



The consumer attention deficit syndrome: Consumer choices in complex markets

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Abstract

Consumers' attention is a scarce resource. It is virtually impossible for a consumer to keep informed about all the markets he or she visits. This article describes a mechanism that is likely to evolve in sophisticated societies with multiple complex markets. Since the nature of consumer areas differs substantially and thus requires different kinds of consumer competences, such competences cannot be easily transferred from one consumer area to another. People therefore tend to give their limited attention to consumer areas of similar nature, while neglecting others. This phenomenon is conceptualised as the Consumer Attention Deficit Syndrome (CADS). Empirically, if such a mechanism exists, this will be reflected in consumers' tendency to develop specialised consumer competence profiles. In three nationally representative data sets collected in Norway in 2005, 2007 and 2009, specialised consumer competence profiles were distinguished. The following analysis indicates that, on an individual level, CADS is quite widespread. While it cannot be claimed that some social groups are more vulnerable to the syndrome than others, different groups' lack of attention is concentrated on different consumer areas. Leaning on choice and decision-making theories, the implications of CADS for the functioning of markets are discussed.

Keywords

consumer attention deficit, consumer choice, consumer competence profiles, consumer information, consumer policy, malfunctioning markets

Introduction

Today's ideal consumer should be both smart and wise. She should be well informed about the products on offer and understand the markets she visits: she should compare prices and qualities, monitor and

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switch banks or electricity companies when their terms are no longer competitive, choose healthy foods, support fair trade and buy environmentally friendly products. The ideal consumer is aware that every choice and purchase represents a vote for a product, company or regime as well as for political and ethical views. She should balance her consumer power in all her purchases, fighting the financial crisis on the one hand and the climate crisis on the other. Hence, the ever-increasing number of options that characterises both the consumer goods markets and many service areas has resulted in a situation of 'choice overload' and a decrease in relative consumer competences (Berg, 2007; Ölander and Neuner, 2007: 90–91; Schwartz, 2004).

Freedom of choice is a highly prized value closely associated with welfare and individual well-being (Smith, 1776). Many people seem to believe, however, that it follows from this that more choices mean more freedom. Hazel Rose Markus and Barry Schwartz claim that this idea is a cultural construction dominating the western world in general and higher-educated and middle-class people in particular (Markus and Schwartz, 2010). Systems that are based on this logic make excessive demands on people's choice capacities. This has been argued with reference to citizen participation and influence in political systems (see Olsen, 2007). A parallel argument can be made for individuals as customers in choice-demanding consumer markets. For customers the amount and complexity of choices will at some point exceed their choice capacities. Rather than establishing arrangements that are based on unrealistic assumptions about human behaviour, societies should be arranged in such a way that the demands are manageable for individuals. If this argument is applied to today's markets, one key question would be: *Are modern, heterogeneous and complex markets manageable for consumers?*

Market mechanisms rest on the simple idea that consumers will search for and compare prices and qualities, choose the best products available, and hence stimulate competition between manufacturers. In well-functioning markets consumers are supposed to act as active stakeholders, 'voting with their wallets' for the products they would like to see survive on the retailers' shelves. If consumers' choices turn out to be more accidental than building on preferences and comparisons, suppliers will be deprived of irreplaceable information. Consequently, this will threaten market mechanisms, and eventually result in malfunctioning markets. Product development will then rely less on consumers' preferences and needs, and more on suppliers' search for profit. *In the market game where market forces meet, do consumers represent a worthy, sufficiently powerful counterpart to suppliers?*

