, *enhancement of consumer protection* and *better consumer information* are overall common objectives that unite the “consumer movement”.

As laid down in the universal *Guidelines for Consumer Protection* adopted at the United Nations in 1985 (2), the traditional understanding of *consumer protection* encompasses several aspects of concern to consumers. These include *physical safety*, *promotion and protection of consumers’ economic interests*, *standards for the safety and quality of consumer goods*, as well as *education and information programmes* and *measures for consumers to obtain redress*. Hence, consumer organizations engage themselves in a wide variety of issues. With the growing global concerns for environmental protection consumer organizations are currently adding further dimensions to their agenda. Amended global *Guidelines on Consumer Protection and Sustainable Development* are currently under consideration at the United Nations and its Commission on Sustainable Development. These draft guidelines call on governments to *actively support consumer organizations and other organizations of civil*

society. They also call for *consumer education and information programmes* in new additional areas such *pollution and environment*; and *efficient use of materials, energy and water* (3).

In recent years a growing number of studies have discussed the emergence of environmentally conscious “green” consumerism and the question of how to put more sustainable consumption into practice (4). As a contribution towards this interdisciplinary field of research, the authors are currently conducting a survey on consumer organizations, in particular on organizations based in industrialized OECD economies and high income developing countries. The overall objective of the study is to assess the role that consumer organizations can play in creating greater consumer preference for (a) energy conserving lifestyles (i.e. energy conscious use of electrical home appliances); and/or (b) for more energy efficient products.

### **3.2. Scope and methodology**

In order to obtain a general overview on consumer information work related to enhancement of awareness and knowledge among consumers on household energy consumption and energy efficiency issues the authors have solicited information from executives of consumer organizations through questionnaires and, where possible, through follow up communications and interviews. The final study report may cover most if not all of the larger consumer organizations of the fore mentioned countries. At the time of the writing of this paper and its preliminary analysis fourteen consumer organizations of OECD countries and two organizations based in newly industrializing economies had returned questionnaires and/or contributed other information towards this study (5).

The current study is conducted in the context of preparations for the *Asia-Pacific NGO Forum on Effective Consumer Information for Sustainable Energy Use*. The Forum is organized jointly by United Nations Economic and Social Commission for Asia and Pacific (ESCAP) and Citizens’ Alliance for Consumer Protection of Republic of Korea (CACP-K) and scheduled to be held in Seoul, Republic of Korea, 19-21 May 1999. Funding for the NGO Forum has been provided by the Government of Republic of Korea, with additional support from Friedrich Ebert Foundation of Germany (6).

### **3.3. Study focus: Comparative Product Quality Testing**

*Comparative product quality testing* and the *publication of test results* in consumer interest magazines is the most important consumer information activity through which consumer organizations publicize information on open and invisible aspects of product quality.

In addition to the general survey on consumer organization activities the authors have therefore also reviewed test reports published by consumer organizations in OECD and high-income developing countries during the period 1994-1998, focusing on selected electrical appliance categories. The following two appliance categories are discussed in this paper: (a) refrigerators and freezers (and combination fridge-freezers); and (b) washing machines (front- loading and top-loading).

The review of test reports is being conducted to compare the concepts of the test reports. The comparison relates to the type of information provided to consumers, the criteria selected for product quality tests and their relative weights in overall ratings, in particular with regard to electricity consumption as a financially and environmentally relevant quality parameter. The review of test reports was not intended to compare product performance or product quality between countries.

## **4 - WHAT DO CONSUMER ORGANIZATIONS DO? HOW ARE THEY ORGANIZED?**

### **4.1. Activities**

Depending on the priority objectives and mandates of individual consumer organizations, different types of initiatives and programmes are carried out at local or national levels, and different kinds of services are provided:

- (a) Representatives of consumer organizations typically provide upon request *legal advice* and support to individual consumers in case of complaints or disputes. Counseling for consumer protection is mostly done at the local level or through *phone-in* services.
- (b) Consumer organizations also engage in the promotion of consumer interests and related *advocacy vis-a-vis government, utilities, industries and business*.
- (c) For purposes of *consumer information*, some consumer organizations conduct market surveys and product quality testing, maintain consumer information resource centers and provide product and product quality information services.

Some organizations engage in all three areas. However, most organizations are focused on only one priority area.

#### 4.2. Statutes

Consumer organizations are typically non-governmental organizations. The majority of consumer organizations receive no government funding support and operate as registered private consumer associations, consumer unions or consumer alliances. In many countries consumer organizations rely to a considerable extent on the honorary work and contributions from members. Most organizations are constrained by a lack of financial resources.

