

Designing policy to influence consumers: Consumer behaviour relating to the purchasing of environmentally preferable goods

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Policy Studies Institute
50 Hanson Street, London
W1W 6UP
UK



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Executive Summary

Consumer behaviour in the real world often differs from that predicted by economics and policy. Drawing together evidence from behavioural economics and marketing, this project sought to explore consumer behaviour relating to the purchasing of environmentally-preferable products. The project's research findings are based on the results of a review of behavioural economics and marketing literature, and additional research with marketing professionals.

Contrary to the belief of many economists, consumers very rarely weigh-up the full costs and benefits of their purchasing decisions. Instead, they are strongly influenced by emotional factors, the behaviour of other people, by habits, and by the use of mental short-cuts, which all help to speed up decision-making. Rather than being consistent, consumer preferences have also been shown to be inconsistent, changing over time and according to the situation and the way in which information is presented.

In turn, while information provision and choice are important, neither necessarily leads to improved consumer decision-making or changes in consumer behaviour. A common feature of standard economic thought is the belief that when individuals make poor choices it is the result of misinformation or a lack of information. Both marketing and the behavioural sciences have proven this 'information-deficit' model to be deeply flawed. In part, this stems from the fact that consumers rarely search out, read or properly digest all of the information that is available to them when making a decision. More fundamentally, the model neglects the wealth of other factors that determine individuals' behaviour.

The most obvious finding to emerge from the research is that policy must take into account all of these different factors if it is to effectively influence consumer choice. An improved understanding of consumer behaviour gives policy-makers a wider range of policy instruments with which to achieve policy objectives. Used in the right circumstances, these instruments are likely to be more cost-effective than more traditional policy instruments.

Policy should also remember consumer behaviour is both context- and product-specific. While the existing evidence on consumer behaviour contained in this report provides guidance on how people make choices, policy-makers need to remember that consumer responses will vary across product groups and policy areas. The six short 'policy briefs' produced to accompany this report provide the key pieces of policy-relevant information and advice on consumer behaviour in relation to

purchasing (and sometimes use) of: private vehicles, white goods, consumer electronics, food and drink, utility contracts.

Key findings: what do we know about consumer behaviour?

- **Consumers rarely weigh up all the costs and benefits of choices.** Instead, purchasing decisions may be made automatically, habitually, or be heavily influenced by an individual's emotions or the behaviour of others. This also means that consumers tend not to use all of the information available to them when shopping. Instead, people are more likely to read information when they perceive a benefit from doing so.
- **Consumers use mental short-cuts to help speed up decision-making.** These short-cuts can distort consumers' decisions. Short-cuts can include relying on labels or brand names that are recognised, and being influenced by the way in which information is presented and the context in which a decision is made.
- **Consumers respond more to losses than gains.** This means people are more reluctant to give something up or suffer loss than they are motivated by benefits of equal value. This aversion to loss has a significant impact on the way in which people interpret information and can lead to consumers avoiding making choices altogether.
- **Consumers value products much more once they own them.** In addition, the value placed on a product is inconsistent. It can vary over time, and can be affected by the previous cost of the product and the emotional attachment someone places on a product. This makes people reluctant to trade in old products, even when it would be cost-effective to replace them.
- **Consumers place a greater value on the immediate future** and heavily discount future savings. This impacts on the way in which consumers value the efficiency and lifetime costs of appliances.
- **Too much choice can be overwhelming to consumers,** making decision-making difficult. As choice increases, consumers may consider fewer choices, process less overall information and evaluate information differently. When choice is particularly excessive, consumers may actually avoid making a choice altogether.
- **Consumers are heavily influenced by other people.** This might take the form of an indirect influence, for example from seeing neighbours or friends buying a product, or a more direct, explicit influence, for example when a salesperson persuades someone to buy a certain product. Nearly all consumption choices are subject to some kind of social influence.
- **Consumers use products to make a statement about themselves.** Products meet far more than just a functional need; they make a statement about a person's identity and about the type of person they are and would like to be. One of the most important lessons from marketing is that people buy products for very

different reasons; for example, while some people may be motivated by concern for the environment, many others will not.

Key findings: implications for product policy

In light of these findings, the project identified a number of opportunities and implications for the design of more effective product policy:

- **Reconsider the impact of price.** The impact that price has on consumer behaviour can be influenced by in-store marketing, such as special offers, by the prices of similar products and by consumer perceptions of changes in price. Policy should work with retailers to encourage price promotions on environmentally-preferable products. Although price incentives may initially cause consumers to react to price changes, consumer valuations of prices tend to change over time. This means that as consumers adapt to higher prices, initial changes to consumer behaviour may not be maintained. Financial levers that increase over time can overcome this problem.
- **Help consumers consider long-term costs.** Consumers have a tendency to overvalue the short-term and undervalue the future so tend not to consider the long-term running costs associated with products. Policy could work with retailers to ensure that the long-term costs of products, rather than just the purchasing price, are highlighted to consumers.
- **Recognise the importance of recognition.** Consumer choice is often driven by recognition of products, brands or labels. Labels need to be consistent and easily recognisable, something which the current colour-coding system used within the European energy label will aid. Future labelling schemes should take advantage of the fact that consumers may already recognise 'A' rated products as the most energy efficient. A 'frontrunner' approach, whereby classes are updated periodically so that the most energy efficient products are always awarded an A label, would help to maintain this existing recognition.
- **Reconsider information provision.** The way in which messages are framed plays an enormous part in the way in which consumers interpret that information. Information is also much more likely to be taken notice of by a consumer if perceived as beneficial. Present information in ways that appeal to consumers, recognising that this may differ according to consumers and products. Policy-makers need to also recognise that product information reaches consumers through numerous routes: consider the role of intermediaries (like salespersons) and new Internet-based information sources on consumer behaviour.

- **Make it easier to make choices.** This may mean making it easier for consumers to research their purchases, for example by improving Internet-based price comparison sites. It could also mean greater ‘editing’ of the choices that consumers face, for example by removing the unhealthiest or the most environmentally damaging products from the market.
- **Fines may be more effective but incentives are preferred.** People feel the loss from a visible fine (or surcharge on a price) more than they value gains from an incentive. The difficulty is that, because individuals are loss averse, they are equally averse to policies that suggest future losses. Policies that fine people are likely to be less publicly acceptable for precisely the same reason that they are likely to prove more effective.
- **Ensure that standard models are environmentally-preferable.** If a consumer feels overwhelmed by choice or perhaps is just in a rush when shopping, they are often likely to accept the standard product model, or ‘default’. Policy should work with retailers to ensure that standard product models (i.e. those that consumers receive if they do not specify otherwise) are the most environmentally preferable.
- **Allow consumers to change their minds.** Often consumers make poor decisions because they are under pressure to make a decision. ‘Cooling off periods’ provide consumers with the space to calmly consider the costs and benefits of a purchase, away from the pressure of a sales environment. This is especially useful for high value purchases, like cars or expensive electronics, where the influence of salespersons in-store is known to be powerful.
- **Remember that all consumers are different.** Gender and income levels impact on product choice, as do attitudes, values and beliefs. While some people may carry out extensive information searches before shopping, others may be content to decide in-store or to listen to the advice of a sales person. No single policy intervention is likely to change the behaviour of all consumers. Instead, a mix of policies will be the most effective way of influencing different consumers.

Key findings: implications for consumer policy and research

In addition, the project identified a number of key findings related to consumer policy and research more broadly:

- **Learn from the world of marketing.** Much can be learnt from marketing about consumer behaviour. One important lesson is that consumers are heterogeneous, which means that a targeted approach to policy design, based on audience segmentation, can capitalise on this heterogeneity. Another potentially effective

policy tool would be interventions that alter the ways in which products are marketed. At one extreme, this could include restrictions on marketing practices. Perhaps more effectively, it could mean working with retailers in ways that encourage them to market certain products or services in order to promote uptake.

- **Pilot policies in the ‘real world’.** Accurate, reliable information about how consumers will react to different policies is difficult to collect, particularly prior to the implementation of policies. Policy-makers will need to be smart in how they obtain this information. Policy pilots and trials provide an opportunity to observe consumer behaviour in a real world setting.
- **Improve policy evaluation.** Building knowledge of consumer behaviour in response to policy instruments will require better evaluation of applied policy instruments. To be useful, that evaluation will need to examine the impacts of instruments on the drivers of consumers’ behaviour, not only the outcomes. New ‘real world’ approaches to evaluation are required.
- **Develop an international evidence base.** Effective design of consumer policy in this area would be supported by exchange of information on drivers of consumer behaviour and evaluations of policy instruments across the EU and other countries. Ways to promote this sharing should be put in place within Member States, or at EU level.
- **Remember that all consumer policy attempts to change behaviour.** Critiques of policy-making based on insight from behaviour economics sometimes accuses such policies of being overly paternalistic, leading to accusations of the ‘nanny-state’. Policy-makers should not be put off by such accusations. Policy instruments that are uninformed by research from behavioural science are not necessarily less paternalistic, *‘they are simply less likely to be effective’*¹.

¹ Amir et al., 2005: 448

1 Introduction

The world presently finds itself forced to address increasingly unsustainable patterns of global consumption. Sixty per cent of the Earth's ecosystem services have been degraded in the past 50 years, while natural resource consumption is predicted to rise to 170 per cent of the Earth's bio-capacity by 2040 (WBSCD 2008). At the same time, population levels continue to increase, reaching a predicted 9 billion by 2050.

On average, 60 per cent of world gross domestic product (GDP) is accounted for by consumer spending on goods and services. Coupled with these twin pressures, increasing levels of consumption present a challenge for policy - not only because of the resource levels needed to sustain such levels of consumption but also because of the ecological impact of extracting and disposing of these resources and the often inequitable distribution of these impacts.

Central to improved consumer policy is an improved understanding of consumer behaviour and improved knowledge of why people buy the things they do. This is by no means an easy task. Of the thirty thousand new consumer products launched worldwide every year, it is estimated approximately 90 per cent fail despite market research indicating beforehand that people will buy them. What people say they'll buy and what they actually buy are often very different.

Drawing on the twin disciplines of marketing and behavioural economics, this project *'Designing policy to influence consumers: consumer behaviour relating to the purchasing of environmentally-preferable goods'* has sought to explore the ways in which people behave when considering which products to buy. The project aimed to illustrate, by drawing on observed evidence from 'real world' consumer behaviour, the many ways in which the behaviour of individuals often differs significantly from that predicted by standard economics and its often employed concept of a 'rational' consumer. In doing so, the research highlights not just the complexity of consumer behaviour but the way in which consumer decisions are determined by the situation in which they are made, the person that is making them and the product that is being bought. It also highlights the limitations of traditional policy levers like information provision and fiscal incentives, and identifies new opportunities for influencing consumer behaviour.

Chapter 2 provides a very brief summary of the project's objectives and methodology (see Annex 1 for a full description), before the key findings from the project literature review are set out in Chapter 3. Chapter 4 uses a set of real world examples of consumer behaviour to illustrate how the real life behaviour of consumers defies standard economic predictions. Findings from marketing professionals, which relate

specifically to certain products, follow in Chapter 5. The report concludes with a discussion of the implications of findings from behavioural economics and marketing for future EU product policy.

2 Project aims and outputs

The project aimed to develop a thorough understanding of how the drivers of consumer behaviour identified by marketing and behavioural economics may cause consumer decision-making that diverges from that predicted by standard economics. In doing so, the project sought to identify the main drivers of consumer behaviour that cause a divergence from purely rational decision-making and to illustrate this through an examination of five product policy case studies. Full details of the project methodology, which supports this brief summary, can be found in Annex 1.

Our research began with a literature review of international evidence from behavioural economics and marketing, as well as other relevant disciplines (including psychology), to pull together the diverse interdisciplinary evidence base that explains why consumers shop the way they do. In light of time constraints, the approach was to 'identify five pieces of research which provide the most interesting, comprehensive and relevant descriptions of consumer behaviour' and to review additional literature from the twin disciplines of behavioural economics and marketing with reference to these.

The review, which initially included over 150 relevant publications, consisted of predominantly English language sources of literature, supplemented with some French and German articles, and drew on academic publications (journal articles, presentations and books), professional conference papers (for example, those of the Market Research Society) and other reports. The review also drew on evidence from marketing, sourced from the Chartered Institute of Marketing (CIM) (one of Europe's leading international bodies for marketing) and the World Advertising Research Center (WARC).

In order to gain access to evidence relating to the real world behaviour of consumers when buying certain products, the research team also spoke to a number of marketing professionals. Details of the individuals and partners contacted personally during the course of the project can be found in Annex 3. Evidence from these discussions is captured in Chapter 5 of this report, '*Understanding consumer behaviour: evidence from product marketing*' and in a series of five policy briefings, which set out key project findings related to consumer behaviour and the purchasing of: vehicles; food and drink; consumer electronics; white goods; and, energy. Once drafted these briefings were 'tested' and reviewed for clarity and ease of use with a network of policy contacts from the European Commission and several member states.

The set of briefings, which accompany this full report '*Designing policy to influence consumers*' as the main outputs of the project, consists of the following:

- Briefing 1: Consumer behaviour and product policy (overall briefing)
- Briefing 2: Food and drink
- Briefing 3: Consumer behaviour and electronics
- Briefing 4: Consumers and their cars
- Briefing 5: Consumer behaviour and white goods
- Briefing 6: Consumers and energy purchasing.

3 Real world consumer behaviour: literature review

3.1 Introduction

As the need for new patterns of consumption increases, so do efforts to understand consumer behaviour, with a more nuanced understanding beginning to emerge based on shared insights from a huge number of disciplines – including psychology, economics, sociology, marketing, neuroscience, evolutionary biology to name but a few. Over time, as this more sophisticated level of understanding has developed, evidence has emerged that calls to account some of the most pervasive and important models previously used to explain behaviour. A wealth of evidence suggests that ‘real world’ behaviour (a term used in this report to refer to the actual, observed behaviour of individuals in day-to-day life) differs dramatically from that predicted by these models.

The evidence presented in this review draws largely on two disciplines – marketing and behavioural economics – and calls into question perhaps one of the most pervasive, if not important, assumptions in standard economics: that of ‘rational man’.

Presented below are the results of this review. Evidence from both behavioural economics and marketing, as well as other relevant disciplines like psychology and sociology, is integrated under headings that set out some of the main factors that drive consumer behaviour.

The review is set out with reference to a series of key texts, which readers are advised to read alongside this report. The aim of this review is not to reproduce the comprehensive arguments and evidence set out in these texts but to build upon these, setting out new evidence where appropriate.

1. **Kahneman, D. (2003) A Perspective on Judgement and Choice: Mapping Bounded Rationality. *American Psychologist*. 58 (9), 697 – 720.**

Daniel Kahneman’s paper (2003) presents over three decades’ Nobel-prize winning research exploring the concept of ‘bounded rationality’ - the ways in which decisions diverge from those predicted by rational choice theory. It focuses largely on ‘cognitive economics’ (it does not, for example, consider the impact of social norms on decision-making), but provides a comprehensive summary of many of behavioural economics’ most well-researched phenomena.

2. **Jackson, T. (2005) 'Motivating sustainable consumption: a review of evidence on consumer behaviour and behavioural change'. A report to the Sustainable Development Research Network. January 2005.**

Several more recent reviews of behaviour change and behavioural models exist but Prof. Tim Jackson's 2005 review of consumer behaviour remains perhaps the most comprehensive and accessible, and the foundation on which the majority of more recent reviews have largely been based. The report sets out in an accessible way the main drivers of behaviour and theoretical models that attempt to explain it, and does so with consistent critiques of rational choice.

3. **Cialdini, R. B. and Goldstein, N. J. (2004) Social influence: compliance and conformity. *Annual Review of Psychology*. 55, 591 - 621.**

A wide-ranging summary of evidence relating to the ways in which people seek to comply with requests and demands, and to conform to social norms. The article summarises recent research (1997 - 2002) and considers the ways in which three goals - accuracy; affiliation and maintenance of a positive self-concept - drive individuals to comply with requests and conform. Findings related to marketing are largely implicit but the articles serve as a valuable summary of many of the principles that underlie advertising and consumer-focused persuasion.

4. **McKenzie-Mohr, D. (2000) 'Fostering Sustainable Behaviour through Community-Based Social Marketing'. *American Psychologist*. 55 (5), 531 - 537.²**

The findings that have emerged from the literature reviewed to date point towards the need for more nuanced policy-making that can take into account the different barriers to and drivers of behaviour in any given situation. Doug McKenzie-Mohr's article sets out a clear, step-by-step guide on how to adopt a community-based social marketing approach when planning interventions (McKenzie-Mohr 2000). Social marketing is already informing SCP policy-making within Europe (e.g. Defra 2008) and is likely to continue to do so. Discussions in the literature review of policy implications will update McKenzie-Mohr's article with reference to recent research and also policy interventions referenced in behavioural economics.

² Or, for even more information, the book: McKenzie-Mohr, D. (2000) *'Fostering Sustainable Behaviour Through Community-Based Social Marketing'*

5. Amir, O. et al. 'Psychology, Behavioural Economics, and Public Policy'. *Marketing Letters*. 16 (3/4), 443 - 454.

Co-authored by a number of leading behavioural economists, this paper sets out a number of ways in which learning from behavioural science can inform policy. It considers three examples from existing policy, before discussing some of the challenges that face policy informed by psychology. Finally, the paper advocates attempting to change policy through the utilisation of emerging findings from behavioural economics and highlights the importance of trialling policies through local level pilots.

3.2 How do consumers really make decisions?

Standard economic thought often contends that consumer behaviour is most cost-effectively influenced by policy through the provision of information and choice; provide enough information and a wide array of products with which consumers can satisfy their preferences and markets will do the rest.

In reality, as this section of the report begins to discuss, consumer decision-making is subject to a host of internal and external factors that bias decisions and over-turn preferences. The repeated buying of products leads to shopping habits, leading to certain products (particularly, for example, food products) being bought almost automatically. Consumers tend to avoid losses and eagerly take advantage of promotions and product trials, making the offer of something for 'free' irresistible. Even the method of payment used to buy a product can have a fundamental impact on the amount someone is willing to pay for it.

What follows is a discussion of some of the evidence that highlights the often surprising nature of consumer behaviour. The chapter then considers in greater detail some of the internal and external factors which drive this behaviour.

3.2.1 Information provision, reliability and sources

A common feature of standard economic thought is the belief that when individuals make poor choices it is the result of misinformation or a lack of information. As such, the information-deficit model of behaviour change (or 'knowledge-deficit' model) contends that poor decisions are made because people lack the information that would enable them to make a better choice. Across many areas of consumer policy, information provision is favoured as a policy tool because of its marginal cost (compared to other options) and because it is assumed that too much information can never be harmful (BRE and NCC 2007). However, both marketing and the behavioural sciences have proven the information-deficit model to be deeply flawed.

In part, this stems from the fact that consumers rarely search out, read or properly digest all of the information that is available to them when making a decision. The type, complexity and amount of information provided, and the way in which it is presented, all have a significant impact on the likelihood of people reading and understanding it. In the UK, research has found that consumers are unwilling to spend time reading a lot of available information (especially 'small print') and that the formal, legal language of much information is confusing. Often, people think that information is being provided because the provider of the information is legally obliged to do so, rather than because it is beneficial to the consumer (BRE and NCC 2007). For example, consumers might assume that detailed information about the specification of a new television is provided because the manufacturer has an obligation to provide it. Rather than actually helping consumers make informed choices, the sheer volume of information now found on products and packaging can make understanding information harder rather than easier. *'200Hz clear LCD' '4 HDMI', 'DVB-T', 'Motionflow 220Hz' 'Xross media bar' '24P true cinema'...Needless to say, we know from research that there is hardly any consumer understanding of the meaning of these features, nor of their consumer benefit'* (van Veen 2009). To highlight two extreme cases, the UK's Better Regulation Executive identify a toaster sold with 52 different safety warnings and a consumer credit agreement that took people 55 minutes to read in full (BRE and NCC 2007). Consumers did not find these helpful.

Another reason that real world consumers might not process all the information available to them is if the benefits of processing the information are thought to be limited; for example, if the consumer sees no personal benefit from choosing a product with a high energy efficiency rating over a product with a low rating.

Three years after its introduction, the EU energy label was found to have little effect in southern European countries but a much greater effect in northern countries, where consumers have been concerned about energy use for a much longer period of time (Sammer and Wustenhausen 2006). Although energy efficiency labels might appeal to consumers concerned about their environmental impact, consumers are more likely to process the information if they see a benefit from doing so. For consumers who are concerned about protecting the environment, knowing they are purchasing an energy efficient product may be enough to motivate their purchase; for other consumers, the personal benefits – in terms of reduced running costs or total lifetime savings – may prove more motivating.

Similarly, a year-long study into the impact of front-of-pack nutritional labelling of food on consumer behaviour in the UK found a marked difference between self-reported levels of label use when shopping and actual observed consumer behaviour. While many people claimed that they were influenced by nutritional

labels, in reality it was largely those concerned with healthy-eating – or following some kind of special diet – who used the labels. In most cases, other external factors (for example price, special offers, brand loyalty and the type of product) all played an influential role in purchasing decisions (FSA 2009). It has been suggested that information provision as a policy option will therefore be most effective when it makes it easier for consumers to process information about expensive products (i.e. it lowers the costs associated with processing the information) (OFT 2008).

The other reason the information-deficit model proves to be ineffective at motivating behaviour change is because of the wealth of other factors – in addition to information – that motivate individual action. Policies that fail to accommodate these other factors, for example by considering the impact of the behaviour of other peoples – are less likely to prove effective. For example, in the summer of 2000, California experienced an energy crisis with demand outstripping supply; prices rocketed and power outages were widespread. Within this context, Schultz *et al.* (2007) tested a series of different interventions that encouraged people to conserve energy in their homes. Across several approaches, the least effective method was providing information. Yet this remained the method most frequently employed by policy (Schultz and Estrada-Hollenbeck 2008).

Other considerations are related to the way in which information is communicated. From as early ago as the 1940s, research has shown that mass media is very rarely able to directly influence more than only a small part its audience. In fact, it is face-to-face contact with others that influences most people (Weenig and Midden (1991), and see Fell *et al.* (2009) for a current review of literature on influence via social networks).

3.2.2 *The 'paradox of choice'*

Consumer autonomy, or the right of consumers to make their own choices, is one of the most fundamental features of classic free market economics, something psychology would initially appear to support as beneficial. The provision of a right-to-choose has been found to positively link to increases in perceived control, intrinsic motivations and life satisfaction, as well as proving beneficial even when the choice itself is trivial (Iyengar and Lepper 2000). However, when faced with too much choice, people have difficulty managing their decisions and both satisfaction and the ability to easily make preferential decisions are reduced. Schwartz (2004) has called this 'the tyranny (or 'paradox') of choice'. Research shows that as choice increases, consumers consider fewer choices, process less overall information and evaluate information differently.

'Choice overload' hypothesis (Iyengar and Lepper 2000) proposes that while the provision of extensive choices can initially be seen as desirable, it ultimately proves demotivating. In a series of studies exploring the way in which people buy jam they found that people proved much more likely to purchase a product when offered a small selection of options (6) than a much more extensive set of options (24 - 30). Their findings support those from cognitive psychology which contend that our short-term memory can generally handle 7 (+/- 2) options when making choices (Productivity Commission 2008).

Consumers may also be less happy with a decision when they closely consider their options than when they do not. If I am presented with one good option, I will be happy. But if I am presented with two good options, I am more likely to critically evaluate both and to notice their disadvantages. Whichever option I ultimately choose, I will be aware of its disadvantages - something that might not be the case if I only had one option to choose from (Hsee and Tsai 2007).

