

Futuro – a sustainable consumption network

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Abstract

The project futuro aims to label goods with their “true” (sustainable) prices. This is meant to be a support for individuals to assess their shopping behaviours in order to find their ways towards a sustainable lifestyle. This paper deals with the description of the process which formulates the futuro on the one hand and the methodological problems of such a “sustainable consumption” measuring rod on the other hand.

1. Motivation

Individuals get more and more concerned about quality of goods (especially food) and services, but they have little means by which to judge the ecological and social impact of production, transport, use and disposal of goods and services. There are some established eco-labels (Overath 2001, Gupfinger/Mraz/Werner 2000), for example the Austrian “Umweltzeichen”, that award some goods as “better” than others in respect of their impact on the environment. On the other hand there are well established consumer information schemes which try to rank products and services according to specific criteria (like the VKI – “Verein für Konsumenteninformation” in Austria). Still there remains the question whether these informations are able to fully reflect the scope of sustainability (i.e. economic, social and ecological) and whether they are profound enough to show how much better a good is compared to another, to allow for price-like comparisons.

In order to overcome these shortcomings, the project futuro aims at labelling goods and services with the necessary information to make this sort of comparison possible. This might be done in the form of a “shadow price” (i.e. an ecologically and socially

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fair price) or in the form of a ranking of goods and services (i.e. along the sustainability criteria).

2. The Process towards the futuro “price”

The process to arrive at the futuro “price” or ranking will comprise three steps:

1. the definition of the ecological and social indicators to be included,
2. for any of the selected indicators a scale to be introduced for the assessment,
3. the aggregation of the selected indicators to one indicator or ranking of alternative products and services

2.1 Definition of the ecological and social indicators

A lot of ecological and social indicators (Schmidt-Bleek 2000, Hochstraßer 1997, Krottschek/Narodoslawsky 1994) have been developed so far. Among environmental indicators CO₂ emissions, pollutants (toxicology), material input or consumption of arable land and social indicators like child labour or exploitation of workforce can be listed. During project futuro their value for the establishment of the futuro is assessed by the public and scientists, both involved in the project.

2.1.2. The public assessment of ecological and social indicators

From February 2002 until May 2002 people were invited to submit their opinions on self-completed questionnaires, that asked for indicators to be included in the futuro and an optional justification. As a starting point the futuro project team suggested a list of six indicators: CO₂ emissions, consumption of arable land, fair wages, working standards, pollutants (toxicology) and material input.

Participation was possible via mail or fax on paper questionnaires, via email by attaching the digital version of the questionnaire or directly through the web portal www.futuro-preise.at, where the participants’ input was automatically saved in the web portal’s database.

From about 4000 people invited to participate by direct mailing from the futuro project partners⁴, 108 people participated in the process. While this is a very low response rate, the quality of completions was high: 53 suggestions for new indicators, 30 comments about indicators and last but not least 75 profound

⁴ The project was started by SOL (www.nachhaltig.at) in co-operation with Klimabündnis (www.klimabuendnis.at), akaryon and experts of the University of Economics, Vienna at the beginning of the year 2002. Further co-operations exist with NGOs from environmental and fairtrade sectors (e.g. Südwind, TransFair, Weltläden), as well as with scientists.

statements about the project, some involving several pages, were given. An analysis of the type of statements can be found in figure 1.

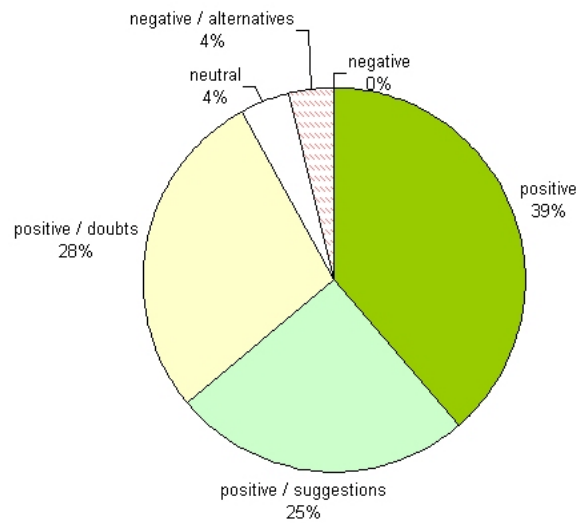


Fig. 1: Analysis of statements about futuro, may 2002

2.2 Introduction of scales for the included indicators

Second, for any of the selected indicators a scale has to be introduced for the assessment. This step is scheduled for July until December 2002.

