

DOLPHINS WP4
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Theme 1. OLP Usage Conceptual Framework

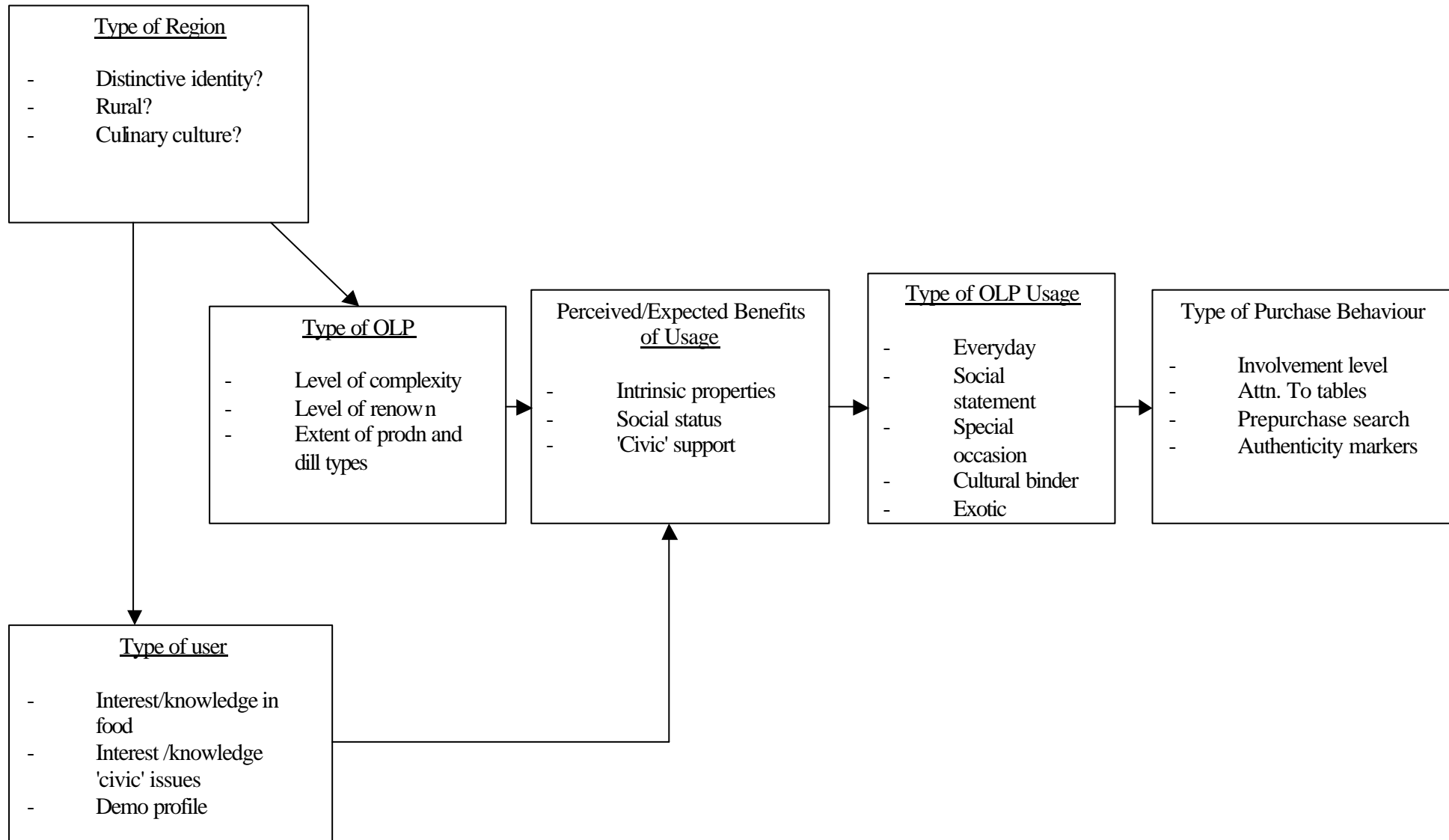
A conceptual framework is needed to help consolidate and explain the link between OLPs and consumers/citizens. The following framework was proposed at the meeting of WP4 in Reggio Emilia (Figure 1). The framework draws from knowledge and evidence supplied by the WP4 participants, in relation to a number of issues such as type of OLP product, type of OLP user, influence of culture/history, type of user behaviour. It proposes that user behaviour is stimulated by a range of factors such as level of complexity of the product, circumstances of usage and perceived benefits derived from usage, which in turn are influenced by the profile of the user and the profile of the region from which the OLP comes.