Linked to loss aversion, the opportunity costs (the opportunities presented by the options that we choose to reject when making a choice) can gain excessive prominence in decision-making. Given that opportunity costs tend to reduce the desirability of the most preferred choice, it can be the case that the more choice there is, the more opportunities we will feel have been lost and the less happy we will be with our choice (Schwartz 2004). Hsee and Tsai (2007) attribute this to the emotional attachment that can result from deliberation; close consideration of a suite of options can lead consumers to form an emotional attachment to all options, including those that have to be foregone. Choosing one option feels like losing the others. Similarly, when faced with multiple undesirable options, consumers are happier if someone else makes the choice for them than if they have to make the choice themselves. For example, if someone is on a diet and has to choose between a selection of meals that do not appeal to them, they will be happier if someone else chooses the meal for them (Hsee and Tsai 2007).

As the complexity of making a choice increases, people simplify their decision-making processes and are more likely to rely on mental rules of thumb, or 'heuristics', to speed up decision-making. Such heuristics - or mental 'rules of thumb' - are often helpful and indeed rational; they allow us to reduce the effort (or 'transaction costs') associated with decision-making and provide 'rough and ready' preference assessments. When heuristics become more problematic, from an economic point of view, is when responses based on heuristics are biased and when these biases are systematically repeated. Related to choice and information provision, product branding and recognition provide one example of when such a heuristic may influence consumers.

3.2.3 *Branding and the recognition heuristic*

As the complexity of making a choice increases, people simplify their decision-making processes and are more likely to rely on heuristics. Related to information provision, product branding and the judgement heuristics discussed earlier (Kahneman 2003), recent evidence suggests the existence of a 'recognition heuristic' (Goldstein and Gigerenzer 2002). When forced to make a decision quickly, consumers often make decisions based purely on product recognition, even if the consumer knows nothing about the product (Ariely 2008; Richter and Spath 2006).

The importance of recognition, and the extent to which consumers are able to access information about products and brands even when attention levels are low, is knowledge of increasing importance to marketing. In the past, marketing relied heavily on 'product recall' (the extent to which a consumer remembered having seen or heard about a product) as indicative of successful marketing. If lots of people recalled having seen an advert, the 'recall rate' was taken as a marker of success. More recently, influenced by advocates of the 'primacy of affect' (Zajonc 1984), marketing is realising that brand *recognition*, rather than an individual's ability to necessarily *recall* seeing an advert or brand, is actually a better predictor of brand favourability. When brand information is subject to what Heath (2001) has termed 'Low Attention Processing' – i.e. the automatic cognitive processing that Camerer *et al.* (2005) identified this can trigger an automatic emotional response, which can in turn lead to an intuitive choice (Penn 2005). If I am shopping in a rush and my thoughts are distracted, I might prove more likely to grab a product or brand that I recognise, regardless of whether I can actually recall seeing an advert about it and without even noticing what other information is on the label (for example, about the fat content or production methods). Market research has used CCTV to monitor the way in which people buy beverages in convenience stores and found the vast majority made a decision within two minutes, going straight to a familiar brand. One conclusion of this is that manufacturers are better advertising out of store than attempting to do so in-store (The Economist, 2008).

The impact of brand loyalty is not confined to point of purchase. A frequently cited example in both behavioural economics and marketing literature comes from Princeton University, where a research team explored brain activity in participants while they drank branded cola. While some participants drank blind, others were made aware of what brand they were drinking and were shown the product packaging. The study found that brand awareness had a dramatic influence on expressed behavioural preferences; *people said they liked exactly the same product much more if they thought that it was produced by a known brand*. What was particularly important in the study was that fMRI brain scans were used to monitor brain activity

during the tests. These found that activity in the part of the brain associated with emotion and affect were greater when participants knew they were drinking the branded product – not only do people report enjoying consuming a branded product more, but their brains exhibit responses commensurate with this (Broadbent 2007; McClure et al. 2004).

3.2.4 Product trials and the appeal of 'free'

Another way that people speed up shopping is through the development of repeat buying habits, which tend to develop for a small selection of brands and products. There are three steps that lead to a consumer adopting a brand which they then buy habitually:

- i) Gaining awareness of a product (which occurs, for example, through advertising, as a result of in-store promotions or simply through seeing the product while out shopping);
- ii) Making a first or trial purchase; and
- iii) Being reinforced into developing and repeating habits (Ehrenberg 2000).

While advertising and marketing are obviously important in the first of these three steps, it is the second and third steps that are vital. One way of prompting initial uptake of a new product is discounted (or free) trial offers. These can be prompted for various reasons, some of them intentional (for example, cut price offers) and others more random (if, for example, a usual brand or product is out of stock). 'Triability' (the ability to trial something) has been identified as a key condition to enable the diffusion of innovation. It is particularly valuable in the context of environmentally-preferable products, where consumers often perceive green products to be inferior in quality (Pickett-Baker and Ozaki 2008).

One technique commonly employed by marketing and documented in behavioural economics, is the promotion of items through goods or offers that incorporate something that is 'free' (the 'zero-price effect'). Evidence suggests that consumers over-react to free promotions, whether they involve buying one item and getting another free ('BOGOF' promotions) or simply new product give-aways. Not only do consumers react to such promotions as if the free product reduces the cost of purchase, but as if the fact that it is free actually increases the benefits associated with the product. In many cases this is the result of affect – zero-priced products promote a more positive emotional response because the options are seen to have no (or fewer) downsides. An anecdotal example of the effect of 'free' comes from a major online retailer, which introduced free shipping in most of the European countries in which it traded, but mistakenly only reduced shipping prices to one

French franc in France. While the number of orders increased dramatically across Europe, there was very little increase in sales in France (Shampanier et al. 2007). Box 1 provides a more pertinent example of how successful free promotions can be.

Having trialled a new product, regardless of product type, a key issue is not whether a consumer buys a new product but whether they buy it again. If someone does not like a product after they have bought it, it becomes impossible to continue successful marketing of it. Despite claims that advertising creates consumer demand, attempts to convince consumers to buy a new product through advertising will do little more than stimulate initial sales. Only successful trials and the subsequent repeated buying of a product will actually lead to the maintenance of consumer demand (Broadbent 2007).

Though marketing talks a lot about brand loyalty, convincing a consumer to continue buying a product or brand (i.e. prompting the formation of a buying habit) is an incredibly tentative process, influenced by a variety of almost haphazard processes (Ehrenberg 2000). While brand recognition may serve to reinforce buying habits, consumers exhibit much lower year-to-year brand loyalty than is often anticipated, with only a small percentage of consumers exhibiting what can be thought of as strong loyalty to particular brands (Rubinson and Baldinger 1996).

Box 1: The power of 'free' energy-saving light bulbs

In March 2008, three major business-led campaigns that kick-started the UK's uptake of energy efficient light bulbs:

1. The Mayor of London and one of the UK's leading DIY stores held a 'Bulb Amnesty', where Londoners were able to take a traditional light bulb from their home to any store and, in return, received a free, energy efficient light bulb. The promotion led to 150,000 energy saving bulbs being distributed over the course of just a few days.
2. One of the UK's leading supermarket chains promoted a buy-one-get-one-free offer. Shoppers were reportedly 'snapping this bargain up'.
3. One of the UK's leading tabloid newspapers joined forces with a major electricity supplier to launch the 'Great British Light Switch', which saw 4.5 million energy saving bulbs distributed free to the paper's two million readers, over the course of just two days.

Collectively, the three campaigns led to the distribution of over 6 million energy saving light bulbs in just one month (The Climate Group 2008). The campaign is particularly useful as a means of challenging consumer misconceptions of energy saving light bulbs based on previous purchases. Many people had bought energy saving light bulbs when the technology was less developed and quality of light poor. Even if major improvements in performance occur, it is difficult to persuade consumers to try the product again without free trials tackling misplaced misconceptions.

Companies realise that a consumer does not need to be persuaded to think that the habitual product is necessarily any better than alternatives - just that it is no worse. This again is where advertising and marketing come in; not only do they aim to persuade consumers to buy their brands, but they serve to reinforce the values and identity associated with that brand during the product lifetime (thus increasing the chances of repeat purchase).

3.2.5 *The impact of payment method*

Another observation (linked tangentially to consumers' desire to avoid losses) is the extent to which payment method can also fundamentally change the way in which people think about purchasing decisions. Paying for items in cash involves an actual loss - as hard currency is handed over. Paying by credit card makes the transaction more abstract, so that consumers are less likely to feel the loss associated with paying

for an item. Evidence that payment type impacts on willingness to pay (Prelec and Simester 2001) found that participants in one study were willing to pay as much as 100 per cent more for an item when they paid on credit card than when asked to pay in cash, an amount quite out of proportion to the value of deferring the payment. It is a finding supported by neuroscience: brain imaging experiments have shown that spending on credit cards actually reduces activity in the part of the brain associated with negative feelings. When we purchase on credit cards, we also become more susceptible to 'present bias': we tend to overvalue immediate gains (our newly purchased flat screen TV) at the expense of future costs (our credit card's high interest rate) (Lehrer 2009).

3.3 Understanding consumer decision-making

In order to understand why consumers choose to rely on heuristics or are influenced by other factors when shopping – particularly at some times but not at others – behavioural economists and marketing professionals are increasingly turning to neuroscience and the study of decision-making in the brain itself.

3.3.1 Some lessons from neuroscience

Daniel Kahneman's paper '*A perspective on judgement and choice*' (2003) is based on his Nobel lecture of 2002 and, more importantly, over three decades' research exploring the concept of 'bounded rationality'. Defined by Herbert Simon (1955), 'bounded rationality' questions one of the most fundamental assumptions of neo-classical economics - that individuals are purely rational decision-makers. Nestled within this assumption, we find '*homo economicus*' or 'economic man' – an entirely rational individual blessed with access to perfect information, motivated entirely by self-interest and a desire to maximise their own welfare, and possessing the cognitive abilities to accurately weigh the costs and benefits of any given course of action. (It has been suggested elsewhere, by Frey (2008), that *homo economicus* is also likely to end up without friends). Simon's concept of 'bounded rationality' states that in many situations individuals are unable to – or choose not to – employ purely rational decision-making; we can think rationally but more often than not this rationality operates within cognitive bounds, or is limited by the availability of time and information.

Most economists would happily admit decisions are not made under such clear-thinking, information-ready conditions. Instead, decisions are made based on imperfect information, using heuristics and under the influence of the situations in which they are made (Ariely 2008; Thaler and Sunstein 2008). The work of Nobel prize winners Kahneman and Tversky (1971, 2003) - which has since been considerably advanced by both behavioural economists and neuroscientists -

attributes these systematic ‘anomalies’ in human decision-making to two distinct types of thinking: automatic and reflective (Kahneman (2003) labels these System 1 and System 2).

- Thinking associated with **System 1** (or the ‘Automatic System’) is fast, automatic, effortless and often emotionally charged. Because we have little control over this type of thought, we have very little control over the behaviours that follow automatic thinking. We may say that decisions made automatically take place through habit, or perhaps are made ‘without thinking’. As such, when asked about behaviours that are triggered by automatic thoughts, people are able to offer very little introspection on why they did them (Camerer et al. 2005).
- In contrast, **System 2** thinking (the ‘Reflective System’) is slower, effortful and more likely to be consciously monitored and deliberatively controlled (Kahneman 2003). System 2 monitors the activity of System 1, though it is only after an automatic action is carried out that we are able to consciously reflect on why we acted in that way. When we do so, attempts to justify such action can be spurious (Camerer et al. 2005). Normally however the self-monitoring of our automatic self by our reflective self is quite relaxed, allowing us to rely on intuitive judgements when we deem it appropriate.

Thaler and Sunstein (2008) suggest that while a rational economic thinker would always consult their reflective system, most of us are happy to rely on our automatic systems at least some of the time. This is not to say that learned behaviour, if repeated, cannot become automatic (for example, see Sennett (2008)), nor that intuitive decisions are not always reliable and beneficial. It is also not to say that everyone agrees with this dual-system distinction. Evolutionary biologists and neurobiologists, for example, argue that the brain is actually a highly unified system, with complementary rather than conflicting components (Gowdy 2008).

With this in mind, and drawing considerably on the findings of neuroscience and recent advances in brain imaging, economists have further developed Kahneman’s System 1 and 2 model, distinguishing two separate dimensions to the way in which our brains operate. Camerer *et al.* (2005) set out a two-dimensional framework as a way of thinking about decision-making, distinguishing between not just automatic and controlled processes on the one hand, but cognitive (those we traditionally associate with ‘rational’ thought, or reason) and affective (feeling or emotions) processes on the other (see Table 1).

Processes that take place in quadrant I are both cognitive and controlled – you would rely on these thought processes if you were to sit down and rationally calculate the

most cost-efficient way of insulating your home. Quadrant II are the rarest type of thought processes – Camerer *et al.* (2005) suggest the best example of their use is during method acting, when an actor draws on previous emotive situations to stimulate a controlled repetition of the same emotion. Quadrant III thoughts control your foot when you receive a pass in football whereas Quadrant IV processes for example make you jump when someone says ‘Boo!’ (Camerer *et al.*, 2005: 15-20).

Table 1: The two dimensions of thought processes

	Cognitive	Affective
Controlled processes: <ul style="list-style-type: none"> • Serial (i.e. occur in series) • Effortful • Evoked deliberately • Good introspective access 	I	II
Automatic processes: <ul style="list-style-type: none"> • Parallel (i.e. can occur at the same time) • Effortless • Reflexive • No introspective access 	III	IV

(Camerer *et al.* 2005: 16)

Although many economists – and this includes Kahneman (2003) – have tended to think of cognition as controlled and emotions as automatic, this fails to recognise that much cognitive thought is also automatic. Penn (2005) uses the example of reading a book to illustrate the ‘cognitive unconscious’ at work. When reading a book, we are able to concentrate and ignore the things around us. Yet if someone calls our name, we stop reading and turn. While our *controlled* cognitive processes are ignoring everything apart from the book, our *automatic* cognitive processes are not (Penn, 2005).

While we associate affect (or emotion) with states of feeling (such as anger, pain or fear) most of our affective processing takes place automatically, below the point at which we are consciously aware of it (in Quadrant IV). What makes this important is the fact that so much of our action and behaviour is actually motivated by these emotional processes. Cognitive processes help us answer true or false questions but Camerer *et al.* (2005) suggest that it is our affective thought processes that help us decide between ‘go’ and ‘no-go’. As such, they propose the view that cognition by itself cannot produce action; ‘to influence behaviour, the cognitive system must operate via the affective system’ (2005: 18).

The best illustration of this comes from the work of Antonio Damasio and colleagues (for example, see Bechara and Damasio (2005)) who proved that emotions are central to decision-making, serving as a crude but automatic summary of the costs and benefits of a decision. Working with patients with brain damage, Damasio found that patients with functioning cognitive processes but minimum affective processes experienced profound difficulty making even the most basic decisions. Not only did they have difficulties making simple plans and choosing friends and activities, but those decisions that they did make often led to both financial and social losses. He argues that 'somatic markers' – emotional reactions associated with mental imagery – are integral to decision-making. Without these emotional indicators, that is to say, when people behave as economists would have us believe *homo economicus* behaves – they became pathologically indecisive. For example, choosing between two brands of cereal was found to take a patient an inordinately long time, because '*of endless reasoned analyses of the pros and cons of each brand*' (Bechara and Damasio, 2005: 339).

What is crucial to note is that it is this twin-functioning nature of our thought processes that accounts for so much of the 'irrational' behaviour that markets are prone to. Taking risk, spending money and delaying gratification are just some of the situations in which we find ourselves torn, with our 'heart' (emotions) telling us one thing, and our head (cognition) another (Camerer et al. 2005). Although the exact way in which our cognitive and affective systems interact is not properly understood, it is enough to note that it is the conflict of these two systems – and ultimately the outcome of such conflict – that determines so much of our behaviour. For now, we return to Kahneman's paper and explore further the use of judgement heuristics.

3.3.2 *Affect, emotion and impulsivity*

The 'affect heuristic' is an automatic, natural assessment of any given stimuli (Kahneman, 2003). Although these evaluations are not always conscious, it has been suggested that they are the main determinant of many judgements and behaviours.

However, as well as playing an important role within the two-dimensional thought process, our emotions exert a powerful force over our thoughts and behaviour in other ways. Affective state (what we might term our 'mood') has been shown to play a vital role in preference construction (Caruso and Shafir 2006). Research has proven a tendency for incidental emotions to affect unrelated choices and decision-making. In general, positive emotions lead to positive assessments and negative emotions result in negative assessments, though the impact of particular emotions varies. For example, in a series of experiments, Lerner *et al.* (2004) explored the impact of disgust and sadness on valuation. Whereas feelings of disgust tend to lead to a resistance to

new acquisitions and a desire to expel objects that are already owned, sadness is related to feelings of loss and helplessness; when we feel sad, we want to change our situation. In their experiments, Lerner *et al.* found that when participants were sad, they were willing to pay higher prices but accept lower selling prices (2004). Disgust meanwhile reduced both buying (or 'choice') prices and selling prices, making the endowment effect of ownership negligible.

This emotional impact on prices between private sellers and buyers would likely be less influential for professional dealers, who are more emotionally detached and therefore able to sell the second-hand product on without the associated emotion. A canny salesperson, for example second-hand car dealers and property developers, might favour dealing with private sellers who are experiencing negative emotions associated with the item they are selling (for example, if they are selling a house or car that belonged to a relative that has recently died). In doing so, the salesperson would shield the private buyer from the negative emotion, but capitalise on it themselves.

Choices based on consideration of mood are unlikely to result in greater consumer satisfaction in the long-term. Existing research shows that people tend to over-estimate how happy they will feel after an experience (for example, after buying a new product) and that the greater an individual's effort to maintain or improve a mood, the greater the chance they will make a decision that is detrimental in the long-term (Caruso and Shafir, 2006).

The extent to which individuals are conscious of, and monitor, their feelings (referred to as 'emotional attention') varies. Those with high emotional attention, i.e. people who regularly monitor their feelings, tend to rely on their feelings when making judgments more than those with low emotional attention. In addition, emotional attention is determined by the strength of particular moods. Only when a mood is strong enough to exceed a minimum threshold of salience (i.e. the mood is strong enough for an individual to become consciously aware of it) will it affect conscious evaluative judgments (Caruso and Shafir 2006).

Although this illustrates the way in which particular emotions can prompt unique decision-making responses, behaviour economists more commonly distinguish between two broad emotional states of arousal: 'hot' and 'cold'. It has been suggested that whether or not a certain behaviour or decision leads to temptation is closely linked to these two ends of the emotional spectrum: something is 'tempting' if we consume more of it in an emotionally aroused state than in a cold state (Thaler and Sunstein 2008).

How an individual chooses to exercise restraint in the face of temptation may border on the extreme: for example, Ariely (2008) describes the 'ice glass' method that some people adopt to reduce their consumer spending on credit cards. They actually store the credit card in a freezer in a glass of frozen water. Therefore, every time the temptation to spend on the card arises, they have the time required to defrost the glass of water before they can use it. Resorting to such extremes to resist temptation depends on being able to estimate, when in a 'cold' state, the extent to which arousal will affect our self-control, something that most people tend to be fairly bad at doing. The impact of emotion on actual behaviour can be mediated dramatically by the extent to which an individual is aware of the different ways their behaviour might vary between 'hot' and 'cold' emotional states (referred to as the 'intra-personal empathy gap' (Amir et al. 2005).

When we contemplate buying things in the future, decision-making largely takes place in the part of our brain associated with deliberative, rational planning so is less likely to be subject to impulsive preferences. It is this part of the brain that encourages us to be patient, and wait for greater gains in the long-term. In contrast, when we contemplate an immediate gain, the parts of the brain associated with emotion become aroused. It is the tug of war between these two areas of the brain that often determines whether or not we take a particular course of action. Whether our cognitive, deliberative processes or our emotional, experiential processes dominate depends on the availability of processing resources (including time, other distractions, and the number of other decisions to be made). The presence of stress when shopping, together with other factors that act as decision-making constraints (such as time constraints, the presentation of choices and the number of choices available), can all lead to more emotions and greater impulsivity (Just 2006).

3.3.3 Accessibility

An important characteristic of automatic, intuitive thoughts (and therefore the bounded nature of rationality) is that they come to mind spontaneously and effortlessly; they are characterised by a certain 'accessibility'.

Kahneman (2003) recognises that this accessibility can be determined by the different aspects and elements of a situation, the different objects in a scene, and the different attributes of an object - all of which can be more or less accessible. Physical salience is one obvious determinant of accessibility - if an individual is presented with four supermarket shelves of product A and only a tiny, bottom shelf of product B, product A is likely to come to mind first. Salience can however be overcome by deliberate attention. A shopper arriving in the supermarket with a coupon for money off product B is likely to make much more effort to search for it: product B will

become more salient. As will be considered later, much recent research has sought to identify the various ways in which 'accessibility' can be manipulated in order to influence individuals' interpretation of different stimuli.

3.3.4 *Salience and priming*

Priming refers to deliberate attempts to vary the accessibility of intuitive thoughts in ways which have an impact on decision-making and behaviour. This is done by using influences to make certain information become more easily accessible. Thaler and Sunstein report some rather surprising examples of the power of priming. For example, objects characteristic of business environments – such as boardroom tables and briefcases – make people more competitive, less cooperative and less generous (2008: 71).

The impact of emotions and mood on behaviour, as detailed above, is also played out when moods are made more salient. In a series of experiments, Caruso and Shafir (2006) found that mood had a marked impact on the choices that people made, and that the more mood was made salient, the more attractive choices that promise to maintain positive moods or repair negative moods become. While it may be desirable in the short-term to make choices based on mood, in the long-term it can lead to ineffective decision-making. For example, it has been proven that bad mood and anxiety in dieters and the obese leads to over-eating (Caruso and Shafir 2006).

Similar studies have also shown that prompting (i.e. priming) people to think about money, even with only very subtle references to money, can have an impact on behaviour. In a series of experiments, Vohs *et al.* (2008) used subtle prompts to remind participants of money (e.g. by playing Monopoly or, in a different experiment, sitting near images of cash) found that participants who were strongly reminded of money were less helpful to others (for example, when someone knocked over a pot of pencils that they needed help picking up) than those who were only weakly reminded. They conclude that money prompts both desirable changes (e.g. task persistence and lone working) and undesirable (reduced helpfulness). (The effect of the actual payment of money on social and market transactions, as opposed to just references to money, is discussed again in this review, in the section entitled 'Social and market norms, and the 'crowding-out' effect'). Priming can be a particularly powerful tool when it is used to make social norms more salient (e.g. see Schultz *et al.*, 2007), something that could prove especially useful in situations where normative influence is reduced (e.g. online retail).

3.3.5 *Hedonic utility and 'hedonomics'*

Emotional attachment has also been used to explain the fact that consumers are less willing to substitute hedonic items (i.e. hedonistic items such as chocolate cake) with items that are considered more utilitarian (or 'virtuous', like health foods). Dhar and Wertenbroch (2000) characterise hedonic goods as those whose consumption is '*primarily characterised by an affective and sensory experience of aesthetic or sensual pleasure, fantasy or fun*' (that satisfy 'wants'), whereas utilitarian goods are those where consumption is '*more cognitively driven, instrumental and goal orientated, and accomplishes a functional or practical task*' (that constitute 'shoulds') (2000: 61). Through a series of studies, their research shows that when people consider giving up a good (or forfeiting it), hedonic values are more salient because hedonic attributes tend to be more sensory and evocative and are therefore easier to imagine. As well as experimental results, Dhar and Wertenbroch use the results of a field survey to prove that owners of cars to which they have an hedonic attachment value their cars more than owners whose vehicles can be thought of as utilitarian (2000).

