



Report

IEA DSM Programme Task VII
*'International Collaboration on
Market Transformation' (mt7)*
***'Multinational study of knowledge
and attitudes towards efficient use
of energy in private households
over 5 European countries' 2003***

energy efficiency *Stimulating demand for buying 'energy efficiency'*
demand
branding

<http://dsm.iea.org>

Branding Energy Efficiency



Report From A Multinational Study Of Knowledge And Attitudes Towards Efficient Use Of Energy In Private Households In 6 European Countries

International Energy Agency
Implementing Agreement for Co-operation on
Technologies and Programmes for Demand Side Management

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IEA DSM Task VII International Collaboration on Market Transformation

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IEA Demand-Side Management Programme

The International Energy Agency (IEA) was established in 1974 as an autonomous agency within the framework of the Economic Cooperation and Development (OECD) to carry out a comprehensive program of energy cooperation among its 26 Member countries and the Commission of the European Communities.

An important part of the Agency's program involves collaboration in the research, development and demonstration of new energy technologies to reduce excessive reliance on imported oil, increase long-term energy security and reduce greenhouse gas emissions. The IEA's R&D activities are headed by the Committee on Energy Research and Technology (CERT) and supported by a small Secretariat staff, headquartered in Paris. In addition, three Working Parties are charged with monitoring the various collaborative energy agreements, identifying new areas for cooperation and advising the CERT on policy matters.

Collaborative programs in the various energy technology areas are conducted under Implementing Agreements, which are signed by contracting parties (government agencies or entities designated by them). There are currently 40 Implementing Agreements covering fossil fuel technologies, renewable energy technologies, efficient energy end-use technologies, nuclear fusion science and technology and energy technology information centres.

The Demand-Side Management Programme is a new collaboration. Since 1993, the 17 Member countries and the European Commission have been working to clarify and promote opportunities for DSM.

Australia	France	Spain
Austria	Greece	Sweden
Belgium	Italy	United Kingdom
Canada	Japan	United States
Denmark	Korea	
European Commission	Netherlands	
Finland	Norway	

A total of 10 Tasks have been initiated, 5 of which have been completed. Each Task is managed by an Operating Agent from one of the participating countries. Overall control of the program rests with an Executive Committee comprised of one representative from each contracting party to the Implementing Agreement. In addition, a number of special ad hoc activities--conferences and workshops--have been organised. The Tasks of the IEA Demand-Side Management Programme, both current and completed, are as follows:

Tasks:

- Task I* International Database on Demand-Side Management
- Task II Communications Technologies for Demand-Side Management
- Task III* Cooperative Procurement of Innovative Technologies for Demand-Side Management
- Task IV* Development of Improved Methods for Integrating Demand-Side Management

- Task V* Investigation of Techniques for Implementation of Demand-Side Management Technology in the Marketplace
- Task VI* DSM and Energy Efficiency in Changing Electricity Business Environments
- Task VII International Collaboration on Market Transformation
- Task VIII Demand Side Bidding in a Competitive Electricity Market
- Task IX The Role of Municipalities in a Liberalised System
- Task X Performance Contracting

* completed Task

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Executive Summary

WHEN WILL BUYING “ENERGY EFFICIENT” BE AS FASHIONABLE AS BUYING “ORGANIC”?

The marketing challenge for the branding of energy efficiency is not a question of spreading knowledge but of establishing image is but one of the conclusions drawn from this multi-national energy efficiency study conducted by the IEA DSM's Task VII.

On behalf of Task VII under The International Energy Agency's Demand Side Management (IEA DSM Task VII). Markeds og Medianinstituttet AS (MMI) organised and carried out a survey of 6 European countries (Denmark, Finland, The Netherlands, Norway, Sweden and UK) to measure knowledge and attitudes towards efficient use of energy in private households. The intention was to use these findings to stimulate new methods of targeted marketing amongst energy efficient product manufacturers.

The study explores attitudes and behaviour in the field of energy efficiency, which are closely related to typologies and value patterns. Understanding the characteristics of these typologies and value patterns will be crucial for those wishing to market their energy efficient products and services effectively.

To the best of the authors knowledge, no such international investigation has ever been undertaken with an emphasis on analysing attitudes, habits and the use of energy efficient products and how these correlate to an individual's specific socio cultural cluster.

The results have conclusively proved that a cross-country analysis of public attitudes on energy efficiency is possible. The results also provide invaluable information that is needed when talking about “selling” energy efficiency as a concept with multinational market actors and industry.

The research explores a number of issues vital to understanding the complex purchasing patterns of the domestic user of energy including a dialogue on brand attraction, knowledge of energy saving efforts, energy saving actions, use of energy saving light bulbs, energy efficient behaviour and willingness to pay for products labelled with special energy efficiency symbols.

The report's findings are based on both bivariate and multivariate analysis and include some interesting findings for those involved in energy efficiency, and for product manufacturers who produce efficient products. For instance, at least 2/3 of the 6000 strong survey sample were willing to pay more for products labelled with special energy efficient symbols – good news for those in the electronics industry who may be concentrating efforts on increased product efficiency.

This critical marketing data has enabled Task VII participants and industry to explore new promotional ideas for energy efficiency and to seek solutions that will increase consumers' desire for energy efficient products and services.

The results of this market research, in conjunction with a cooperative industry, may provide the key to stimulate a demand for the “brand” of energy efficiency that could be as strong as the ever growing demand for the brand of ‘organic’ food’.

It is hoped that various market actors will use the information from the following market research to develop a 'brand' approach to energy efficiency. This 'brand' approach would focus more strongly on people as brand aware, self-conscious consumers. Thereby lifting promotion of energy efficiency beyond the usual 'save money and the planet' arguments and seeking to identify energy efficiency with the lifestyles, values and attitudes that currently drive consumer purchasing.

Background – Branding of Energy Efficiency

Energy saving technologies are currently available for most systems such as refrigeration equipment, lighting, washing machines, freezers, dryers etc. This equipment is not only technically proven but also cost effective at current energy market prices. In addition, most of these products are labelled as energy efficient and by all respects represent the common sense choice to consumers. However, the overall sales of these products when compared to their potential use and benefits to the consumer are very disappointing. This is because the preferred choices made by consumers are largely motivated by factors other than energy efficiency. For instance, when a consumer chooses between fridge A or B they often base their decision on brand name, design, interior lay-out, noise level and product's price, rather than the energy consumption considerations of the fridge.

Energy efficiency is low or non-existent in the consumer's **hierarchy of needs** when deciding between competing consumer products. There are many complex reasons for this consistent disregarding of energy efficiency in purchasing decisions. However, one theory holds that energy efficiency is not dominant in purchasing decisions because few consumers, if any, have ever been professionally exposed to marketing and branding of energy efficiency as a positive consumer choice. As a consequence, the value attached to the brand's image, i.e. capability of reflecting and enhancing the purchaser's own desired image as being energy-conscious, is not perceived as a selling point.

Subsequently energy efficiency is not in the consumers' **evoked set**, not at the top of their mind and hence disregarded and rejected in favour of other factors that have established themselves in the market place. These other factors have acquired their positions in the mind's evoked set through marketing by the producers and retailers over long periods of time. As yet there has been little significant marketing of energy efficiency as a desired selling point for consumers.

One of the most efficient marketing concepts in existence today is establishing **brand preferences**, i.e. making the buyers voluntarily prefer, even at higher prices, products that yield added value in the form of intangible assets like image or reinforced image to the buyers. Building an **Energy Efficiency Brand** utilising the skills and techniques inherited from marketing will provide a communicable and targeted means through which to raise the profile of energy efficiency up the list of a consumer's preferred choice. Targeted sectors in the market will respond differently to a variety of branding messages. The most effective way to communicate any message is to know how and what message the receiver of the information best responds to. One way of finding out attitudes and values in the field of Energy Efficiency is to undertake market research studies revealing just how sectors of consumers can be expected to react to a 'branded' energy efficiency message. This will be dependent on a consumer's set of values and aspirations as defined by the social-valued category he/she is a 'member' of.

Brands give generic products added value by adding desired image to the buyer, which is why:

People don't buy the generic drink mineral water - they buy Coke, or Pepsi.

People don't buy generic shoes - they buy Dr. Martens or Nike.

People don't buy generic film - they buy Kodak or Fuji.

And as a better example in this instance, people no longer just buy food they specify **Organic Food**. Branding energy efficiency as a positive lifestyle choice in tune with peoples' desires, aspirations and values, may help to raise energy efficiency up the agenda of consumers purchasing decisions so that, like organic food, requesting energy efficiency becomes a popular choice when consumers are buying new energy using products. This has the capacity to transform the chain of market actors, from manufacturing through to the selling and buying of products, as the demand for the most energy efficient products increases.

Introduction

On behalf of Task VII under The International Energy Agency's Demand Side Management Programme (IEA DSM Task VII), Markeds og Mediainstitutet AS (MMI) organised and carried out a survey in 6 European countries (Denmark, Finland, The Netherlands, Norway, Sweden and UK) to measure knowledge and attitudes towards efficient use of energy in private households. The survey formed part of the work plan for the IEA DSM Task VII, which aims to transform the way energy efficiency is promoted and achieved in the marketplace.

There were two main goals for undertaking this research:

- 1) The first was to establish a common empirical platform for market description by collecting common cross-country data about the knowledge and attitudes on energy saving matters in the participating country populations. By using the same parameters, the researchers also were able to obtain comparative measures on the subject from country to country.
- 2) The second goal was to establish a cross-country socio-cultural framework for analysing the knowledge and attitudes on energy saving. By using MMI's MicroMonitor, the researchers were able to describe and analyse the socio-cultural patterns in the so-called '*Value Map*'. This map describes the correlations between target groups defined by certain knowledge or attitudes and scores on socio-cultural values (profound convictions of what is right or wrong in life). From this description we can better understand the behaviour and market adjustments of different segments in the market.

In reaching the two goals, Task VII established a common platform for developing market strategies for energy efficiency and energy efficient products.

The survey was carried out by telephone interviews (CATI) in spring and summer of 2001. The survey in Norway was executed as a pilot study in the last week of March. In Denmark, Sweden, Finland and The Netherlands, the fieldwork was carried out in May, while the UK study was delayed by the prohibition against publicly financed surveys in the campaign period before Parliament elections, and thus carried out in the last half of June. The fieldwork was carried out by the following institutes:

- Denmark: PLS Rambøll Management A/S
- Finland: Taloustutkimus Oy
- Norway: Markeds- og Mediainstitutet AS (MMI)
- The Netherlands: ITC International BV
- Sweden: TEMO AB
- UK: MORI Telephone Surveys

In Denmark, Finland, Norway, The Netherlands and Sweden a national representative sample of 1000 persons over the age of 15 were interviewed. In the UK, where 4 countries were to be covered, the total sample was 1200 persons aged 16+, distributed between 700 in England, 250 in Scotland, 150 in Wales and 100 in Northern Ireland.

The national samples have been weighted by gender and age in standard geographic regions. In the total base, each country is included with equal country weights.

The tables present results in percentage points. The table heads show number of interviews which the respective percentage points are built upon in both the total column and the breakdowns. In the table part of this report, the authors present the distribution of answers for all questions, both in the total base and with breakdowns on gender, age, household income, country, education, ownership of home, house type, household size and socio-cultural segments. Each table comprises three pages.

Because this is a sample survey, where the whole population is not observed, all results in this report contain some statistical uncertainty. However, this uncertainty can be estimated. Numbers in the total column contain margins of error from +/- 2-3 percentage points. Margins of error for subgroups are likely to be higher. One should be careful interpreting results from subgroups consisting of less than 35-40 interviews.

Differences between subgroups which are significant (read horizontal) and the total column are shown in the tables as black (significantly higher) and white (significantly lower) triangles. These considerations of significance are based on a chi-square test.

The contact persons for this survey were Mr. Verney Ryan at BRE in UK, Operating Agent for IEA DSM Task VII and Mr. Johnny Almvang, representing NVE (the energy efficiency authority in Norway). Responsible for operations and report is Mr. Erik Dalen, assistant managing director of MMI.

Presentation of results with brief comments.

On the following pages the total results are presented and short comments related to each substantial question are provided in the same sequence as they were asked. For deeper and more detailed analyses, the enclosed tables provide the numerical results.

The results are presented in two parts. First the results from the bivariate analyses are provided, showing the distributions of answers on all the substantial energy efficiency questions. In the second part, the results from the socio-cultural analyses with the multivariate approach are presented with accompanying comments.

The Bivariate Analyses

Brand attraction

The first question measures what is known as 'brand attraction'. It is obviously very difficult to ask about this in a way that makes it reasonable and easy for individuals to report their real preferences for exclusive brands. Social norms and other motives may produce "tactical" answers, hiding the real attitudes. Nevertheless, the answers enable readers to identify a part of the population that is more attracted by exclusive brands than others. And this is exactly the objective by asking such a question. By defining a target group who claim to be high frequent buyers of exclusive brands because it strengthens their image and gives them respect from others, it is possible to analyse the correlation between brand consciousness and attitudes towards energy efficiency.

As can be seen from the diagram below, about 17% of the adult population in the six countries can be defined as attracted by exclusive brands, as they claim to buy such brands often or sometimes. If those who do it seldom are included, the target group expands to 36% of the total population.

Do you often, sometimes, seldom or never buy certain, exclusive brands which cost more, because it strengthens your image or gives you respect from others?