The application of the framework may be illustrated by two examples of the usage of Parmigiano-Reggiano. P-R is a very typical product, with wide renown, in a category (cheese) which is quite complex in production (therefore open to lots of variation) and which contains proliferation of types and brands. Cheese is also complex in that it can be used in a functional sense, but is also subject to 'gourmandising' (like wine).

Example 1. Parmigiano-Reggiano usage in Reggio Emilia

Reggio-Emilia is a region with a strong food culture and many typical products ('Type of Region'). Consumers tend to be highly involved with food ('Type of User'). Typical products such as P-R are seen as embodying the region, so usage may be motivated, at least in part, by the desire to express belonging and identity ('Perceived Benefits/Type of Usage'). In terms of purchase behaviour therefore, many consumers may buy direct from suppliers, with the product in a 'raw' format (little packaging etc). Consumers draw from own knowledge and experience of the product to make judgements about quality/authenticity, or perhaps use the seller as a proxy, rather than relying on official designations/labels. Packaging/labeling/official designations play a less important role in the purchase decision. Consortia marks (or their proxy signals) play a more important role in choice than PDO/PGI designations, as consumers have long-standing knowledge and experience of the product prior to the awarding of these designations.

OLP Usage Conceptual Framework



Example 2. Parmigiano-Reggiano Usage in London

London is a cosmopolitan city in a relatively heavily industrialized country. Historical forces of industrialization, urbanization, trade and agricultural policy have led to a food culture which is not regionally based, nor is there a plentiful supply of differentiated, artisan produced, typical products. As a large city, London does not have a single, distinctive food culture ('Type of Region'). Food culture is stimulated by interest in cooking by celebrity chefs (often exotic dishes and cuisines), although interest in locally produced and organic food is growing. A hypothetical consumer in London (e.g. female, early 20s, relatively affluent) may have grown up with food as a relatively low-involvement item. Nevertheless, this consumer may now be taking an interest in food from a 'fashion' point of view, and may also be concerned about safety and/or green issues ('Type of User'). A typical product such as P-R may have appeal because it is perceived as exotic, of the very highest organoleptic quality, and essential to the construction of an authentically Italian meal as a special occasion ('Type of OLP Usage'). P-R may accord social status to the consumer, indicating their taste (in Bourdieu sense), knowledge, lifestyle, sophistication ('Perceived Benefits of Usage'). Knowledge about cheese, and P-R specifically, is more likely to come from cookery programmes, books, retailers' promotions than from family or upbringing. Therefore, information appearing on the product itself, such as name, label, imagery/symbolism and official designations are likely to play an important role in product choice. Retailers may also be used as a proxy for authenticity (e.g. consumers may trust specialist delicatessens more than supermarkets). Nevertheless, as awareness of PDO/PGIS is very low in the UK, it must be assumed that it is the other information appearing on the product which takes precedence in choice evaluations.

It should be noted that these examples are not meant to be illustrations of the 'truth'. Of course, some consumers in London may have grown up with a strong food culture, and it is even possible that some consumers in Reggio Emilia don't buy P-R (!!). Furthermore, some consumers in London who buy Whitstable Oysters might behave more in line with Example 1. The purpose of the conceptual framework is to help 'join up' different theories and evidence about OLP usage, to examine the links between different factors, and to encourage debate about what is assumed to be true regarding OLP usage. The framework is also useful for marketing recommendations for OLPs. In the two examples given above, it can be seen that the different types of usage lend themselves to different types of marketing mixes, communication strategies, labeling, etc.