Some European and other industrialized country governments have established one or more statutory bodies, agencies or specialized subsidiary institutes for implementation of consumer policy, consumer protection and/or consumer information, with budgetary support partly or fully provided from public funds.

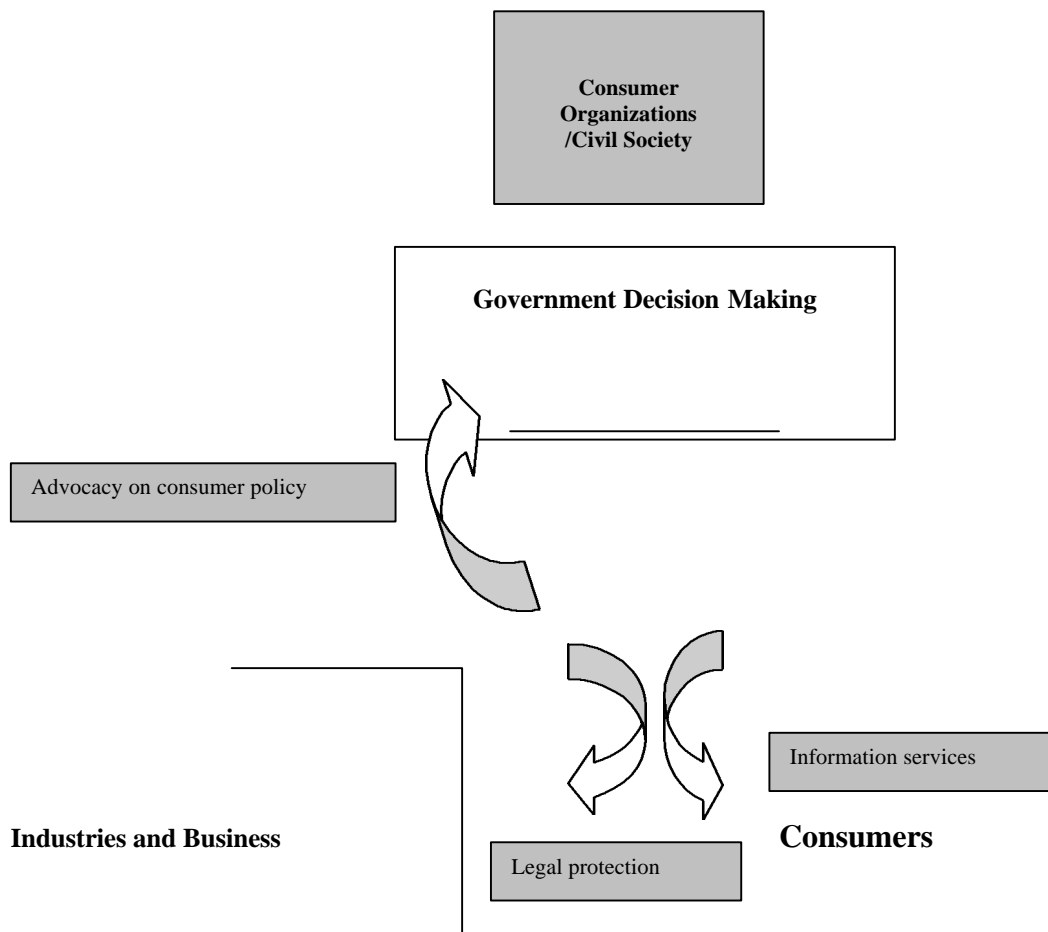


Figure 1. Functions and Activities of Consumer Organizations in Consumer Protection and Information

#### 4.3. How is information disseminated to consumers?

Consumer organizations provide information of interest to members and non-members using the various available media. Most organizations provide their information to consumers through local newspapers. Some organizations also report the use of radio broadcasts and TV. Among the well established organizations the regular publication of newsletters and magazines and guidebooks is the preferred way of disseminating consumer interest information to members and the general public. Some organizations have started to make use of electronic media to disseminate their information (7).

Consumer organizations provide consumers with household energy consumption related information in essentially two complementary ways: (a) *hints and recommendations on energy conscious appliance and equipment use* aim to make consumers aware of energy conservation potentials in their homes; (b) reports on results of *comparative product quality tests for energy-using home appliances* intend to give consumers market overview and information on visible and non-visible aspects of product quality.