A central observation drawing on neo-institutionalism (Williamson, 1975, 1985; North, 1990), information economics (Stiglitz, 2002) and behavioural economics (Kahneman, 2003; Kahneman and Tversky, 1979; Thaler and Sunstein, 2008) is that consumers do not always act rationally or in their own – or their community's – best interests. We believe that one reason for this is that in today's heterogeneous, complex and rapidly changing markets it is barely possible for regular consumers to keep informed about every market they visit. The argument developed here draws on an attention allocation perspective on decision-making developed by Simon (1971), Cyert and March (1992) and March (1994). We apply our analytical lens to the role of attention scarcity, describing the mechanism by which people tend to give their limited attention to consumer areas of a similar nature while neglecting others. We conceptualise this phenomenon as the Consumer Attention Deficit Syndrome (CADS). By CADS, we intend to convey that poorly informed consumers constitute a problem not only for the individual non-informed consumer who makes a bad consumer choice. Consumers' levels of information connect to the market level. If a market is encumbered with many non-informed consumers, this is likely to weaken market forces on the demand side, and hence hinder the functioning of the market. To throw light on this mechanism, we analyse survey data on consumer competences in 12 consumer areas.

This article is organised as follows: first, the research questions and analytical perspective are placed in a conceptual and theoretical context, incorporating a theory of attention allocation in decision-making to understand consumer practices. The second section presents the data, methodology and operationalisation of the main variables. In the third section the results are presented. The final part of this article discusses the implications of the findings.

Conceptual and theoretical framework

Not only competition policies, but also consumer policies, have a long tradition of being heavily affected by economic theories. Despite the fact that several Nobel laureates have confronted mainstream economic theory and its competition paradigm, policy-makers have remained loyal to this paradigm for decades (for example, by deregulating formerly regulated markets, as well as by introducing management systems building on market mechanisms in the public sector). As Gudmund Hernes remarks: 'The Choice God has been proven not to exist over and over again. He is dead – but he won't lie down' (1992: 423). After the last financial crisis, when even Alan Greenspan admitted in the US Congress that his ideology had failed (Greenspan, 2008), there are now signs of a shift from a belief in traditional (neo) classical economics to behavioural economics.¹

In their approaches and solutions, mainstream economists mainly focus on suppliers and their competition conditions. Behavioural economists have contributed to a change in this focus, bringing attention to consumers and their limitations. Hence, the main interpretation of consumer practices shifts from a rational choice perspective to a behavioural perspective, in other words, from a powerful, rational *acting* consumer to an easily manipulated and often irrationally *behaving* person. Behavioural economists do not exclude rationality, but rather they distinguish between two systems of thinking: one that is intuitive and automatic and another that is rational and reflective. Nonetheless, their main project is to uncover and predict irrational systematic behavioural biases caused by the intuitive system's interference with the rational system (Kahneman, 2003: 1450; Thaler and Sunstein, 2008: 21). In this article consumers are understood neither as free, rational actors, nor as irrational persons. Instead, depending on the circumstances of consumers' interests, capabilities and attention, we believe consumers can be reflected and act upon information in one situation, while they can be non-reflected and behave more randomly in another.

More precisely, *reflected* choices are defined as choices based on processed information. Reflected choices and practices can be economic-rational (switch bank to get better conditions), quality-oriented (pay whatever to get exactly what you desire), value-oriented (ethical and political consumption) or sceptical (avoid pesticides and unsafe foods). *Non-reflected* practices can be irrational (buy too small shoes to show a patronising clerk that you can afford them), naive (confuse a smile with a guarantee), manipulated (buy 'three for the price of two', when you only need one), denying (suppress what you know about chicken production) or due to habits (stick to the same old brand), inherited norms or traditions (foods determined by religion) and other social constraints (pink for girls and blue for boys). Finally, routines can be based on a previous search for information.

Consumers' choice conditions

To approach our key questions we conceptualise three conditions that affect consumer choice: (i) consumers' attention deficit; (ii) consumer competence profiles; and (iii) multiple complex markets. These three concepts all relate to *product and market information*. While markets should provide necessary information to allow consumers to make quality and price comparisons, consumers need to be attentive and gather that information so that they are prepared to make reflected choices. Whether markets are manageable for consumers, and whether consumer power matches the supply side of markets, is of course influenced by a range of factors. Yet, attention deficit could be the Achilles heel of the circle that translates markets' provision of product information to the functioning of markets (Figure 1).