3.4 **Decision-making and short-cuts: the use of 'heuristics of judgment'**

An important finding about intuitive decisions is that when people are working under pressure (Kahneman gives the example of the captains of fire crews), they rarely need to choose between different options because only one option comes to mind. In most cases though, when we are not forced to make split-second decisions in such high pressure scenarios, we moderate intuitive judgements by considering other attributes, like similarity. To understand and explain this moderation process, Kahneman identifies what are termed 'judgement heuristics', which help us make decisions quickly. For example, when assessing the quality of a new television we might compare it not just to the other televisions on sale, but to the quality of our previous television. Since Kahneman's early work in the 1970s, over 60 different heuristics have been identified by behavioural economists seeking to explain the 'short cuts' we use to aid decision-making (Philips 2008).

3.4.1 *Anchoring and adjustment heuristics*

One of the most prevalent judgement heuristics we employ during evaluation is the process of 'anchoring and adjustment', which is used to estimate the unknown value of something. The process involves starting with an anchor – a number that is known or about which a reasonable estimate can be made – and then adjusting the judgement in an appropriate direction. For example, studies from the US repeatedly show that when people are asked to estimate the population of a major town or city, their estimates are affected by the population of their home town. Those from smaller conurbations use their local population size as an anchor, while residents of

larger towns and cities anchor to their (larger) population sizes. For consumers, showing a recommended retail price (RRP) for a product alongside the actual (cheaper) sale price causes consumers to anchor to the RRP, and judge the sale price to be good value. The process of anchoring is problematic in two ways:

- Firstly, seemingly irrelevant numbers, or prices, can serve as anchors when we make an evaluation, leading us to be disproportionately influenced by the first suggestion we encounter. Ariely (2008) uses the term 'arbitrary coherence' to refer to the idea that the initial prices we attach to things are arbitrary, but that once established they shape the ways in which we think about present and future prices (making them 'coherent'). This does not imply that any one of the prices which someone out shopping might find themselves bombarded with will stick in our minds. Instead, it is only when one consciously contemplates buying an item at a particular price that it can become an (arbitrary) anchor (Ariely, 2008).
- The second reason anchoring can result in biases is attributed to the process of 'adjustment' that accompanies it. Research repeatedly shows that the adjustments that people make away from an anchor are insufficient. For example, if considering the market price of flat-screen televisions and comparing current prices to previous prices (which only a few years ago were much higher), people will systematically underestimate the extent to which the reduction in price reflects technological development. As such, current low prices may be perceived as better value than they necessarily are.

3.4.2 *The availability and representativeness heuristics*

Kahneman's second heuristic, the '*availability heuristic*', is employed when we assess the risk, likelihood or likely impact of a course of action by considering similar examples that easily spring to mind. For example, if asked to judge how likely it is that I am at risk of being involved in a future earthquake; I will judge the probability as much higher if I have been caught in an earthquake in the past – even if past experiences are completely unrelated to future probability (for example, if I was on holiday in an earthquake-prone area at the time). In the context of consumer behaviour, it has been suggested that the easier it is for someone to remember previous examples of pro-environmental behaviour (for example, if lots of occasions when they have recycled their waste spring easily to mind), the more pro-environmental the consumer will perceive themselves to be (Cornelissen *et al.* (2008).

Closely related to this question of availability, the '*representativeness heuristic*' is employed when individuals make a judgement about the likelihood of a given event by using 'representativeness' as a rule of thumb. The example often used to illustrate

this is Tversky and Kahneman's original experiment (Tversky and Kahneman, 1983), which shows how a representative description of a person can bias judgements about that person's situation. In their experiment, Tversky and Kahneman (1983) provided participants with the following description of 'Linda':

Linda is 31 years old, single, outspoken and very bright. She majored in philosophy. As a student she was deeply concerned with issues of discrimination and social justice and also participated in antinuclear demonstrations.

Participants were then asked to judge the probability of eight different outcomes of Linda's current activity, which included 'Linda is a bank teller' and 'Linda is a bank teller and active in the feminist movement'. (The other six options were unrelated and independent). Participants judged the probability of Linda being both a bank teller and an active feminist as higher than the probability of her being just a bank teller, even though this is impossible. Kahneman (2003) explains that the psychology behind this mistake is straightforward: the similarity of Linda to stereotypes of a feminist are highly accessible whereas judgements about probability are difficult. Faced with the task of determining probabilities, people substitute a judgement about *representativeness* (or similarity) to replace the required judgement about probability (Kahneman, 2003).

Cornelissen *et al.* (2008) suggest two reasons why the representativeness heuristic is likely to mean individuals underestimate the extent to which previous behaviour is judged to be environmentally-preferable. The first is frequency of behaviour. The more widely that a behaviour is carried out within society, the less likely it is to be associated with a particular disposition (like being 'green'). In addition, causality has a role - the more reasons there are for carrying out a course of action ('I choose this particular hybrid vehicle because I like the design, I want cheap fuel bills, I only have a small garage and I want to reduce carbon emissions'), the less likely I am to be able to take the purchasing decision as representative of pro-environmental behaviour (Cornelissen *et al.* (2008).

3.4.3 Framing Effects

While it is valuable to understand when and why heuristics are used, one of the most important consequences of our use of heuristics is the way in which they lead to systematic biases across markets. Heuristics do not lead us to all make small errors that collectively cancel each other out; they cause us to all make the same small mistakes which together lead to systematically biased decision-making and behaviour. We are, as the title of Dan Ariely's book on the subject suggests 'predictably irrational' (2008). As we will now consider, one of the reasons for this is the external factors that influence our decision-making.

The basic principle that defines the effect of framing is the ‘passive acceptance’ of the formulation of a problem or choice (Kahneman, 2003: 703). A central tenet of standard economic theory is the assumption that preferences are unaffected by the way a choice is presented or by the presence of irrelevant options or outcomes. Yet in numerous experiments as well as in real life, it is well documented that the way in which people react to a problem or decision is determined by the way in which information is presented. Box 1 illustrates the way in which framing effects work.

Box 1. Framing: an energy saving example

Campaign A:

‘Insulating your loft and cavity walls could save you around 250€ a year on energy bills’

Campaign B:

‘If you don’t insulate your loft and cavity walls, you could be losing as much as 250€ a year on energy bills’

Even though the above statements convey exactly the same information about energy saving, they are framed differently. Campaign A emphasising the benefits of installing insulation, while campaign B emphasising the costs. In this instance, because people are naturally much more averse to loss (i.e. costs) than they are gains, behavioural economics suggests that the phrasing of campaign B will be much more effective than campaign A (based on Thaler and Sunstein, 2008).

Framing is of course not new to the world of marketing. It is the reason a dairy product will be labelled 95 per cent fat-free, rather than 1 per cent fat, for example. Nevertheless, framing is essential to effective communications campaigns, which should seek to promote the positive benefits of action while framing these benefits in terms of averted losses or costs.

3.4.4 Risky choice and Prospect Theory

Perception is reference dependent. The way that we perceive and interpret any given stimulus reflects both a contrast between that stimulus and other competing stimuli. Kahneman’s way of illustrating this, in terms of a visual example, is perhaps the simplest – see Box 2 below.

As well as our interpretation of a stimulus being affected by other stimuli, our interpretation can also be affected by our experiences and adaptation to similar stimuli in the past. If we plunge our hand into very hot water, and then immediately into cold water, we will think that the water is much colder than if we put it straight into the cold water. In a similar way, our reaction to information about a product on

special offer may be tempered by competing in-store information about other special offers or whether we have seen the product on offer many times in the past.

Box 2. Reference dependency: a visual example (from Kahneman, 2003)



The two boxes above illustrate the way in which our vision is reference dependent. The two squares in the middle of each box are exactly the same colour but do not appear equally bright; instead, the box on the right appears darker. This is because the brightness of the squares is not independently interpreted by our eyes. It requires a reference which in this case is the larger square around it.

It was this observation of perception reference-dependency that first led Daniel Kahneman and his colleague Amos Tversky to explore the reference dependency of risk. Through a series of experiments in which participants were asked to take or decline to take different proposed gambles, they found that individual preferences were determined by losses and gains *relative to a reference point*. This finding suggests that it is changes in wealth, rather than states of wealth, that influence happiness (or 'utility').

In turn, Kahneman and Tversky's 'Prospect Theory' identifies the fact that consumers find it very difficult to estimate probabilities and to understand the risks associated with very low probabilities, leading to quite different reactions in the face of defined risks than to the less easily defined state of uncertainty (Lunn 2009)³. Risk

³ Behavioural economist Peter Lunn (2009) has recently argued that the distinction between risk and uncertainty usefully illuminates the causes of the recent financial crisis. During the years preceding the crisis, traders relied on complex risk management models to balance and monitor risk across different assets. Once it became apparent that precise predictions of risk probabilities were useless, that is to say when it became apparent that traders were dealing with uncertainty rather than risk, markets stopped lending. While traders were happy to trade under conditions of defined risk, this changed as soon as the situation became uncertain. Lunn argues this behaviour is '*utterly irrational, but quite understandable if you know how people typically perceive and react to risk and uncertainty*' (2009: 16).

aversion can therefore cause consumers to over-spend on risk-reducing products. Individuals' aversion to uncertainty and risk, and the difficulties that probabilities present to decision-making, also has wider implications for policy and government communications, suggesting for example that risk communication should avoid presenting risk in terms of probabilities if seeking to influence behaviour. For further details of the characteristics of Prospect Theory – the descriptive theory that Kahneman and Tversky proposed to describe the way in which people make choices under risk – see Kahneman (2003).

For our purposes, what is noteworthy about Prospect Theory is the way in which it models **loss aversion**: the fact that people are much more averse to loss (or to giving something up) than they are content with gain. There are lots of examples of the effects of loss aversion in the real world, or '*in the wild*', ranging from the behaviour of stock markets to the behaviour of taxi drivers (see Camerer (2003)). One pertinent example is the asymmetric price elasticity of consumer goods. The price elasticity of a good refers to the change in demand for that good, divided by the percentage change in its price. (A product's price elasticity is something that can be estimated by studying changes in purchasing demand following a price increase). Because loss averse consumers dislike price increases more than they like gains from price cuts, they cut back on purchases when prices increase more than the extra amount they would buy if the price decreased, something which has been proven by consumer behaviour in response to product price changes (Camerer, 2003: 152).

3.4.5 *The endowment effect*

Loss aversion also became particularly important when it was used by Thaler (1980) to explain what he identified as the 'endowment effect'. The endowment effect states that the maximum amount people pay to obtain a good is typically much less than they demand to part from it. In short, we value something more once we own it.

As well as reflecting an aversion to loss, the endowment effect is also a product of remembrance. When we consider selling or giving up an item, we think emotively about all of our past experiences using that product, rather than thinking rationally about our use of it. This will sometimes present a challenge to policies aimed at encouraging people to replace old products with new, more energy efficient models, such as recent European attempts to encourage consumers to trade in old cars. Financial incentives to encourage consumers to give up their old cars (for example, those that are 10 years old) may need to be much higher than anticipated in order to overcome the endowment effect, particularly given how emotionally attached consumers often are to their cars.

Research also suggests that the value we place on an object depends on how the object was obtained, something Loewenstein (1999) terms 'source-dependence'. When someone has earned an object through performance of a task, they are much less willing to give it up than if they receive the same object as a gift. Similarly, we value things more if we have actually contributed to their production. (Ariely (2008) calls this the 'Ikea effect', in reference to his speculation that our pride in owning self-build furniture correlates strongly with the amount of time it takes to assemble).

More recently, evidence has also highlighted the importance of the sense of touch to consumers when shopping. While it is perhaps not surprising to learn that the feel of an item is an important consideration for shoppers buying new pieces of clothing (Defra 2008b), research also suggests that the way that an object feels can impact on the way in which we value it. For example, although the importance of touch varies according to different individuals (Peck and Childers 2003), some people have been found to be willing to donate more to charitable organisations when the pamphlets distributed by the organisations are considered more pleasing to the touch (Peck and Wiggins 2006). Similarly, for people for whom touch is important, items might actually be valued differently when consumed. For example, the firmness of a cup in which water is served in may affect consumers' judgments of the taste of the water itself (Krishna and Morrin 2007). The importance of sense when shopping was illustrated last year by the organisation of the first ever Sensory Marketing Conference, at the University of Michigan, USA.

In addition to touch, it is emerging that a range of other factors can increase an individual's sense of ownership, even before ownership actually occurs. For example, the longer that someone bids on an item on an online auction site (such as eBay) increases the sense of ownership and, consequently, the amount people are willing to bid (Heyman et al. 2004). Similarly, merely possessing a coupon for a product can increase consumers' preference for that product in the same way that actual ownership can (Sen and Johnson 1997). This 'virtual ownership' (Ariely, 2008) is something advertisers and marketers regularly attempt to tap into. By creating a sense of ownership, adverts and product catalogues, for example, can increase consumers' valuation of goods before they have even bought them.

3.4.6 *Status quo bias (and the use of defaults)*

Loss aversion also contributes to 'status quo bias'. In any situation, the advantages and disadvantages of a choice are weighed up relative to the current situation. Loss aversion means that when we evaluate a decision or change in state, the disadvantages loom larger than advantages so we have a tendency to favour the status quo (*'better the devil you know'*). For example, it is status quo bias in consumers

that is exploited by marketing through free trial subscriptions. Having been wooed into subscribing to receive a free trial of a magazine (the disproportionate value of it being free rather than cheaper is discussed later), status quo bias prevents consumers cancelling the subscriptions when the free trial period ends – regardless of whether or not they actually value, or even read, the magazine (Thaler and Sunstein 2008). Thaler and Sunstein (2008) label this the *'yeah, whatever'* heuristic.

Status quo bias is one of the reasons that default options - defined as *'the alternative a consumer receives if they do not explicitly request otherwise'* (Brown and Krishna, 2004: 529) - are a powerful policy tool. In the case of products, a default may be the *'standard model'* that one buys if no additional requirements are specified or, in the instance of white goods, the product model installed in new homes by a property developer.

It is suggested that defaults may work in one of three ways. Firstly, consumers may rely on them to reduce the cognitive effort needed to make a difficult decision. For example, in a study of German car purchasing decisions, Herrmann *et al.* (2006) explored the ways in which *'attribute alignability'* (the comparability of product characteristics) affects decision-making. They found that consumers were happier with their choices when the attributes of different cars were comparable and that, when presented with products with non-alignable features that were difficult to choose between, consumers were more likely to settle for a default option (Herrmann *et al.*, 2006). It is in these instances that defaults may capitalise on Thaler and Sunstein's *'yeah, whatever'* heuristic (2008).

Secondly, defaults can be taken to indicate endorsement of the option by those who set the default. In the case of government or corporate policies, for example pension plan enrolment, defaults can be interpreted as a recommendation from policy-makers (Smith *et al.*, 2009). Evidence from a green energy example (discussed in detail later) suggests that this is the case: despite requesting information about alternative energy suppliers, very few people wanted more information about the default company suggesting an assumption that they were already subject to scrutiny (Pichert and Katsikopoulos, 2008). In product markets, defaults have also been recognised as *'carriers of meaning'* (Brown and Krishna, 2004: 537), transmitting information about the marketplace to the consumer. This may be taken to say something about the relative value of a product (for example, the default model is taken to be the one that most closely meets the needs of the average consumer) or about the intentions of the retailer or producer. If it is the latter, consumers may be suspicious about the motives.

Finally, as illustrated in the context of green energy markets in Germany in Section 4.4, defaults can capitalise on the impact of cognitive biases like status quo bias.

When presented with a default option, giving up the option can be considered a loss so individuals more often than not choose to remain with the default option. As will be discussed later, the manipulation of defaults represents a powerful tool for policy, one that is particularly useful where consumer choice involves, or is perceived to involve, significant time or effort.

3.4.7 *Mental accounting*

Contrary to standard economics, the value that someone places on a consumer item is not simply the replacement value but instead depends on a set of highly nuanced factors, like the item's history, whether or not it has fulfilled its use, and whether we actually intend to replace it. Some of these influences are described below:

'No spend' accounting

In a series of studies, Shafir and Thaler (2006) found that when we purchase items for consumption at a later date – for example, tickets to a concert in the future, or a crate of wine – consumers tend to avoid the feeling of having spent money by thinking of purchases as 'an investment'. For example, when buying an expensive coffee maker, someone might think about all of the money that they will save at the local coffee shop, rather than the cost of the coffee machine itself. The result of this 'money saving event' is that mental accounting allows the consumer to avoid thinking about the true implications of their spending generally with the coffee machine. Therefore there will be a tendency to think of each cup of coffee made by the machine as 'free', rather than remembering how much the machine cost (Shafir and Thaler, 2006). This is not to say that the purchase of the coffee machine may not be cost-effective (and therefore a worthwhile investment) but that, if it is an investment, it will not necessarily be the result of a proper consideration of the costs and benefits by the consumer.

While there is little scope for this 'no spend' form of mental accounting when purchase and consumption occur close together (for example, with the purchasing of food), there are implications for other products. Behavioural economics suggests that the use of durables (for example, white kitchen appliances) as planned does not lead to mental accounting in line with depreciation or average cost; instead, the use of a durable is often thought of as free. Advance purchases are typically thought of as investments rather than spending – Shafir and Thaler (2006) found that over three-quarters of those involved in their studies conformed to what they call the 'never spender' pattern, as described above.

Inconsistent valuations

The extent to which replacement costs are considered is determined by emotional attachment to the item – the less emotionally-attached the consumer is to a product, the more likely they are to consider its replacement costs. This may be why, for example, consumers are not more unhappy with the relatively short product lifespans of products like mobile phones: the phone forms an important part of the consumer's identity and therefore replacement costs are much less likely to be considered during use. In China, for example, mobile phones have recently been reported as replacing vehicles as the consumer good as an expression of its owner's identity (Precourt 2008).

People also tend to apply a piecemeal frame to consumption decisions, as opposed to a more global perspective which can lead to a contradiction between purchase attitudes and consumption behaviour. We may *purchase* items with a wider, global perspective (*'I will invest in a bike because I would like to do my bit to reduce climate change...'*), but tend to *consume* them with a more local frame (*'...but will leave it in the garage and get the bus today because it is raining'*).

Absolute versus relative costs

Another way in which mental accounting leads to inconsistent decision-making can be illustrated with a second example. Consider the following questions:

- i. You are in a shop and are about to buy a new suit that costs €500 when another shopper stops to tell you that exactly the same suit is for sale, at a different shop 10 minutes away, for €10 less. Would you walk to the other shop to buy the suit from there?
- ii. You are about to buy a new pen that costs €15 when another shopper stops to tell you that exactly the same pen is for sale, at a different shop 10 minutes away, for €10 less. Would you walk to the other shop to buy the pen from there?

When faced with these two questions, a much greater percentage of people are likely to walk ten minutes to buy the pen from the other shop than they are to buy the suit, even though the two situations essentially involve exactly the same money-saving task (i.e. walking ten minutes to save €10). This is because we evaluate costs *relative* to other costs, rather than in absolute terms.

In the context of product policy, this implies that people are much more likely to accept upfront costs when they are associated with other larger costs. For example, while a consumer may be reluctant to take out a loan to buy a new washing machine, they may be much more likely to do so when the cost is combined with a larger cost like a mortgage for a new house. The purchasing of new homes therefore presents a

useful window of opportunity to encourage people to consider other purchases – such as the installation of insulation or new energy efficient white goods.

The impact of 'sunk costs'

Mental accounting also explains the way in which consumers make decisions based on 'sunk costs' (or prior investments) as well as future costs. The result of this is that rather than replacing an item, there is a tendency to hang on to broken or useless products because they cost us a lot of money in the past. For example, Shafir and Thaler (2006) discuss a study which found that people are much more likely to give a cheap pair of shoes to a charity shop than a more expensive pair, even if in both situations the shoes hurt the wearer and have been sitting in a wardrobe unworn for months.

3.4.8 *Hyperbolic discounting and procrastination*

Another aspect of mental accounting which has been well documented in behavioural economic literature is the way in which people value the immediate future too highly while discounting the future excessively. Discount rates have been found to be unstable and reflective of factors (like the physical size of the good) not normally captured by more standard economics (Shafir 2008). A real world example of the discount rates that people apply to consumer electronics is provided in Chapter 5.

Not only does this time inconsistency affect the way in which we value things but it has a significant impact on behaviour in other ways. While standard economics acknowledges that people are impatient, it assumes that people are *consistently* time inconsistent – that is, that they will excessively value the near future in the same way across all domains of behaviour (Loewenstein, 1999). This is not the case. 'Present-biased preferences' (O'Donoghue and Rabin, 1999) mean that we tend to favour immediate rewards and avoid immediate costs. The 'present bias' effect means that we *procrastinate* (wait when we should do something) if actions involve immediate costs and *preproperate* (do something when we should wait) if the actions involve immediate rewards.

The extent to which people are prone to these biases depends on a certain level of sophistication: *'a naive person believes she will behave herself in the future while a sophisticated person knows she may not'* (O'Donoghue and Rabin, 1999: 104). Although behavioural evidence of just how aware people are of their susceptibility to present bias is quite limited, the use of commitment devices within products is often an indication of sophistication. Commonly cited examples include 'Christmas clubs' – where individuals contribute a small amount on a frequent basis to help them save –

and 'fat farms', or other weight loss support groups. Other identified antidotes to time-inconsistent behaviour include incentive schemes (or other programmes of task completion) that include deadlines (Ariely, 2008) and, at a more intrinsic level, the deep-rooted human desire to meet self-set goals ('goal completion') (Loewenstein 1999).

3.4.9 Hedonic adaptation

One final temporal feature of behavioural economics worth considering is the process of 'hedonic adaptation' whereby consumers adapt to stimuli, for example a new product, over time. The result is that while our initial reactions to the product might be positive, the pleasure we gain from acquiring or using the product is likely to diminish over time. In part, this is a consequence of basic biological adaptation. It also reflects the fact that our attention becomes diluted. When I buy a new car, I might spend much of the first month that I own it revelling in its extra space or zippy acceleration. Before long though, my attention will shift back to the traffic jams and high parking charges that I associate with driving. In addition, adaptation can result from a process of 'ordinazation' (Tsai and Hsee, 2008), which leads consumers to rationalise affective events and reduce their affective impact. For example, enjoying the extra space in my new car might lead to rationalisation that subsequently reduces my positive evaluation (*'Extra space is the least I should expect at the price I paid'*).

3.5 Habit

When behaviour becomes routinised and is repeated frequently, without thinking, it is often said to be driven by habit. To the extent that habitual behaviour - that is, behaviour that is prompted by the automatic, System 1 thinking identified by Kahneman (2003) - reduces the time taken to make decisions and the costs associated with deliberation, it is possible to think of habits as perfectly rational. We do not want to spend our daily lives thinking about whether or not to, or how best to, carry out simple everyday tasks like brushing our teeth or choosing which newspaper to buy.

Such habitual behaviour becomes problematic when our habits become so engrained that the effort needed to override them makes them difficult to overcome. This is particularly the case when our habits lead to personally (or environmentally) damaging behaviour, or when our habits prevent us adopting new beneficial behaviours (Jackson 2005). While our habitual brushing of our teeth might seem harmless enough, it presents more of a challenge to policy-makers seeking to reduce domestic water consumption. It is difficult to get someone to turn the tap off during tooth-brushing if they do not even make a conscious decision to turn it on in the first place.