Some consumer interest magazines feature articles educating readers on the connection between household energy consumption and emission of greenhouse gases (8). Consumer information measures and consumer awareness creation campaigns for promotion of energy conservation referred to in (a) above are intended to be discussed in a separate paper. The following discussion focuses on comparison tests reports and their potential impact on consumer awareness of and preferences for energy efficiency.

**Table 1 Portrait of Consumer Organizations conducting Product Quality Testing**

Name of Consumer Organization Country founded	Gov't Support	No of staff	Name of Publications	No of copies	Fre- Quency
<b>Australia Consumer Association (ACA)</b> Australia	Yes	na	<b>Choice</b>	na	Monthly
<b>Consumers Association of Canada (CAC)</b> Canada 1947	Yes	na	<b>Canadian Consumer</b>	na	Monthly
<b>Consumers' Association</b> United Kingdom (UK) 1957	No	na	<b>Which?</b>	na	Monthly
<b>Consumentenbond</b> Netherlands 1953	Yes	275	<b>Consumenten Gids</b>	650,000	Monthly
<b>Consumers Institute of New Zealand Inc</b> New Zealand 1960	?	36	<b>Consumer</b>	82,500	Monthly
<b>Consumers Union (CU)</b> USA 1936	No	400	<b>Consumers Report</b>	5 million	Monthly
<b>Forbrukerradet</b> Norway	Yes	140	<b>Forbruker Rapporten</b>	88,000	10 issues per year
<b>Hong Kong Consumer Council (HKCC)</b> Hong Kong, China 1977	Yes	125	<b>Choice</b>	23,000	Monthly
<b>Japan Consumer Information Center (JCIC)</b> Japan 1970	Yes	130	<b>Tashikana me (Critical Eye)</b>	40,000	Monthly
<b>Konsumentverket (KO)</b> Sweden	Gov't Agency	180	<b>Rad &amp; Ron</b>	na	Monthly
<b>Korea Consumer Protection Board (KCPB)</b> Republic of Korea 1987	Yes	na	<b>Consumer Age Cons.Newslet ter</b>	na	Monthly quarterly
<b>Stiftung Warentest</b> Germany 1964	Yes	250	<b>Test</b>	750,000	Monthly
<b>Verein fuer Konsumenteninformation (VKI)</b> Austria	Yes	na	<b>Konsument</b>	na	Monthly

na = not yet available

## **5 - COMPARATIVE PRODUCT QUALITY TESTS: WHAT INFORMATION DO THEY PROVIDE TO CONSUMERS ? DO THEY ENCOURAGE “GREEN” CONSUMERISM?**

**Table 1** presents a portrait of consumer organizations known to conduct product quality comparison tests and publish results in consumer interest magazines. In some European and other industrialized countries, a number of consumer organizations have engaged in product testing since the mid-1960s, covering almost all electrical home appliances. Depending on observed market trends, surveys and product tests are repeated or up-dated every 2 to 3 years, in particular tests on electrical appliances.

### **5.1. General observations on testing**

Product quality testing requires laboratory equipment and professional technical staff only few consumer organizations can afford. Consumer organizations therefore typically commission testing to laboratories for a fee. Due to the costs involved only larger and financially better placed consumer organizations are able to commission testing. Some organizations share or jointly use laboratory facilities. Comparison testing and the publication of consumer interest magazines is mainly a domain for consumer organizations that are supported by government. However, some consumer organizations have been able to develop independent product information services into non-profit but self-financing services (e.g. Consumers' Association, UK; Consumers Union, USA; Consumers Institute of New Zealand Inc., New Zealand).

Comparison tests are only meaningful for products of the same function and the same or at least similar size and capacity. Where functions and capacity ranges vary significantly, consumer organizations often prefer to conduct separate tests.

Technical tests of electrical appliances follow the national and international testing protocols and norms, as applicable in the respective countries (i.e. EN ISO 7371 for energy consumption measurement in refrigerators; IEC 456 11/96 for testing functions of washing machines; IEC 704-2-4/3.89 for measurement of noise from washing machines; as well as national standards for mechanical / electrical safety ). The EU standard classification for energy labeling is followed when energy efficiency categories are verified by consumer organizations from Europe.

### **5.2. General observations on test reporting in consumer interest magazines**

Most test reports combine a brief narrative report with a comparison tabulation providing an overview of the main test results. Where ever space of consumer interest magazines permits, comparison reports also show photographs of products included in the tests, together with brand names and model specifications. Technical specifications (i.e. dimensions, weight, usable space/volume) are regularly listed for comparison purposes, but usually remain excluded from any evaluation.