Other factors which need to be added to the framework:

Spatial and Geographic Factors. To differentiate between region of origin (RO) and region of consumption (RC) including the characteristics of the RC market, degree of competition (proliferation OLP and non-OLP products), availability of substitute products. For example Mario cites a low degree of differentiation between OLP and non-OLP products within a region in Portugal with a reputation for high quality and mentions specifically OLP and non-OLP meat produced from the same breed. Ana raises the issue of the ability of consumers to distinguish between products within a given category.

This distinction would provide for the analysis of differences in consumer relationship and involvement with the product in terms of socio-cultural factors (for example culture and the sociology of food and gastronomy (Agnes and Vanessa) and purchase motives linked to the act of consumption (quality assurance, product homogeneity, traceability, control, safety) and the act of citizenship (tradition, cultural identity, regional support, sustainability). In addition this would also provide for an analysis of the hierarchical nature of preferences regional, national, international (Burkhard and Frank, Martine) in the context of availability of domestic and non-domestic substitutes (Wine in the UK for example?).

The relative importance of OLP and other attributes, including brand and consortium marks and multiple certification (Burkhard and Frank, Franco, Mario).

Issues concerning the dynamics of consumer learning and behaviour (Agnes and Vanessa) including search and acquisition of information (labelling, personal recommendation). Following this there is the point (Franco) about inconsistencies in the use of labels between different product types. Franco, for example distinguishes the case of wine (explicit) and cheese and ham (rarely/never?)

At the other end of the framework there could be provision for links between perceptions, purchase intentions, purchase behaviour and post purchase aspects. For example the delivery of satisfaction and value, leading to repeat purchase and loyalty.

Theme 2. Research Methods

The research that would be appropriate for the UK would need to accommodate the current situation. For example, it would appear that with a relatively low number of PDO/PGI products consumer awareness or understanding of the significance of the labels is low and that ‘users’ have a particular profile in terms of age (older), education (more educated) and disposable income (higher). According to DEFRA (previously MAFF) it also appears to be the case that producers in the UK have not exploited these designations in their marketing strategies but have adopted them as an indication of guaranteed quality.

2. Research Approaches

Given this situation there is scope for research that employs two approaches. These approaches need not be mutually exclusive and could be used in parallel. The first approach would research PDO/PGI by direct or explicit reference. However given the current state of awareness this approach may not be appropriate in the first instance. Consequently, the second approach would research PDO/PGI products indirectly. That is, in terms of the benefits that they potentially confer to the consumer. In other words this means that reference to PDO/PGI could be substituted by a description of the benefits they confer.

The general research approach would need to address the following dimensions.

- ?? Between OLP product types
- ?? Within product categories including OLP and non-OLP versions of products
- ?? Spatial/location dimensions within and between regions and nations
- ?? Examination of OLP usage within the context of general food behaviour.

3. Research Agenda

The research agenda would address the following issues.

3.1. Consumer Awareness, Understanding and Support for OLPs

- 3.1.1 Consumer awareness of OLPs.
- 3.1.2 Consumer support for the objectives of OLPs.
- 3.1.3 Relative importance/support for consumer and citizen components of OLPs.
- 3.1.4 Consumer benefits conferred by OLPs.
- 3.1.5 Relative importance of OLPs as an indicator of quality, including aspects of food safety and trust in the context of other quality cues, including brand, region of origin, product type, consortia marks etc.

3.2. Consumer Buying Behaviour and OLPs

- 3.2.1 OLPs purchase with respect to frequency, purpose and motive (usage).
- 3.2.2 The (tangible and intangible) attributes of consumer food buyer behaviour, including OLPs, quality, price (value) and emotional cues.
- 3.2.3 Links between attitudes, perceptions, purchase behaviour, satisfaction and loyalty.

- 3.2.4 Relative importance of OLP in context of other tangible/intangible product attributes.
- 3.2.5 Value attached to OLP label and willingness to pay.
- 3.2.6 Differences between OLP and non-OLP versions of same product.
- 3.2.7 Profiles of consumers with respect to demographic characteristics, motivation and benefits sought.