While there is a tendency for habits to be framed as distinct from behaviour (for example, by suggesting that habits somehow prevent or drive behaviour), Shove (2009b) argues that for most people habits are '*practices*' which are socially-determined as much as they are reflections of automatic cognitive processes. However, breaking habits, or promoting the repeating of new processes and practices, is difficult but not impossible. One way of encouraging people to adopt new habits is to tap into 'moments of change', when they may be developing new patterns of behaviour anyway. These moments often coincide with key life-transitions, for example when people move house, have children or retire. The ongoing '*Life Events as Windows of Opportunity for Change towards Sustainable Consumption*' project, being led by the Technische Universität Berlin⁴, provides an interesting example of how these opportunities for change may be tapped into and explored.

3.6 Identity, altruism and social influence

So far, the review has considered the ways in which cognitive decision-making departs from that predicted by standard economic conceptions of 'rational' thought, ranging from the use of heuristics to the tendency for us to over-estimate costs and to avoid losses. The majority of the traits identified were predictable and supported arguments against just one of the assumptions of standard neo-classical economics – that individuals are rational.

This next section of the review considers the remaining tenets of standard economic thinking; that individuals are self-interested and operate as independent decision-makers, unaffected by the preferences and behaviour of others. In doing so it draws on findings from a variety of disciplines including sociology and, in particular, psychology. Although economics has always been tied to psychology – it is, after all, about behaviour – it has relied on a 'naïve psychology' (Amir et al. 2005) that has not always stood up to scrutiny when compared to empirical evidence. Behavioural economists are aiming to provide economic thinking with a more empirically robust psychological grounding.

The importance of this for policy should not be understated. The way in which other people behave and the internal motivations that influence consumer choices are just as likely to bias and override individual preferences as the cognitive short-cuts discussed so far. For a more comprehensive review of the role of social and psychological antecedents of behaviour, including identity and altruism, see the

⁴ See the project website at: <http://www.lifeevents.de> for further information

report *'Motivating Sustainable Consumption'* (Jackson 2005) or, for a more detailed summary of the key theoretical models of behaviour, Darnton (2008).

3.6.1 Identity, attitudes and values

Modern identities are increasingly created through the symbolism of consumption (Jackson 1999). When we shop, the products we buy tell others something about us, regardless of whether we are conscious of these messages. While some authors are critical of mass consumption, suggesting that consumers have been passively persuaded and manipulated into buying products against their will, others argue that consumer passivity has been overstated (Jackson 1999).

Information campaigns, collective action and social movements have led to the increasing politicisation of consumption, with both products themselves - and the certification and labelling of products (for example, the Fair Trade brand) - becoming indicators of environmental and social attitudes and values. Responsible consumerism provides individuals with a means of adopting market behaviour in line with wider environmental and social concerns. Others argue that consumers are able to appropriate and subvert the meaning of everyday commodities (for example, by personalising goods and 'street styles'). Based on evidence from Italy, Lori (2008) for example, has argued that responsible consumption can be considered a creative process in which the personalisation of goods adds additional meaning to them. Similarly, recent research with consumers in France and Belgium (Camus and Poulain 2008) concludes that spirituality has, and will continue to have, an influence on consumer behaviour. Whereas religion is associated with collective values, spirituality is embedded within individual perspectives and processes. Through changes in consumption practices, individuals can provoke spirituality. Research within cultural studies has found that shopping for luxuries often leads to feelings of guilt, whereas shopping for items thought of in terms of 'thrift' or 'economy' are seen as virtues. Guilt emerges when shoppers compare personal indulgence with socially-approved self-sacrifice for the good of the family (Jackson 1999).

Soper (2007) has argued that a small but potentially growing number of consumers are eschewing excessive consumerism in favour of what she terms 'alternative hedonism' whereby individuals are motivated not just by an awareness of the collective impact of their consumption, but by the pleasure associated with consuming differently. It is this self-interest - an awareness that greater pleasure may be gained from eating better quality, organic food, or by cycling to work - that motivates the uptake of environmentally-preferable behaviour, as much as it is an altruistic ethical or environmental concern.

Soper's arguments chime with similar ideas within marketing, which has documented a consumer shift in recent years from 'status symbols' (symbolic products that are used to indicate status or social standing) to a wider emphasis on 'status lifestyles'. Market research companies, for example the market trend website trendspotting.com, suggest that increasing social concern and a backlash against materialism and individualism mean that status is no longer being sought through the accumulation of branded, luxury goods. Others argue that the relationship between consumption and identity should not be reduced to the level of individual 'lifestyle'; instead, it needs to be considered in the wider context of social interaction, gender and family relations (Jackson 1999).

An attitude can be thought of as '*a person's favourable or unfavourable evaluation of an object (or person, or idea)*' (Schultz and Estrada-Hollenbeck 2008). Attitudes cannot be directly observed but instead are generally inferred through individuals' stated preferences or their actions. Despite an initial focus within social psychology on the importance of attitudes in influencing behaviour, recent research has proven that changing attitudes does not necessarily lead to behavioural change. Nevertheless, appeals to values and identity are critical in marketing and are one of the key reasons that branding is so powerful. When brands and brand advertising first emerged in the eighteenth century, their value was that they enabled consumers to distinguish between products manufactured by different producers. As such, companies used brand advertising to promote the tangible qualities of their products (e.g. size, quality, cost) above the qualities of their competitors' products.

However, by the turn of the twentieth century companies had recognised the importance of the 'association of ideas' (Broadbent 2007) in advertising, whereby products are marketed not for their specific qualities but the concepts and values associated with the product. For example, when one of the world's leading car manufacturers launched its first multi-person vehicle (MPV) in the mid 1980s, it used a major advertising campaign to secure new customers. Rather than focusing on the utilitarian qualities of the new larger sized vehicle (as the manufacturers' competitors had done) its advertising was based on 'the luxury of unused space' (Broadbent, 2007). The adverts tapped into the aspirational values of consumers - by portraying excess space as a sign of high status.

Nowadays, most advertising seeks to promote a particular product or brand in a competitive situation, by attaching particular values or meanings to the product. Within marketing, brands are successful because they promise to give consumers something that they value, and offer consumers a means of expressing their personalities and aspirations (Clegg 2006b). In general, relationships with others,

wellbeing and a sense of worth are the things that matter to people, and successful marketing campaigns tap into these aspirations.

3.6.2 *The need for self-consistency*

As individuals, we dislike believing that we are inconsistent in our beliefs and attitudes and seek to reduce any perceived inconsistencies. The term 'dissonance' is broadly used to describe such an inconsistency, or a conflict, between two or more attitudes, beliefs or actions. Dissonance can serve as a contributory factor in individuals becoming more aware of information that they are normally exposed to. Consumers are not usually convinced that a particular product they have bought has all the advantages over the alternatives. To reduce the dissonance between action and attitude, the consumer may adjust their attitude to the product so that their choice appears adequate (Ehrenberg 2000). Recent consumer research on purchasing of vehicles in France found that consumers continue to seek out information about their chosen car while waiting to take delivery, long after they have made their purchasing decision (sometimes several weeks) (Aitchison and Precourt 2008).

The theme of dissonance also features in behavioural economics literature in the context of priming and the so-called 'mere measurement effect'. Researchers have found that simply asking people how they are going to behave ('measuring') can have an impact on the choices people make. For example, asking people the day before they are due to vote how they intend to use their vote has been found to increase the probability of them voting by as much as 25 per cent (Thaler and Sunstein, 2008). In part, this is because to *not* vote in line with their stated intention would be inconsistent and therefore undesirable.

3.6.3 *Social norms*

Social norms are the 'rules' that tell us how to behave in a situation. Despite standard economics' model of an economy made up of individual agents, there are very few situations (if any) in which our actions and behaviour are not dictated by the social situation we are in and the people we are around. Social norms have been described as '*the grammar of society*' (Bicchieri 2006) – they are like the unsaid linguistic rules that are implicit in a language. They have been found to influence a range of behaviours across a wide range of domains, including recycling, littering and even tax evasion (Cialdini and Goldstein 2004).

Two types of social norms are generally identified: *descriptive* norms, which are those that describe to us how other people behave or inform us about what is normally done, and *injunctive* norms, which carry an implicit moral component and indicate how we are expected to behave and what is usually approved or disapproved of. The

point at which behaviour switches become a social norm (i.e. they are seen as 'normal' behaviour) is very difficult to identify, though it has been suggested that individuals feel the need to conform to social norms 'when they believe that there is a sufficient number of others conforming to the rule (descriptive) and a sufficient number of others who then expect the individual to conform to that rule (injunctive)' (Defra, unpublished).

What is important about norms from marketing's perspective is that norms only direct behaviour when they are in focus; that is to say, we are much more likely to comply with norms when we are consciously aware of them. Although norms are very powerful, the normative information needs to be prominent in our consciousness.

An ability to learn from observing the behaviour of others is a key social learning process; we can gain new skills and learn appropriate patterns of behaviour by watching others. Patterns of what Earls (2003) has called 'herding' (i.e. when we look to the behaviour of others to decide how to behave) can however lead to bias. For example, when individuals try to decide what something is worth, they tend towards the valuations of everyone else. This is the reason that advertising that tells consumers '99 per cent of shoppers prefer to buy...' works so well. In the context of new product uptake this is very powerful; as Ehrenberg notes *'To acquire goods, one only needs some money, someone to produce them, and a precedent of other people owning them in order to overcome cultural habits and inhibitions'* (2000).

Individuals often look to social norms to gain an accurate understanding of social situations and to judge how best to respond to the situation (Cialdini, 2001; 2004). This is especially the case in times of uncertainty. This can prove problematic when we fail to recognise that the people whose behaviour we are observing may too be reacting to uncertainty. (This leads to what psychologists have labelled 'pluralistic ignorance' in situations where people are not sure how to react. A common example is when someone (for example, a victim of crime) is in need of help but by-standers tend to do nothing because everyone else is doing nothing.) It may also lead to situations of mindless queuing, when people join the back of a long queue when they have no idea what is at the end.

3.6.4 Market norms, and the 'crowding-out' effect

Heyman and Ariely (2004) suggest that social relationships can be broadly divided into two types – those based on economic transactions (the money market) and those based on social exchange (the social market). In money markets, in which relationships are based on paid labour at an agreed wage rate, people exert effort relative to the amount of monetary compensation they are paid. Work performance

will be lowest when payments are low and higher when payments are high. In contrast, in social markets altruism defines working relationships. People work as hard as they can regardless of what they are being paid, so that effort is largely independent of payment levels. This echoes the findings of Vohs (2008) that it is not necessary for there to be an actual monetary transaction for there to be a shift from social- to money-market norms. Even the mention of money can lead to a shift in market perceptions (Heyman and Ariely 2004). A frequently cited example in behavioural economics literature is set out in the paper '*A Fine is a Price*'. Gneezy and Rustichini (2000) investigated the impact of a fine on parents picking up their children late from nursery school. They showed how the imposition of a fine was interpreted as a price to be paid; leading parents to feel it was acceptable to pick up their children late as they were paying to do so. Prior to the fine, a late pick-up left parents feeling guilty for imposing on the teacher's time. Rather than acting as a deterrent against this undesirable behaviour, the fine was interpreted as a way for parents to pay to leave their children at the nursery school longer so more children were left late.

Social psychologists have known for some time that rewards and fines serve to reduce the internal motivation of individuals. We are said to be internally motivated to do something if we receive no apparent reward from the behaviour other than from the behaviour or action itself. Although the distinction between intrinsic and extrinsic motivations is complicated, it is possible to broadly categorise actions and behaviours as one of two types: those that we do just because we like them (intrinsically motivated) and those we do for monetary payment or because we are in some way obliged or ordered to do them (extrinsically motivated).

The distinction between intrinsic and extrinsic motivation is central to the economic thinking that explains the 'crowding out effect'⁵, which refers to situations in which the imposition of monetary compensation (incentives) works in precisely the opposite effect to the neo-classical price effect (which assumes that the higher the compensation, the greater the effort and quantity of work).

All over the world, the playing of economic decision-based games has proven that central to all economic transactions is a sense of mutual trust and cooperation. While standard economics favours markets ruled by Adam Smith's 'invisible hand', behavioural economics proves that trade is more beneficial when governed by the

⁵ Note that while the 'crowding out' effect is used very specifically in this instance, 'crowding out' is also a general term within economics with all kinds of applications.

'invisible handshake' (Lunn, 2009: 18-19). The most commonly used 'game theory' is the 'prisoner dilemma'; whereby both players (i.e. suspects) would rationally confess to reduce their sentence, even if there is insufficient evidence for a conviction. This is because they are aware that their co-suspect faces the same dilemma. However, as in real life, the game can be iterated so that the potential for future gains leads to a partnership and mutually assured trust. This is the underlying economics which might explain much diplomatic exchange, even where social trust is low. It has also been used by Dawkins (1989) to explain apparent selfless behaviour by the action of 'selfish genes' following an evolutionary self-interested path. Interestingly, he was also able to model the stable existence of a sub-group of selfish free-riders who break social rules within a population, as well as the equivalent action of ideas which can go through their evolutionary selfish journey in partnership with their selfish genes.

4 Case studies of real consumer behaviour:

4.1 Introduction

There are many examples that show how people do not buy any consumer products in line with the rational economic model that policy makers use as the basis for much policy, and some examples of policy taking this into account. This section illustrates a few clear examples, to illustrate the discussion in the literature review.

4.2 Time discounting and energy saving: energy using products

Researchers have in the past attempted to estimate the discount rates that people apply to product utility, by identifying real-world behaviours that involve trade-offs between the near and more distant future. Frederick *et al.* (2002) summarise a number of early studies that examined consumers' preferences towards different models of energy-using appliances, which present consumers with a trade-off between long-term costs of running the appliances (determined by the products' energy efficiency) and the upfront purchase price. In the various studies that Frederick *et al.* discuss, real world consumer behaviour suggests discount rates⁶ that vastly exceed market interest rates and more interestingly differ substantially across product categories. The implicit discount rates ranged from 17–210 per cent for air conditioners, 102 per cent for gas water heaters, 138 per cent for freezers, and between 45 and 300 per cent for refrigerators, depending on assumptions about the cost of electricity (Frederick *et al.* 2002). The findings show the way in which consumers fail to apply time-consistent discount rates. As the authors note, '*It does not make sense for anyone with positive savings to discount future energy savings at rates higher than the market interest rate*' (2002: 384).

4.3 Time discounting and food behaviour

Just (2006) uses two 'real world' examples, from the US food assistance programme, to show how consumers often fail to optimise the benefits of food purchasing in the way that standard economic models would predict. The first observation is that recipients of food assistance tend to spend all of their benefits and consume more food at the beginning of the benefit period, and run out of food towards the end of the period. In large part, this shows that individuals discount time in the near future at a much higher rate than time in the distant future, and the 'present bias effect'

⁶ A 'discount rate' is the rate at which any given value declines over time or is discounted in the future.

(discussed in Section 3.2.14), which states that we tend to *preproperate* (do something when we should wait) if the actions involve immediate rewards.

The second example is that the average recipient of food benefits tends to spend their entire benefit on food during the benefit period, and often spends some of their additional income on food purchasing as well. However, when individuals are provided with cash (rather than points on a benefits card) they tend to spend much less on food, suggesting that the value consumers place on food varies depending on the method of payment. This is consistent with evidence from behavioural economics that has shown that consumers are willing to pay as much as 100 per cent more for an item when paying by credit card than when paying using cash (Prelec and Simester 2001) and overvalue immediate gains at the expense of future costs (Kahneman 2003).

4.4 Willingness not to choose and the use of energy defaults

Standard economic theory would suggest that, due to their homogeneous nature, deregulated utility services will attract market competition and reduced prices for all. However, there is growing evidence that domestic consumers are not switching as much as anticipated and that in some circumstances consumer welfare would have been greater if the state had regulated prices on consumers' behalf. This 'willingness not to choose' has been utilised by the authorities in two German areas which offered choice but made green energy the default option. The result is that 94 per cent and 99 per cent of customers kept their default green tariff.

Brennan (2007) reviewed the outcome of electricity market deregulation in a number of countries and jurisdictions. The outcome of this review is summarised in Table 2.

Table 2: Outcome of electricity market deregulation

Jurisdiction	CAEM's RED Index ⁷		Switch rate	Year	Key barrier/success factor
	Score	Rank			
England (UK)	88	1 st	>50%	2004	Successes: Significant savings (up to £75)
New Zealand	75	2 nd	25%	2005	Barrier: Complexity of switch over process
Texas (US)	69	4 th	27%	2005	Successes: Increased price for default services
Pennsylvania (US)	67	5 th	~4%	2003	Barrier: Complexity: Guide 'akin to IRS tax calculation worksheet'
Alberta (CA)	61	6 th	6%	2003	Barrier: Consumer inertia
Maine (US)	64	7 th	1%	2003	Barrier: Availability of standard regulated offer alternative
New York (US)	60	8 th	6.4%		Success: 'Switch and save' - random assignment and discounts

Source: Brennan (2007)

Table 2 suggests that only in the English⁸ example did market forces lead to successful competition. In the other examples, the success that was achieved was achieved via artificial intervention. Even in the case of the English market, inertia was high. In 2002, OFGEM found that it took annual savings of 28 per cent (£72) to induce switching of 60 per cent. This left 40 per cent of consumers willing to forgo a considerable amount of money not to switch supplier.

Brennan (2007) went on to propose a model of the welfare outcomes of all consumers, incorporating the cost⁹ of searching for a new tariff. The modelling exercise compared prices against a theoretical regulated price where the state would

⁷ CAEM = Centre for the Advancement of Electricity Markets; RED = Retail Electricity Deregulation index. The RED index is a weighted average of 22 attributes of electricity markets applied to states, Canadian provinces, three Australian states, England, Wales, and New Zealand. The attributes pertain to facets of the retail competition institutions, generation markets, consumer protection, distribution regulation, and regulatory commissions. The factors getting the most weight are anti-favouritism safeguards, standardized business practices, generation market structure, liberalization of the wholesale market, and the limited marketplace role for regulated default service.

⁸ i.e. England and Wales

⁹ i.e. a valuation of search costs including people's time

either auction for the lowest cost provider on the consumer's behalf or regulate the prices charged by the incumbent. The prices paid by those who switch may be lower than the regulated price. When search costs are included however this will not always hold true. This situation is exacerbated by evidence that consumers' ability to find the best tariff is limited. Wilson and Dowlatabadi (2007) found that those consumers switching exclusively for price reasons only managed to capture between a quarter and a half of the maximum gains available. For consumers who do not switch, the price they pay will be greater than the theoretical regulated price due to the incumbent capturing their willingness not to switch. The modelling therefore recognises the potential for total consumer welfare to increase under a deregulated system where search costs are low and switch over rates high. This was understood by many of the regulators as part of deregulation process who gave considerable effort into reducing search costs for consumer. The low switch rates reported in Table 2 suggest that such effort appear to have had limited success.

There may be more to the low switch rate than high complexity and search costs alone. Brennan (2007) touched upon the issue of loyalty within the British telecom's market, where after 20 years of deregulation, 82 per cent of residential access lines remain with the incumbent and about 75 per cent of customers viewed themselves as loyal. This is somewhat different in the English electricity market where rates of switch over have exceeded 50 per cent at times. The difference appears to be due in part to the structure of the privatisation process, where the electricity producers were forced to separate (i.e. unbundle) their retail operations from generation and distribution. The consumer is therefore left with fewer clues about who to be loyal to.

Whether down to loyalty or inertia, two German local authorities (the German town of Schonau and the German local utility Energiedienst GmbH) have used this 'willingness not to choose' and made green energy the default electricity tariff – see Pichert and Katsikopoulos (2008). As a result, 99 per cent and 94 per cent of customers retained the default after 8 years and 2 months respectively. The context of these examples is as follows.

- Schonau: As a reaction to the Chernobyl disaster in the 1980s, campaigners in Schonau resulted in 1997 in the take-over of the electricity grid and the establishment of the green tariff as a default. The population was not otherwise known for their environmentalism and voted 52 per cent to 48 per cent in favour.
- Energiedienst GmbH: In 1999, Energiedienst GmbH, a company supplying a grid area in southern Germany offered three tariffs instead of one. A

waterpower tariff was used as the default with grey power being 8 per cent cheaper and a 'greener' tariff 23 per cent more expensive.

There are a number of reasons for such high levels of retention of the default option:

1. Norms: Defaults can be perceived as the socially desired behaviour, or the option that decision-makers have deemed the most beneficial for individuals.
2. Context: Western citizens are 'energy illiterates' and so often construct preferences on the spot. This is a process which is highly contingent upon context and information presentation factors (i.e. framing).
3. Complexity: It is generally difficult for people to perform trade-offs and reconcile conflicting objectives such as saving money and preserving the environment. This becomes even harder when some of the objectives have a moral connotation. Sticking with the default seems to allow one to bypass a stressful and awkward decision.
4. Habit: People are creatures of habit - the word 'customer' historically derives from 'custom', meaning 'habit'. Being a customer to an extent infers a psychological attachment to a vendor or a service.

(Pichert and Katsikopoulos, 2008)

4.5 Fuel efficiency, CO₂ emissions and vehicle choice

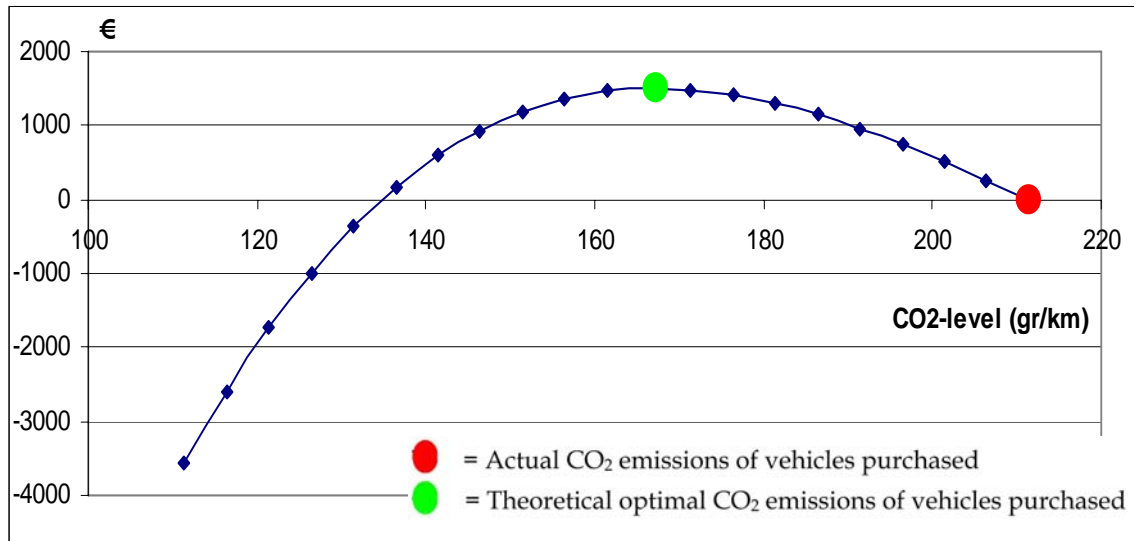
A cursory look at a new car advert would quickly suggest that when people buy new cars, their choice of vehicle is about much more than just fuel efficiency and perceived cost-effectiveness. As we will go on to discuss in Section 5.3, a consumer's choice of new vehicles is as much about how a new car makes them feel and look, as it is CO₂ emissions and fuel costs. As the analysis below proves, real world consumer behaviour relating to car purchasing differs significantly from that which standard economic modelling might suggest.