Some organizations limit the total length of a test report to a maximum of 4-8 pages (e.g. Consumers Union (USA), Forbrukerradet (Norway), Stiftung Warentest (Germany)). This enables the editor to accommodate more reports or other items in the same publication. Some other organizations prefer to present more comprehensive test reports which can be as long as 18 pages ( i.e. Hong Kong Consumer Council *Choice Magazine*, Test report on combination fridge-freezers, 4/1995).

In international comparison, the formats of test reports can vary considerably. Some organizations use symbols (dots/marks/stars) to visualize the relative product ratings under the different quality sub-categories (i.e. Hong Kong Consumer Council). Other organizations grade products in terms of “not satisfactory”, “satisfactory”, “good” and “very good” (most European organizations) or "A" (above average), "B" (average) and "C" (below average) (Japan Consumer Information Center; Korea Consumer Protection Board). The presentation format of test reports varies with what is expected to be most easily understood in the respective country or cultural environment. However, whilst variations in presentation formats are many, they do not as such reflect different quality rating concepts.

Most consumer organizations give their readers tips on appliance use in conjunction with related test reports. Some aspects of general interest to users are sometimes found in supplementary articles (i.e. explanations on suitable positioning of refrigerators in kitchens). Most consumer organizations also list contact addresses of manufacturers to enable readers to obtain any additional information directly from manufacturer, if desired.

### **5.3. Reporting on market surveys and product prices**

In the assessment and experience of most consumer organization representatives, the product price is the main and most important single factor consumers use to rank their preferences and make their choice (9).

In recognition of this priority consumer interest, almost all consumer organizations present a comparative market price survey. The product price listings are prominently placed in the reports, and are often the first item listed in comparison tables.

Some organizations (i.e. Stiftung Warentest of Germany) inform readers on the highest, lowest and average retail prices of each product found in the market. Other organizations (such as Hong Kong Consumer Council and Japan Consumer Information Center) list the manufacturer or official agent recommended retail prices and also give the average prices found through market surveys. Prices are typically obtained from selected suppliers nationwide. Price surveys enable readers to judge if the respective offers for their preferred products are competitively priced.

The market surveys and test reports show readers that for any one product or home appliance, considerable retail price variations exist. In some markets retail price variations can reach or even exceed 15 per cent of the product price. Consumer reports can be expected to make consumers considerably more cost conscious.

### **5.4. Appliance operational electricity costs**

For electrical home appliances with a significant electricity consumption (such as refrigerators, freezers, washing machines, electric heaters or air-conditioners) several consumer organizations calculate the estimated “life-time”/“long-time” electricity costs. (Life-time) operational costs are typically calculated over periods of ten years, at average rates of standard use, with electricity costs (and water costs in case of washing machines) calculated at the prevailing local tariffs.

The presentation of long-term electricity costs in immediate connection with initial purchasing cost enables the reader to calculate and compare products on a more long term “life-cycle” cost basis. Throughout their magazines, and in particular with regard to electrical appliances, consumer organizations remind their readers of the economic benefits of “life-cycle” cost considerations. The “life-cycle” style cost comparison is unique to consumer organization test reports, because in most countries consumers will not likely find such information from any other source.

In many countries surveys of the appliance markets show that there tends to be a correlation between (average) product prices and (average) product quality, including energy efficiency. In many countries, energy efficient products are somewhat higher priced than their lower efficiency counterparts. Through calculating and publicizing operational costs of electrical appliances, consumer organizations and their test reports tend to make the relatively higher priced but more efficient products more acceptable and attractive even to the cost conscious majority of consumers. Consumer organization price surveys and comparisons therefore tend to support acceptance and penetration of energy efficient products in the market.

### **5.5. Product quality testing and quality criteria**

Product testing is done to evaluate the absolute and relative product quality taking into consideration selected quality criteria, mainly *function / performance, convenience / ease of use, durability, as well as environmental and safety aspects*.

(A) According to market research and assessment of most consumer organizations, consumers rate *function / performance* as the relatively most important quality dimension of electrical appliances. *Function / performance* is therefore usually described and discussed first in most appliance test reports.