4. Research Methodology

The suggested approach to the research agenda would employ integrated qualitative and quantitative research with the former methodology being used to explore detail and emotional aspects of attitudes, perceptions, and usage of OLPs. While qualitative research can be used in isolation, it is suggested that it could also be effectively employed to inform the structure and content of quantitative research.

4.1 Qualitative Research

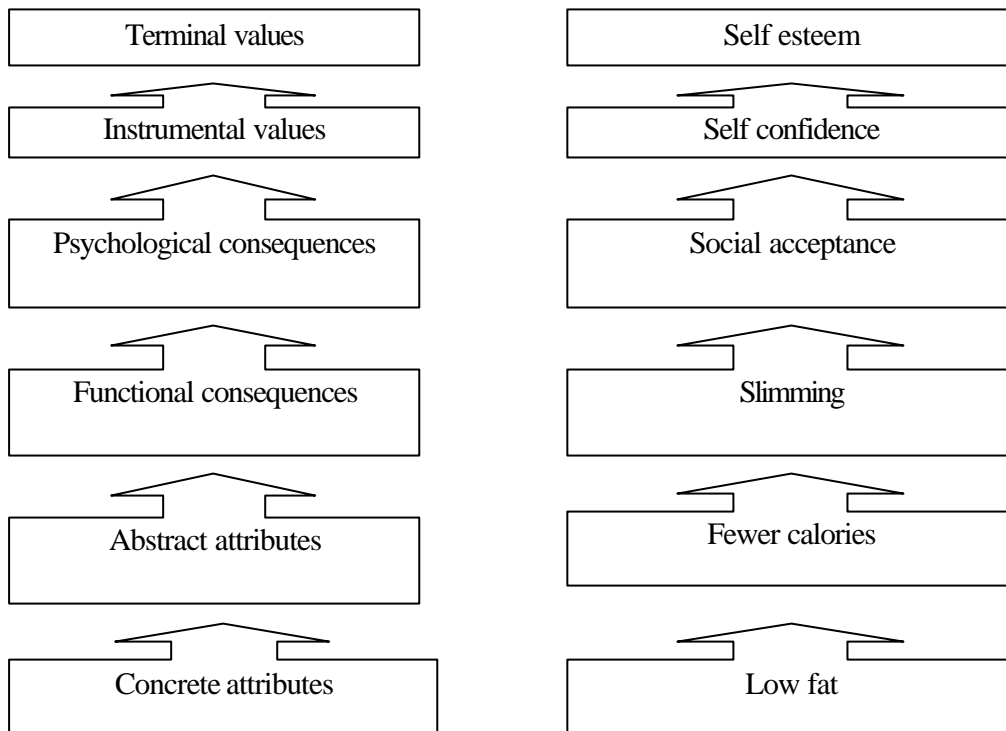
The benefit of qualitative research lies in the facility to explore detail, to delve into deeper, emotional aspects of attitudes, perceptions and behaviour than is possible in quantitative research. The advantage to the research agenda is in the possibility of exploring the emotional aspects of OLPs with respect to the human component of the geographical-socio-cultural aspects of OLPs. In addition to this it would also facilitate an understanding of the attitudes to and perceptions of OLPs in all other items in the research agenda. In an integrated mode, qualitative research would also provide for the identification of the issues that are to be researched by quantitative means. For example the basic advantage is in the identification of the issues that are important to consumers, the language and terms they use, and so on.

In terms of the research agenda suggested in Section 3, qualitative research would be especially effective in achieving the objectives 3.1.1-3.1.5. Furthermore it would inform the basis of quantitative research to satisfy both objectives 3.1.1-3.1.5 and 3.2.1-3.2.7. One particular issue, associate with research agenda items 3.1.5, 3.2.4 and 3.2.6 could employ triadic sorting of actual labelled products (cheese, olive oil, wine) to establish the attributes that consumers use to distinguish OLPs or OLPs and non-OLPs from quality cues (OLP, Brand, Product type) that appear on labels.

4.2 Semi-Qualitative Research (Means-end Chain Analysis)

Means-end chain analysis is a technique that effectively links both qualitative and quantitative methodologies. Grunert (1995) for example, defined the technique a 'semi-qualitative technique'.