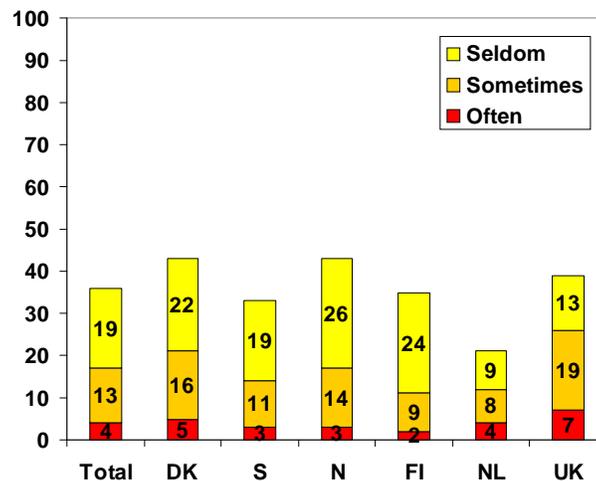


Figure 1.0 – Responses Indicating Preference For Brands

If we rely on those who answer *often* or *sometimes*, we see that the respondents from Denmark (21%) and the United Kingdom (26%) seem to be most often attracted to exclusive brands, while those from Finland (11%) and the Netherlands (12%) seem to be less attracted to exclusive brands than others. In the opinion of the research team, the differences between the countries are not dramatic. It must be kept in mind that cross-country surveys of this type may produce differences that are culturally based and do not necessarily reflect differences in attitudes. This is because the questions may be related differently to the real life of people in different countries.

Young people are much more attracted to exclusive brands than older people. People with high education are slightly more attracted to exclusive brands than people with low education, but this may be as much to do with age also, as young people are often more highly educated than those of older generations.

Knowledge of energy saving efforts

In order to make people use energy more efficiently, it is obviously important that people are informed of what to do. To get an impression of the knowledge of energy saving efforts and variations between the countries, the researchers asked what one can do to use energy more efficiently. The response ‘no efforts’ was read out by the interviewer, but a series of alternatives were precoded in the questionnaire. Therefore, the interviewer had to allocate each answer to the precoded alternatives, or if this was difficult, tick off under “other”. It should be noted here, that representatives from all the participating countries contributed with common local answers in order to make the list consistent and complete.

In the diagram below it can be seen that the most frequent answer is “Turn out the lights in rooms you do not use”, mentioned by 41% of the sample, more than double those answering “use energy saving light bulbs” (17%) and “Lower temperature in living rooms” (16%).

What can you do to use energy more efficiently?

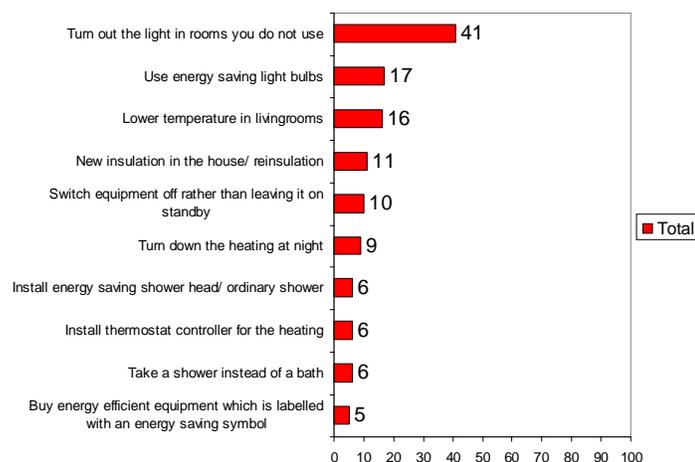


Figure 1.1 – Knowledge Of Energy Saving Efforts - Total

There are surprisingly few people in the sample who are able to mention any alternative from “Turn out the light in rooms you do not use”. This question is not about what one is willing to do or what one already has done, but only about efforts that will be energy saving if they are done. Therefore, there is still great potential in providing alternatives to make it clear that actions such as turning down heating in night, or taking a shower instead of a bath will also save energy.

As many as 18% in the total sample were not able to give any answer, and only about 22% gave three or more answers.

There are some interesting variations between the countries. In the following diagram the ten most frequent answers in Denmark are shown. The Danes are able to give more

answers than the total sample, and both “Turn out the light in rooms you do not use” (48%) and “use energy saving light bulbs” (28%) are answered significantly more frequent than the total sample.

What can you do to use energy more efficiently?

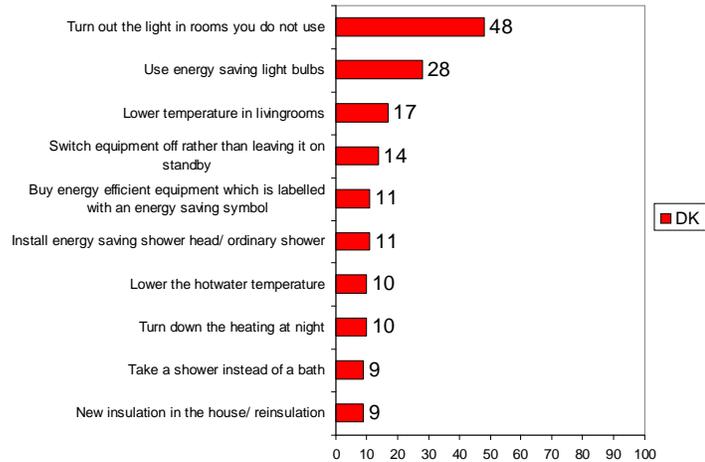


Figure 1.2 – Knowledge Of Energy Saving Efforts – Denmark

When looking at the sample from Norway, we find that “Turn out the light in rooms you do not use” is answered more frequently (47%) than the total sample, while “use energy saving light bulbs” (14%) is answered less frequently. Perhaps because of the cold climate and historically cheap energy, “Lower temperature in living rooms” (26%) is the second most frequent answer, while “Install energy saving shower head” (19%) is the third most frequent answer.

What can you do to use energy more efficiently?

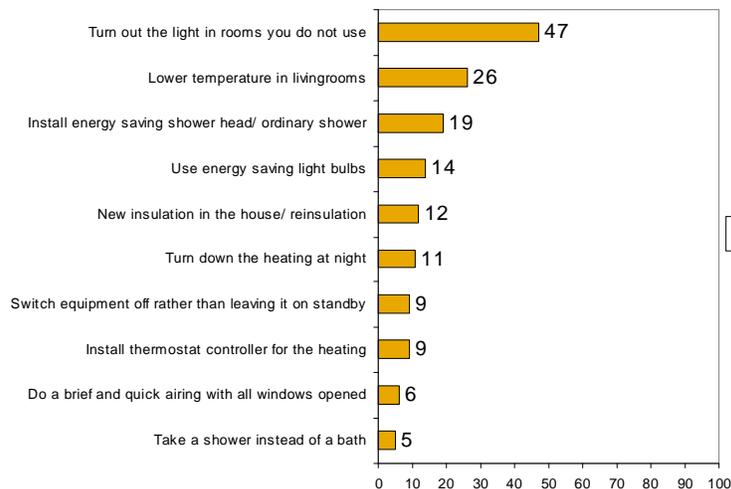


Figure 1.3 – Knowledge Of Energy Saving Efforts – Norway

In the diagram below the results from Finland can be seen:

What can you do to use energy more efficiently?

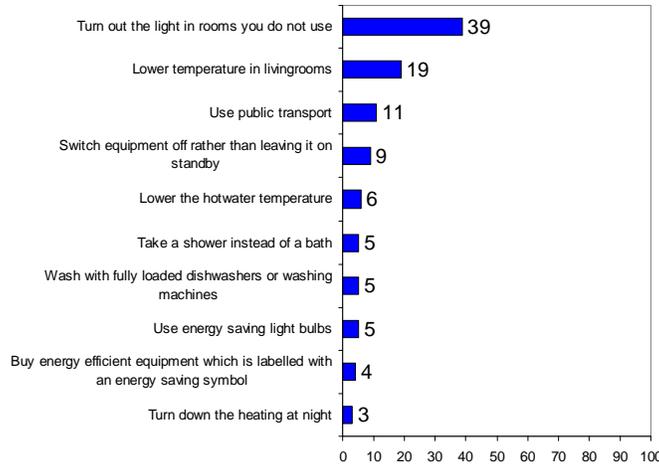


Figure 1.4 – Knowledge Of Energy Saving Efforts – Finland

It can be seen that the rank between the answers does not differ much from the total, but that the average frequency is lower for the top ten answers. Energy saving light bulbs do not seem to be popular among the Fins compared to the other nations, while “Using public transport” (11%) is answered more frequently.

The sample from Sweden differs from the total with lower frequencies for the top ten answers as seen below:

What can you do to use energy more efficiently?

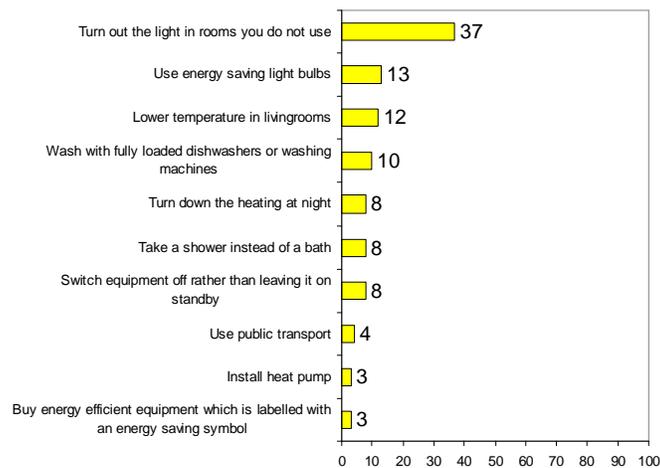


Figure 1.5 – Knowledge Of Energy Saving Efforts – Sweden

The UK results show that the answer “New insulation in the house/re-insulation” appears at a rate more than double the frequency of the total sample (24%). That is also the case with “Install triple/double glazing” (17%).

What can you do to use energy more efficiently?

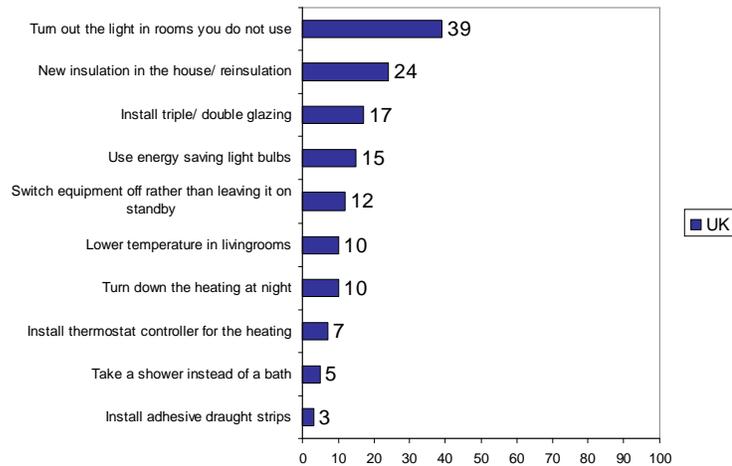


Figure 1.6 – Knowledge Of Energy Saving Efforts – UK

The results from the Netherlands shown below also state some deviations from the total. On the one hand, “Turn out the light in rooms you do not use” is answered less frequently (34%) than the total sample, while on the other hand “Use energy saving light bulbs” (24%) and “New insulation in the house/re-insulation” are answered more frequently (16%).

What can you do to use energy more efficiently?

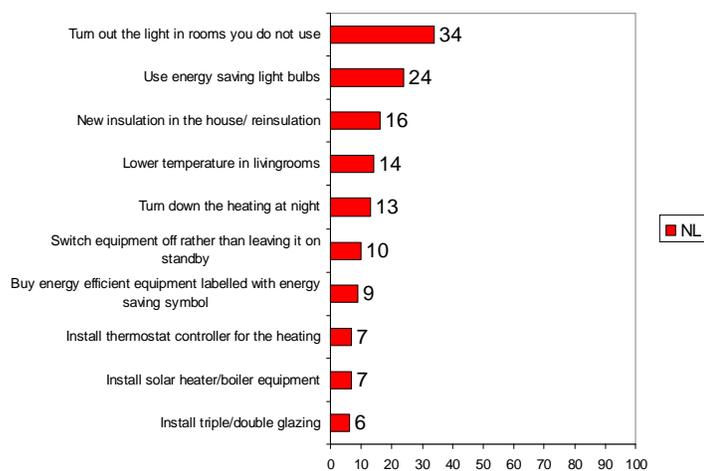


Figure 1.7 – Knowledge Of Energy Saving Efforts – The Netherlands

The overall impression provided by these results indicates that most of the population are aware of some simple daily activities that contribute to energy saving at a household level.

Whilst these activities are similar amongst the participating countries it is also somewhat alarming how limited the range of knowledge about energy saving practices is.

Energy saving actions

It is one thing to know about different activities that can lead to a more efficient use of energy, but knowledge is not always a guarantee for actions. Therefore the researchers asked the respondents to provide information about what they had actually done themselves to use energy more efficiently.

Not surprisingly, as is seen in the diagram below, very similar actions are mentioned as commented in the previous chapter on knowledge awareness. The frequencies are almost the same or slightly lower in most cases. This shows that people seem to know about activities that they are engaged with, but it cannot be concluded that there is correlation between knowledge and action at this stage of the analysis. It may be more likely that the two questions were understood as similar during the process of the survey.