For *refrigerators*, the main functions tested may include (a) temperature stability / maintenance of cooling temperatures, and (b) temperature range within cooling compartment. For freezers and combination fridge-freezers, the functions tested relate to similar performance parameters. For *washing machines* the main functions tested relate to tub capacity, washing / cleaning performance in the different programmes and wash cycles, and to temperature and other control options.

Most test reports present sub-category summary quality ratings. Depending on product and testing organization, *function / performance* accounts for between 30 to 60 per cent in the overall product quality rating.

(B) *Convenience / ease of use* is identified by several consumer organizations as the second product quality parameter rated important by many consumers. Convenience / ease of use has a different meaning depending on the products being tested.

For *refrigerators or freezers* convenience / ease of use relates to accessibility and design of control functions, utilization of cooling space, ease of cleaning or interior illumination. For *washing machines*, convenience / ease of use may refer to design of easy-to-read controls, size of front or lid opening, special wash cycles, bleach dispenser, fabric softener dispenser, among other factors. Clarity of explanations in operating manuals are also compared. Depending on product and organization *convenience / ease of use* has been found to account for between 10 and 20 per cent in overall quality rating.

(C ) Some consumer organizations also include some *technical aspects* in the product quality evaluations. For refrigerators and freezer, the quality of door seal is one such aspect. For washing machines rotational balance (high load/low load), or lengths of connection wires and tubes are compared. In cases in which technical aspects are evaluated they can account for up to 25 per cent in overall product quality rating.

(D) *Durability* is another quality criterion of concern among consumers. Therefore, some consumer organizations conduct separate (long-term) durability tests, simulating the average / expected use of the products over their expected lifetime. Durability is more significant in products with moving mechanical parts, such as washing machines. Results of durability test were found to account for up to 20 per cent in overall product quality rating.

In lieu of durability tests some consumer organizations conduct consumer surveys and report findings on the frequency of defects or breakdowns.

(E) *Environmental aspects*, which may include consumption of electricity and water (in case of washing machines or dish washers), as well as noise generated by the appliance during its use, are also compared by most consumer organizations as a separate product quality category.

In the comparative test report review *environmental aspects* were found to be given a relative weight of between 15 and 35 per cent in overall product quality rating.

The authors observed that some test reports thus indirectly refer to energy efficiency twice, once under calculated “operational cost” (mentioned under 3.4 above), and a second time in qualitative terms under “environmental dimensions”. The repeated references to energy efficiency may draw the attention of the reader to these aspects, and constitute an indirect promotion of energy efficiency.

One consumer organization (Japan Consumer Information Center) also includes the nature and quantity of packaging materials used in the comparative assessment of environmental aspects (cardboard, foam, plastics).

(F) As applicable, several consumer organizations also assess and evaluate *safety aspects* as a separate quality dimension. Electrical appliances are designed and manufactured in compliance with national electrical safety standards. Variations in product safety are, therefore, usually limited. If included in the evaluation, *safety aspects* rarely account for more than 5 per cent in overall product quality rating.

### 5.6. Weighing of quality criteria in summary product quality rating

When reviewing test reports, most readers are likely to look first for the **overall product quality rating** before they review any detailed technical aspect or product comparison in sub-categories. How are overall quality ratings calculated, and what relative importance is given to energy efficiency ?

Appliances of different brands included in one test batch may show different performance under different quality criteria. Some products with superior quality in some aspect may be less perfect in another. At this point the relative weights given to the different quality criteria significantly affect the overall product ratings. Whereas technical performance tests and their outcomes represent objective results, some normative decisions are unavoidable when several quality criteria are weighed together to give summary product quality ratings.

Most consumer organizations determine relative consumer preferences through own market studies and/or by way of interviews. The selected quality parameters and their relative weights are subsequently determined accordingly by testers and/or the test report editors.

In the light of the above, the relative weights given to the product quality parameters can be expected to differ from product category to product category, from organization to organization, or from country to country, reflecting the relative weights given by consumers to the various quality parameters.

Some organizations maintain uniform criteria weights for tests related to the same appliance category; other organizations change the relative weights from test to test (i.e. Consumers Association, UK; Stiftung Warentest, Germany). Some organizations (e.g. Forbrukerradet, Norway) do not always calculate or present summary product quality scores, especially in tests in which the number of products compared or the number of comparison criteria are limited. Test reports of consumer information organizations in Republic of Korea (Korea Consumer Protection Board, KCPB) and Japan (Japan Consumer Information Center, JCIC), typically rank products only in sub-categories, but do not calculate summary product quality ratings.