While it is fairly easy to find scales for ecological indicators like CO₂ emissions (CO₂ equivalents), it will be tricky to find quantitative scales for social indicators. Basically the challenge which has to be faced is the phenomenon of weak commensurability in this context. Weak commensurability is defined as to have a single measuring rod for different alternatives or acts which is denominated in an ordinal form (see Martinez-Alier et al. 1997). The main problem attached to this is the fact that by using different kind of scales it will be very difficult – if not impossible – to aggregate the data at hand in a useful way so that the task of the futuro as an information tool for the consumer can be fulfilled. Besides, there is a very well known phenomenon in social science that qualitative data (even if "translated" into quantitative scales) are to be regarded as less "useful" than hard core quantitative data (see e.g. Boston 2000). However the need to draw a picture which is as complete as possible in respect of all the effects which are caused by the production, transport and distribution of a product will without any doubt lead to the necessity to use such indicators and scales.

2.2.1 The public assessment of scales

A suggestion for scales will again be presented to the public to gain an insight in understandability and usability.

2.3 Aggregation to one indicator

Third, this large amount of information for the selected indicators has to be "converted" into something which will allow the consumer to make comparisons upon and which reflects as much as possible of the information at hand. Basically the problem could be summarized along the following lines:

Consumer decisions (i.e. to purchase a specific good or service) are based upon information which is provided to them in the form of different modes. Standard economic theory states that the most comprehensive and in most of the cases the only mode is the market price. Market prices reflect in the case of a perfect competition (see e.g. Samuelson/Nordhaus 1989, Mansfield 1997) all information a consumer could possibly need to compare and make decisions upon: an equilibrium price of a perfectly competitive market therefore reflects not only the production costs (like factor prices for labour and capital) but also the production method – i.e. the technology employed and the know how used, all pictured by the underlying production function of the supplier. On the other hand, this price reflects the preferences and level of utility which can be achieved by this specific good as well – thus enabling an optimal social and individual outcome (in economic terms referred to as the Pareto optimum of a market). In real world conditions however perfectly competitive markets are the exception rather than the rule and therefore the single consumer is increasingly confronted with a diminishing market power vis-à-vis the supplier and in order to make decisions in accordance with his values, mind set or personal judgements it becomes necessary to use further information other than the price alone.

Legitimate consumer interests have led to legislation which forces to give a certain amount of additional information at the point of sale – e.g. ingredients, terms of use, expiry dates, countries of origin. But this information is, in some cases, far from enough to decide upon according to preferences which may be determined by an interest in the working conditions, in a fair distribution of income, in the misuse of children and women during the production process and others. This need for information on the side of the consumer is absolutely legitimate and in accordance with a free market economy. Still, the more information is supposed to be given to the consumer, the more it becomes a problem to "transport" it in a manageable way. Basically there are two extremes which could be distinguished:

1. Either a simple, very much compressed form of information – e.g. by using a single denominator like money or mass flows. This leads without doubt to

a higher level of abstraction and a certain loss of richness of the information which has to be transferred.

2. Or have the full variety of information transferred to the consumer in a less compressed way – e.g. by using rankings or deviation analysis. This leads to less abstraction and a more one-to-one like transfer of relevant data.

Practically the **first case** would mean a "price" in the form of a single figure – basically in the sense of an aggregated indicator using money as measuring rod (or other forms of aggregated indicators like the Ecological Footprint (Wackernagel/Rees 1995)). – This form of consumer information would be useful at the point of sale – e.g. in the form of stickers attached to the product itself. Still it has to be admitted that by using this mode of "transport" for the information it will not be possible to state the underlying assumptions, the way of aggregating all the different criteria and indicators into one denominator, which becomes rather important in this case as there is a strong correlation between the reduction of complexity (i.e. one single denominator) and the amount of assumptions and simplifications to be made beforehand.

The **second case** means practically to set up rankings or benchmarks for specific product or service types. This means there is no single indicator attached to the product, but comparison is made between products of the same kind (e.g. coffee, orange juice,...). – This mode of "transport" is especially useful in the sense of consumer information in a more elaborated way – e.g. in the form of consumer information journals.

For the methodological aspects of these two cases see section 2.3.2.

So far no decision has been made which form of aggregation should be chosen in the future case and for both ways of aggregation a public contribution will be necessary to finalize the design of the procedure.

2.3.1 The public assessment of aggregation

In order to contribute to this step people are asked to rank the selected indicators in order of their specific importance to them. This process was kicked off on the world environmental day (5th of June 2002) and will be carried out over a longer period, probably until autumn 2002. The process will be accompanied by an information campaign on the indicators in order to allow people to settle profounder opinions. This step could then be used in various ways for the two cases of aggregation procedure outlined above.