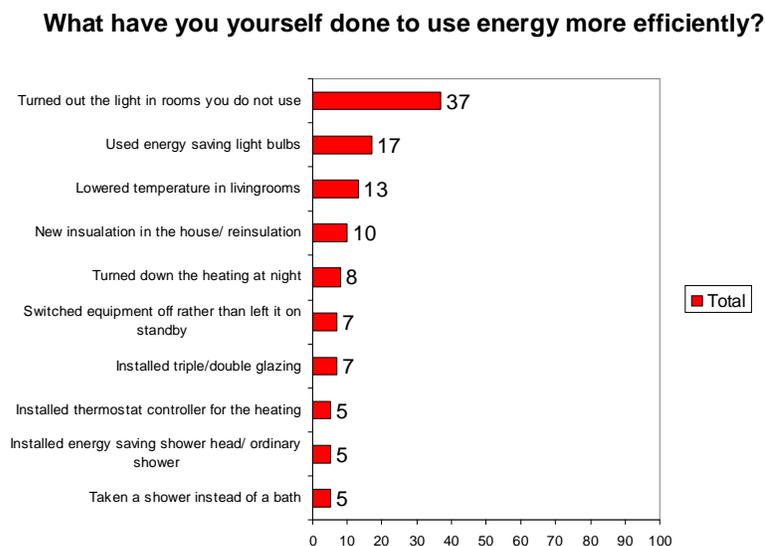


Figure 1.8 – Energy Saving Actions – Total

The only statement among the “top ten” in this ranking that was not in the knowledge ranking is “Installed triple/double glazing”. On the face of the results the impression is that the action frequencies are somewhat low. But it must be kept in mind that the actions were not read out for the respondents – and therefore the possibility of forgetting some actions is high.

The variations from country to country are very similar to those encountered in the previous chapter on knowledge. Let us first have a look at Denmark:

What have you yourself done to use energy more efficiently?

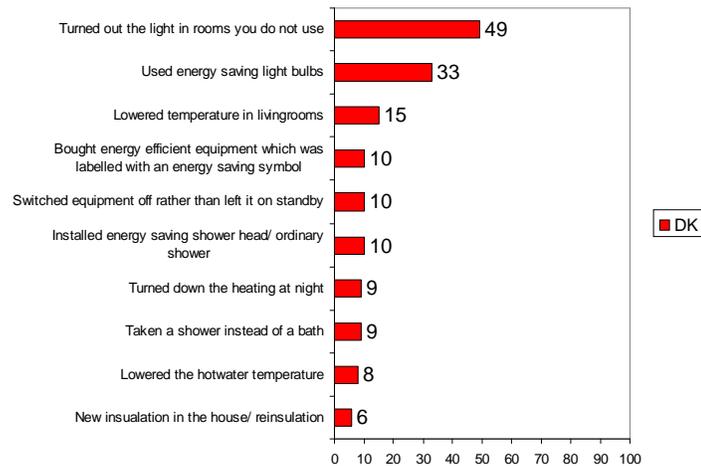


Figure 1.9 – Energy Saving Actions – Denmark

The 10 statements in this ranking are the same as those in the knowledge ranking. The Danish sample has a significantly higher frequency than the total sample on the three top ranked actions, and remarkably, the action frequency on using energy saving light bulbs is higher than the knowledge frequency.

In Norway the two top ranked actions are higher than the total sample, as is the case with “Installed energy saving shower head”.

What have you yourself done to use energy more efficiently?

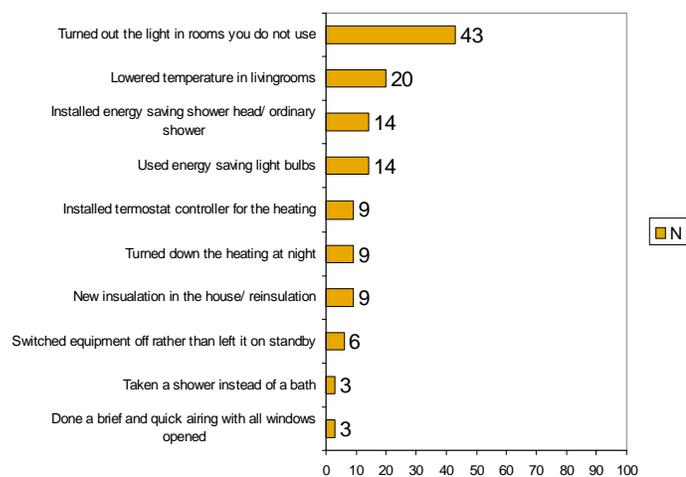


Figure 1.10 – Energy Saving Actions – Norway

Again it can be seen that the use of energy saving light bulbs is lower in Norway as in most of the other countries.

The sample from Finland shows the lowest user frequency of energy saving light bulbs of all the participating countries. On the other hand, the use of public transport for energy saving is higher than in other countries, even if the frequency of 7% is not overly impressive.

What have you yourself done to use energy more efficiently?

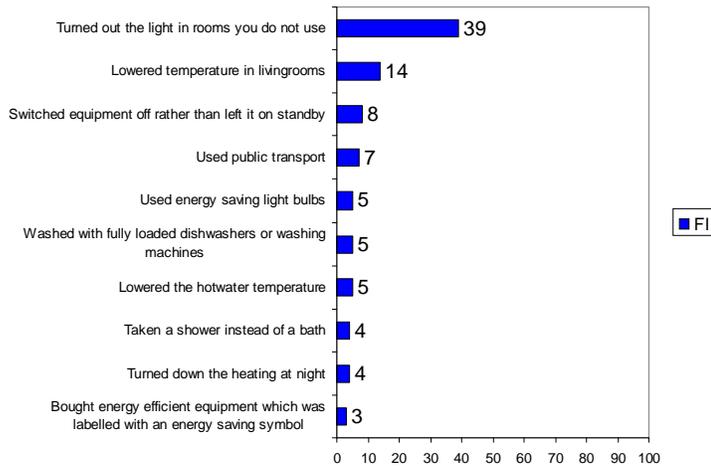


Figure 1.11 – Energy Saving Actions – Finland

The Swedes have lower action frequency than the total sample on almost all of the specified actions.

What have you yourself done to use energy more efficiently?

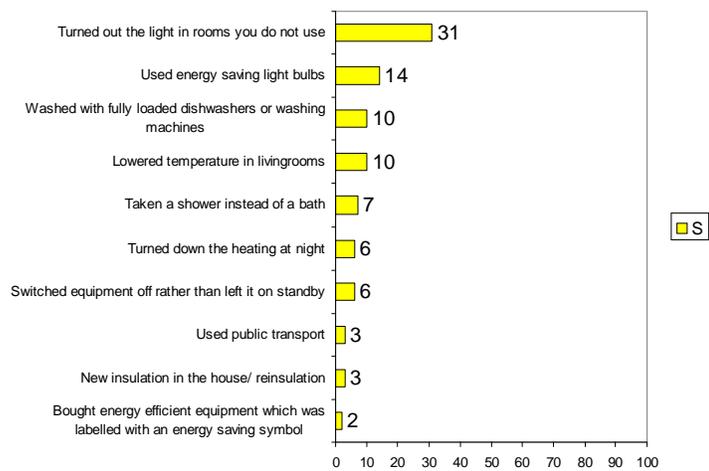


Figure 1.12 – Energy Saving Actions – Sweden

In the UK, two actions occur significantly more frequent than in the other countries. They are “New insulation in the house/ re-insulation” (25%) and “Installed triple/ double glazing” (21%), both occurring 2.5 - 3 times more frequent than the total sample.

What have you yourself done to use energy more efficiently?

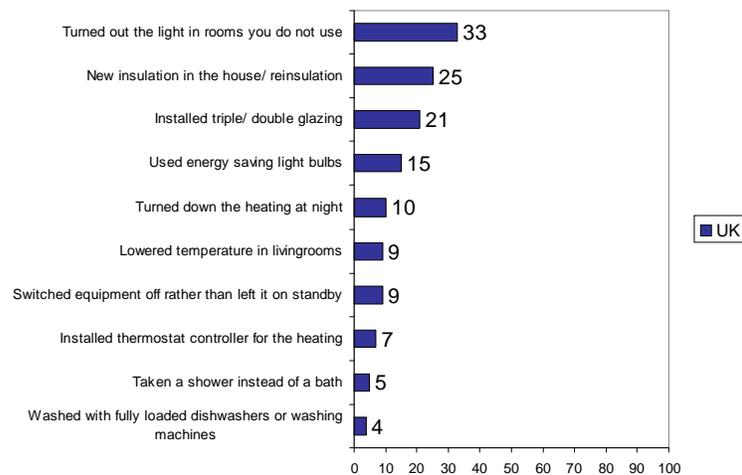


Figure 1.13 – Energy Saving Actions – United Kingdom

The action ranking from the Netherlands is similar to the knowledge ranking, and indicates that they score low on turning out the lights in rooms that are not in use, but high on using energy saving bulbs, compared to the other countries.

What have you yourself done to use energy more efficiently?

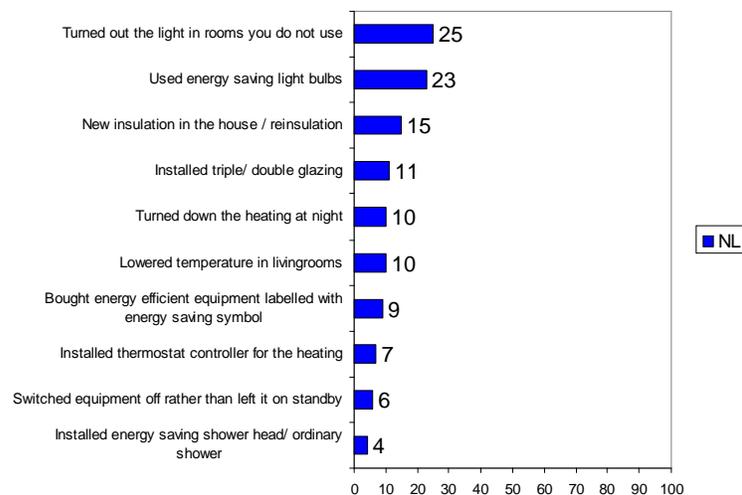


Figure 1.14 – Energy Saving Actions – The Netherlands

This survey indicates that neither energy efficiency nor energy saving are high interest topics and neither are they a highly focused activity for the populations of the six countries. The most frequently occurring action, to turn out light in rooms one does not use, is the sort of

behaviour that is not considered a large challenge for most people. It is possible that the top ranking of this activity is a result of the fact that turning out a light in an unused room is a part of normal behaviour that is not always motivated by energy saving. But when promoted about energy saving efforts, this may be an easy and appropriate answer to give.

The other suggestions provided are acted upon by low fractions of the population only. The second most frequent action, “used energy saving light bulbs”, is possibly a more tangible energy saving action than turning off a light, but only 17% of the sample mention such bulbs for energy efficiency. Therefore, the conclusion that is drawn regarding actions to use energy more efficiently is that overall levels of consciousness are low and the actions are few and accidental.

Use of energy saving light bulbs

As stated in the previous chapter, the use of energy saving light bulbs in order to use energy more efficiently is not widespread. Only 17% of the total sample claims to do so. But when asked whether one has energy saving light bulbs in use in the household, we find that 61% confirm that they have. This means that a large part of the sample use energy saving light bulbs without necessarily thinking of it as energy saving effort. Below we see how many energy saving light bulbs the respondents in the total sample claim to have:

Do you have energy saving light bulbs, if so how many are in use in your household?

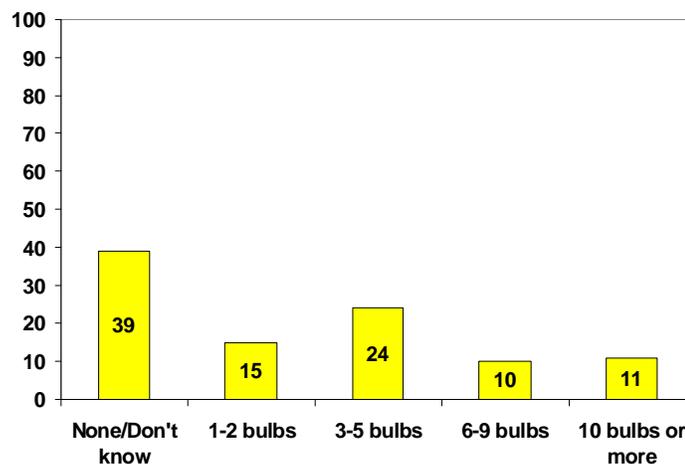


Figure 1.15 – Number of Energy Saving Bulbs in Use – Total Sample

There are great differences between the countries in the use of energy saving light bulbs. While 71% of the Danish sample and 68% of the Netherlands sample have at least one energy saving light bulb in use, only 49% of the British claim to have one in use in the household. The occurrence of energy saving light bulbs in the countries can be studied in the following diagram (1.16):

**Do you have energy saving light bulbs, if so how many are in use in your household?
(Have at least 1 energy saving light bulb)**

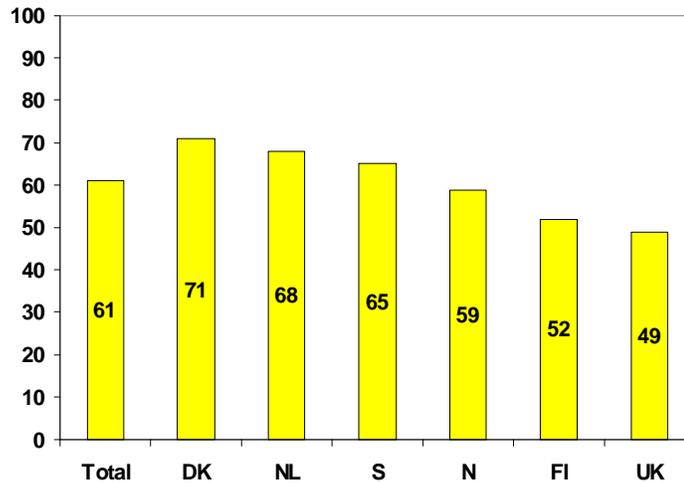


Figure 1.16 – Number Of Households With At Least One Energy Saving Bulb In Use – Total

In the total sample males report more energy saving light bulbs in use than females. People aged 40-59 years use more than the younger; and the older, highly educated people more than lowly educated people. People living in detached or semidetached houses use the bulbs more than those living in flats/apartments and people living in 4-person households use the bulbs more than those living in small households.