The aim of the means-end theory (Gutman, 1982; Olson and Reynolds, 1983) is to establish links between abstract or concrete product characteristics, functional or psychological consequences and consumers' instrumental and terminal values (Olsen and Reynolds, 1983). An example of a single link for the case of a beef attribute 'Low fat' is presented by Grunert (1995).



Source: Grunert (1995)

The methodology requires that product attributes be identified. These can be identified from qualitative research so that each consumer is presented with the same set (See Section 4.1). Alternatively, the consumer may be allowed to identify a sub-set of attributes that are specific to his/her personal circumstances.

Bech-Larsen et al (1997) identify five possible elicitation methods:

- ?? Triadic sorting
- ?? Free sorting
- ?? Direct elicitation
- ?? Ranking
- ?? Selection from a 'master' attribute list.

Grunert et al (1995) emphasise that different elicitation techniques may generate different attribute sets so that it is important to understand the context of the buying decision to identify the 'right' set.

Hence, for example, triadic sorting favours concrete intrinsic attributes while free elicitation favours abstract attributes. In a four-country study of perceived beef quality Grunert (1997) generated a set of intrinsic and extrinsic quality cues using focus group research. Bech-Larsen et al (1996), in a study of seven vegetable oils (olive oil, virgin

olive oil, corn oil, sunflower oil, grape seed oil, rape seed and salad and cooking oil) used a ranking method in the context of alternative usage scenarios.

Data collection requires that the interviewer presents the respondent with relevant attributes and then asks a series of probing questions that establish preference or liking or importance with the aim of eliciting links from attributes to consequences and thus to values. ('Why is low fat important to you?'/ 'Why do you prefer low fat?').

Analysed in the aggregate, or for consumer segments, the results of the analysis present a hierarchical value map, a series of hierarchical links or structures linking product attributes to consequences and personal values. The means-end chain is the structure that defines how the product attributes facilitate the achievement of personal values. There will typically be multiple links from a particular attribute to consequences and levels. The objective would be to understand how consumers associate attributes with their own lifestyle objectives.

The analysis provides the facility for a wide range of marketing activities including product positioning, new product introduction, pricing, advertising and distribution (Gutman, J., 1982; Reynolds and Gutman, 1984; Reynolds and Rochon, 1991; Reynolds and Whitlark, 1995). It has been applied to a wide variety of foods including apples (Jaeger and MacFie, 2001), beef (Grunert, K., 1997), fresh fish (Sørensen et al, 1996) organic olive oil (Krystallis Krontalis, 2001) and vegetable oil (Bech-Larsen et al, 1996).

It is analysed using specialist software such as Laddermap (Gengler and Reynolds, 1995) although one of the limitations of this particular software is in the restrictive sample size. The procedure has been used for several quality-based food studies and could accommodate additional quality-based attributes cues linked to certified quality geographical preference.

In addition to 'standing alone' as a research instrument, means-end analysis can also be used in tandem with other techniques. For example, Krystallis Krontalis employed means-end chain analysis to inform the design of a conjoint study that was subsequently employed to identify consumer segments in the organic olive oil market.

Means-end chain analysis would be suitable for establishing the hierarchical links between a complete set of attributes, the benefits conferred by the attributes (consequences) and consumer objectives as for example indicated by research agenda items 3.2.2-3.2.4.

4.3 Quantitative Research

The sample method would be based on a structured convenience sample (probability sample?) to reflect age, education and disposable income. The questionnaire structure would depend on what is regarded as an appropriate research strategy or objective. For example whether it would be deemed appropriate to develop 'a grand plan' or to conduct successive but less ambitious investigations, each one developing the theme further.

The question content and design would depend upon the analytical instruments to be employed. In general the content would include behavioural variables linked to food shopping behaviour, attitudinal variables, for example to measure the importance of appropriate attributes. Finally the questionnaire would also include relevant demographic characteristics such as age, education and disposable income. The focus of subsequent analysis would be the attitudinal variables associated with appropriate scales.