The lifetime costs of owning a vehicle can be calculated by adding up all of the future anticipated running costs, discounting these as they occur in the future and then combining these with the purchase costs of buying a vehicle. A major component of running costs for most vehicle owners will be fuel costs, which is proportional to the level of CO₂ emissions. According to standard economic thinking, if a prospective vehicle owner is able to estimate their future usage of a new vehicle, in theory at least, he should be able to choose the vehicle with the most financially optimal level of fuel usage and efficiency (and therefore CO₂ emissions) to purchase.

TNO (2006) does this calculation for a number of vehicle categories and compares this theoretical optimal level of CO₂ emissions (derived from fuel usage and efficiency) (the green dot in Figure 1) with what is actually being purchased (the red dot). What the diagram shows is that when people in the EU are buying larger diesel

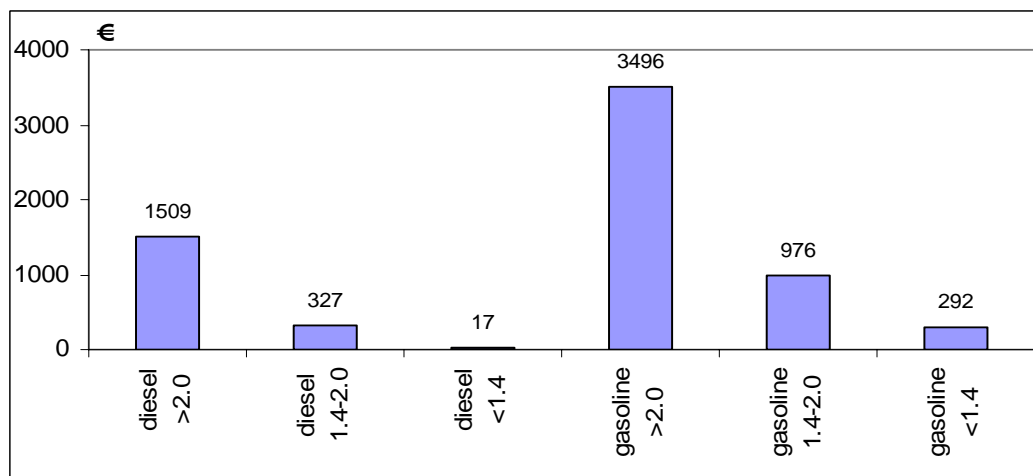
cars they tend to choose vehicles which use more fuel and emit more CO₂ than is financially optimal for them. They would therefore save money over the lifetime of owning the vehicle if they invested in more efficient vehicles at the point of purchase. For larger diesel cars, this 'economy gap' is about €1,500.

Figure 1: Potential lifetime cost saving for large diesel cars in relation to CO₂-emission level in the EU (2006)



Source: TNO (2006). Note: The vertical access represents the potential savings available to prospective vehicle buyers relative to what is actually being purchased. The optimal level of CO₂ emissions for the level of usage assumed in TNO (2006) is about 167 grams per km. The actual CO₂ emission factor of large diesel vehicles purchased was about 210 grams per km.

Figure 2: Relative (lifetime) cost differences between CO₂ levels of observed sales and the theoretical optimum for different market segments



Source: TNO (2006). Notes: Size differentiation refers to engine size (litres). The vertical access represents the potential savings available to prospective vehicle buyers relative to what is actually being purchased.

Figure 2 provides the results of this analysis for six categories of cars. It suggests that the gap between the optimal level of CO₂ emissions and the emissions of vehicles actually bought is lower for smaller engine sized cars (than cars with larger sized engines) and lower for diesel cars than petrol cars.

The significant gap between optimum and observed emissions seen for larger petrol cars (€3,496) highlights the way in which 'real world' consumer behaviour can differ. One reason for this arises from the internal limits to our ability to calculate the optimal CO₂ emission level when deciding on a new vehicle. This may be simply because it is a complex calculation but it can also be subject to the cognitive biases, such as hyperbolic discounting, discussed in Chapter 3.

The gap proves that consumers who buy larger cars are not necessarily cost conscious and instead – as we will go on to illustrate in Chapter 5 – buy cars for a whole host of different reasons. It also proves there is scope for policy to go further in efforts to promote efficiency to consumers, for example by highlighting the financial savings rather than CO₂ emissions and resolving some of the complexity by making the lifetime savings explicit. If the provision of such information was a requirement, those marketing large, more efficient petrol cars would very likely respond by ensuring that the consumer is aware where there is no compromise in performance and innovate to ensure that this is the case where necessary.

4.6 Real world researcher behaviour

One final example, also cited in Frederick *et al.* (2002), proves that procrastination has a place in research and policy. The 'natural' experiment took place in the UK following a decision by the Economic and Social Research Council (ESRC) to eliminate submission deadlines for many of their research grants, and instead introduced a rolling system, whereby proposals can be submitted at any time (though they are only reviewed periodically). It is reported that, without the time commitment of the deadlines to combat the time-inconsistent behaviour of researchers, proposal submissions dropped 15–20 per cent following the policy change (Frederick *et al.*, 2002: 352).

5 Understanding consumer behaviour: evidence from product marketing

5.1 Introduction

An important finding from marketing (and other disciplines) is that consumer behaviour is product-specific. The motivations that influence someone's choice of car, for example, are very different from the factors that influence the buying of a new pair of shoes. Much can be learnt therefore from examining how consumers behave differently when purchasing specific types of products. This chapter presents an overview of recent research from marketing and behavioural economics about consumer behaviours in certain areas of consumption. The examples of how consumers behave in these product areas have lessons for policy in both these and other areas.

Most obviously, they provide evidence that the policy measures often implemented to shape consumption are not the only tools on offer to policy, or necessarily the most effective.

5.2 Food and drink

5.2.1 Introduction

Food and drink is a regularly purchased group of products which consumers are familiar with and form a central and essential part of people's lives. The physiology and psychology of the consumption of food lends itself to particular consumer behaviour, which Capaldi (2006) suggests is explained by a number of reasons:

1. **Food preferences are remarkably resistant to change:** Unlike other behaviours, food behaviour is much less likely to change (so long as people do not experience physical nutritional deficiencies or experience an adverse reaction to the food such as food poisoning).
2. **Preference for a food increases with consumption:** The need for all animals to avoid food poisoning has led to a tendency for increasing exposure to a food to lead to increasing preference for that food.
3. **Flavour-flavour learning:** If the consumption of a food is paired with another already liked food – particularly sweet foods – the preference for the new food is increased.
4. **The dessert effect:** Any perceived benefit of eating a savoury meal is liable to be affected by our physiological desire to follow savour food with something sweet.

As with much consumerism, the consumption of food is highly normative and is increasingly motivated by factors beyond necessity. Food relates to everything from our health, skin and life expectancy, to our personality, lifestyle and family. So much so that buying and eating food is no longer just an issue of sustenance, but one of status, personal self-modelling and identity: opening a refrigerator in front of strangers *'is like baring the soul'* (Lonneker et al. 2008). In addition, attitudes towards food vary across countries, with some countries (for example, Italy) putting a strong emphasis on the role of food within the family, while in other countries food behaviour has been strongly affected by increasingly fragmented modern lifestyles, whereby food consumption patterns are characterised by heterogeneity².

Together, both these cultural differences and the psychological influences on behaviour relating to food present a challenge to efforts to encourage the consumption of environmentally-preferable food (such as organic produce). The reason for this is two-fold. To begin with, it is very difficult to actually find out *why* people buy the foods they do. Research finds individuals tend to provide what are perceived as socially desirable responses when questioned about food purchasing (which leads to a divergence between stated preferences and actual behaviour). It is often impossible for people to rationalise - and therefore verbalise - the cognitive and behavioural drivers that come into play when food purchase decisions are being made.

In addition, the amount of money that food manufacturers and retailers spend on marketing food products means that policy aimed at encouraging new food behaviours is up against tough competition in the (super)market place.

5.2.2 *The standard economic model*

Standard economics largely accepts the preferences outlined above and assumes that by satisfying these preferences, a consumer's welfare will be maximised. Consumers are supposed to weigh the cost of purchasing and consuming a particular food product (as opposed to consuming other goods) against the correctly anticipated benefits that consumption would provide. Amongst other things, consumers are expected to factor into this assessment the possible health implications of consuming the food, as well as any constraints (such as the time it takes to prepare a certain meal, or the individuals' income). Although the modelling of food consumption in this way can be useful in tracking broad trends, it provides policy-makers with a very limited set of policy-levers for encouraging healthier, or more pro-environmental, forms of food consumption. This rests largely on either the manipulation of prices (for example, 'fat taxes') or the provision of information (Just 2006).

While seasonal trends are expected in the price of fresh produce, the price of food has decreased in real terms over time as a result of technological developments and

competition. This has often been counteracted by peaks in prices in the shorter term due to supply constraints linked to variations in weather.

When this complexity is combined with behavioural and psychological drivers of food choice, most economists would recognise that the assumption of rational deliberation is somewhat unrealistic. The fact that the cost of obesity to countries across Europe is now approaching one per cent of GDP suggests that changing patterns and habits when it comes to food consumption will not be achieved easily, nor through policies that have been formulated with only reference to rational, deliberate decision-making (Wallop 2008).

5.2.3 *Food preference formation and habit*

The regularity with which we buy food means that food purchasing is more likely to be driven by automatic and emotive thought processes than controlled, cognitive processes. As such, the purchasing of food is subject to many emotional and automatic biases.

Food satiates one of the most basic biological affects – hunger. As such, the consumption of food is determined by both emotive (think of ‘comfort eating’) and biological affect (such as hunger, or cravings) perhaps more than most other product type. It will not surprise anyone who has gone to a supermarket while hungry that hunger directly impacts on the way people shop and the amount they buy. On a physiological level, simply viewing or smelling food acts as a reminder of a pleasurable experience and induces the release of dopamine, stimulating hunger (Just, 2006). In addition, hunger can lead to what behavioural economists term ‘preference bias’ – when people shop for food while hungry, they shop as if their future preferences will reflect that hunger. Research has shown that not only does this lead to the purchasing of food that would not be bought otherwise, but that people are more likely to choose unhealthy foods over healthy foods (Loewenstein 2007). There is also evidence that preference for a food increases with consumption. The basic evolutionary need for humans to avoid food poisoning is responsible for ‘taste aversion conditioning’; an unconscious and automatic aversion to a particular food or types of food, caused by a previous bad experience with it (Camerer *et al.*, 2005).

Individuals view goods according to a moral structure – some products are virtuous or ‘utilitarian’ (for example, healthy or environmentally-preferable foods) while others may be seen as hedonic (or ‘sinful’, like extravagant or unhealthy foods). This is particularly important in food consumption where advertising and public information campaigns are used to reinforce the morals associated with food. People tend to think about virtuous goods when deciding what to acquire: this is one of the reasons supermarkets place fruit and vegetables at the front of stores, to make people feel good about themselves when they begin shopping. In contrast, hedonic goods

become salient when people decide what to give up – we are much more likely to add good foods to our diets than to give up bad foods (Shiv and Fedorikhin 1999).

5.2.4 Recognition and branding

The amount of deliberative thought that consumers give to a purchasing decision depends on various processing resources (time, number of distractions, information available) and also determines the extent to which they may be happy with the decision once made. Evidence suggests that when decisions are made quickly, individuals are more likely to make decisions with very little deliberation. This is particularly evident in the case of fast food, where studies have shown that it is the availability of food rather than its price that contributes to obesity – people spend even less time deliberating the purchase of fast food, making them more likely to react to impulses (Just 2006). This means that encouraging slower shopping and eating – for example, by encouraging consumers to shop at local markets and farmers markets, as advocated by ‘slow food’ movements – may lead to greater deliberative decision-making and reduced ‘impulse’ buying.

Deliberation is also likely to decrease during food purchasing when consumers are over-whelmed with choice. Market research suggests that faced with a proliferation of branded food products, consumers opt for a default brand or product. This can involve a consumer relying solely on the recognition of a product as a factor in decision-making, regardless of whether the consumer actually recalls anything about it. But the effect of recognition does not stop at purchasing. Even if a group of people is given exactly the same product to eat or drink, studies have shown that they not only report preferring the taste of those labelled with a brand-name (Gigerenzer 2008) but that the presence of a brand label actually causes increased activity in the part of the brain associated with pleasure (Ariely 2008). Although branding does not necessarily mean food products taste better, our brains can still tell us otherwise.

This recognition heuristic influences the selection of food brands where advertising merely needs to lead to this shallow level of recognition for consumers to buy it – or at least not avoid it. It is this reliance on recognition that advertising and marketing professionals depend on. Repetitive brand advertising – which often seeks not to persuade people to buy a new product but simply for them to recognise it – becomes particularly important when there is little differentiation between products. In other situations, food product defaults can simply be the products that an individual’s parents bought (Cotton 2007).

5.2.5 *Framing and anchoring*

It will come as no surprise to most people that the way in which food product choices are marketed in stores has a huge impact on the way in which people shop. In particular, the way that aspects of the sale are framed ('95 per cent fat free' as opposed to '5 per cent fat', for example) and the way in which consumers attach prices to different food products (known as 'anchoring') play an important part in the marketing of food.

Two of the most dominant promotional offers used by large supermarkets across Europe are the buy-one-get-one-free (BOGOF) and the three-for-two offers. In the UK, for example, more than 80 per cent of all promotional activity within supermarkets is a BOGOF or three-for-two, with research among consumers suggesting more than 70 per cent of supermarket shoppers rating it their favourite type of promotion. While such offers are popular and memorable to shoppers, it is estimated that about one-third of products bought through such deals are actually thrown away. The reason these offers are so attractive to consumers is that in both cases, individuals perceive the transactions as resulting in something free, whilst maintaining the anchor price for future purchases. Anchoring is a useful strategy, particularly when the price of food varies by season and a high proportion of customers return to buy in the future. The allure of 'free' (as discussed earlier) is also used in food marketing in the context of content labelling – although the calorific difference between a product with one calorie and no calories is rationally negligible, 'calorie-free' is much more likely to appeal to shoppers (Ariely 2008), particularly where less informed consumers do not have an anchor to tell them how many calories are significant. A further example¹⁰ of framing is the odd pricing of goods (e.g. €4.99) to make products appear disproportionately cheaper than if priced evenly (i.e. €5.00). Although not the original motive of the strategy, it has since been adopted as a strategy for framing purchasing decisions.

Framing affects not just consumer food choice but consumption. Studies have shown that people consume less of a food product if it is individually wrapped (Wansink 2004) and, conversely, eat more if portion sizes are bigger. Perhaps more surprising is evidence that suggests people still eat more food when given a bigger portion, even when they report that the food tastes horrible (Thaler and Sunstein, 2008: 43).

¹⁰ See http://www.consumerpsychologist.com/food_marketing.htm

5.2.6 Food purchasing and new trends

Cotton (2007) explores the key trends in the food and drinks market in relation to the marketing of specialist food and drink producers. He reports on a trend towards status symbols being replaced with status lifestyles. Closely linked to increasing levels of affluence, status lifestyles represent a trend away from wanting more to wanting better. In terms of status, rather than owning the most, people are increasingly seeking to own the best. Although the extent to which people link food purchasing with environmentalism differs across cultures, in some cultures environmentally-preferable food is considered higher quality and is therefore aspired to. Cotton (2007) explores this trend in seeking higher quality and the emergence of a group of consumers referred to as 'Transumers', whose status lifestyle is one of transience, driven entirely by experiencing as many different things as possible. But the search for status lifestyles can play directly to the strengths of both specialist food and drink brands (and environmentally preferable products more generally) by offering experience and participation (for example, through websites, newsletters and opportunities for consumers to visit the food production site).

There is also a trend toward the polarisation of home cooking: underlying this is the polarisation between the 'cash rich, time poor' modern lifestyle and the experience and leisure cultures of the new status lifestyles. People are increasing their consumption of convenience meals but also taking a more leisurely recreational approach to cooking for weekend meals, celebrations and entertaining. This latter 'recreational' cooking has also become embedded into the ethical aspirational status lifestyle. In terms of marketing, Cotton (2007) proposes the use of co-branding of local products and ingredients to make the provenance of food more obvious and to increase food's desirability. For example the use of local ale in sausages will likely increase the value of both brands.

Developing on from status symbols is an emerging trend for status lifestyles which are transcending some of these more basic food preference forming factors by actively seeking new food experiences and stories to tell others. Such trends are associated with affluence and a desire for a sense of participation with the production of food. It is this emerging trend and the marketing techniques developed in response to it which represents the most promising area for the promotion of environmental preferential products.

5.2.7 Providing a product story

Food marketing that pursues a 'status lifestyle' marketing strategy will seek to provide consumers with what is known as a 'prepping story', which provides details

of a product's provenance, uniqueness or eco-friendliness. Examples of companies and brands which use prepping include:

- LocalChoice Milk, sold by UK supermarket giant Tesco. UK supermarket chain Tesco has started paying a premium to smaller local farmers. The milk packaging is branded as LocalChoice, instead of as Tesco, and uses text designed to look like handwriting on the labels, to underscore the familiar, regional value message.
- Natural beverages, is the brainchild of Dr. Alex Hughes, an orthopedic surgeon at the University of California, Los Angeles. Drinks come with names like House Call, Vacation and Light Weight, and promise healing, mood improvement or weight loss. The founder's expertise and naming instantly add a story to what would otherwise have been just another health drink.
- In the same vein Firefly Tonics are natural drinks made in the UK, which are promoted as containing herbal extracts and fruit juices. They claim to work with herbal experts to find natural formulas that work.

As with the consumption of all products, regardless of the frequency with which they are bought, a key determinant of repeated buying is successful trials. Marketing recognises that free or low cost trials of new food products are an important way of engaging with new consumers.

5.3 New vehicles

5.3.1 Introduction

Car purchasing decisions are high involvement: the product is complex, there are considerable costs associated with poor decisions, and the transaction involves a high financial cost. They also represent a considerable proportion of the emissions that the householders are responsible for. Perhaps more than any other product, for many people cars are seen as an extension of the self and are therefore deeply associated with a personal sense of identity and personality. Accounting for what are often deep-rooted psychological reasons that individuals choose new vehicles is something that more traditional economic modelling often fails to do.

5.3.2 The standard economic model

Standard economics attempts to understand car purchasing behaviour by assuming that individuals weigh-up the relative advantages from purchasing a car with a given set of attributes, against the lifetime costs, compared to alternative purchases. Within this it is assumed that consumers mentally 'score' different purchase options based on their preferences and purchase the vehicle that scores highest (Eftec 2008). Once a particular vehicle has been chosen consumers are offered optional 'extras' such as air conditioning and anti-lock braking systems. These additional purchasing decisions are made based on the perceived additional utility they each provide.

Attempts to model car purchasing on this basis rely on quantifiable product attributes (like vehicle type, engine size, CO₂ emissions and fuel economy) and measurable socio-demographics (for example, age, gender, socio-economic group) but fail to disaggregate the less tangible but equally powerful motivators of consumer behaviour. Instead, modelling exercises are only able to value the residual or surplus value of the consumer, thereby identifying the value that manufacturers capture in unquantifiable attributes such as style or product brand.

While standard economic theory allows for a wealth of factors to be valued by consumers or to be the subject of consumer preferences (including functional qualities like cost, fuel efficiency and performance, as well as more subjective qualities like design preference), what it does not tend to allow for are the other cognitive and situational factors that may also influence consumer deliberations during the purchasing of a new car. Evidence from behavioural economics and marketing highlights many ways in which consumer preferences can be both constrained and overridden by these additional cognitive and situational factors.

5.2.3 *Vehicle preference and choice*

At a product class level, the main determinants of car ownership per household are socio-economic, such as income, age, household size, and the number of drivers in the household. Vehicle choice has also been shown to be dependent on attitudes and driver personality, lifestyle and mobility. Evidence from the US suggests that those on lower incomes, younger, female and better educated are more likely to drive small cars, while those who have a strong dislike for travel have been found to be more likely to drive luxury cars (Choo and Makhtarian 2004). McCarthy and Tey (1998, in OECD (2008)) found demand for fuel-efficient cars greater for women, minorities and younger people; whereas people with larger incomes tend to choose larger, heavier and less fuel efficient cars. While this evidence is useful, it provides little detailed insight into the process of deliberation which leads to a particular purchasing decision and therefore how new trends might be promoted.

Fujii and Garling (2003) compared stated preference and actual behaviour following the opening of a new subway line in Kyoto and found intentions differed systematically from actual behaviour. They found the intention not to do something an accurate prediction of behaviour unless the behaviour involved changing habits, in which case the accuracy of the prediction was reduced even further (roughly 20-30 per cent).

5.2.4 *Cars and identity*

All consumption decisions to some extent reflect the identity of the person making them, whether they are small, everyday choices (like the food someone buys for their lunch) or much larger, one-off purchasing decisions, such as buying a new television. The purchasing of cars in particular represents a powerful part of many people's identity. Recent research on sales of one leading hybrid vehicle in the US revealed that the overwhelming reason that people chose that particular make and model was not because of fuel economy or low emissions but because the car was seen by consumers to make '*a statement about me*' (CNW Marketing 2007). What is unique about the particular model is that, it is not available in a conventional (non-hybrid) version. Therefore there is little ambiguity about the driver's green credentials (Thaler and Sunstein, 2008).

What is also interesting is that while sales of the vehicle were particularly successful in the US and Japan (where the innovative hybrid technology appealed to Japan's love of new technologies), sales in Europe had very limited success. Market research undertaken on behalf of the vehicle manufacturer revealed a number of barriers to the uptake of the new hybrid technology in Europe, including a low awareness of hybrid technologies among consumers, negative connotations with earlier model

electric cars (the research found that *'a huge proportion'* of respondents thought the vehicles' battery *'needed to be taken out and plugged in for recharging on a frequent or daily basis'*), and poor driver imagery (de Jonghe and Thun 2004). Research from the UK suggests this low take-up of low carbon vehicles persists despite consumers perceiving themselves as caring about the environment. Even though buyers may express concern about the environment and the environmental impact of their car, these concerns are very rarely prioritised by consumers in car purchasing decisions (DfT, 2003, in OECD, 2008).

Although transport models tend to treat travel as a derived demand, rather than desired in its own right, research contends this. A recent study in the Netherlands, for example, concluded that people drove because they *'loved to'* (OECD 2008). The fact that most people attach hedonic value to their vehicles is something that marketing has known, and has capitalised on for some time. One of the earliest examples is the case of the Cadillac car company in the US. During the great Depression, Cadillac's CEO realised that *'Cadillac competes with diamonds and mink coats. The Cadillac customer does not buy 'transportation' but 'status''* (in Broadbent 2007). In this instance, marketing cars was not about convincing people to buy a particular brand of car over another, but about competing with other luxury goods. More recently, the reason that repetitive brand advertising seeks to attach values and identity to different vehicle brands and models is precisely because marketing professionals know how powerful cars are as a statement about the owner.

5.2.5 *Attribute choice and framing*

Standard economic theory assumes that when presented with the opportunity to pay more for additional product attributes, such as air conditioning or air bags, consumers will reflect on the added value of such attributes and will be willing to pay more for them, if the benefits of the attributes are perceived as outweighing the additional cost. However, consumer choice is largely dependent on the way in which different options are framed. For example, if individuals are presented with a *'full model'* car (for example, a car with a full suite of additional product attributes) and are given the option of removing attributes, they will be willing to pay more money for a car with more attributes than someone presented with a *'base model'* (with no extras) but the option of adding more attributes. This is because consumers are loss averse, so are more reluctant to suffer the *'loss'* of the extra attributes than they are willing to pay for the benefits of them (Park et al. 2000). It is also because loss aversion is greater for product quality than price (Tversky and Kahneman, 1981). Similarly, if consumers are faced with a choice between vehicles with non-alignable features (i.e. it is difficult to compare the *'extras'*), they are much more likely to just settle for the default vehicle model (Herrmann et al. 2006).