Energy efficient behaviour.

When analysing questions of energy efficiency and energy saving in Norway, an important parameter has been a question where the respondents characterize themselves as energy saving types. Three types are described, and the respondents choose the one that applies best on their own attitude or behaviour. In the following diagram, the characterizations of the types are given. It can be seen that only 12% are ignorant to energy efficiency, while 49% sometimes do things reduce their use.

I will now read out three attitudes about indoor use of energy; either for heating, lighting or electric equipment. Which attitude is closest to your own?

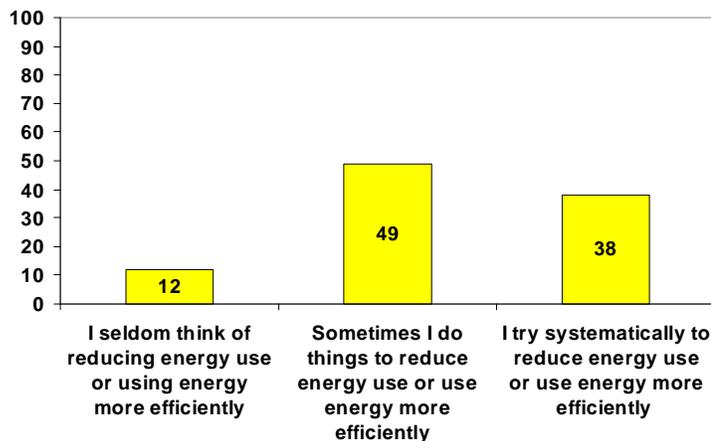


Figure 1.17 – Attitudes To Reducing Energy Use – Total

In the promotion of energy saving or more efficient use of energy, it is the third type, those who try systematically to reduce energy use or use energy more efficiently, that represent the preferred attitude and behaviour. In order to describe differences between the countries, this 'third type' was a focus of the research in each of the participating countries. In the diagram below, it can be seen that the Danes appear to be most energy conscious, while those from Sweden are the least energy conscious.

**I will now read out three attitudes about indoor use of energy; either for heating, lighting or electric equipment. Which attitude is closest to your own?
Those answering - "I try systematically to reduce energy use or use energy more efficiently"**

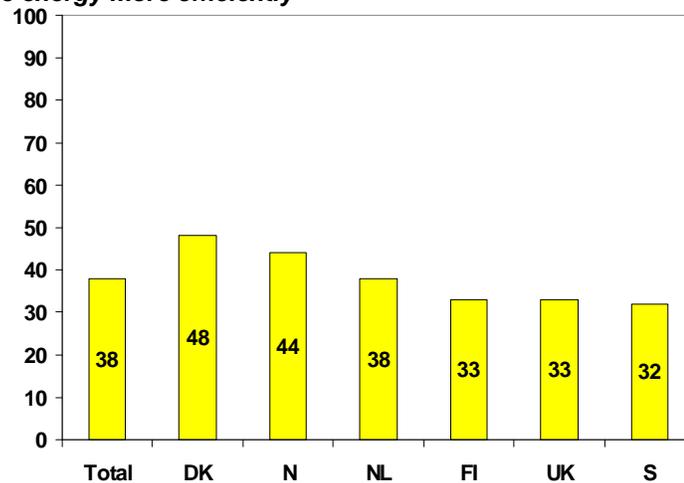


Figure 1.18 – Respondents Claiming to Use Energy Efficiently - All Countries

In general terms, females score higher (41%) than males (35%) as a frequency of this 'third type'. The scores increase by increasing age, are higher among those who own their home than those who rent their homes, and are higher among those who live in a detached or semidetached house than those who live in a flat or apartment.

Willingness to pay for products labelled with energy efficient symbols

Today, products and equipment labelled with special energy efficient symbols exist in the market place. The best products labelled with these symbols can use half as much energy as other functionally similar products. When promoting energy efficiency through a market transformation strategy, the IEA DSM Task VII plans to support marketing of energy efficient products in cooperation with the manufacturers of electric equipment. In this context, a branding strategy for energy efficiency has been discussed, and in accordance with the theories of branding, the research aimed to study the willingness to pay for more energy efficient products.

As can be seen in the diagram following (1.19), substantial parts of the population claim to be willing to pay for products labelled with special energy efficient symbols. If we add those who answer 'don't know' to the non-willing to pay group, one third of the sample are not willing to pay anything for products labelled with special energy efficient symbols. This seems surprisingly low, especially compared to the size of this group in Norway (46%).

In percentage, how much more would you be willing to pay for energy efficient products and equipment labelled with special energy efficient symbols?

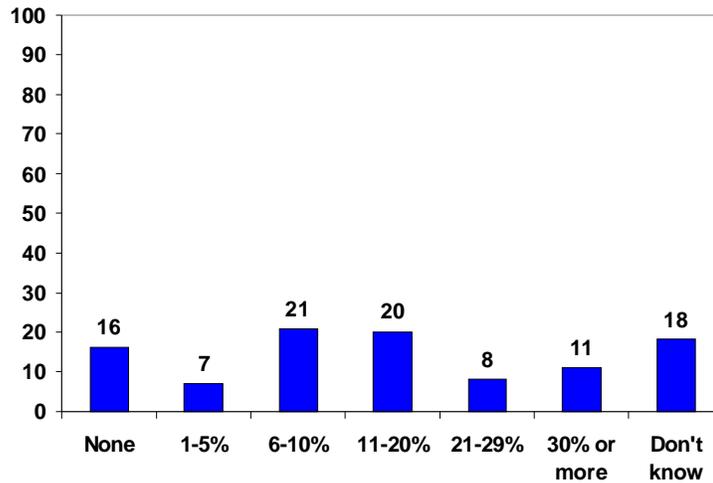


Figure 1.19 – Willingness to Pay More for Labeled Energy Efficient Products

Averagely, those who give a substantial answer are willing to pay about 16% more for products labelled with special energy efficient symbols. We remind the reader that the respondents were informed about the potential energy gains of products labelled with special energy efficient symbols, which certainly will bias the answers in a positive direction.

There are substantial differences between the countries. In the following diagram, the frequencies for those who are willing to pay more than 10% for products labelled with special energy efficient symbols are shown, and the frequencies for those who don't express willingness to pay anything (None + Don't know) for such products are also provided.

In percentage, how much more would you be willing to pay for energy efficient products and equipment labelled with special energy efficient symbols?

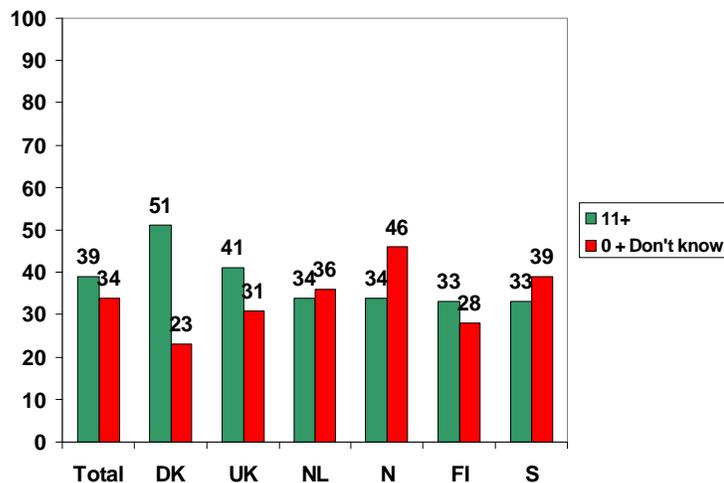


Figure 1.20 – Willingness to Pay More Than 10% Extra for Products – All Countries

The Danes are by far the most willing to pay for products labelled with special energy efficient symbols. More than half the population is willing to pay more than 10% more for such products, while only 23% are not willing to pay anything at all. At the opposite end of the scale are Sweden and Finland, of whom 33% are willing to pay at least 10% more for products labelled with special energy efficient symbols.

The willingness to pay more for products labelled with special energy efficient symbols is higher among young people than the elder, higher among highly educated than lowly educated people, and significantly increasing by increasing household size.

Perceptions of products labelled with energy efficient symbols

The market potential for energy efficient products very much depends on consumer perceptions of such products. To find out whether there are any significant barriers for such products in the market, the research measured some basic perceptions of products labelled with special energy efficient symbols. Three statements, about price, design and quality, were read out for the respondents who were asked to express how well they thought each statement applied to products labelled with special energy efficient symbols. The statements are shown in the following diagram, where it clearly appears that price will be the most serious barrier for any market transformation strategy.

Do you think these statements apply very well, fairly well, less well, or not at all to electric equipment labelled with energy saving symbols.

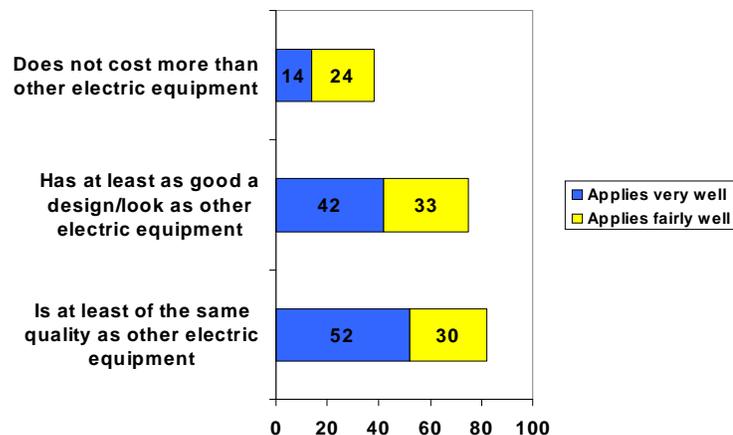


Figure 1.21 – Perceived Attributes of Energy Efficient Products

Perceptions about the quality of energy efficiency products are encouraging and the acceptance of 75% of the sample indicating that design is seen as being as good as other non-efficient equipment is also satisfactory.

45% of the total sample thinks that the first statement about price applies less well (24%) or not at all (21%). Respondents from Denmark (57%) and Finland (59%) are especially sceptical, while those from the Netherlands (33%), the Norwegians (39%) and the Swedes (38%) are less concerned. National deviations can be extracted from the following diagrams. Firstly, the results from the price statement are analysed.

For each statement I want to know whether you think the statement applies very well, fairly well, less well or not at all to electric equipment labelled with energy saving symbols.

Does not cost more than other electric equipment

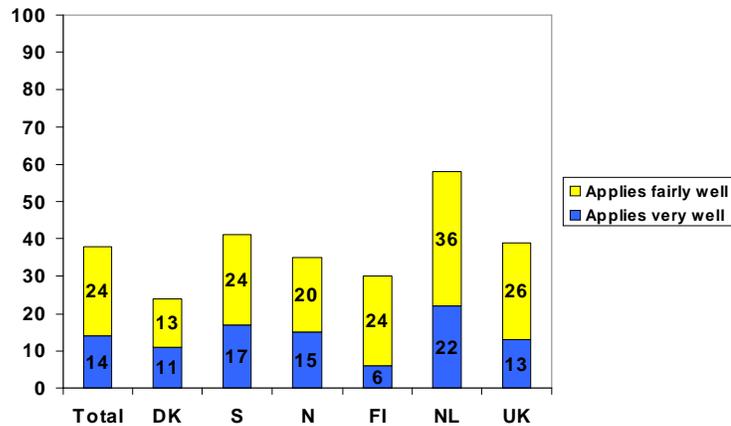


Figure 1.22 – Perceived Cost Comparison of Energy Efficient Products

From previous results, we have concluded that Danish respondents are among the most energy conscious of the six countries. Therefore, emphasis on the fact that the Danes seem to be most sceptical to the price of products labelled with special energy efficient symbols is interesting. Those from the Netherlands indicate a very positive outlook regarding the costs of energy saving equipment – possibly as a result of various subsidy schemes for energy efficient equipment run in the Netherlands during the survey period. Norwegians seem to be least positive towards the design of products labelled with special energy efficient symbols, although 60% think that the statement applies well.

For each statement I want to know whether you think the statement applies very well, fairly well, less well or not at all to electric equipment labelled with energy saving symbols.

Has at least as good design/ look as other electric equipment

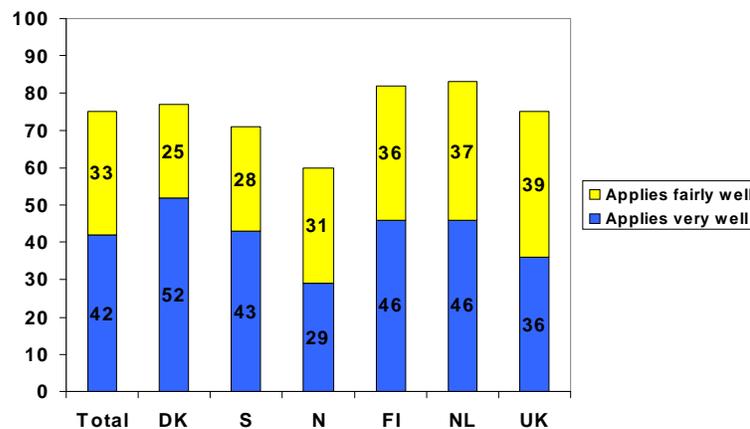


Figure 1.23 – Perceived Design Comparison of Energy Efficient Products

Apart from the Norwegian deviation, there are only small differences between the countries on this statement. Concerning quality, the Norwegians are also less positive than the other nations, even though 71% of them think that the statement applies well.

For each statement I want to know whether you think the statement applies very well, fairly well, less well or not at all to electric equipment labelled with energy saving symbols.