The analytical strategy would employ multivariate analysis. The advantage of this lies in the ability to analyse causal or interactive links between the many variables that would be involved in each of the items in the research agenda. The focus of the analysis would be the multiple item scales, for example 3.1.1-3.1.5 and 3.2.2-3.2.7.

Some of the most obvious techniques are discussed below.

4.3.1 Multivariate Analysis of Variance (MANOVA)

MANOVA would be appropriate for testing hypotheses for differences between scale item scores for various groups of interest. For example to test whether there are group differences on the basis of location (within and between region/nation) for research agenda items 3.1.2, 3.1.3, 3.1.5, and 3.2.4-3.2.5.

4.3.2 Factor Analysis.

Factor analysis is employed to identify the dimensions underlying multiple item scales. It has been used frequently to establish the dimensions of consumers' perceptions of products in terms of appropriate product characteristics or attributes. It requires that the target variables are metric and correlated. Since it is usually applied to a multiple-item scale these conditions can often be safely assumed since individual scale items are often correlated with other items. Underlying the factor model is the assumption that non-measurable latent variables or factors determine the measured variables (attributes) and also explains the variance/covariance structure of measured variables. The factors are derived sequentially as a descending hierarchy and so establish the relative importance of the dimensions.

Applied to a set of food attributes including extrinsic and intrinsic quality cues it would provide an understanding of the relative importance of the attributes that link to the factors. Hence for example the application of factor analysis to a scale representing consumers' concerns about food risk and uncertainty reveals that the most important dimension of concern is linked to the technology of food production (gm, pesticides etc) and the second represents lifestyle concerns. Factor analysis could be used as a basis for identifying the underlying dimensions of multi-item scales associated with research agenda items 3.1.2-3.1.5, 3.2.2, 3.2.4, and 3.2.6.

4.3.3 Cluster Analysis

Cluster analysis is used to establish consumers segment on the basis of similarities of perceptions, benefits sought from products. This may also be applied to a multiple item

scale directly, using the original scale items, or indirectly, using factors derived from the factor analysis of those variables. The focus of cluster analysis is to establish the number of segments that are appropriate and subsequently to identify profiles of each segment. The profiles are usually established on the basis of the target variables and in addition, on the basis of behavioural and demographic variables.

For example cluster analysis applied to the food risk factors discussed above reveals four clusters. The first cluster represents people with high concerns on both factors that are predominantly female. A second cluster has high technological concerns but low lifestyle concerns and is predominantly comprised of middle-aged people in the ABC1 social class category. A third cluster has low concerns on both factors and is comprised of young ABC1 males. The fourth cluster has low concerns on the technology factor but higher concerns on the lifestyle factor and is predominantly young people. The potential use of this technique is in targeting segments in terms of differentiated marketing, communication or even education. For example it could be employed in the achievement of research agenda item 3.2.7.

4.3.4 Conjoint Analysis

Conjoint analysis is a technique for modelling consumers' preferences for alternative, differentiated products or services. In the first instance it is usual to estimate a preference model for each consumer. It assumes that products/services can be described as a set of attributes, that the attributes can be defined at different levels, and that the overall evaluation of the product is determined by the contribution attribute levels.