Evidence related to vehicle purchasing also supports behavioural economic theories of 'mental accounting' (Thaler 1985), which suggest that the subjective valuation of products can change over time. For example, although there are great benefits to having access to a vehicle, many people who own cars do so even when it is not cost-effective once all costs are considered. This is because drivers fail to properly value the costs of their journeys (Shafir and Thaler 2006), often only considering the marginal or additional fuel costs of each journey. Eftec (2008) reports the results of a study which analysed (through economic modelling) the impact of small changes in the fixed running costs of motoring (for example, through changes to Vehicle Excise Duty (VED)) on the CO₂ emissions of the new cars people buy. Their report finds that marginal changes in costs have only very minor impacts on purchasing behaviour in the new car market and practically no change in the average CO₂ emissions of vehicles bought (Eftec, 2008).

5.2.6 Information, eco-labelling and fiscal incentives

Standard economics presents policy-makers with two obvious levers with which to influence consumers' purchasing behaviour and subsequent use of vehicles:

1. Better information (which can encourage the purchasing of cleaner vehicles, or make car use less necessary or less desirable); and
2. Fiscal and pricing measures, such as the provision of incentives for cleaner vehicles, or by increasing the variable costs of car use (e.g. fuel tax) or the fixed costs of ownership (e.g. VED) (OECD, 2008).

Car purchasing decisions are high involvement: the product is complex, there are considerable costs associated with poor decisions, and the transaction involves a high financial cost (Bakken 2008). As such, the role of information is particularly important, with market research suggesting that television, the Internet and the motoring press represent the most influential sources of information for car-buyers (Aitchison and Precourt 2008). This is perhaps not surprising given the amount the car manufacturing industry spends on advertising: in the US, 25 per cent of all local TV advertising revenue comes from car manufacturers and dealers, as does 7.7 per cent of the revenue of online ad-supported services and 18 per cent of that of local newspapers (Precourt 2008). However, given the vast, often overwhelming amount of information available, consumers employ a range of heuristics to simplify the car purchasing process.

One example of this is through word of mouth – verbal recommendations and advice passed on by family, friends and acquaintances. For example, a recent Finnish study, by the Helsinki School of Economics, found strong evidence of a neighbourly

influence on car purchasing. The recent purchasing of a particular car brand by near neighbours had a greater influence on car brand choice than almost all other factors (Bakken 2008).

Fiscal incentives have to date had limited success in encouraging uptake of low carbon vehicles. Vehicle Excise Duty (VED) for example has done little to persuade car buyers to choose a lower-carbon model, though there is currently little robust evidence on how reformed VED would influence car buyers. Despite some suggestions that graduated VED reform would shift consumer buying patterns (EST 2008), evidence from marketing and elsewhere highlights the limits to using price and fiscal incentives to motivate consumers' vehicle purchasing patterns. Not only is the way in which people interpret prices (including taxes) highly influenced by situational factors (for example, the price of other vehicles in the showroom or the recommendation of a car salesperson) but considerations of price can be over-ridden by other behavioural drivers – such as a consumer's sense of identity and the extent to which a car will potentially 'say something' about its driver.

5.3 Consumer electronics

5.3.1 Introduction

Household consumer electronics, otherwise known as 'brown goods', are household electrical entertainment appliances intended for everyday use (DVD players, TVs, MP3 players etc.). Although the consumer electronic sector is a highly dynamic and growing sector that touches upon several different industries, including communications, IT, services, and advertising, the consumer research presented in this report relates primarily to televisions, due to their significant recognised environmental impact (e.g. see EIPRO, 2007).

Televisions are widely owned and accessible across Europe. According to a TNS study, in the European Union, 96 per cent of households have at least one television. The penetration rates are the highest in Cyprus, Luxembourg and Malta where virtually 100 per cent of all households have a television (TNS 2008). An important factor that has driven the market of televisions is technological innovation. TVs are products that have seen an increase in their functionality – made possible by continuous technological innovations, such as digitalisation and the phase out of analogue broadcasting, high definition TV, connectivity and network interaction. Other key factors driving the marketing of TVs as a product include the possible new energy label on TVs and rising consumer awareness of the environmental impacts of energy consumption. Finally, production process changes have made fabricating flat-screen TVs more profitable and wide-scale. These parameters set the context for the

environment in which consumers find themselves when confronted with purchasing a TV.

Once a TV is purchased, it is the consumer who becomes responsible for the environmental impact of the device during its use phase. If a larger screen TV consumes twice as much power than a medium size TV, the consumer's initial product choice is an influencing factor. But which aspects are actually influencing the buying decision and how transparent are the environmental implications of a buying decision to a customer?

5.3.2 *The standard economic model*

Numerous reasons explain the transformation of the consumer electronics markets. Evidence on consumer trends in consumer electronics suggests that price is currently the most important factor influencing the buying decision and that the lowering prices of consumer electronics have been the main driver of the growing market; a fact that corresponds to standard economic theory. On average, in 2007 an LCD TV cost 771€, compared to 802€ in 2007, and 1214€ in 2004 (Le Figaro 2008). Consumer research has also shown that technical aspects such as display technology, picture quality (for example, contrast and moving picture resolution), high definition ready and hard disk recording capacity are also important factors that influence the consumer choice, in addition and in correlation to the product price. Indeed, socio-scientific market analysis supports these assumptions: '*Price and screen size are considered the most important criteria, followed by display quality, design, brand, and technology*' (IZM 2007). Thus, for neo-classical economists, consumers' choice of TVs is influenced by the growing market choice, which is in turn driven by technical development and lower prices. However, standard neo-classical economics fails to take into account a number of other important aspects that have been shown to influence consumer buying decisions.

5.3.3 *Behavioural factors in consumer purchasing of flat-screen televisions*

Behavioural economics challenges the traditional assumption that humans make rational decisions through an evaluation of all costs and benefits. This section reviews some of the recent marketing trends seen in consumer TV purchasing behaviour and shows that these trends cannot always be fully explained by standard economic theory.

5.3.4 *The decoy effect and relativity*

Evidence has shown a growing trend of consumers purchasing larger flat-screen TVs. Results from consumer research demonstrate that purchasing trends towards larger flat-screen TVs reflect more than just the single price for a TV (IZM 2007).

Indeed, recent trends show consumers favour increasing screen size: on average screen size increases by 3.5 cm per year (Le Figaro 2008). This pattern is especially observed in the EU where consumers are purchasing slightly larger flat-screen TVs for the same price as the smaller screen. This behaviour is problematic because the larger the TV screen, the more energy it will consume. While consumers will not necessarily always opt for the bigger screen, a desire to 'get more for one's money' (even though picture quality is not always better) is likely to continue this trend. This behaviour raises questions over standard economic explanations in the sense that a conventional TV (CRT TV) can produce just as good an image at a fraction of the price of the newer LCD models (The Economist 2009).

One possible explanation for the trends in increasing screen sizes is the decoy effect. Behavioural economics shows that humans always evaluate the things around us in relation to others; and compare things that are easily comparable. When faced with two choices that are difficult to compare, a third option (a 'decoy') can sway our decision asymmetrically (known as the 'asymmetric dominance' effect). This means that consumers' preferences towards two options tends to change when also presented with a third option (Ariely 2008). The decoy effect is usefully illustrated in Figure 3, where the addition of -A (the decoy) makes not just A look better than -A, but also comparably better than B.

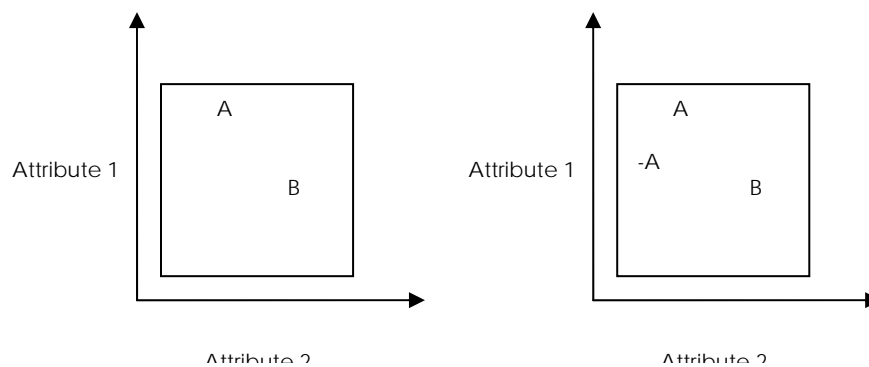


Figure 3: The decoy effect (Ariely 2008)

In the diagram above, if attribute 1 (the y axis) was screen size, it is possible to see how screen size could sway consumers asymmetrically. When faced with a choice of TVs that are similarly priced but which have different screen sizes, consumers will almost always choose the larger screen TV because this easily comparable feature is given undue weight during the purchasing process. In relative terms, the bigger screen size is immediately perceived as a 'better buy', despite the fact that picture quality and home logistics might say otherwise.

5.3.5 *Anchoring*

Despite the economic recession and plummeting consumer purchasing power, market reports suggest that people are increasing their purchases of certain consumer electronics - particularly flat-screen televisions (Baar 2009). One possible explanation for this is the principle of anchoring, as the anchor price that consumers attribute to flat-screen televisions (which are likely to have been determined by previous prices) affects the way consumers perceive the value of flat-screen televisions in the future. In other words, decisions about future flat-screen television purchases become coherent after an initial price has been established in our minds. Evidence has shown that consumers are aware of the significant price cuts in recent years for goods such as flat-screen televisions. Therefore, although televisions remain a high-cost product, people may weigh up this financial cost relative to a price anchored at a time when TVs cost more.

5.3.6 *Recognition heuristics and branding*

Recognition heuristics are another aspect that affects the consumer electronics markets. In Japan for example, consumers are highly familiar with national brand names of Japan such as Sony and Panasonic, worldwide leaders in the industry. Japanese consumers not only buy these brands because it makes a statement about supporting national industries and contributing to national identity, but also because of recognition heuristics, which stipulates that if one of two objects is recognised and the other is not, then they infer that the recognized object has the higher value with respect to the criterion. This factor could explain why consumers stick to purchasing national and easily recognisable brands, regardless of rational factors such as price and weighing up of the costs and benefits of the product.

5.3.7 *Socially embedded factors*

Rational economic theory rarely takes into account the direct influence of other people's behaviour and social norms to explain why consumers buy certain products. Social learning is a process by which we subconsciously take in the behaviour of others to learn how to behave⁹. In the case of consumer electronics, disparities exist between European, Japanese, and American consumers based on cultural and social factors. For example, experts have observed that in Japan, people become fanatic and obsessed over new technologies. This has been a fundamentally cultural trait in Japan that has existed since the 1970s and 1980s in the midst of the technology boom. New features on consumer electronics from new gadgets, functions, and designs, which are considered 'hip' and 'sexy' are extremely popular among Japanese consumers. Possessing the latest flat-screen television or mobile phone is part of being socially acceptable and 'cool'. Stobbe describes these

consumers as 'technology addicts', who will purchase state-of-the-art consumer electronics regardless of price or real necessity.

In the US, similar cultural tendencies that drive consumers to possess the latest in consumer electronics also exist, but this is also coupled with the concept of getting a 'bargain'. Consumers in the US are aware of many of the new features of the latest product, but will most likely buy it, only if it is a 'bargain'.

In Europe, consumers tend to be more conscientious in their purchasing than in the US and Japan, since the majority of European consumers will not necessarily buy a product just because it is new. This can be explained by the social value of frugality which means consumers pay more attention to how money is spent. In addition, pricing in Europe is generally more realistic and the culture of 'sales' and 'offers' are less widespread in Europe, meaning consumer electronics are generally more expensive, which differs from the concept of product 'dumping' found in Japan and the US. However, it should be noted, that these cultural based observations are generalised and do not necessarily apply in all cases.

Finally, social norms also motivate people to 'do the right thing', even if this means ignoring the financial costs. Protecting the environment falls under this category because people are concerned about the welfare of others and future generations. More and more consumers are increasingly aware of the environmental impact that stems from their consumption choices and are starting to change their consumer behaviour. In fact, a recent study by the Consumer Electronics Association (CEA), *'Home Technologies and Energy Efficiency: A Look at Behaviours, Issues and Solutions'*, finds increasing consumer interest in the energy efficiency benefits of consumer electronics products. Homeowners are thus factoring energy efficiency into the purchase decisions of consumer electronics in an effort to reduce home energy costs. This also means new market opportunities from increasing consumer demand for energy saving technology products.

A real world example of energy saving technology products includes environmentally-friendly TVs, or 'eco-TVs', which companies such as Sharp, Sony, and Panasonic have just recently started manufacturing. These eco-TVs use a variety of technological innovations, to achieve substantial power and cost savings with no sacrifice in performance and picture quality. Consumer experts predict that environmentally friendly functions are a premium that consumers will pay for and that will become a standard for all LCD TVs in the near future¹¹. Because of the recession, along with concerns about climate change, consumers are more concerned about energy consumption and running costs, but the challenge will be to develop technology that can improve the eco-function but will not increase the cost.

Marketing professionals are hopeful that in a few years, eco-TVs may become more desirable.

5.4 White goods

5.4.1 Introduction

Households buy long lasting appliances for cooling, cooking, washing and heating water. These are usually referred to as 'white goods'. As soon as thermal processes are involved, these appliances usually consume a significant amount of energy. Although considerable progress has been made over the last years to improve the energy efficiency of such white goods, the durability of the appliances entails that older, less advanced technologies only fade out very gradually. This policy brief will focus mostly on refrigerators and freezers and washing machines for two reasons: first, these appliances can be found in almost any European household; second, for these products, sufficient data exists on eco-friendly consumer behaviour. Are consumers aware that their old appliances are high energy consuming? Does environmental preference for a particular appliance play a role in consumer choice? Attributes potentially influencing a consumer's decision entail: design, performance, technological innovation, reliability, warranty, service and last but not least the initial purchase price. Consumers are therefore faced with a complex decision when trying to buy white goods. Not only do the different attributes of a product build on complexity, but they can also provide contradicting objectives, such a low purchasing price and technological innovation.

To describe most of these attributes, labelling is believed to provide a solid basis to inform consumers. Introduced in the mid-1990s, the energy efficiency labels have been slowly evolving, leading to the EU energy label. However, life cycle costs of the energy footprint are only partially visualised by the EU's energy label scheme.

The purchase of white goods offers a complex and challenging field for investigating consumer behaviour. The following sections address the issue from a rational choice perspective and then investigate what other aspects may influence actual behaviour.

5.4.2 The standard economic model

The standard neo-classical economics model assumes that consumers have full and unbiased information about the product and the purchasing process based on which they then can find a rational decision regarding the purchase of the product. Rational economics describes the act of purchasing as a process involving the consumer, the product and information about the product, including budgetary constraints due to the income level and the actual retail price.

Several problems arise from this model. First of all it is very important to note that consumers buy household appliances or white goods only every few years, which

means they normally know very little information about the state of the art when first considering their purchase.

Secondly, this information deficit links directly to consumers' need for guidance in order to define the optimal timing for replacing an old appliance and to choose a new one. Moreover, the question of whether delaying the purchase and using a less efficient appliance outperforms the renewal is far from trivial and involves complex computation that very few consumers have either the time or the inclination to carry out. The role of sales personnel as information agents and interpreters is therefore influential to many consumers. The choice process requires more than information alone and will involve social mechanisms.

5.5.3 Consumer behaviour

The nature of white goods means that consumers are subject to far fewer emotional influences than when buying other products. Consumers usually have limited emotional attachment to white goods; they tend to think of them in terms of their use rather than how they make us look or feel. Where a consumer is seeking to replace an old but working appliance, the high cost and use of white goods means they are unlikely to be bought on impulse. Consumers typically focus on price and efficiency, and recognise the EU energy label even if they do not fully understand the details. However, sometimes a white good will be needed quite quickly because an existing appliance has broken. In these instances, less time is available to reflect on the purchase.

Compared to other products, the design of white goods has relatively limited impact on consumer choice. White goods tend to look relatively similar and have a low profile in people's kitchens. As such, manufacturers' marketing strategies tend to promote white goods by focusing on price and energy efficiency, rather than on branding or iconic features. Consumers are therefore likely to buy a familiar brand of white good because they rely on brand as a short-cut to speed up decision-making, rather than because they feel any particular brand loyalty.

In the case of refrigerators this is changing. The emergence of 'luxury' fridges (or large 'American-style' fridges) has partly been driven by manufacturers using bright colours and iconic designs to make their products status symbols. This allows the consumer to make a visual statement about their lives. There may be similar potential to use social influence and the desire for iconic statements to promote the most energy efficient appliances.

5.5.4 Energy labelling

The European energy label is one attempt to standardise information on household appliances and to ensure the availability of minimum essential information on energy efficiency and the estimated energy consumption. The label rates products from 'A' to 'G', 'G' being the least efficient. For refrigerators, the categories 'A+' and 'A++' were added to better distinguish the different energy efficiency levels. How successful the labelling scheme has been at influencing consumer behaviour directly has been dependent on both consumers awareness of, and concerns, about energy efficiency, together with the decision of the scheme itself.

Schweizer (2009) states – based on internal customer surveys – that, even though climate change is omnipresent in the media, more than 60 per cent of consumers are not sensitive to energy efficiency. Eighty per cent of the surveyed customers declared themselves energy savers. However, only 14 per cent base their purchasing decision primarily on energy efficiency. According to Schweizer, 35 per cent of consumers are altogether unaware of the European energy label. In stark contrast, Murray (2009) quotes that 90 per cent of a surveyed sampled have indicated to be aware of the European energy label. These contradicting values reveal the important difference in attributes influencing consumer behaviour and, in particular, the difference between consumers being aware of a label versus understanding the label and actually being influenced by the label in their purchase decisions.

While the label states energy consumption in kWh, it does not necessarily translate this figure into actual costs. Given that consumers are unlikely to make the effort to process information unless they perceive the information to be relevant to them, consumers will only use energy labelling while shopping if energy consumption is a specific consideration. Even in these situations, other external factors (such as special offers or the advice of intermediaries like salespersons) are likely to compete with the energy label for consumer attention.

In addition, there is evidence that the labelling scheme itself causes confusion. The label is an absolute label, i.e. an energy rating corresponds to specific energy consumption in kWh for a specific product group. That said, a condenser dryer rated B would in fact consume more energy than a vented dryer rated B, since thresholds are product category specific¹¹. Thus, the labelling scheme itself may also add more confusion to the already confused consumer (Greening, 2000). Another issue directly

¹¹ Still, the most environmental friendly way to dry clothing is to simply hang them, a method not rated by the energy label.

linked to the structure of the label is that over time, more products reach the A label, making it very difficult for consumers to purchase the most-environmentally preferable products.

Research on actual consumer behaviour finds that although energy efficiency may be recognised as an important attribute, consumers have difficulties in linking energy consumption with a cost parameter. In their work, Sammer and Wustenhagen (2006) found respondents significantly over-valued the cost advantage of products featuring an energy label, but under-estimated the cost advantage of low energy consumption washing machines which did not carry a label [at the time]. The study suggests that consumers are actually willing to pay a premium on appliances featuring an energy label. Moreover, the study found that respondents valued the purchase price as the most important attribute (31.8 per cent), followed by the equipment (19.2 per cent) and then only energy efficiency (11.9 per cent). In their study, 74.2 per cent of respondents recall having seen the energy label. However, levels of label recognition for individual product types may go as low as 0.9 per cent for PCs.

5.5.5 Consumer trends

Öko-Institut (Rüdenauer 2005) reports that 37 per cent of refrigerators in Germany in 2005 were older than 13 years. GfK data suggests that household appliances tend to be used over long time horizons (Gutberlet 2008): 16.9 years for freezers, 15.2 years for cooking ranges, and 14.6 years for refrigerators, 12.2 years for washing machines and dryers and 11.7 years for dish washers. In Germany, all appliances older than 10 years consume together 40 per cent of the electricity used for household appliances, resulting in potential energy savings of more than 30 per cent of energy used for household appliances or 8.4 TWh.

The European association of home appliance manufacturers CECED states that more than 188 million home appliances across Europe are older than 10 years, leading to a savings potential of 44 TWh or 6 per cent of Europe's Kyoto target. The spatial evolution of the share of the different energy labels in total sales of refrigerators can be seen in Figure 5.4. This shows that the energy labels D-G are no longer in use and that most cooling appliances fall into category A nowadays.

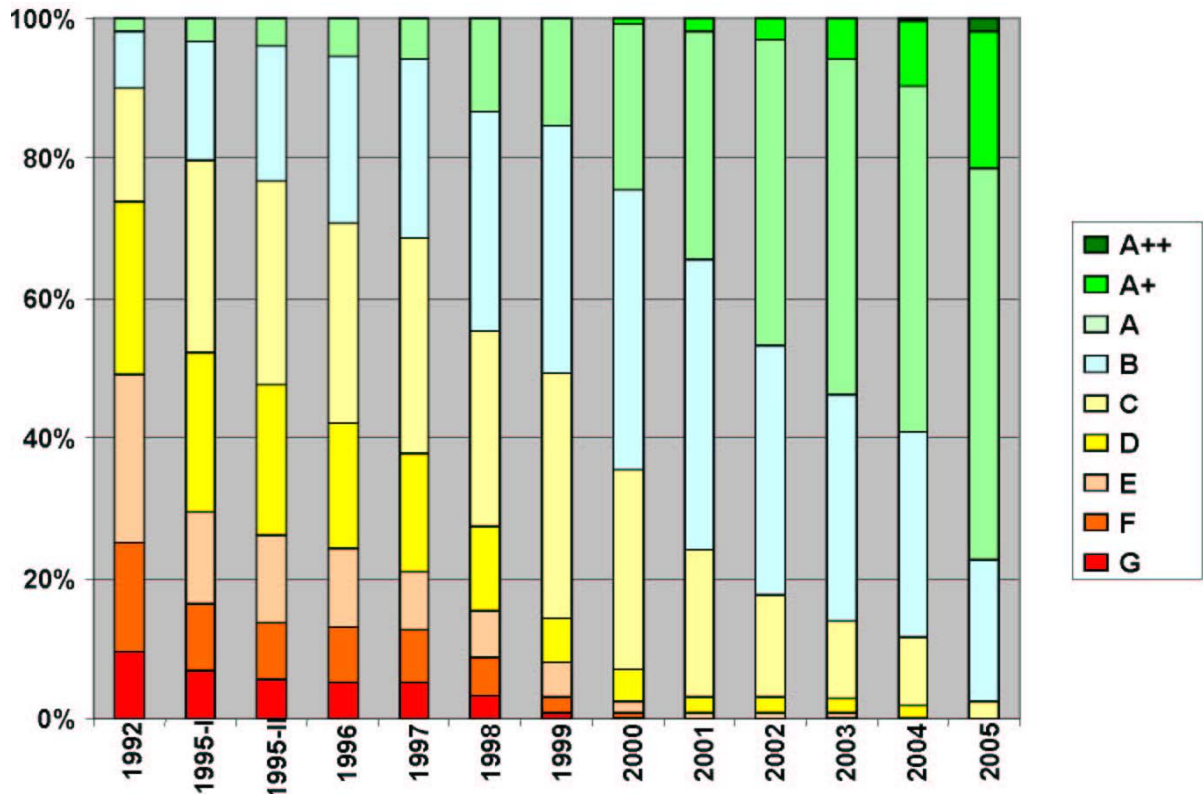


Figure 5.4: Evolution of energy classes in the EU 1992-2005 (Source: CECED)

The introduction of an income tax rebate on energy saving appliances in Italy in 2007 (20 per cent of purchasing value up to 200€) led to an accelerated market profusion of sold A+ and A++ refrigerators: from 11.6 per cent (2006) to 28.5 per cent (2007) and 38.8 per cent (2008) (Stöckle 2009). In 2007, 85.3 per cent of all newly introduced refrigerators were in A+ or A++ categories in Italy, compared to EU West with just 28.2 per cent and especially the UK with 4.3 per cent. Furthermore, the GfK Panelmarket (Eckl 2008) found higher A and A+ shares for refrigerator sales in Eastern European countries than in old EU Member States, mostly due to an abdication of 'No-frost' features.