Is at least of the same quality as other electric equipment

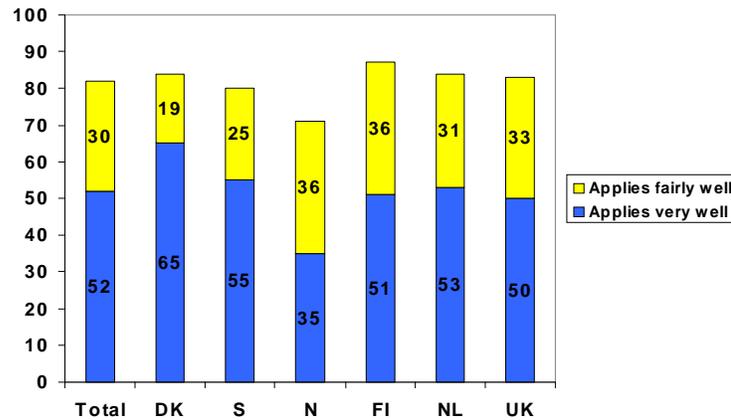


Figure 1.24 – Perceived Quality Comparison of Energy Efficient Products

Efforts to save energy if prices double

An important objective for this study has been to describe attitudes and behaviour towards energy efficiency and energy saving. One of the most common initiatives suggested to reduce consumption has been to increase energy prices. Increasing energy prices has also been discussed as a means to reduce energy demand. To make this investigation more complete and thus get the possibility to define those who are most liable to react to increased energy price, the survey asked how big an effort one would make to save energy if energy prices were to double. As we see below, half the total sample claims that they would make big efforts to save energy if this happened.

If energy prices double, would you make big efforts to save energy, would you make some efforts to save energy or would your use of energy be unaffected?

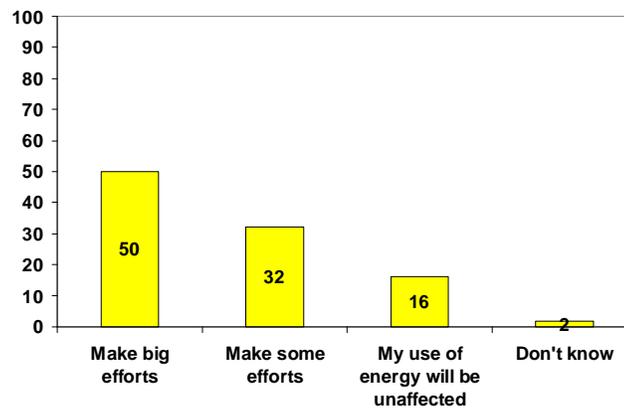


Figure 1.25 – Efforts to Save Energy if Prices Double - Total

When examining the differences between the countries, we must bear in mind that local price levels will probably affect the answers. When, for instance, we see from figure 1.26

that 60% of the Danes will make big efforts to save energy if prices double, it may reflect a present energy price level that is felt to be high, while the price level in the Netherlands may be felt a little lower with only 37% willing to make big efforts. Looking at the national differences, we see in the following diagram that in Denmark and the United Kingdom, big efforts would be made to save energy if prices doubled. The Netherlands, Finland and Sweden are up at the other end of the scale.

If energy prices double, would you make big efforts to save energy, would you make some efforts to save energy or would your use of energy be unaffected?

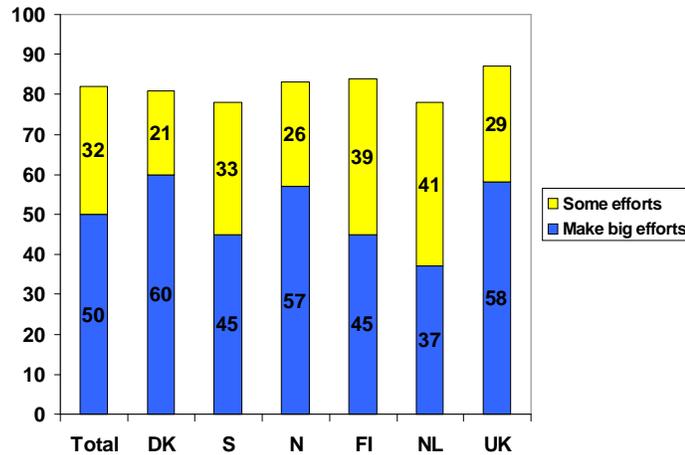


Figure 1.26 – Efforts to Save Energy if Prices Double – All Countries

Socio-cultural approach

The first part of this report presents the results from the multinational energy efficiency study through a *bivariate* analysis. The tables also present the results in several socio-demographic subgroups by gender, age, education etc.

An initiative taken by the Norwegian participants in the IEA DSM Task VII to examine attitudes and behaviour toward energy efficiency and energy saving in a socio-cultural perspective was discussed and accepted by other Task VII participating countries as a model for the research. Socio-cultural analyses have been successfully used in the past in Norway to explain motives and behaviour towards efficient use of energy and energy saving. The analyses have explained and described how different value preferences initiate different attitudes and behaviour. By means of this knowledge, marketing strategies towards different value segments have been developed. Thus, if we are able to identify cross-country value patterns and corresponding attitudes and behaviour on the energy efficiency field, a common platform for marketing strategies emerges.

In this second part of the report, the main results from the research are analysed in the context of the socio-cultural approach using multivariate analyses. An introduction to the methodology used in this study and some thoughts about consequences and conclusions on energy efficiency matters is given in the paper "Research on Values and Consumer Trends in Norway" which was distributed to the IEA DSM Task VII members. The Authors also refer to the paper of Ottar Hellevik (1993b) "Postmaterialism as a dimension of cultural change" in *International Journal of Public Opinion Research* Vol. 5, No. 3: 211-233.

Introduction

Since 1985 large surveys, both in terms of sample size (increasing from 2200 in the first wave to more than 4000 in the last ones) and number of questions (close to 3000) have been carried out every second year by the market research institute MMI in Norway. The introductory questions are asked by an interviewer over the phone, while the major part is included in a self-completion questionnaire. The samples are representative for the population aged 15 and above.

The Monitor study maps value preferences of the population. By this is meant their desires, in terms of basic goals (end states) and means to achieve them, on the personal, interpersonal and societal level. To measure value preferences, approximately 70 questions, mostly of the agree-disagree format, are used to construct 25 additive value indexes. Each index contains items worded in opposite directions, to control for "yea-saying" tendencies, which in some cases are quite strong. The index positions the respondent on a scale of opposite value poles, e.g. between concern for the environment or economic growth. A factor analysis of the indexes yields two value dimensions with a clear substantial interpretation.

The dimension best capturing differences in value orientation as measured by the Monitor value indexes, opposes those who prefer new technology, novel social mores such as gender equality, risk taking, spontaneity, urban life against those who believe in established traditions, religion, authority, conformity, frugality, respect for law and order. The terms *modern* versus *traditional* value orientation or change oriented versus stability oriented have been used to characterize the first value dimension.

The Sociocultural Value Map of the Norwegian Monitor

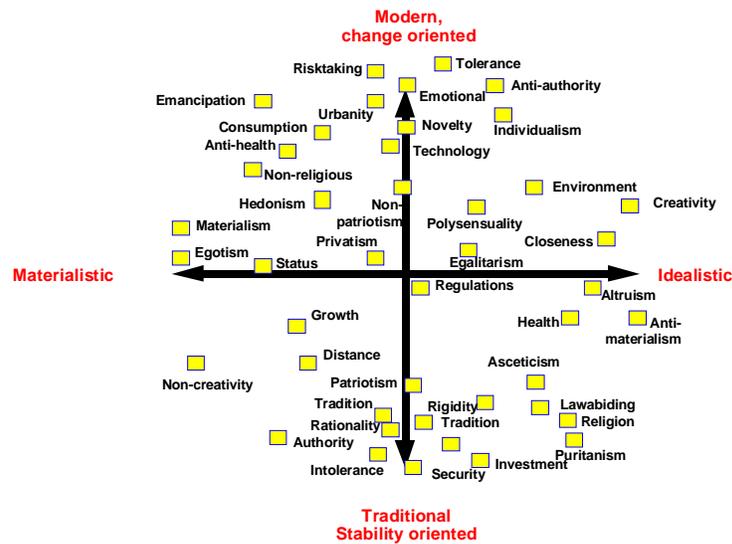


Figure 2.0 – The Sociocultural Value Map of the Norwegian Monitor

The second dimension has been called *materialistic* versus *idealistic* value orientation, or outer versus inner oriented. On one side we find people who value economic growth, material possessions and consumption, immediate as well as conspicuous, and who put their own needs above concern for others. On the other side spirituality, inner feelings, creativity, close interpersonal relations, health and concern for the environment is valued.

The two value dimensions are independent (orthogonal). They define a two dimensional cultural space as shown in figure 2.0, where persons with a modern value orientation are located at the top and traditionalists at the bottom of the vertical axis, and materialists to the left and idealists to the right on the horizontal axis.

Socio-cultural studies like this have been done in many countries worldwide. Axis 1 (Modern-Traditional) occurs as the first dimension in all countries, and reflects the value differences between present living generations/age groups. The young tend to be located in the northern, modern part of the value map because they score high on the modern values, while the elder people tend to be stability oriented, located in the traditional south. The second dimension also occurs in most other countries with a varying, but strong explanatory value.

The two main dimensions divide the population into four main socio-cultural segments (subcultures). These segments can be described as follows:

1. **The Modern Materialists**, who are characterised by high scores on risk-taking, technology, materialism, hedonism, status and egotism. Individuals of this group give high priority to their personal needs, and do not care much about considerations to others. They live dangerously and are risk takers, for example by eating and drinking without caring about the warnings of the health authorities. They have a very short-term view on money spending, with less planning for the future than others. As materialists, they are much concerned about possessing things, and seek status and acceptance from

others by showing their possessions. As the surface is what can be seen of material things, the modern materialist is much concerned about appearance. This shallow approach to things can also be transformed to thoughts. The modern materialist does not seek depth, perspective and thoroughness in his daily life approach; some may call it 'superficiality'.

2. **The Modern Idealists** are characterised by high scores on protection of environment, individuality, polysensualism, self-realisation, creativity and community. They have high education and income. In consumption, and they really consume, acquiring or possessing material things is not a goal in itself, but a means of achieving other goals in life. Therefore a basic motive for market adjustment is fitness for use, flexibility and applicability. Through use and consumption, the modern idealists seek experience, enrichment, excitement, education and insight. They want to develop their personalities, to get on in life. They are tolerant and accept everyone's right to express personal characteristics through behaviour and clothes. They are much concerned about others, and have a strong need for community and communication. In contradiction to the modern materialists, they seek depth, perspective and thoroughness in daily life. They are the guiding powers and the leaders of modern society.
3. **The Traditional Idealists** are characterised by Puritanism, religion, health and need for security. They rely on the traditions and institutions of the old society, such as church, family, close neighbourhood, roots, classic arts and artists and untouched nature. It is important to save instead of consume, to repair things instead of buying new. This pattern of modesty, asceticism, respect and security, gives long-term quality as a basic motive for market adjustment. They are willing to pay for quality if they trust the product or the service to keep their promises and last very long.
4. **The Traditional Materialists** are characterised by conformity, localism, rationality, authority and growth. The average age is high, the education and income level low. They feel that they have not been given the opportunities of modern society, and this feeling has turned to bitterness and unhappiness. They dislike and fear the new world. They feel that they are left alone and forgotten, and that they are unable to keep pace with development. It is therefore typical, that the only outwards activity that this group do more frequently than the total population is playing bingo! The buying power of the traditional materialists is limited. Therefore, low price, especially special offers, and the feeling of low living cost, is a basic motive in their market adjustment.

By knowing the typologies, what are their values, how the values determine their choices and behaviour, we have an operative platform for developing a marketing strategy for branding of energy efficiency.

The MicroMonitor.

The positive experiences from using results from The Norwegian Monitor in understanding market processes and market adjustments are many. By analysing correlations between value patterns and attitudes and behaviour in the market and by target group descriptions, Norwegian Monitor has been used as a platform for developing marketing and communication strategies for both private companies and public institutions.

These experiences initiated the idea of establishing a simplified version of the 70-question algorithm of Norwegian Monitor, which could be used in other studies to establish a link between any ad hoc study and the socio-cultural map. By allocating the respondents in the value map, any survey could establish membership of socio-cultural segments as an

independent variable for further bivariate analyses. From a comprehensive analysis of the explanatory values of each of the about 70 questions in the Monitor algorithm, 10 questions were extracted. 5 of these had the highest explanatory value when allocating respondents on the modern-traditional axis and 5 had the highest explanatory value when allocating respondents on the materialistic-idealistic axis. The 10 questions are statements about everyday occasions to agree or disagree upon, and can be added to the questionnaire in most surveys, both omnibuses and ad hoc studies. Compared to the complete algorithm, the explanatory value of the 10 questions is about 70% in Norway. This result is very satisfactory, and enables the authors of the research to use the MicroMonitor for socio-cultural analysis in most surveys in the population.

International cooperation on socio-cultural research the last 15 years has demonstrated that there are great similarities in the socio-cultural landscapes of western European countries. Therefore, MMI proposed to the IEA DSM Task VII to use MicroMonitor to find out whether there was a common socio-cultural platform for developing marketing strategies for energy efficiency. Uncertainty regarding the differences in cultural context between countries and whether this would produce varying understanding of the questions and thus interpretable problems, was a risk to take in this project. However, as can be seen from the results, the MicroMonitor works exceedingly well in all the Task VII participating countries.

Validation.

An important step in this analysis was to validate the MicroMonitor. It was necessary to check whether the well known patterns from analyses in Norway occur in the 5 other countries by use of MicroMonitor. Checks were carried out to ascertain the location of males and females in the value map, and in the same way the location of age groups and educational groups were also followed. Additionally, a comparison regarding the location of target groups defined from the answers on energy efficiency questions was made. Two key questions were used for this check; the question about what one can do to use energy more efficiently, which express degree of knowledge, and the question classifying the respondents in energy efficiency types, which express intended behaviour. For both these question, the basic patterns from The Norwegian Monitor were known, and this was then used for comparisons.