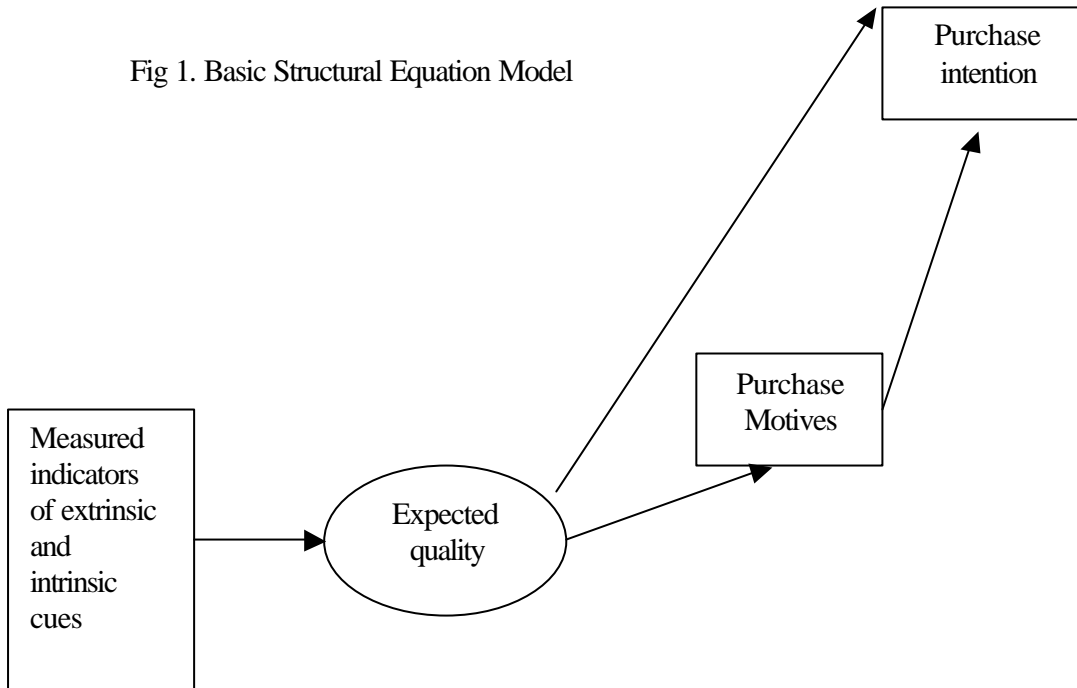
The objectives of the analysis are to establish the attribute level combination that confers the highest satisfaction to the consumer and also the relative importance of product attributes. Hence the usefulness of the technique is in establishing products that most satisfy the consumer and consumers' priorities in terms of the attributes they deem most important. Extensions of the analysis provide for the identification of consumer segments with similar preferences, market share simulation and profitability analysis. Conjoint analysis could be employed in the analysis of research item 3.1.5, 3.2.4 and 3.2.5.

4.3.5 Structural Equation Modelling (SEM)

Structural equation modelling provides a technique for the estimation of equation systems to depict causal structures linking dependent and independent variables. As such it may be regarded as an extension of the regression style technique that accommodates both measured and latent variables (constructs). An example of a simple SEM model links purchase likelihood to overall satisfaction in turn linked to satisfaction with various elements of the product.

Grunert (1997) in effect employs an SEM approach to estimate models that link intrinsic and extrinsic cues to expected quality purchase motives and purchase likelihood (See Fig 1, although Grunert refers to this model as 'Extended Conjoint Analysis')

Fig 1. Basic Structural Equation Model



Source: Adapted from Grunert (1997)

In this model 'expected quality' is a construct that cannot be measured directly but is measured by a series of indicators of intrinsic and extrinsic quality cues. The potential use of SEM is very comprehensive. The basic structure provides a basis to evaluate the relative influences of the elements of the structure. For example whether price more important than origin. Furthermore of provides the basis for estimating split models, for examples for different countries, different consumer groups. Hence one could address the question 'is price more important than origin' for regular and non-regular users of origin-labelled products? Otherwise it provides a basis for testing hypotheses linked to the various elements of the causal structure. The hierarchical nature of the causal structure could be established through means-end chain analysis. The identification of constructs, sub-constructs and their measured indicators could be identified by exploratory factor analysis and could be validated within the SEM structure using confirmatory factor analysis. SEM could form the basis of a complete model linking research agenda items 3.1.2, 3.1.3, 3.1.5 and 3.2.3.

Integrated Approaches

A final research approach would be to integrate qualitative and quantitative approaches, reported and observed behaviour, with a longitudinal dimension. A study could set up an 'observatory' on a number of specific consumer groups, undertaking interviews with them (to gain an understanding of influences of background, up-bringing, family, culture), conducting participant observations on their shopping and cooking habits (to gain in-depth picture of actual food-related behaviour); making use of diaries or other documentary records over extended periods of time (to gain longitudinal understanding); and tracking their actual purchasing behaviour via till receipts or possibly scanner data (to compare reported/observed behaviour with actual purchasing).