6 Implications for policy-makers

6.1 Introduction

This section of the report considers the implications of project findings for public policy, and in particular product policy and the encouragement of pro-environmental behaviour¹².

6.2 Key findings for policy-makers: a summary

1. **Design policy that works with the real drivers of consumer behaviour**, not the 'rational' consumer often found in standard economics. There are substantial differences between the two that are very likely to lead to different policy results. Standard economics assumes consumers simply need to be properly informed about products and, if offered a range of choices, will act in their own self-interest to maximise their own benefits. Evidence from both marketing and behavioural economics (and a host of other disciplines) proves this is wrong. An improved understanding of consumer behaviour gives policy makers a wider range of policy instruments with which to achieve policy objectives. Used in the right circumstances, these instruments are likely to be more cost-effective than more traditional policy instruments.
2. **Remember consumer behaviour is both context- and product-specific**. The effective design of policy instruments requires policy organisations to build up a sound knowledge base – including staff expertise – on how consumers really behave. While the existing evidence on consumer behaviour contained in this report provides guidance on how people make choices, policy-makers need to remember that consumer responses will vary across product groups and policy areas. The six short 'policy briefs' produced to accompany this report provide the key pieces of policy-relevant information and advice on consumer behaviour in relation to purchasing (and sometimes use) of: private vehicles, white goods, consumer electronics, food and drink, utility contracts.
3. **Pilot policies in the 'real world'**. Accurate, reliable information about how consumers will react to different policies is difficult to collect, particularly prior to the implementation of policies. Policy-makers will need to be smart in how

¹² For an overview of the application of behavioural economics to public policy, see Amir *et al.* (2005) or Thaler and Sunstein (2008).

they obtain this information. Policy pilots and trials provide an opportunity to observe consumer behaviour in a real world setting.

4. **Improve policy evaluation.** Building knowledge of consumer behaviour in response to policy instruments will require better evaluation of applied policy instruments. To be useful, that evaluation will need to examine the impacts of instruments on the drivers of consumers' behaviour, not only the outcomes. New 'real world' approaches to evaluation are required.
5. **Develop an international evidence base.** Effective design of consumer policy in this area would be supported by exchange of information on drivers of consumer behaviour and evaluations of policy instruments across the EU and other countries. Ways to promote this sharing should be put in place within Member States, or at EU level.
6. **Learn from the world of marketing.** Much can be learnt from marketing about consumer behaviour and product-policy. One important lesson is that consumers are heterogeneous, which means different consumers of a product or service will respond differently to different policy instruments. A targeted approach to policy design can capitalise on this heterogeneity. Another potentially effective policy tool would be interventions that alter the ways in which products are marketed. At one extreme, this could include restrictions on marketing practices. Perhaps more effectively, it could mean working with retailers in ways that encourage them to market certain products or services in order to promote uptake.
7. **Reconsider information provision.** The way in which messages are framed plays an enormous part in the way in which consumers interpret that information. Information is also much more likely to be taken notice of by a consumer if perceived as beneficial. Present information in ways that appeal to consumers, recognising that this may differ according to consumers and products. Policy-makers need to also recognise that product information reaches consumers through numerous routes: consider the role of intermediaries (like salespersons) and new web-based information sources (like online product comparison sites) on consumer behaviour.
8. **Make it easier to make choices.** This may mean making it easier for consumers to research their purchases, for example by improving Internet-based price comparison sites. It could also mean 'editing' the choices that consumers face, for example by removing the most unhealthy or the most environmentally damaging products from the market.

9. **Think differently about price.** Increased knowledge of consumer behaviour on pricing highlights that consumers do not react only to lowest prices, but also to relative price, changes in price and the information that is conveyed by price (for example on quality). This information can be used to better design incentive policy. Information about consumer behaviour can also cast light on how producers and retailers choose to price their products, which provides insight on the likely responses of producers and retailers (for example, through changes in marketing or pricing) to policy instruments. This is an important consideration when judging the likely effect of a policy instrument.

10. **Remember that all consumer policy attempts to change behaviour.** Critiques of policy-making based on insight from behaviour economics sometimes accuses such policies of being overly paternalistic, leading to accusations of the 'nanny-state'. Policy-makers should not be put off by such accusations. Policy instruments that are uninformed by research from behavioural science are not necessarily less paternalistic, '*they are simply less likely to be effective*' (Amir et al., 2005: 448).

6.3 Implications for policy: discussion

6.3.1 Policy development as an 'experimental endeavour'

Based on the evidence reported, it is obvious that the key difficulty faced when setting consumer-facing policies is the complexity of human behaviour. Indeed, one of the strongest defences of rational economics is its simplicity and therefore the modelling and predictions it permits. While synthesising the core findings of behavioural economics into a unified alternative economic model represents a central political and economic challenge (Lunn 2009), it does not imply that the guide that economics currently provides to policy is necessarily useful. Although the findings of behavioural economics are often 'messy' they are also, as Read (2008) notes, '*more likely to be accurate*'. In contrast, the predictions of standard economics '*are elegant but often wrong*' (Productivity Commission, 2008: 104).

One of the key challenges for policy that stems from the findings of behavioural economics is that an overarching, one-size-fits-all approach to consumer policy is fundamentally flawed. Policy frameworks need to allow for flexible approaches that recognise how different citizens make different choices in different situations; as behavioural economists themselves admit: '*the number of situational factors that affect behaviour often means that the answer to questions about behaviour is 'it depends'*' (Amir et al. 2005).

In this context, trial and error in policy development also becomes desirable and is likely to be beneficial (Brook Lyndhurst, 2006), leading some of behavioural economics most important theorists to call for policy testing that approaches an '*experimental endeavour*' (Amir et al., 2005: 451). Despite the high costs of implementing policy, the complexity of the public policy environment and the high uncertainty inherent in most policy-making, policies are not always piloted or tested before being implemented. Yet the only way of really being sure of how people will react to a new intervention - and of establishing how successful that policy is likely to be - is to trial the policy in the 'real world'. This is not to say that a successful pilot could automatically be 'scaled up' to have a wider positive impact; what works with some people will not work with others. Such piloting would however enable more effective policy and research evaluation, informing improved policies based on observed (rather than self-reported) public responses.

In accepting a more nuanced, multi-faceted approach to policy, policy-makers can (and already are beginning to) learn much from marketing and the way in which consumer segmentation is used to ensure product advertising and marketing, and product development itself, effectively targets its intended audience.

6.3.2 *Using consumer segmentation*

Consumer segmentation is a technique commonly employed by businesses to identify – and subsequently target – key audiences and customers. In the UK, the Department of the Environment, Food and Rural Affairs (Defra), together with other government departments, have developed a segmentation model to inform its on-going work encouraging pro-environmental behaviours¹³. The model divides the UK population into seven distinct segments, each defined by differing attitudes towards the environment and other socio-demographic characteristics. The model is not intended to inform policies targeted specifically at members of different segments but instead to allow a suite of policies to be developed that collectively will motivate a range of responses across larger population groups (see Defra (2008a)). One way to ensure policy can more adeptly consider the ways in which different individuals may react differently to policies is by adopting a (community-based) social marketing approach, which involves applying lessons from marketing to the formulation of policy (McKenzie-Mohr 2000).

6.3.3 *Improving consumer research*

As this project has highlighted, individuals are unreliable. This makes research based on self-reported behaviour and intentions equally unreliable (Earls 2003). If policy is to move beyond its flawed model of consumers as rational, self-interested individuals, it is important to ensure that it is not based on research that encourages participants to think in this uncharacteristic manner and to ensure that more is done to understand the way in which emotions affect consumer decision-making.

If so much behaviour is driven not only by unconscious, automatic thought processes but also by our emotions and affect, it is highly unlikely that asking people why they may or may not buy certain products will prove particularly insightful. In addition, the limits to research based on responses to stimuli in experimental settings needs to be realised. Stimuli need to reflect the complex environments in which decisions are made despite the fact this makes causal links and inferences harder to make (Amir *et al.*, 2005).

To this end, valuable lessons can be learnt from the world of market research, in which techniques for exploring the deep, emotional reasons why people make purchasing decisions are increasingly being developed. For example, metaphor elicitation techniques draw on visual imagery, story telling and metaphors to

¹³ Something that other UK government departments – like the Department of Health (DH) and the Department for International Development (DfID) - are also doing to inform their policies.

uncover the links between the products that people chose and their deeper emotional motivations (Clegg 2006a). Research exploring why people buy consumer electronics in the UK (Young et al. 2006) employed the market research technique known as 'laddering' (whereby an in-depth, one-on-one interview is used to draw out the connections that people make between product features, the impact of those features and individual values) to unpack consumer decision-making. Van Veen and colleagues took a more direct approach and resorted to standing on the shop floor and interviewing shoppers as they stood in front of shelves contemplating purchases (van Veen 2009).

Regardless of the techniques utilised, there is also simply a need for *more* research in this area. It is worth noting at this point some feedback from the Chartered Institute of Marketing (CIM) Information and Library Service, which we contacted while seeking evidence on 'real world' consumer behaviour. The service representative reported finding it '*quite difficult to find anything which fits the gap between academic theory/models on consumer buying behaviour and the more general market report information*'. It was suggested:

'Part of the reason for the gap in information between academic theory (how consumers 'should' behave) and the market research data (what consumers have actually done but not why they have done it) is that in many respects it seems to be an unknown area. Some of the articles in the market research searches I have attached allude to various difficulties in finding this information. Having now looked at this I believe that in many cases the information simply does not exist. Some companies may have a better understanding of consumer buying behaviour than others but even then I doubt any know all the answers, and if they did they would be unlikely to share this information'.

(CIM information services, email correspondence)

Similarly, despite protracted discussions with the Future Foundation (one of the UK's leading market research providers) in an effort to gain more evidence on 'real world' consumer behaviour, it eventually was decided that there could be no guarantee that the Future Foundation's models would provide the depth of insight that was sought. Like much market research, the model considers overall market trends, the 'how' of consumer behaviour, rather than information about why consumers bought different products.

Further research into the observed 'real world' behaviour of consumers when buying new products, as well as post-hoc evaluations of consumer responses to new policies and measures, is essential in continuing to build a more realistic picture of consumer behaviour and, in turn, more effective consumer policies.

6.3.4 *From products to practices*

An additional, more challenging lesson would be to consider consumer needs in the way that marketing does. Rather than focusing specifically on products, policy should consider the needs that products meet and the practices of which they form a part. This focus on practices, or the wider social context in which products function, is something that marketing has long acknowledged; as 1960s marketing guru Theodore Levitt famously identified, '*Consumers don't want to buy drill bits. They want to make ¼ inch holes*'. What advertising and marketing realise is that people do not necessarily want a car, but they want a comfortable way of getting to work, or of taking their children away for the weekend. Shove (2009a) has similarly argued that in order to understand contemporary patterns of consumption, we need to consider the everyday practices that constitute our lives. Perhaps the question should not be whether or not people buy energy or water efficient washing machines, but why people feel the need to wash their clothes so much more frequently than they have in even the very recent past? If the washing of clothes is determined by socially constructed ideas of hygiene and 'freshness' as well as external (and completely incidental) factors like the weather as research suggests (Defra 2008b), it is as important to understand how these factors contribute to behaviour as it is the in-store promotions that might effect consumers' choice of washing machines.

6.3.5 *Reconsider the role of information*

In highlighting the many ways in which the 'information-deficit' model of consumer behaviour is deeply flawed, behavioural economics and marketing provides many useful lessons on how information provision could be reconsidered and potentially improved.

A key lesson here is the importance of peer-to-peer communication and the 'word of mouth' transmissions of product information. One of the biggest influences on consumer choice is recommendations from friends, acquaintances and family, something that marketing has known for sometime and (through various mediums, such as 'viral marketing') has sought to capitalise on.

This is not to say it is either desirable or appropriate for policy to utilise marketing techniques in information campaigns and advertising. Indeed, relying on the word of mouth transmission of information is inherently risky – negative evaluations of a product can prove disastrous for companies and, once people start talking to one another, a company has very little control over what they actually say. Research suggests that negative and positive information travel across social networks differently: because we are inherently risk averse, negative advice (for example, warnings not to buy a faulty product) has been found to be provided more readily

than positive advice (which may be deemed to be intrusive and meddling) (Weenig and Midden, 1991). It does however highlight the value of using social networks to aid campaigns. In the UK, for example, the National Health Service's community-based Health Trainers Initiative trains members of local communities to act as sources of information about health care for local people. The scheme is successful because it recognises the power of personal communication with trusted individuals (Fell et al. 2009).

In the context of product policy, it is also important to recognise a new, web-based form of word of mouth that has emerged in recent years in the form of online customer reviews. Word of mouth has, in effect, migrated online creating active electronic communities that provide a wealth of product information. Particularly in the area of consumer electronics, forums that facilitate consumer product reviews are an increasingly important part of the consumer decision-making process. Similarly, online price comparison sites are becoming an increasingly important means by which consumers find out about products and prices. It has been suggested that an important challenge for policy is to create environments that enable markets, like electricity and telecoms, to utilise the lessons of price comparison sites, so that individuals can make more informed choices, more easily (Productivity Commission 2008).

6.3.6 *Aiding and 'editing' consumer choice*

Consumer policies have long been dominated by the concept of 'consumer sovereignty', whereby it is suggested that consumers should be free to influence the market of products and services by exercising their right to choose and their purchasing power in a free market. Fundamental to the idea of consumer sovereignty is the assumption (pervasive in standard ('rational') economic theory) that consumers benefit from the greatest number of products and the widest choice. The belief that more choice can only be a good thing is not one that historically has been restricted to just economists. Psychological research has for decades demonstrated a link between the provision of choice and increases in many of the antecedents of behaviours, such as intrinsic motivation and perceived control, discussed earlier (Iyengar and Lepper 2000). More than this, the ability to choose one's own path, and to learn from the mistakes that may entail, is seen as fundamental to concepts of freedom and liberty (Thaler and Sunstein 2008).

Yet, as discussed in Section 3.2.2, rather than leading to better consumer purchase decisions, too much choice can actually lead people to process information differently, to consider few options and, in some cases, to avoid making choices altogether. Furthermore, it has been argued that this approach fails to recognise the

relative costs of consumption compared to production, thereby placing undue responsibility on consumers rather than producers and retailers (Cooper 2008). Problems are also posed by the fact that consumers who choose non-environmentally preferable products may be acting perfectly 'rationally' (in that they are maximising their individual welfare) but are collectively reducing social welfare (for example, by contributing to climate change).

One way around this is a restriction in the number of products or product attributes on the market. In the case of consumer electronics, people find this process of 'choice-editing' acceptable and assume that this is already being undertaken by government (Brook Lyndhurst, 2007). Another way in which policy-makers can help consumers overcome the problems of excessive choice is by making it easier for people to compare different products and prices. Setting prices and packaging products in a standardised, easily comparable way makes it easier for consumers to make informed decisions (BRE and NCC, 2007; OFT, 2008).

6.3.7 *Work with heuristics, not against them*

Policies will work better if they are designed to capitalise on the variety of heuristics that consumers rely on to make decisions. For example, the use of 'defaults', takes advantage of our tendency to avoid efforts during decision-making and our tendency to favour the status quo. Ensuring that product standard models are environmentally-preferable is just one way in which policy could make use of defaults.

Similarly, policy should make use of what is known about the impact of brand recognition. The 'recognition heuristic' means that consumer choices can be affected by familiarity even if nothing is known about the particular brand (or label). This implies that there is value in making sure that people recognise similar labels and sources of information. For example, although the information contained on energy labels is important, it could perhaps be useful to ensure that consumers recognise the labels of the most energy-efficient products. The existing colour-coding will aid this process - information campaigns that promote the visual appearance of A rating labels will ensure consumers recognise these when shopping, which may increase the chances of them purchasing these products if involvement in the purchasing decision is low.

6.3.8 *The impact of others: social norms and social influence*

The past decade has seen a surge in social-norms marketing campaigns, particularly within health policy, which delivers normative information (i.e. information about what is 'normal') as a means of reducing the prevalence of socially undesirable

behaviours. These centre on two consistent findings: that the majority of individuals underestimate the prevalence of undesirable behaviours (e.g. alcohol abuse) among their peers, and that individuals use their perceptions of others' behaviour as a benchmark against which to monitor their own behaviour. Correcting misconceptions about the prevalence of behaviours are often the main aim of normative marketing campaigns. However, evidence suggests that focusing on descriptive norms alone can lead to undesirable outcomes. For example, in a study aimed at decreasing energy consumption, Schultz *et al.* (2007) provided feedback to residents on average household energy consumption in their communities. Although those consuming more than the average reduced their consumption, those who originally consumed less than average actually increased their consumption. Cialdini puts it succinctly: *'Within the statement 'Many people are doing this undesirable thing' lurks the powerful and undercutting normative message 'Many people are doing this thing'* (2003: 105).

In these instances, it is important that an injunctive component – i.e. a message that tells individuals not just what others do, but what is socially desirable – is included. Norm-based persuasive messages are most effective when communications align both injunctive and descriptive messages. Research suggests that descriptive normative messages are based on the 'raw behaviour of others' (Cialdini, 2003: 109) they appeal much more directly to our emotions. In contrast, messages based on injunctive norms demand cognitive processing, because they require an understanding of morality and social rules. As such, we are more likely to critically assess the persuasiveness of an injunctive message, a process which can mediate the messages' effectiveness (Cialdini, 2003).

The effective use of normative messaging is confined largely to behaviours to which normative social influence applies though evidence does suggest that online retailing may provide scope for normative messaging. Because online shopping reduces the need for people to conform to the expectations of others, it can also serve to reduce normative influences (Chen 2008). Prompts that make norms more salient at the point of purchase – for example, adverts that remind people of injunctive norms linked to energy efficiency or sustainable consumption – could help to remind consumers of wider social implications of their purchases and make them more likely to consider social norms.

6.3.9 Maximising the impact of fiscal and financial instruments

Behaviour economics presents a variety of useful lessons about the use of incentives and fines to encourage environmentally-preferable behaviour.

- **Incentivise retailers to promote environmentally-preferable products.** The way in which products are marketed and promoted by producers and retailers - whether this is through special offers, in-store advertising, online customer ratings or through the advice of sales staff - has a huge influence on consumer behaviour. Policy should incentivise retailers to promote certain products by, for example, offering greater profits through tax reductions, on those products.
- **Reconsider the impact of price.** The impact that prices have on consumer behaviour is heavily influenced by in-store marketing, such as special offers, and by the prices of similar products. Policy should work with retailers to ensure that environmentally-preferable products are promoted through attractive price promotions. In doing so, policy should remember that consumers like to think they are avoiding costs. The allure of all things free suggests that products that are 'tax-free' products are likely to be much more attractive to consumers than those with reduced tax.
- **Help consumers consider long-term costs.** Our tendency to overvalue the short-term and undervalue the future means we tend not to consider the long-term running costs associated with products. Work with retailers to ensure that the long-term costs of products, rather than just the purchasing price, are highlighted to consumers.
- **Recognise the importance of recognition.** Consumer choice is often driven by recognition of products, brands or labels. Labels need to be consistent and easily recognisable, something which the current colour-coding system used within the European energy label will aid. Re-classing the ratings used in the European energy label using a dynamic 'front runner' system with dynamic rating would reform the system in a way that maintains consumers' existing recognition of A rated products as the most efficient.
- **Fines may be more effective but incentives are preferred.** People feel the loss from a fine more than they value gains from an incentive. The difficulty is that, because individuals are loss averse, they are equally averse to policies that suggest future losses. Policies that fine people are likely to be less publicly acceptable for precisely the same reason that they are likely to prove more effective.
- **Remember that consumer valuations adjust over time.** Consumers will readjust behaviour to new prices so although incentives may initially cause consumers to react to price changes, these changes may not be sustained over time. Financial levers that increase can overcome this problem.

Central to standard economic theory is an assumption that a product price ('market price') is determined by the balance between supply (the cost of production) and demand ('the desires of those with purchasing power'). Critical here is the belief that

the two forces are independent, but as the evidence presented in this report makes clear, this is often not the case. As we have seen however, willingness to pay – i.e. demand – can be manipulated and consumers do not have a good understanding of their preferences or the amount that they are willing to pay for a product. In addition, the process of anchoring shows that supply and demand do not function independently. Prices can be influenced by recommended retail prices (RRPs), advertising, promotions, introductory prices, which are all supply-side variables; supply can therefore influence demand (Amir *et al.*, 2005).

In addition, behavioural economics has implications for the use of financial incentives (and disincentives) to influence other aspects of consumer behaviour, beyond just product policy:

- **‘Crowding out’**. Although they can lead to an initial increase in the uptake of desirable behaviour, incentives have been proven in some cases to ‘crowd out’ the intrinsic motivation of people to act in a socially responsible way. This suggests incentives may be more useful in prompting completely new behaviours, rather than in encouraging activities that some individuals already undertake.
- **‘A fine is a price’**. Use of fines where none have existed in the past, can lead to a shift in attitudes from social to market norms – if people are being fined for behaving in a certain way, there is a tendency to think undesirable behaviour is acceptable precisely *because* the individual is paying for it. In these situations, fines become fees (or ‘a price’ to be paid for unsociable behaviour). The distinction between a fine and a fee is important because whereas a fine has an intrinsic, socially-moral component, no moral judgement is implied in a fee. Introducing financial instruments into previously social-contract situations can be very detrimental, and take a long time to reverse.

Influencing consumers: the role of the state?

Finally, it is worth briefly considering the legitimacy of policy measures that draw so heavily on the behavioural sciences, in recognition of the potential for these to be seen as too paternalistic.

In doing so, the first thing to emphasise is that in the vast majority of cases, policy measures informed by behavioural economics are not necessarily about the state telling people what to do or completely reducing choice. Instead, such measures should leave people free to choose but direct (or ‘nudge’ (Thaler and Sunstein, 2008)) them towards more socially desirable or individually beneficial outcomes. For example, making the most energy efficient model of a washing machine the standard

model rather than an option would *not* mean a consumer was unable to buy a non-efficient model if they chose to. It would simply mean that those people who had no particular preference and were content to accept the standard model would automatically be buying the most efficient. In addition, some framing of consumer choice is impossible to avoid and is therefore already inherent to consumer policy. The choice decision policy-makers face is not whether to include framing in the policy process but whether to harness its power to achieve certain ends.

It is also important to realise that much of the learning from behavioural economics is already being used by marketing to influence consumers in ways that are unbeneficial to the consumer themselves. Both Lerner (2009) and Ariely (2008) suggest one of the greatest benefits of behavioural economics is the opportunities it creates for greater consumer understanding of their own behaviour. Rather than disempowering consumers, an increased awareness of the way in which cognitive biases can lead to make poor decisions in the long-term can help inform individual action to limit the impact of such biases. This can help people make improved decisions by making them aware of the ways in which they may or may not already be being influenced by marketing.