**Tables 2 A and 2 B** allow a comparison of product quality criteria and their relative weights in recent test reports of eight selected consumer organizations (3 European; 3 East Asian; 1 American, 1 Australian) In spite of the many fore mentioned testing and relative weight variations, it can be observed that consumer organizations are increasingly including energy efficiency, and where applicable, water saving as environmental aspects in the assessment of product quality, *even if the environmental aspects do not necessarily represent any immediate or direct (material) benefit to the consumer.*



**Table 2 A: Quality criteria and their relative weight in product tests**  
**Appliance category: Household refrigerators, freezers and combination fridge-freezers**

	Function/ Performance	Con- Venience	Environmental Aspects				Technical Aspects	Safety	Total
			Energy	Noise	CFC	Total			
Australian Consumer Association									
Choice Magazine (6/1997) - 2 door Combination Fridge-freezer 380 – 423 l	50 %	50 %	(22.5 % considered under function)				n t / n w	n t / n w	100%
Choice Magazine (3/1998) - 2 door Combination Fridge-freezer 480 – 520 l	50 %	50 %	(20 % considered under function)				n t / n w	n t / n w	100%
Consumers' Association (UK)									
Which? Magazine (2/1997) – Worktop Height, uprights and chest freezers 73 - 294 l	50 % * ?	10%	20 %	10 %		30 %	n t / n w	n t / n w	100 %
Which? Magazine (5/1997) - Larder Fridges and Fridges with Icebox 84 -137 l	55 %	10%	25 %	10 %		35 %	n t / n w	n t / n w	100 %
Which? Magazine (10/1997) Fridge-freezers 160 - 238 l (total vol)	57..5 %	7..5 %	25 %	10 %		35 %	n t / n w	n t / n w	100 %
Which? Magazine (10/1998) Fridge-freezers 160 - 284 l (total vol)	52..5 %	12..5 %	25 %	10 %		35 %	n t / n w	n t / n w	100 %
Consumers Union (USA) **									
Consumer Reports (5/1996) CFC-free Refrigerators with Top-freezers Apt. Size (14-16 ft³) - US\$ 520-580 Med. Size (21-22 ft³) - US\$ 660- 930	yes	yes	yes	yes	yes		n t / n w	n t / n w	100 %
Consumer reports (2/1997) Small, medium and large refrigerators with Top-freezers, Side-by-side Models, various sizes (18-27 ft³) US\$ 550 –1700	yes	yes	yes	yes	yes		n t / n w	n t / n w	100 %
Consumer reports (2/1999) Refrigerators with Top-freezers, Side-by-side Models, (21-23 ft³) US\$ 570 –1500	yes	yes	yes	yes	yes		n t / n w	n t / n w	100 %
Hong Kong Consumer Council									
Choice Magazine (4/1995) - 2door / 3 door Combination Fridge-freezer 300-400 l	40 %	20 %	20 %	5 %	5 %	30 %	10 %	n t / n w	100%
Korea Consumer Protection Board									
Consumer Age (12/1997) - 2 door Combination fridge-freezer (500-550 l)	Yes yes  Products rated under sub-		yes yes	nt / nw	yes		yes	yes	No overall rating
Stiftung Warentest									
Test Magazine (5/1995) - Refrigerators 121-144 l with 3*** freeze compartment	35 %	15 %	25 %	n t / n w	n t / n w	25 %	25 %	n t / n w	100%
Test Magazine (2/1996) – Refrigerators 130-171 l for built-in kitchens	30 %	20 %				30 %	20 %	n t / n w	100%
Test Magazine (2/1997) – Freezers 76 - 112 l for built-in kitchens	30 %	15 %				30 %	20 %	5 %	100%
Test Magazine (7/1997) – Refrigerators 116-124 l with 3*** or 4**** compartment	55 %	10 %				35 %	n t / n w	n t / n w	100%
Verein fuer Konsumenteninformation (VKI)									
Konsument Magazine (8/1998) Freezers (Upright) - 180-240 l	80 %	20 %	yes yes	nt / nw	yes		Yes yes included under perf <sup>m</sup> ce		100%

\* in Which? (2/1997 Test report) sum of weights not equal to total 100 %

\*\* summary rating calculated but not published in CU reports (5/1996; 2/1997; and 2/1999)

**Table 2 B: Quality criteria and their relative weight in product tests**  
**Appliance category: Household washing machines (front-loading and top-loading)**