All of the analyses on target group locations in the value map were processed. As described in the next chapter, there are substantial, but not dramatic differences between the countries along the materialistic-idealistic axis. However, the patterns in every country concerning location of men and women, age groups and educational groups are identical. In the map below, males are located in the modern-materialistic quadrant and females in the traditional-idealistic quadrant. Not only does this correspond identically with the Norwegian pattern, but the distance between the two centres of gravity are also exactly the same as in Norway. In the map below and in the following maps, coordinates are used for the whole sample. The centre of gravity, which is the average location of all respondents in the map, is at the origin. If a map had been made for each country, the national centre of gravity at the origin of the national map would also have been adjusted, but the patterns would remain the same.

The Sociocultural Value Map Gravity centres by gender

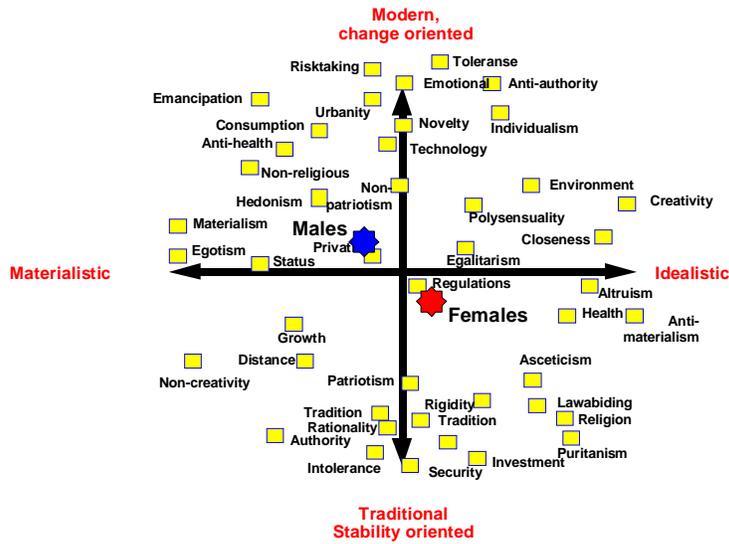


Figure 2.1 – The Sociocultural Value Map Showing Gravity Centers by Gender

In the next map, the centres of gravity for age groups are plotted. What emerges is a north-south pattern with the younger age groups in the modern part of the map, also tending towards materialism, and the older age groups in the south, traditional part of the map. This is also exactly the same as in Norway and in other countries where similar analyses are done.

The Sociocultural Value Map Gravity centres by age groups

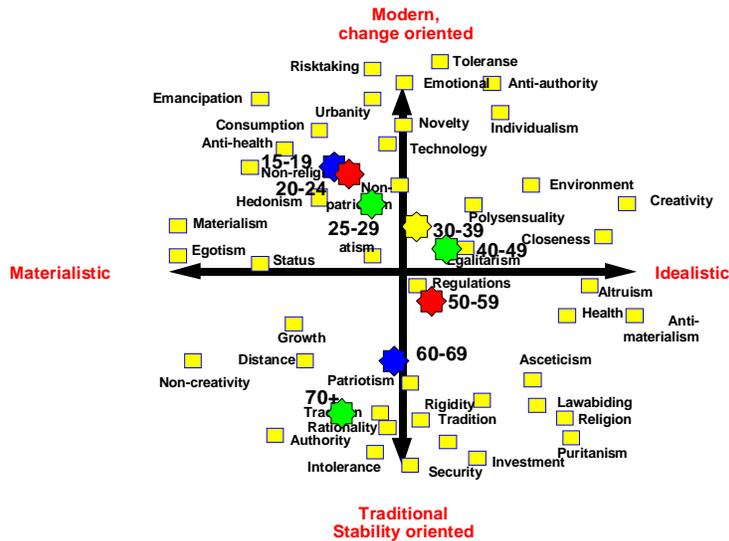


Figure 2.2 – The Sociocultural Value Map Showing Gravity Centers by Age

It is worth noting the west-east aspect of the pattern. The centres of gravity for the post-war generation, the protesting 68'er generation, are located significantly to the idealistic part of the map. This generation, the pioneers of post materialism, has been succeeded by more

consumer-oriented, hedonistic and materialistic age classes. This phenomenon appears in the results from similar socio-cultural research in many countries.

The third independent variable to be tested is education. In the map below, we find the centre of gravity for highly educated people in the modern idealistic quadrant, while the centre of gravity for lowly educated people is in the traditional materialistic quadrant.

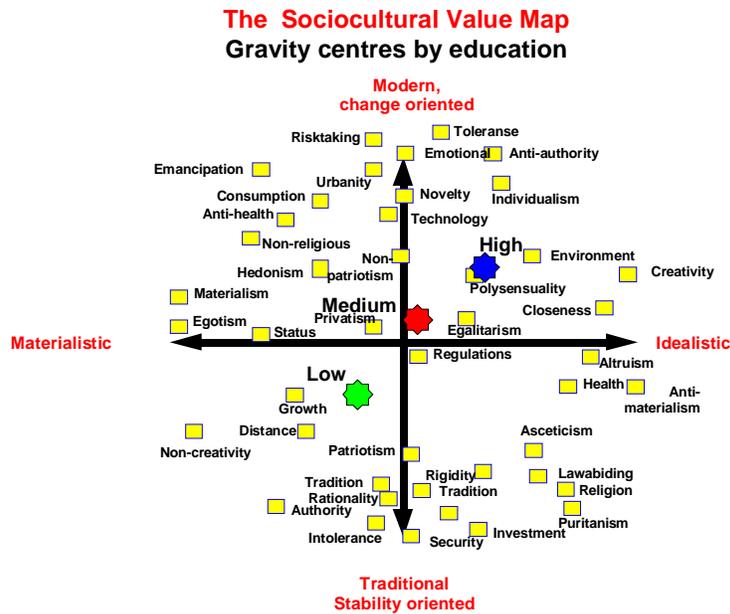


Figure 2.3 – The Sociocultural Value Map Showing Gravity Centers by Education

This pattern also corresponds perfectly with the Norwegian pattern. In all the six countries the same pattern on educational groups is found, which indicates strongly that the MicroMonitor works with a high degree of compatibility across borders.

Before concluding on the validity of the MicroMonitor, the pattern of some dependent groups in the survey must be examined. As mentioned above, many of the questions in this energy efficiency study are the same as those used in The Norwegian Monitor. In Norway the value patterns of target groups defined from these questions have been successfully analysed, and thus there are compelling reasons to expect specific patterns in the other five countries too.

The first question to examine is about what one can do to use energy more efficiently. This was a multi-answer question, and a new variable has been established from the results detailing the number of answers provided by individual respondents. This “knowledge variable” groups the respondents along a scale from zero answers (low knowledge) to four answers or more (high knowledge). 26% of the total sample were not able to give any answer to the question. 28% gave one answer, 24% two answers, 12% three answers and 10% four answers or more. The following diagram shows the socio-cultural pattern of this knowledge variable.

**What can you do to use energy more efficiently?
Gravity centres by knowledge - number of answers**

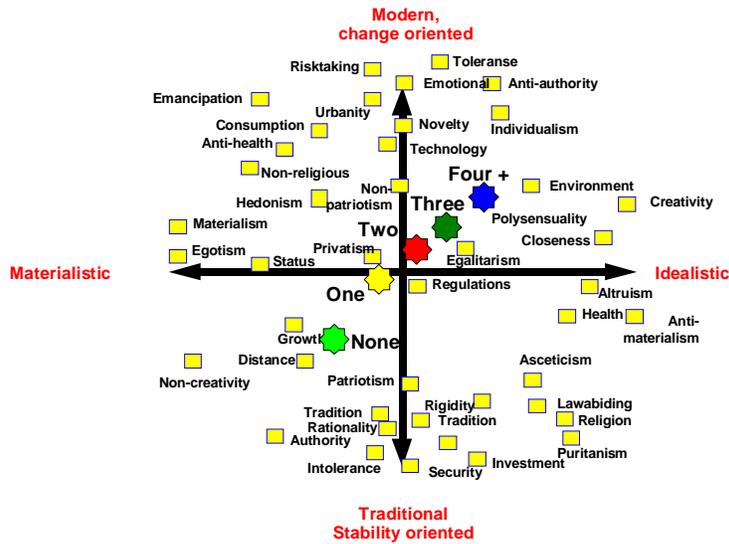


Figure 2.4 – The Sociocultural Value Map Indicating Knowledge of Energy Efficiency

As can be seen, the centres of gravity form a perfect string from low knowledge in the traditional materialistic quadrant to high knowledge in the modern idealistic quadrant. This pattern corresponds perfectly with the pattern in Norway, and also with the pattern on environmental concern found in several other countries.

The last check necessary is concerned with the energy efficient types, which can be defined from the question describing behaviour towards energy efficiency. The alternatives describe level of activity in the field of energy efficiency actions. In the following diagram the centres of gravity once again form a string from low activity in the modern materialistic quadrant to high activity in the traditional idealistic quadrant. This pattern also corresponds perfectly with the Norwegian results. When checking the national patterns in the five other countries, equal patterns are found everywhere.

Activity segments:

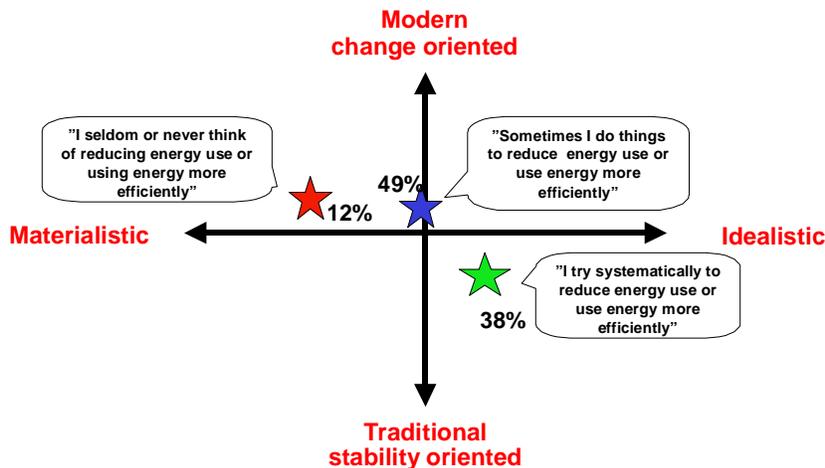


Figure 2.5 – The Sociocultural Value Map Showing Attitudes to Reducing Energy Use

This research presents the first example of use of the MicroMonitor in countries outside Norway. Even if initially there were reasons to believe that the tool would work to some extent in countries with Western European cultures close to the Norwegians, the results from the analysis exceeded the researchers expectations. The value patterns of the target groups examined seem to be exactly the same as those found in Norway and in some other European countries where similar analyses have been done. Therefore, it has been concluded that the MicroMonitor has worked perfectly in this study, and indicates strongly that Task VII has successfully developed a common socio-cultural platform in the six countries that can be used for strategic planning.

The socio-cultural platform

The last part of this report sets out a socio-cultural description of the results from the survey. The value patterns of the targets groups defined from the answer groups of the various questions are explored. This enables a thorough examination of the correlations between value preferences and attitudes and behaviour on the energy efficiency field. This description hopefully enables Task VII and the audience of the research to better understand the underlying forces that influence the energy efficiency market processes.

First, however, the socio-cultural map of the six countries is presented and the differences between the countries are examined in more detail. Despite the conclusion that the research shows great similarities between countries, it is important also to take the notable differences into consideration. In the following diagram, the centres of gravity are shown for each of the six countries. Please note that the origin in this map is the centre of gravity for the total sample, where each country has the same weight independent of population size.

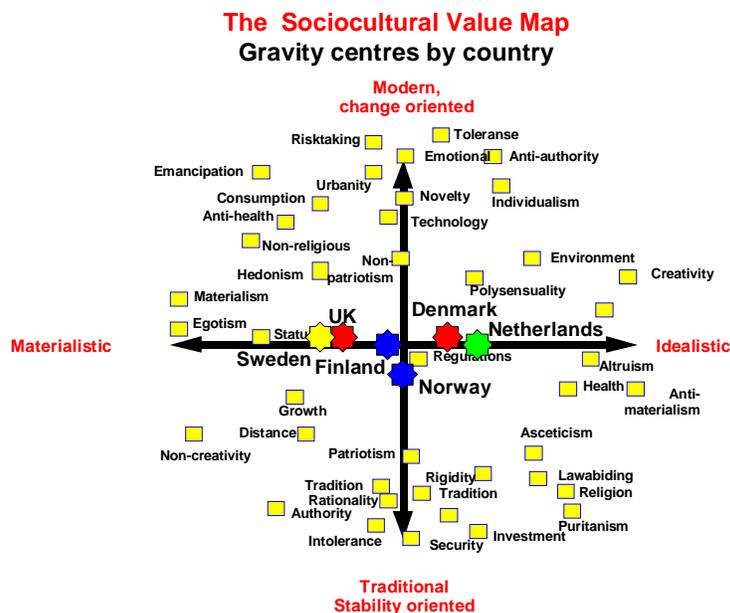


Figure 2.6 – The Sociocultural Value Map Showing Gravity Centers by Country

The distances between the countries is not very large, but significant in statistical terms. Sweden and the UK are more materialistically oriented, while Denmark and The Netherlands are more idealistically oriented. This “polarization” may be explained by cultural and economical similarities and differences. Sweden and UK have both historically feudal and

industrial traditions and their national economic problems the last decades may have caused a stronger focus on material demands and economical security in the two countries. Denmark and The Netherlands are both small, flat countries, playing globally less important economic roles than Sweden and UK. Perhaps the national economic conditions have initiated more optimistic atmospheres in the two countries and less focus on material demands and economical security than in Sweden and UK. Finland and Norway are located at the middle of the materialistic-idealistic axis, while Norway is more traditionally oriented than any other country. The Norwegian position is not surprising, roots-oriented as Norwegians are with a strong weight put on traditions, Puritanism and ascetism, even though Norway is among the richest countries in the world.