Attention deficit

While Joseph Stiglitz (2002) argues that asymmetrical information (i.e. a transparency problem) at market level hinders rational choices, Jon Elster (1993) points out that there is a limit to how much time it is possible and reasonable to invest in gathering and comparing information before making a choice (i.e. a

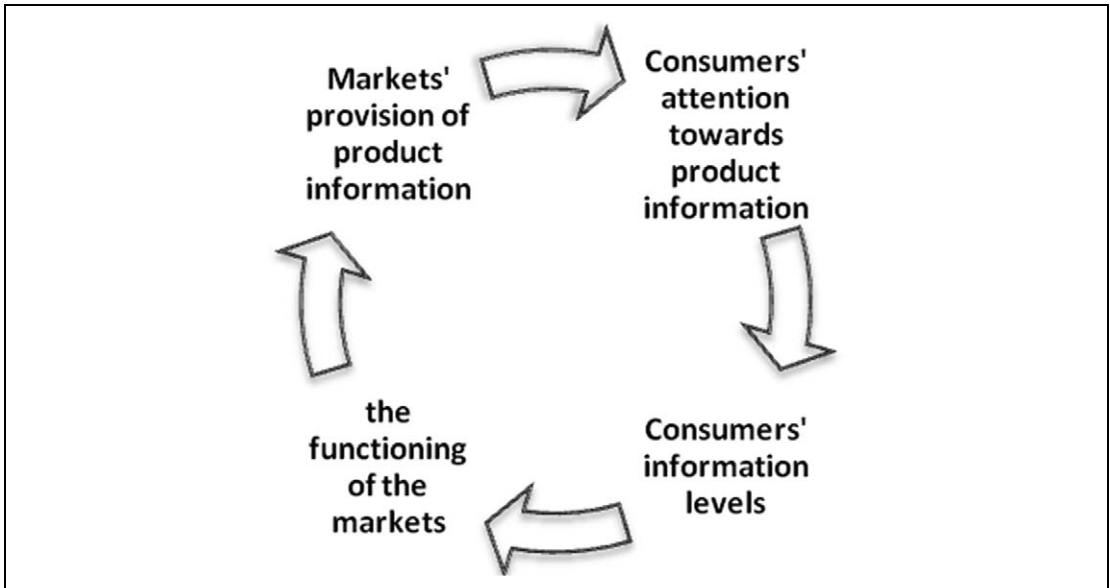


Figure 1. The interrelationship between consumers' attention and The functioning of markets.

time problem). Herbert Simon takes us one step further by recommending that we focus on attention scarcity rather than on information scarcity:

in an information-rich world, the wealth of information means a dearth of something else: a scarcity of whatever it is that information consumes. What information consumes is rather obvious: it consumes the attention of its recipients. Hence a wealth of information creates a poverty of attention and a need to allocate that attention efficiently among the overabundance of information sources that might consume it. (Simon, 1971: 40–41)

So, information consumes attention. And when consumers have no attention to spare, neither available information nor supportive institutions will reach consumers in a choice situation.

Elaborating Simon's point, James March argues that decisions happen in a complex ecology of decision-making situations (March, 1994). Multiple, heterogeneous and changing claims on attention constitute what Cyert and March refer to as *attention mosaics* (Cyert and March, 1992: 235). These mosaics are essential for understanding how consumers act and behave. There are multiple claims on people's attention. Not everything can be attended to. Too many signals are received and too many things are relevant to a decision (March, 1994). The implication of this idea for consumer practice is apparent: individuals attend to some things and not to others. We suspect that this condition is endemic to consumers in multiple market situations and that this constitutes the essence of the condition which we refer to as CADS.