	Function	Dura bility	Con- venience	Technical Aspects *	Environmental Aspects			Safety	Other	Total
					Energy	Water	Total			
Australia Consumers Association										
Choice Magazine (9/1997) - front and top Loaders ( 5-6 kg capacity; price below AUD 1200 )	70 % (40 %) (15 %) (15 %)	n t   nt   nt dirt removal score spin efficiency score gentleness score			15 %	15 %	30 %	n t	n t	100 %
Choice Magazine (9/1997) - front and top Loaders ( 6.5-7.5 kg capacity; price below AUD 1200 )	70 % (40 %) (15 %) (15 %)	n t   n t   nt dirt removal score spin efficiency score gentleness score			15 %	15 %	30 %	nNt	n t	100 %
Consumers Union (USA) **										
Consumer Reports (7/1996) Front and top loaders Price range: US\$ 350 – 600	yes	nt	nt	yes capacity	yes	yes	yes	nt	n w	100 %
Consumer reports (7/1998) Front and top loaders Price range: US\$ 300 - 1,600	yes	nt	nt	yes capacity	yes	yes	yes	nt	nw	100 %
Hong Kong Consumer Council										
Choice Magazine (1/1994) - front and top Loading washing machines	55 %	n t / nw	5 %	n w	15 %	15 %	30 %	n w	10 % noise	100 %
Choice Magazine (5/1998) - front and top Loading Combination Washer Dryer	90% (55 %) (35 %)	n t / n w	10 %	"washing performance" includes all other aspects "drying performance" includes all otheraspects						100 %
Japan Consumer Information Center										
Tashikana Me Magazine (9/1995) Top-loading (6-6.5 kgs) [ only models able to use recycled bath-tub water]	yes   no   yes   yes ( products rated in each subcategory, but no summary rating)				yes	yes	yes	Yes	yes	No Overall rating
Tashikana Me Magazine (7/1997) Top-loading (7-7.5 kgs) [ only models with Wash cycles suitable for sensitive clothes ]	yes   no   yes   yes ( products rated in each subcategory, but no summary rating)				yes	yes	yes	Yes	yes	No overall rating
Stiftung Warentest										
Test Magazine (10/1994) - front loading Washing machines (~ 1000 rpm)	40 %	20 %	15 %	10 %			10 %	5 %	nt	100 %
Test Magazine (10/1995) - front loading Washing machines (~1200 rpm)	40%	20 %	15 %	10 %			15 %	nt	nt	100 %
Test Magazine (10/1996) - small size Washing machines (front & top load) (~ 1000 rpm)	50 %	n t / n w	15 %	10 %			20 %	5 %	nt	100 %
Test Magazine (1/1998) - top-loading Washing machines (1000-1200rpm)	40 %	20 %	10 %	10 %			15 %	5 %	nt	100 %

Notes: nt / nw = not tested / not weighted separately in summary rating

\* rotational balance

\*\* summary rating calculated but not published in CU reports (5/1996; 2/1997; and 2/1999)

In their review of test reports the authors found that environmental aspects were accorded between 15 to 35 per cent in overall product quality rating. The inclusion of environmental aspects in comparative product quality testing tends to support the public acceptance and preference formation for the relatively more energy efficient products, in particular in those cases in which energy efficient appliances match their competing products on the other quality counts.

### **5.7. Product Quality Testing and Consumer Preferences**

Most consumer organization executives reported that their organizations monitor and periodically analyze feed-back received from individual member or subscribers. The evaluation of feed-back is mainly related to (a) selection of products tested, (b) presentation styles, and (c ) information provided. In some cases consumer organizations have also conducted studies regarding use of the information provided to consumers / members through consumer interest magazines and related test reports. Some organizations concluded that their consumer information magazines are an important source of information for consumers on energy efficiency / conservation.

A quantitative assessment of the impact of consumer organization information work on *green consumerism* or *sustainable energy use* may be possible but would require considerable resources. However, the qualitative assessment presented above may provide an initial indication on the nature of the impact.

Many consumer organization representatives consider their members/subscribers to be more environmentally conscious in their lifestyles, appliance use and product choice than average consumers. The regular distribution of test reports to this group of consumers can be expected to reinforce the relative preference for higher quality products, including more energy efficient products, among this consumer group.

## **6 - MARKET REACTION TO PRODUCT TESTING: INDIRECT IMPACTS OF CONSUMER INFORMATION ON PRODUCT QUALITY DEVELOPMENT**

Whilst test reports are mainly written for use of individual consumers they also attract attention among the industry concerned. In addition to private consumers, subscribers of consumer interest magazines include traders and distributors, including merchants trading in electrical home appliances, who take a professional interest and who may take test ratings into consideration when reviewing and ordering new stock.