With reference to the validation in the previous chapter, stating that the socio-cultural patterns were the same in all six countries, the east-west diversification seen above can be examined by gender, age, education, energy efficiency knowledge and behaviour. For example, males in Sweden are located far west of males in Denmark, while older people in Denmark are slightly more modern oriented than older people in Norway.

Following this, an examination of the socio-cultural patterns of targets groups defined from the results of the energy efficiency questions can be made.

Brand attraction

From analyses in Norway, it is known that people attracted by exclusive brands and status seekers are allocated to the modern materialistic quadrant in the value map. Exactly the same is the case in this survey in the six participating countries. In the diagram following (figure 2.7), it can be seen that the 4% of the total sample reporting that they buy certain, exclusive brands which cost more, but strengthens the image or gives respect from others, is located significantly into the modern materialistic quadrant. In the opposite direction we find the centre of gravity for those 63% who answer 'never' to be in the traditional idealistic quadrant. The centres of gravity form a perfect string from low brand attraction in the southeast to high brand attraction in northwest. This means that marketing efforts emphasizing exclusive brand image will more probably succeed among the modern materialists than among the traditional idealists.

Do you often, sometimes, seldom or never buy certain, exclusive brands which cost more, because it strengthens your image or gives respect from others?

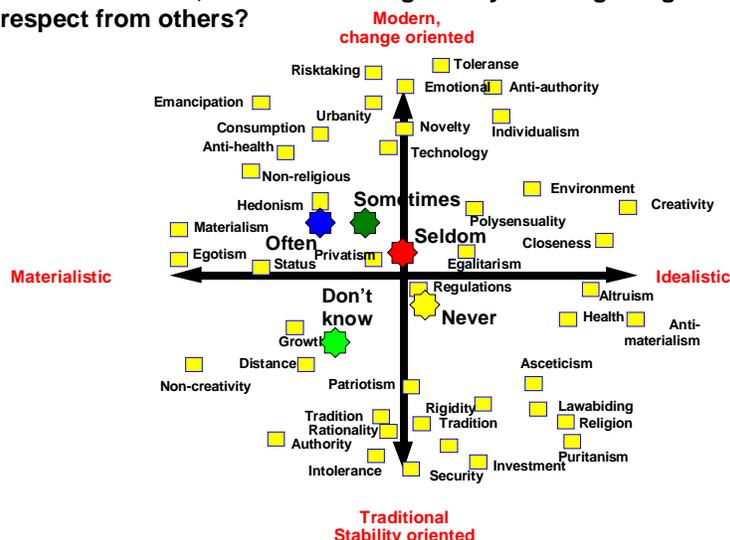


Figure 2.7 – The Sociocultural Value Map Showing Tendency to Buy Brands

It may be noted that the fraction of strongly brand-attracted people appears rather small, and that this will reduce the effect of an image related campaign for energy efficient products. However, this may be more a reflection of how the question was asked and the obvious social barrier to reporting oneself as a 'status seeker'. What is important here is the pattern found -which shows that the modern materialists, who have a low action level for energy efficiency, are also the most attracted by certain, exclusive brands.

Knowledge of energy saving efforts

In a previous chapter when explaining the socio-cultural approach, and as can be seen in the figure below, we have an axis of knowledge with low knowledge in the traditional materialistic quadrant and increasing knowledge when we move into the northeast direction towards the modern idealists.

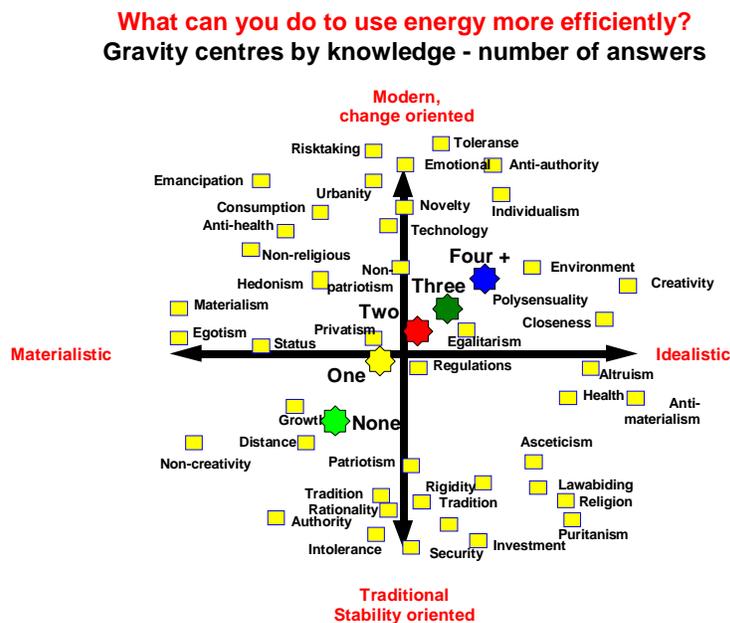


Figure 2.8 – The Sociocultural Value Map Indicating Knowledge of Energy Efficiency

When the centres of gravity for each of the ten most frequent energy saving actions known by the total sample are checked, all are located in a small area in the modern idealistic quadrant, close to the origin, as shown in the following diagram (figure 2.9).

**What can you do to use energy more efficiently?
Gravity centres of the ten most frequently given answers**

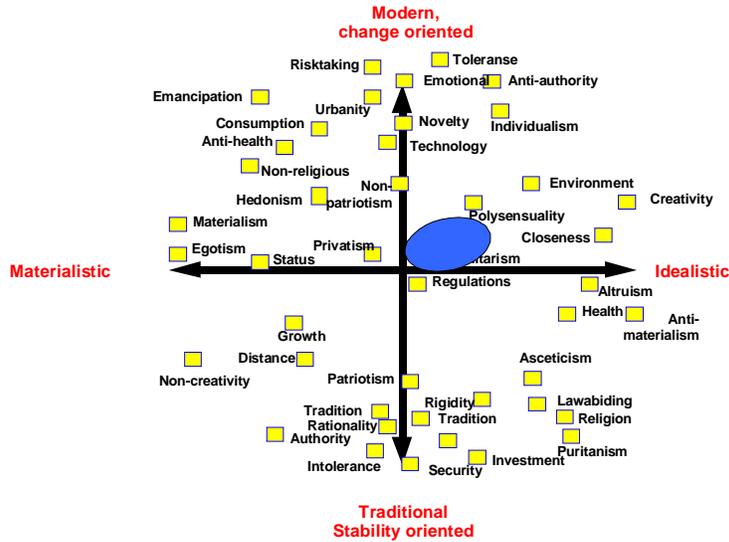


Figure 2.9 – The Sociocultural Value Map - Gravity centers of Ten Most Frequently Given Answers Relating to Energy Efficiency Knowledge

The energy saving suggestions located in the upper right part of the oval, is “Buy energy efficient equipment labelled with an energy saving symbol”, while the suggestion located closest to the origin is “Turn out the light in rooms you do not use”.

Energy saving actions.

As stated earlier, the answers to the question about what one has done to use energy more efficiently do not differ much from the answers to the knowledge question. When examining the centres of gravity for the ten most frequent answers, a corresponding pattern is found, except for the fact that some of the gravity centres are a little more traditionally oriented. This indicates the difference between energy efficiency knowledge and energy efficiency actions. The latter is more traditionally and idealistically oriented than knowledge.

**What have you yourself done to use energy more efficiently?
Gravity centres of the ten most frequently given answers**

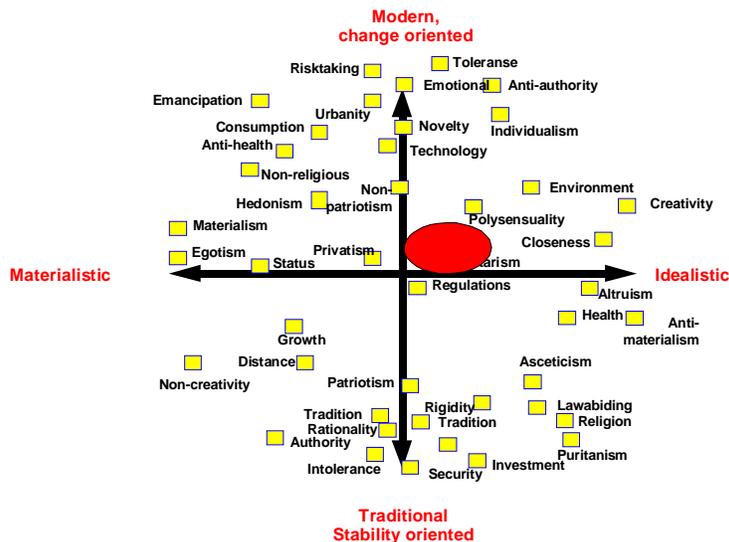
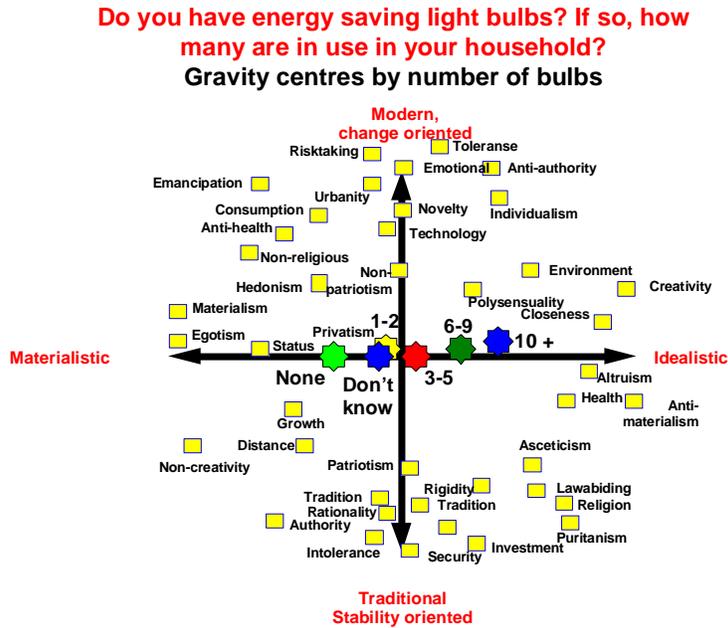


Figure 2.10 – The Sociocultural Value Map - Gravity centers of Ten Most Frequently Given Answers Relating to Energy Efficiency Actions

Use of energy saving light bulbs.

The west-east pattern of energy efficiency actions is confirmed when examining the centres of gravity for users of energy saving light bulbs. In the figure below, the heavy users of bulbs are found on the idealistic side of the map whilst the non-users are located on the



materialistic side.

Figure 2.11 – The Sociocultural Value Map – Number of Energy Saving Light Bulbs in Use

Energy efficient behaviour

One of the most important questions posed in this survey asks the respondents to characterize themselves as one of three energy saving types. These three typologies were described to the sample and the respondents were asked to choose the one that was most appropriate to them. This diagram has been shown and commented on in the previous chapter on validation, but is presented again in more detail:

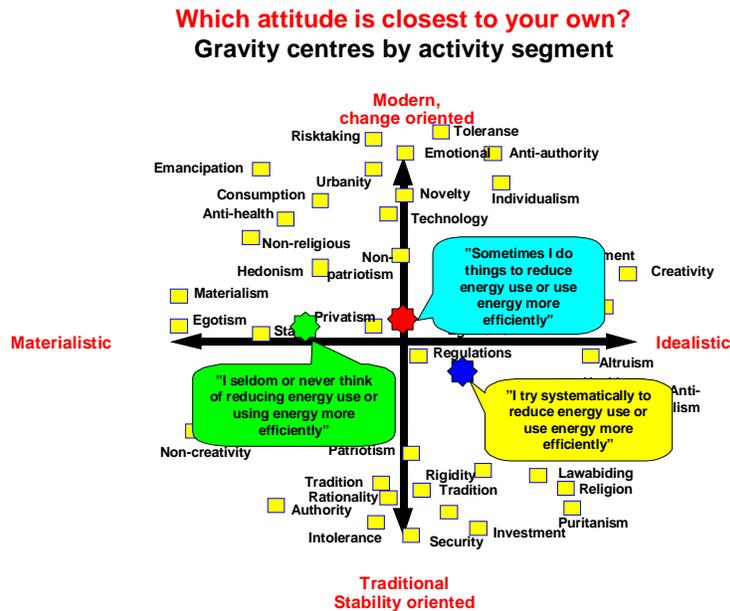


Figure 2.12 – The Sociocultural Value Map - Gravity centers of Ten Most Frequently Given Answers Relating to Energy Efficiency Actions

The most significant finding illustrated in this diagram is that energy saving typology seems to be uncorrelated to knowledge. The string of activity and typologies that goes from high activity in the traditional idealistic quadrant to low activity and ignorance in the modern materialistic quadrant, constitute an activity axis uncorrelated with the knowledge axis. This again means that the marketing challenge for branding of energy efficiency is not a question of spreading knowledge, but more of establishing image.

Willingness to pay for products labelled with energy efficient symbols

As stated before, substantial parts of the population in the six participating countries are willing to pay more for energy efficient products. The willingness to pay is closely related to value preferences. As expected, the willingness to pay more increases the more modern and idealistic the respondents are. This finding is illustrated in the following diagram (figure 2.13):

In percentage, how much more would you be willing to pay for products labelled with special energy efficient symbols?