2.3.2. Methodological aspects of aggregations

Following the above drawn outline of options to fulfil an aggregation procedure in the context of a consumer information tool two fundamentally different methods,

Cost Benefit Analysis (CBA) for the first case of the “price” and Multicriteria Analysis (MCA) for the second case of the ranking, will be discussed. They differ widely in their basic methodological assumptions, in their capacities, in their advantages and drawbacks and in their outcomes.

CBA – especially social CBA – claims to picture all effects (including externalities⁵) of a process by summarizing them via a single denominator – i.e. monetary units. The methods to do so – i.e. quantifying effects, externalities which are not included in the market price so far – are manifold (see Hanley/Spash 1995). Just to give an example, the method of intrinsic valuation for instance uses estimated costs which would either be necessary to repair damages (defensive costs) or prevent them (offensive or prevention costs) in order to monetarize externalities. Furthermore pseudo-markets (e.g. hypothetical labour markets) are used to quantify social effects. In order to adjust those costs over time and to include the interests of future generations discount rates are assumed and applied.

MCA is a method that tries to construct models which may support decisions in any context of real life decision making. The attractiveness of the method is caused by the fact that a large number of aspects which may influence decisions can be included systematically in the procedure. In other words *"in multiple criteria decision aid the principal aim is not to discover a solution, but to construct or create something which is viewed as liable to help an actor taking part in a decision process either to shape, and/or to argue, and/or to transform his preferences, or to make decisions in conformity with his goals"* (Roy 1990). MCA assumes that an analysis on the basis of weak commensurability and weak comparability⁶ is possible (Martinez-Alier et al. 1997).

The major differences between the two methods have been pointed out in various publications (Munda 1995, Bouma et al. 2000, Schuh/2001, Schuh/Sedlacek 2002).

A decision has to be made in order to choose the appropriate aggregation procedure for the futuro process. To be able to do so, it will be necessary to compare the two methods at hand – i.e. CBA and MCA – along specific criteria to see their strengths and weaknesses and to assess their applicability for futuro.

⁵ In economics externalities are defined as those effects (positive as well as negative) which are caused by economic acting of two or more parties and which are unwillingly affecting third parties to the transaction at hand.

⁶ From a philosophical perspective, it is possible to distinguish between the following concepts: **strong commensurability** according to which there exists a common measure of the different consequences of an action based on a cardinal scale of measurement; **weak commensurability** according to which there exists a common measure based on an ordinal scale of measurement; **strong comparability**, according to which there exists a single comparative term by which all different consequences can be ranked; and **weak comparability** according to which values are irreducibly plural and can not be uniquely ordered along a single scale.

Actually the selection procedure of the aggregation method will have to take the two extreme points of consumer information strategy – mentioned earlier on in this paper – into account. Is the principal aim of futuro to give a simple straight forward information which can be used at the point of sale and to be identified at one glance, then the CBA will be the better choice as only there an aggregation to one single "price" is possible. As a drawback CBA suffers from a high degree of underlying assumptions which follow basically neoclassical economic theory and which are not revealed to the customer at first sight. Besides some criteria will not be able to be included into the aggregation at all as the mathematical axiomatisation will not be possible. Is the principal aim of futuro to include as much of the ecological and social criteria as possible in the information provided to the consumer and should the comparison of products of the same kind be possible on a large scale of different indicators, then the MCA will deliver the better results. The drawback will be that the result will be a ranking or benchmarking rather than a price thus making it impossible to be caught at one glimpse.

The final decision will again depend strongly on the preferences of the "public" and therefore the participational aspect of the network has to be emphasized once more.

3. The participational aspect - "Why involve the public?"

The futuro project aims to establish a system that supports consumers in their daily shopping decisions and the future users of the system should be involved right from the beginning (both to improve the project as well as to rise public acceptance). (Bußwald/Niederl/Schuh/Jakubowicz 2002)

Even more important, the first project months showed that futuro might be able to raise public interest in the sustainability discussion. This could support any sustainability project, that, today, often lack public interest (Rosenberger 2001). Of course this conclusion cannot be drawn from the participation rate in step 1 (see section 2.1.2), but from a number of events arranged all over Austria in June 2002, where people engaged joyfully in futuro discussions. futuro seems to be able to touch and trigger personal dismay. By inviting people to state their opinions, futuro could thus contribute to raise public engagement and responsibility in order to take decisions for a new sustainable living culture (Sarkar 2001).

4. Application of futuro "prices" or rankings

futuro's web platform is now used for the participational process in accomplishing the futuro "price" or rating, but will, in the future, also fulfil other important tasks:

futuro prices or rankings will be listed on the platform and updates of these data and assessment algorithms will be organised through the platform. Producers will be able to register for the assessment of their goods and services via web.

In the real world it is planned to carry the futuro process in pilot regions, schools and other educational units, as well as to introduce “futuros” in shops.

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