As a part of their tests, some consumer organizations verify energy efficiency label ratings or claimed product capacity and publicize discrepancies where they occur.

In the communications with consumer organization executives, the direct and indirect feed back obtained from manufacturers was also discussed. Consumer organization representatives referred to their own experiences and observations and indicated that on various occasions manufacturers seem to have reacted to the publication of test results. In some cases in which an unsatisfactory product performance or deficient quality was reported, some manufacturers have threatened or taken legal action to dispute testing methods or results. In selected other cases, consumer organizations have observed that after publication of test results some inferior quality products have been taken from the market, or have been replaced by other products with different model names or specifications. In competitive markets manufacturers can ill afford any negative publicity from consumer organization bodies.

In most countries included in this review, consumer organizations discourage the quotation of test results in commercial company advertising, as it may impair public perception regarding neutrality or consumer organization independence from commercial interests. However, representatives of several organizations have reported that manufacturers nevertheless sometimes use positive test ratings in their product promotion and advertising campaigns.

These observations demonstrate that product testing performed by consumer organizations can have significant indirect impacts. In addition to any voluntary or mandatory product standards demanded by governments, consumer organizations through their unique creation of greater market transparency seem to exercise considerable indirect pressure on industries and business for the maintenance and development of product quality, including energy efficiency.

## 7 - ACKNOWLEDGEMENT:

*The authors express their appreciation and thanks to the organizations and individual experts who have provided information towards this study, have assisted with translations and the interpretation of test reports or have commented on earlier versions of this paper.*

## 8 - ENDNOTES AND REFERENCES

- (1) Consumers International WWW-site: <http://www.consumersinternational.org>
- (2) United Nations General Assembly Resolution A/RES/39/248 (16 April 1985)
- (3) United Nations Economic and Social Council, Commission on Sustainable Development, Sixth session (20-April - 01 May 1998), Report of the Secretary General, *Consumer protection: guidelines for sustainable consumption*, Document E/CN.17/1998/5 (19 February 1998).
- (4) Consumers International, 1998, *Green guidance: how consumer organizations can give better advice on putting sustainable consumption into practice*.
- (3) Following consumer organizations returned questionnaires and/or provided other information towards this study: Australia Consumers Association (ACA, Australia); Consumidores y Usuarios (Spain); Citizens' Alliance for Consumer Protection (CACPK; Republic of Korea); Consumentenbond (Netherlands); Consumer Institute of New Zealand Inc (New Zealand); Consumers International (UK); Consumers Union (CU, United States of America); Forbrukerradet (Norway); Foundation for Consumers (Bangkok, Thailand); Hong Kong Consumer Council (KHCC; Hong Kong, China); Japan Consumer Information Center, JICI, Japan; Konsumentverket (KO) (Swedish Consumer Agency); Korea Consumer Protection Board (KCPB; Republic of Korea); Stiftung Warentest (Germany); Verbraucherschutzverein (Germany); Verein fuer Konsumenteninformation (VKI), Austria.
6. Information on the *Asia-Pacific NGO Forum on Effective Consumer Information for Sustainable Energy Use* can be obtained through ESCAP WWW-site: <http://www.unescap.org/enrd/energy/eff.htm>
7. For a description of changing concepts in consumer information magazines see also Erik de Gier (Consumentenbond, Netherlands) *"The future of consumer magazines in Holland: from Mass production to individually tailor made?"*, 15<sup>th</sup> World Congress of Consumers International, Santiago, Chile, 3-7 November 1997.
8. Consumer Union (USA), Consumer Reports (9/1996) *"Turning up the heat"*, and Australian Consumers Association (ACA), Choice (4/1997) *"How to save the earth and your money"*.
9. The communications with consumer organization representatives have revealed some differential assessment in the relative importance that the product price has in consumer decisions compared with quality or other criteria. In Germany and United States of America, representatives of the main testing organizations suggested that approximately 40-50 per cent of the consumers include factors other than price in their purchase decision (i.e. environmental aspects). The corresponding consumer group from Spain suggested that likely only 2 per cent of consumers in Spain may consider environmental aspects in their product choice.
10. Some organizations were found to include reference to warranties in their test reports (Consumers Union, USA). Other organizations discuss warranty issues separately from product test reports (Stiftung Warentest, Germany).