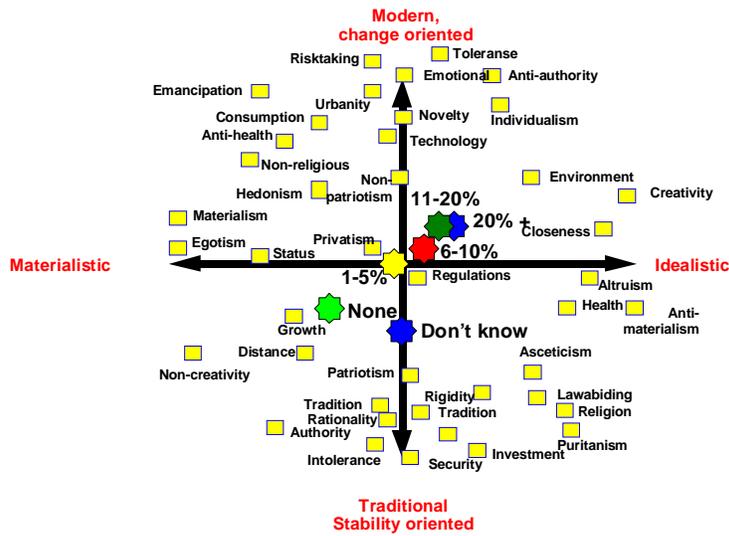


Figure 2.13 – The Sociocultural Value Map - Willingness to Pay More for Labeled Energy Efficient Products

The centres of gravity form a string very similar to the knowledge string, but un-correlated to the activity string. This can be interpreted as a confirmation of the special challenge in marketing energy efficiency as a brand value.

Perceptions of products labelled with energy efficient symbols

As highlighted earlier, perceptions of price, design and quality were measured by three statements read out to the respondents who were then asked to express how well they thought each statement applied to electric equipment labelled with energy saving symbol. The following diagram indicates a correlation between value preferences and attitude to price of electric equipment labelled with energy saving symbol.

How well do you think this statement applies to electric equipment labelled with special energy efficient symbols?
Does not cost more than other electric equipment

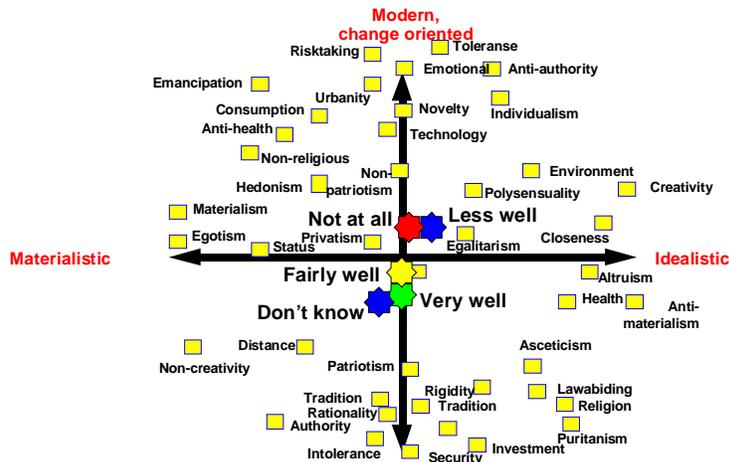


Figure 2.14 – The Sociocultural Value Map: Perceptions of Energy Efficient Product Costs

Those who have the best knowledge of energy efficiency and are the most willing to pay more for such products also appear to believe that these products cost more than other electric equipment. Even though the string or pattern is consistent from one part of the map to another, the distance from the opposites of the scale is not dramatic. This means that the correlation between attitudes and values is not very strong.

The socio-cultural pattern of attitudes towards design is opposite to the price pattern. As is shown in the diagram below, the pattern is less consistent than the price pattern, which means that the correlations are somewhat weaker.

How well do you think this statement applies to electric equipment labelled with special energy efficient symbols?
Has at least as good design/look as other electric equipment

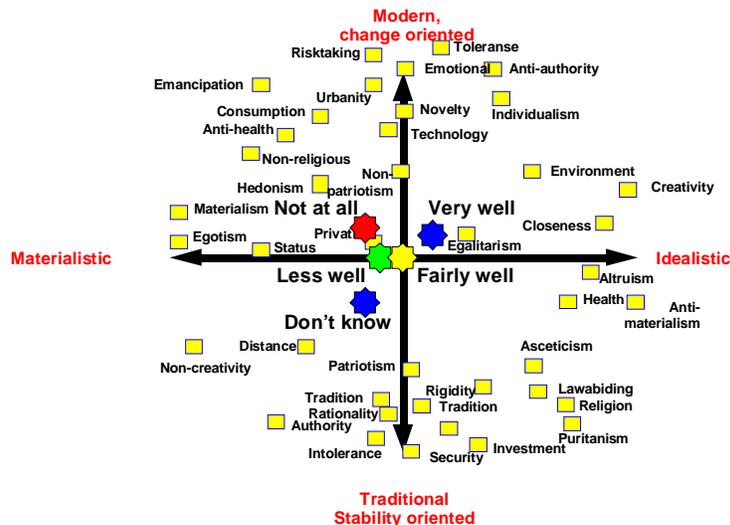


Figure 2.15 – The Sociocultural Value Map: Perceptions of Energy Efficient Product Design

The string of gravity centres is more east-west oriented than the corresponding price string. The acceptance of energy efficient equipment seems to be significantly higher on the idealistic side of the map than on the materialistic. The third diagram below, relating to the quality variable, confirms this tendency.

How well do you think this statement applies to electric equipment labelled with special energy efficient symbols?
Is at least of the same quality as other electric equipment

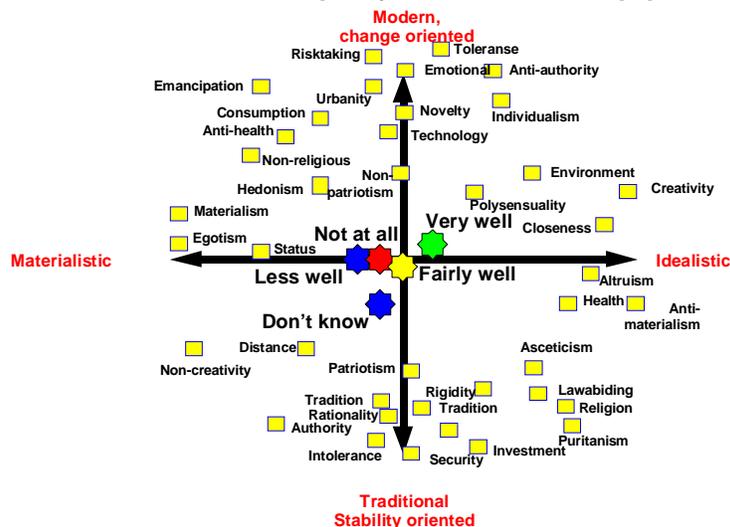


Figure 2.14 – The Sociocultural Value Map: Perceptions of Energy Efficient Product Design
 The distance between the gravity centres of the opposites of the scale is about the same on all the attitude questions. Therefore, it can be concluded that there is a significant and consistent, but not strong correlation between attitudes towards price, design and quality of electric equipment labelled with special energy saving symbols.

Efforts to save energy if prices double

The last substantial question on energy efficiency was concerned with how big an effort respondents would make if energy prices double. As can be seen below, the centre of gravity for the half of the total sample who claim that they would make ‘big efforts to save energy’ if process doubled, is located near the origin, very close to the 32% answering “some efforts to save energy”.

The pattern of the gravity centres confirm previously described patterns. The most energy conscious segments are located in the idealistic parts of the map. The modern idealists give the most politically correct answers, probably due to high knowledge and environmental engagement, while the traditional idealists are more action oriented. They tend to do as authorities tell them to, due to personal concern of energy scarcity or future pollution from energy production.

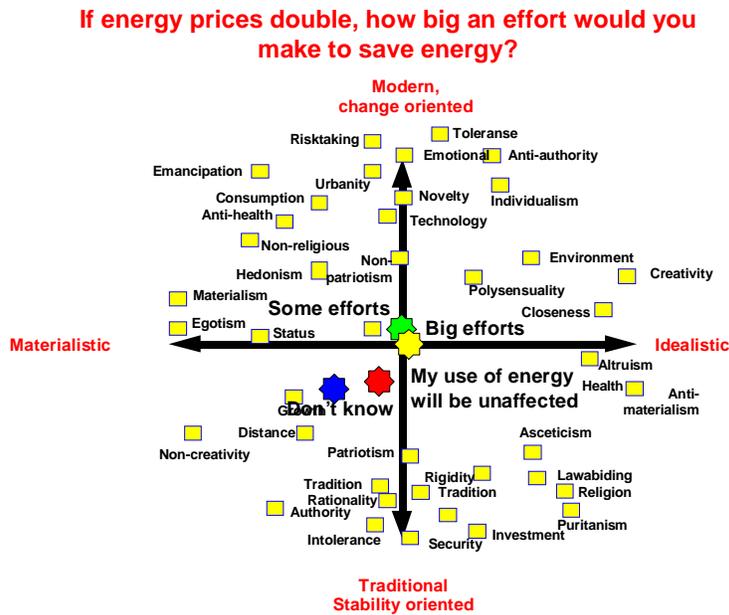


Figure 2.17 – The Sociocultural Value Map: Efforts to Save Energy if Prices Double

Final comments

This study has shown that attitudes and behaviour in the field of energy efficiency are closely related to typologies and value patterns. They will influence on willingness to save energy, on the responsibility to listen to authorities in energy matters, on the ability to comprehend the consequences of energy waste in society and so on. Hence, characteristics of typologies and value patterns will be crucial in determining the way to communicate energy efficiency so that it will be noticed, understood and accepted by target groups in different parts of the population. The arguments and actions to promote energy efficiency must be relevant to the value priorities of the target groups. To give an idea of the relation between value patterns and attitudes and behaviour in the field of energy efficiency some highlights of the research findings from this survey and from Norway are provided. However, it should be noted that this list is in no way complete and provided in conclusion only.

1. The **Modern Materialists** initially don't care about how much energy they use, how they use energy and the consequences of energy waste. To make them adjust their behaviour in the right direction, one has to communicate on the basis of their needs expressed by their value priorities. That means that one should appeal to their need for status and materialism (co-operate with producers of status brands of energy consuming equipment), give support to their need for shopping and consuming (relate such activities to energy saving equipment), use domestic youth idols as messengers and so on.
2. The **Modern Idealists** initially know a great deal about energy matters and energy efficiency. They also score highly in terms of environmental consciousness and are more socially aware. On the other hand, their behaviour on the energy field does not always reflect their competence and their level of engagement. They are hard to influence by advertising campaigns, but are more likely to react positively to public information campaigns, even if their pride, knowledge and high self-esteem sometimes makes them sceptical of public authorities. The arguments to this target group should relate to their care for the community and society, that energy saving is a kind of empathy, that energy saving is ethical and that energy saving gives better comfort in peoples homes.
3. The **Traditional Idealists** are concerned about all the problems that they are made aware of through public information routes. They obey every directive from the public authorities, and have already bought low energy light bulbs, water saving showerheads and new draught proof windows. There will be no difficulties in communicating energy efficiency to this target group in the future – simply tell them to do it. However, the gains will be small due to past energy saving actions.
4. The **Traditional Materialists** have presently low understanding of the problems with energy waste and energy efficiency. In Norway, they are the working classes who established the high energy consuming industry before and after the World War II. When the authorities now tell them to save electricity, they react negatively because of an inability to understand the consequences of waste and the reasons why exactly they have to save. To the members of this sub culture, arguments related to money saving without loosing comfort have an opportunity to be understood and accepted. It also has to be communicated that energy saving is a challenge to all, that we are all in the same boat; and that if you don't save energy, you deviate from the mass. The traditional materialists are also very much concerned about economic growth, and if energy efficiency can be related to economic growth there is a good chance that it will be noticed.

Research conducted by the authors on the energy field indicates that different subgroups of the population react differently to information and campaigns from public authorities in the field of energy consumption. Therefore, public information campaigns only intending to increase knowledge seem to have varying effects on energy savings. Socio-cultural studies have shown the need for differentiation of information and marketing activities to make people adjust their behaviour in an energy efficient direction.

This study, undertaken by the IEA DSM Task VII countries in association with MMI has demonstrated that the pattern of attitudes and behaviour in the six countries forms a common, socio-cultural platform for marketing energy efficiency as a brand. The common platform can be summarized in the final figure below, expressing correlations between value priorities and thus socio-cultural typologies, and attitudes and behaviour towards energy use and energy saving.

Attitudes, behaviour and activities towards energy saving and energy efficiency

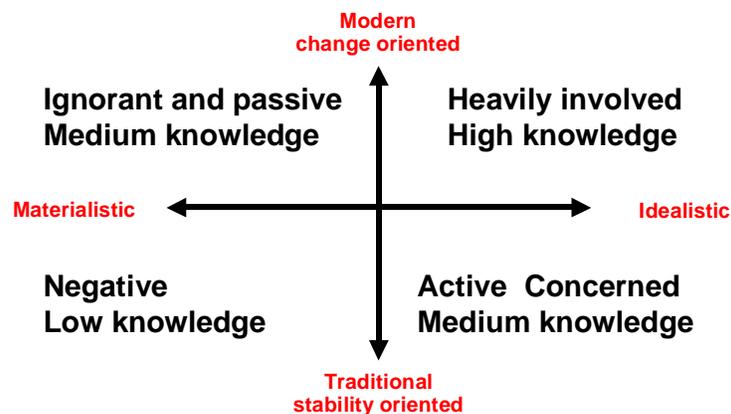


Figure 3.0 – The Sociocultural Value Map: Summary of Attitudes, Behaviour and Activities Towards Energy and Energy Efficiency