7 Product-specific policy opportunities

In addition to the general implications for policy, set out above, our project has identified a number of ways in which the findings from behavioural economics and marketing can inform product-specific policy-making.

7.1 Implications for consumer vehicles policy

When designing policy to influence consumers' choice of new vehicles:

7.1.1 Encourage consumers to consider future costs. People do not weigh up immediate costs against long-term running costs. Measures that help consumers to meet any additional up-front costs of new fuel efficient vehicles, such as interest-free loans, can be effective at influencing consumer behaviour. Efforts to encourage car-sharing and membership of car pools would benefit from increased information about the overall costs of car ownership and a move towards greater fixed monthly or annual membership fees which 'decouple' payment from the car use.

7.1.2 Recognise that consumers become emotionally attached to their cars. This means that many car owners value their cars for more than just the cars' utility. Ensure that trade-in schemes, which allow less efficient vehicles to be taken out of use, take into account the different ways in which consumers value their cars.

7.1.3 Reconsider the impact of price. Although price is a critical factor in car purchasing, consumers' interpretation of prices can be swayed by the way in which price information is presented by retailers or by special offers and price promotions. In particular, in many countries, consumers are attracted to things that are 'free'. A car that is tax-free, or free from some other up-front or long-term cost, will be much more attractive than an option with an extremely small rate of tax or cost. Removing the tax on vehicles with the lowest levels of CO₂ emissions will be more motivating to consumers than very low tax rates.

7.1.4 Provide information that is relevant to all car buyers. Individuals rarely use all of the information available to them when shopping and are more likely to read information when they perceive a benefit from them doing so. Rather than highlighting fuel efficiency, labels may be more effective if they translate this efficiency into costs or savings. Highlighting the costs associated with fuel inefficient cars will have more of an impact on consumer behaviour than efforts that highlight the benefits of a fuel

efficient car. Requiring consumers to pay a visible additional cost when purchasing cars with high fuel consumption is likely to be more influential than offering incentives for the purchasing of cars with low fuel consumption.

- 7.1.5 **Make sure standard models are the most efficient.** Consumers often assume that the standard vehicle model (for example, the model they get if they do not add any optional extra features) is preferable. Encouraging manufacturers of fuel efficient vehicles to make the most efficient vehicle the standard model will improve take-up rates. Similarly, in situations when both a hybrid and non-hybrid model of the same vehicle is available, the hybrid model should be described and sold as the standard.
- 7.1.6 **Encourage retailers to reassure consumers that new technologies are proven and reliable.** Consumers are often misinformed about or misunderstand new technologies, such as electric vehicles. One of the best ways of providing reassurance of their quality is by giving consumers a chance to test-drive vehicles. Encouraging retailers to give their customers this opportunity is crucial in helping to overcome misplaced perceptions about the performance of new technologies.
- 7.1.7 **Help consumers carry out their own research.** People are increasingly using the Internet and consumer guides to research the purchasing of cars. Easy-to-understand price comparison sites that enable consumers to compare future and lifetime costs, or other ways of helping consumers compare product options, can highlight potential savings and encourage replacement. Consumers need to trust these sources. Policy has a role in validating the authenticity of these sources and working with independent providers of consumer information to improve the presentation of future costs to consumers.
- 7.1.8 **Recognise the important role of intermediaries.** Intermediaries, such as sales people in car showrooms or mechanics, play a very influential role in car purchasing. Working with retailers and trade associations to ensure their staff and members are well-informed about the advantages of fuel efficient vehicles and new technologies will increase the chances of these messages reaching consumers. Evidence suggests people are increasingly using Internet and consumer guides to research high involvement purchases like cars. The UK's Department of Transport, for example, has

worked with one of the country's main consumer car buying guides to provide consumers with an online guide to green car purchasing¹⁴.

7.1.9 Encourage retailers to let consumers change their mind. Although sales representatives are known to be very persuasive, this can also lead some consumers to treat their recommendations with caution or to feel pressured into buying a product that they would not normally buy. These problems can be overcome through measures which allow consumers to change their mind about a car post-purchase. So called 'cooling-off' periods provide consumers with the opportunity to carefully consider the costs and benefits of a decision, away from the pressure of a sales environment.

7.1.10 Remember that people buy cars to make a statement about their personality. While some consumers might want to be seen driving 'green' cars, others may not. Encourage manufacturers to design vehicles that appeal to a wide variety of consumer aspirations and to make environmentally preferable vehicles available in models that are both conspicuously and inconspicuously 'green'. Policy should also consider how the example set by government influences consumers' perceptions of vehicles; set a good example through increased procurement of low carbon vehicles.

7.2 Implications for consumer food policy

When designing policy to influence consumers' choice of food products:

7.2.1 Recognise that consumers make food purchasing decisions based on habits. Changing food behaviour is dependent not just on product awareness but on good experiences of new products. Encouraging retailers to promote environmentally-preferable food products through free trials, price promotions and low cost offers would help to promote those foods.

7.2.2 Consider the fact that people find it harder to give things up than to try something new. This is particularly the case when we try to give up something that gives us pleasure. Encouraging people to take up healthier foods is likely to be more effective than trying to convince them to give up unhealthy food.

7.2.3 Encourage greater deliberation when food shopping. Consumers often make food purchasing decisions without really thinking about them. This is

¹⁴ See <http://www.whatcar.com/green-cars>

particularly the case when time is scarce. Shopping environments that slow down the decision-making process (for example, the means of shopping and cooking advocated by 'slow food' campaigns) give consumers a chance to think more carefully about what they are buying. The more consumers deliberate, the more the wider, non-immediate issue of food purchase will be considered.

7.2.4 Realise that food makes a statement about identity and lifestyle.

Environmentally-preferable products are often bought because they are perceived by consumers as making a statement about them as a person. Efforts to influence food purchasing behaviour need to recognise this. Policy should work with retailers to ensure environmentally-preferable foods are marketed in a way that appeals to all types of people.

7.2.5 Accept that excessive choice is not always for the best. Consumers often feel overwhelmed by choice. This can lead to consumers spending less time making food choices. Policy may consider 'editing' the least desirable food products (for example, those with the highest fat content) in order to help prevent consumers feeling overwhelmed by choice.

7.3 Implications for consumer electronics policy

When designing policy to influence the buying of consumer electronics:

7.3.1 Work with retailers to promote energy efficient products. The visibility of these prices is very important: a key factor in consumer choice is whether an individual believes they are getting some kind of reduction in price. Something 'half price' or in particular 'free' (for example 'tax free') can be even more appealing.

7.3.2 Consider the framing of information. People want to avoid loss even more than they value additional gains, so use policy that imposes visible losses – like extra tax - even if quite small relative to the price. This is more influential than a similar-sized positive incentive, so can be used to make policy more effective at a small policy cost. The same is true for describing relative qualities. For example, labelling that highlights the additional running costs of less efficient products (compared to the most-efficient product) will have a bigger impact than labels that highlight the savings potential of a more efficient product.

7.3.3 Encourage retailers to provide consumers with opportunities to trial products so they can personally experience improved product quality, or

offer no-query money back guarantees. People get attached to products they know and may have outdated feelings about the qualities of new products. Providing product trials helps consumers to overcome biased attachments to old products.

- 7.3.4 **Ensure that labels are easily recognisable.** Recognition of a brand or label can be as important an influence on consumer choice as the information on the label. Make environmental labelling easily recognisable and promote it in a way that ensures labels are widely recognised.
- 7.3.5 **Choice-edit.** People think it is acceptable for government to restrict the sale of the least preferable consumer electronic products and often assume that this is already being done. Setting tough minimum product standards, to ensure environmentally damaging products are removed from the market, is acceptable to many consumers. This needs to be focused on removing the least environmentally preferable products from the market, thereby 'editing' rather than restricting choice.

7.4 Implications for white goods policy

When designing consumer-facing policies on white goods:

- 7.4.1 **Work with retailers to promote consideration of the life costs of white goods,** rather than just the purchasing price. For many consumers, labels are more effective if they translate energy efficiency into costs or savings. Where feasible, labels should provide the life-cycle costs of white goods, which indicate to consumers the potential savings over the expected lifetime of the product.
- 7.4.2 **Highlight the costs of energy efficiency.** Requiring consumers to pay more for energy-inefficient white goods is likely to prove a more effective means of changing consumer behaviour than offering money-back rebates or incentives. Individuals want to avoid loss (or costs) more than they want to benefit from gains. Highlighting the costs associated with high energy-using white goods will be more motivating to consumers than focusing on the savings associated with low energy-using goods. It also means consumers find additional taxation more off-putting than a similar-sized incentive, such as a tax rebate.
- 7.4.3 **Work with retailers to encourage price promotions** and in-store offers that promote energy efficient white goods. Consumers are heavily influenced by

in-store marketing and by the price of similar products encountered while shopping.

- 7.4.4 **Ensure labels are easily recognisable.** Consumer choice is often driven by recognition of products, brands or labels. Labels need to be consistent and easily recognisable, something which the current colour-coding system used within the European energy label will aid. Future labelling schemes should take advantage of the fact that consumers may already recognise A rated products as the most energy efficient. A 'frontrunner' approach, whereby classes are updated periodically so that the most energy efficient products are always awarded an A label, would help to maintain this existing recognition.
- 7.4.5 **Make consumer research easier.** People are increasingly using the Internet and consumer guides to research the purchasing of white goods. Easy-to-understand price comparison sites, or other ways of helping consumers compare product options can highlight potential savings and encourage replacement. Consumers do, however, need to trust these sources. Policy has a role in ensuring the authenticity of these sources and working with independent, trusted providers of consumer information.
- 7.4.6 **Work with intermediaries.** Intermediaries, such as sales assistants, can play a very influential role in the purchasing of white goods. Working with retailers and trade associations to ensure their staff and members are well-informed about the advantages (and potential long-term cost savings) of energy efficient white goods will increase the chances of these messages reaching consumers. Encouraging in-store and online retailers to give energy efficient appliances more visibility will also improve product uptake.

7.5 Implications for energy and utilities

When designing policy relating to the purchase of utilities, like energy:

- 7.5.1 **Consider green tariffs as 'defaults'.** When weighing up the advantages and disadvantages of a choice, the disadvantages may be considered more than the advantages. This means consumers can overestimate the costs associated with switching utility suppliers and underestimate the benefits. Introducing a green tariff as the default choice increases uptake while still giving consumers the freedom to choose an alternative if they wish.
- 7.5.2 **Work with retailers to ensure the long-term costs associated with tariffs are easy to understand.** Individuals tend to value the immediate future too highly and do not value the distant future enough. There is also a tendency to

favour immediate rewards and avoid immediate costs. This makes energy contracts with very low initial rates particularly attractive.

- 7.5.3 **Work with retailers to make consumer research easier.** Complicated tariff structures are difficult for people to grasp and can mean that consumers are put off making energy purchasing decisions. Policy should work with utility companies and independent organisations to develop consumer support mechanisms, like price comparison websites, that help individuals compare the tariffs and prices of different suppliers.
- 7.5.4 **Allow ‘cooling off’ periods.** Individuals can be pressured into making poor decisions. This can be particularly the case with door-to-door salespersons, or when companies ring individuals at their homes. ‘Cooling off’ periods allow consumers to reverse or cancel any decisions to switch utility suppliers, away from the pressure of the sales environment.

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Annexes

Annex 1: Full project methodology

Our research began with a literature review of international evidence from behavioural economics and marketing, as well as other relevant disciplines (including psychology). The aim of the review was not to duplicate the vast body of literature (much of which has been synthesised comprehensively) that already exists in this area. Rather, it aimed to point policy-makers and others interested in consumer behaviour to the most interesting, comprehensive and relevant descriptions of consumer behaviour in a way which maximised the time of the project team and the policy-makers for whom the project outputs were intended.

1.1 Literature review

Spanning a broad range of disciplines that include marketing, sociology, psychology and economics, consumer behaviour is a burgeoning area of research and policy interest. As such, much recent work has sought to pull together the diverse interdisciplinary evidence base that explains why consumers shop the way they do (for example, see Jackson (2005), Darnton (2008) and Ehrhardt-Martinez (2008)).

The approach for the literature review, as set out in both the project specification and proposal was to 'identify five pieces of research which provide the most interesting, comprehensive and relevant descriptions of consumer behaviour' and to review additional literature from the twin disciplines of behavioural economics and marketing with reference to these. The five pieces of research were to be identified in consultation with the European Commission project staff and agreed between the three partners undertaking the literature review: PSI, Ecologic and BIO.

Although several pieces of literature were immediate candidates for five central pieces of research (Jackson 2005; Kahneman 2003), the project team agreed to leave the final selection open, to allow for the inclusion of any articles or reports discovered during the review of literature itself. With this in mind, papers were reviewed with reference to key themes (e.g. cognitive factors, habit, social norms). The review included predominantly English language sources of literature, supplemented with some French and German articles, and drew on academic publications (journal articles, presentations and books), professional conference papers (for example, those of the Market Research Society) and other reports. It has included grey literature where relevant, but may benefit from more commercial sources. All articles found and deemed relevant (based on an initial reading of

abstracts) were added to an EndNote¹⁵ project library. The review initially adopted a 'two pronged' research strategy with which to find articles:

i. A snow-balling process based on citation searches of pre-identified key documents and authors (eg Jackson, Kahneman, Cialdini etc). This involved identifying key articles and using these to identify subsequent articles of relevance. Articles found were read and, where appropriate¹⁶, summarised using data extraction forms.

ii. Formal search process:

- i) Define search terms to use in review and identify sources [see Annex 1]
- ii) Search databases and identify all articles matching search terms
- iii) Sift identified articles for relevance, based on reading of abstracts
- iv) Review and summarise using data extraction forms

The formal search process identified over 200 pieces of literature in total, of which approximately half were initially judged to be relevant. In addition to the above, project partners BIO and Ecologic translated the search terms and followed the same process in undertaking searches of French and German databases respectively [Annex 1]. In each case, approximately 15 – 20 articles were identified and selected to be read. However, on a fuller reading, not all were felt to be sufficiently relevant. In line with initial expectations about the availability of non-English language material, less than 15 French and German articles were reviewed that are referenced in this final project report.

Having carried out this initial literature search, it became apparent that the review had not identified and included evidence from marketing to the extent deemed necessary. Resource constraints meant that repeating the literature review process with new search terms was not feasible, so instead a more targeted search strategy was used to identify relevant evidence from marketing. This involved three steps:

1. A full search of Chartered Institute of Marketing (CIM) library database.

The Chartered Institute of Marketing (CIM) is the one of Europe's leading international bodies for marketing. CIM's Information and Library Service conducted a search of its library database for research and evidence related to consumer motivations. The search resulted in the identification of a further 60

¹⁵ Proprietary reference management software.

¹⁶ In the instance of longer summary reports or reviews and books, notes were taken.

articles, of which 8 had already been identified by the literature search and a further 20 were considered relevant based on the reading of abstracts.

The response makes it clear that identifying evidence relating to precisely why individuals buy different products is not easily achieved.

2. A narrow search of the WARC Online.

The World Advertising Research Center (WARC) is a leading provider of information and insight to the global marketing industry. WARC Online is its internet service, which provides access to marketing insight (publications and conference papers). The size of the database meant only a targeted search was possible. This was restricted to articles catalogued under key search terms of relevance to the review (eg consumer behaviour, decision-making) (see Annex 2) and restricted to papers identified as 'classic', meaning they had been identified by WARC as timeless and high quality.

3. Additional suggestions based on discussions with project advisors.

Finally, in commenting on the project's Interim report, project partners and expert advisors made a number of useful suggestions for additional reading and evidence to include. Every effort was made to also include these suggestions.

1.2 'Real world' case studies

The project proposal intended that the case studies illustrate, through reference to 'real world' data on the impact of product policies, why behavioural economics is important and what lessons it can teach about the way in which people make choices. The case studies were to serve as stand-alone examples of why behavioural economics is important rather than explicitly detailing behavioural economic theory, and that were convincing because they are based on actual consumer responses to product policies.

The inception phase of the project required that case studies should:

- Have available robust impact evaluation data (ex-ante and ex-post of implantation) that enables a comparative explanation of behaviour using both standard and behavioural economic theory.
- Focus on product policies whose impact can be explored across multiple countries.

The following five case studies proposals were developed by project partners in response:

- **Labelling and the consumption of meat organic (IVM)** – This case study proposed to explore the impact of product labelling on the consumption of organically produced meat in Europe.
- **Energy using products (Televisions) (Bio)** – This case study proposed to explore recent market trends for increased sales for larger flat screen TVs in preference for the cheaper cathode ray tube alternative.
- **The promotion of green electricity tariffs (PSI)** – The case study proposed to explore the impact that defaults can play in increasing the uptake and retention of renewable and green electricity tariffs.
- **Response to marginal charging for water (Ecologic)** – This case study proposed to explore the rationality of the response to the marginal charging for water.
- **Response to CO₂-differentated purchase tax on new passenger vehicles** – This case study proposed to explore the less than anticipated consumer response to this French purchase tax.

After consultation with the two project advisors it was agreed that the case studies as presented were, in general, unlikely to meet their intended need and would not therefore provide sufficient value to the policy briefings. This was largely because the impact assessment data was not available as hoped and had therefore relied on large sets of aggregate data which would have required statistical analysis to identify behavioural anomalies. It was agreed that much shorter vignettes to catch the attention of readers would be required.

1.3 Product-specific market research

An important finding from the literature review and research undertaken as part of the case studies scoping phase, was that consumer behaviour was highly product specific – people buy cars for very different reasons than they buy food or washing machines for example. However, apart from (largely experimental) studies published in academic journals, our literature research found only a limited amount of information about observed consumer behaviour in the ‘real world’. To access marketing research relating to product purchasing, we realised that our searches would be more fruitful if focusing on a small number of specific products. In an attempt to access this, a more personal approach to the research was adopted during

which the research team contacted marketing professionals and carried out additional searches of evidence.

Project partners were asked to spend their allocated case study days (this was 4 or 6 days depending on their original role) searching for consumer and marketing research relating to the real world behaviour of consumers when buying certain products. After speaking with a number of marketing professionals, it was agreed that personal contact with professionals was the most effective way of accessing research from marketing. Details of the individuals and partners contacted personally during the course of the project can be found in Annex 3.

In addition, PSI was involved in long discussions with the Future Foundation, one of the UK's leading market research providers in the hope of utilising the Future Foundations 'N-Vision' model. However, it eventually was decided that there could be no guarantee that the model would provide the depth of insight that was sought. (Like much market research, the model considers overall market trends, the 'how' of consumer behaviour, rather than information about why consumers bought different products.)

1.4 Policy briefings and testing process

The information collected during the analysis of product-specific market research was used to directly inform the production of five policy briefings, which set out key project findings related to consumer behaviour and the purchasing of: vehicles; food and drink; consumer electronics; white goods; and, energy. Once drafted these briefings were 'tested' and reviewed for clarity and ease of use with a network of policy contacts from the European Commission and several member states. On receipt of all comments, the briefings were revised and re-formatted into a more 'user friendly' lay out.

Annex 2: Search terms and databases searched

Search terms [German / French translations]

A. Population

consumer(s)	verbraucher	consommateur
public	die Öffentlichkeit	publique/public

B. Interventions

identity (self/ social) (self concept)	identität (selbst/sozial) (Selbsteinschätzung oder Selbstverständnis)	Identité (soi-même/ sociale) (conception de soi)
self-interest	eigeninteresse / eigennutzen	Intérêt personnel
preferences	präferenzen	Préférences
social norms	soziale Normen	Normes sociales
descriptive norms	descriptive oder beschreibende Normen	normes descriptives
injunctive norms	injunktive Normen	normes injonctives
values	werte	Valeurs
consumer attitudes	Käuferverhalten / Einstellung der Verbraucher	Attitude/Etat d'esprit des consommateurs
environmental attitudes	Umwelteinstellungen	Attitude envers l'environnement, attitude favorables à l'environnement
rational choice	Rational choice / rationale Entscheidungswahl	Choix rationnel
bounded rationality	eingeschränkte Rationalität	Rationalité délimitée
rationality	rationalität	Rationalité
behavioral economics	verhaltensökonomik / verhaltensökonomie	Économie comportementale
marketing / social marketing	Marketing / soziales Marketing oder Absatzforschung auch Sozialmarketing	Marketing / marketing social
green marketing	grünes marketing	Marketing vert ou écolo ou durable
eco-labelling	Umweltzeichen / Umweltauszeichnung	Etiquetage environnemental
products / energy-efficient products / eco-friendly products	produkte / energieeffiziente Produkte / umweltfreundliche Produkte	Produits / produits consommant moins d'énergie, produits plus performants/ produits verts, écologiques

C. Outcomes

Behavio(u)r / behavio(u)r analysis* / planned behavio(u)r	/ Verhalten / Verhaltensanalyse / geplantes Verhalten / Konsumentenverhalten / Käuferverhalten	Comportement / analyse de comportement / comportement planifié
consumer behavio(u)r	umweltbewusstes	Comportement de consommation, comportement de consommateur
pro-environmental behavio(u)r	Käuferverhalten	Comportement pro-environnementale
choice behavio(u)r	Entscheidungsverhalten	Comportement de choix
choice shift	[choice shift / choice Shift [fester Begriff] Gruppenentscheidungstheorie	Changement de choix
consumer choice	Verbraucherentscheidung	Choix de consommateur
decision making	Entscheidungsbildung	La prise de décision
purchasing	Einkauf	Achat
shopping	Einkaufen	Shopping/ faire du shopping/ faire les magasins
energy consumption	Energieverbrauch	Consommation énergétique
food consumption	Nahrungsverbrauch	Consommation alimentaire
sustainable living	Nachhaltige Lebensführung	Vivre durablement

List of all databases used:

- JSTOR
- CAIRN
- IDDRI
- Factiva
- Persée
- EJS (Electronic Journal Service)
- Sage Journals Online
- SCOPUS
- COPAC
- Web of Knowledge cited reference search
- EBSCO databases (Business Source Premier, Econlit, Greenfile, International Bibliography of the Social Sciences, PsycInfo)
- Springer.de
- Google Scholar
- Chartered Institute of Marketing (CIM) database

Annex 3: Individuals and organisations contacted during the course of the project

- GfK Retail & Technology GmbH (market research), Torsten Meyer
- CECED (European Committee of Domestic Equipment Manufacturers), Candice Richaud, Trade and consumer affairs specialist,
- Bosch Thermotechnik (boilers), Rainer Dieringer,
- BSH Bosch und Siemens Hausgeräte GmbH (household appliances), Fridolin Weindl, Communications
- Gorenje (household appliances), Marko Jevšenak, marketing,
- Primondo / Quelle (household appliances), Christian Schweizer, sustainability management,
- Dr. Lutz Stobbe, senior scientist and project manager at the IZM Department Environmental Engineering, France
- Julie Hill, 'Designing out Waste' research lead, Green Alliance, UK
- Kirsten Reeves, Consumer Insight lead, Defra, UK
- Chartered Institute of Marketing (CIM)'s Sustainability and Marketing Group, UK
- The Social Marketing Practice, UK
- Futerra Sustainability Communication, UK
- The Future Foundation (consumer research), UK
- Alison Auston, Environmental Manager, Sainsburys, UK
- UK Institute of Grocery Distribution, UK
- William Brocklehurst, Senior Policy Adviser, Consumer Team, Confederation of British Industries (CBI), UK
- Will Stephens, Ethical Trading Coordinator for Food, Tesco, UK