Consumers cope with modern society's choice overload and the attention deficit problem in different ways. One widespread strategy is to rely on trust as a complexity-reducing mechanism (Luhmann, 1979) and to reduce the options by only choosing among familiar, well-known labels. It is also common to follow institutionalised habits inherited from past generations (Berger and Luckmann, 1967), in other words, to continue an internalised consumption pattern reflecting tradition, norms, gender and status. To save time and effort, people also develop routines that allow non-reflected, almost automatic shopping habits (Gronow and Warde, 2001). Finally, it has been shown that decision-makers develop information and decision-making strategies. They specialise, create heuristics and use simplifying frames to define and solve decision problems (Tversky and Kahneman, 1974: 1124).

The ways in which consumers cope with their attention scarcities are not random and chaotic, but rather show patterns shaped by social structures and contexts within which consumers are located. Strategies people use to cope with the allocation of attention and multiple claims are influenced by contingent events, prior experiences and reference group identification, all influencing consumers' interests and preferences. This is for instance evident in gendered consumer practices (Berg and Teigen, 2009: 37).

Complex markets

Attention deficit is closely related to the complexity of the markets. With the concept *multiple complex markets*, we want to demonstrate the variety of modern markets. If market choice situations were few and/or identically structured, then paying attention to product information and developing consumer competence (see below) would not pose too much of a problem. As illustrated in Table 1, different segments of the market require diverse kinds of consumer competences.

The main challenge in *everyday consumption markets* is to handle the enormous and ever-changing supply of products. Both prices per unit and qualities should be considered. The same product can be sold at different prices in different shops, and prices need not correspond to quality. Consumers can choose between dozens of different bread types. Even in a fisheries nation such as Norway it is still possible to buy fish from the other side of the world. Regular customers will gain much experience-based knowledge, while occasional customers will have problems navigating through such commodity abundance. In parts of this day-to-day food shopping market, experience by trial and error is an accepted way of gathering information. Normally, people can afford a bad buy occasionally. However, being strongly price conscious can save a family thousands of euros.

In the *financial products market* 'price' is often the only parameter to compare, but the final price is often unknown (e.g. changing interest rates, financial investment products, etc.). Financial products are rightly criticised for being intentionally opaque and complex, and many consumers are not aware that their bank adviser is actually a salesman (Berg, 2008). Today supportive institutions offer transparent price calculators to assist consumers (e.g. the Norwegian Consumer Council's financial portal), but there is reason to believe that it is the already-active bank customers who take advantage of such support.

In the *eco-ethical products market*, quality in terms of fairness or sustainability is the main parameter to consider. Consumerism in a political context is to use consumer power to influence the political development. When buying fairtrade products, the main objective is not to stimulate market competition in order to promote greater value for money. On the contrary, the fairtrade markets have evolved because competition has unintentionally resulted in, for example, unreasonably cheap, good-quality coffee in the rich parts of the world at the expense of the health and living and working conditions of coffee workers in developing countries. The best buy seen in the interests of an individual is not necessarily good for the

Table 1. Some distinguishing features describing purchases in different consumer areas

Purchase distinguished by:	Consumer areas and their characteristics			
	Everyday products	Financial products	Eco-ethical products	Technology products
Choice options mainly by	Price and quality	Price and risk	Quality (fairness)	Quality (techno), price, social value
Active purchase or subscription	Active	Subscription	Active	Active/combined
Best buy motive	Ego-oriented	Ego-oriented	Community-oriented	Ego-oriented
Competence requirements	Handle complexity	Abstract calculations	Empathy	Engineering

world community. Taking into account the impacts of one's own consumption pattern on other citizens and the environment requires other kinds of logic than being able to compare financial products or being price-conscious in everyday markets.

Finally, we have *the technology products market*, one of the most complicated markets for 'amateur' consumers to navigate in. Suppliers in the technology market often combine products and services so that, for example, consumers are forced to rent technical equipment and subscribe to service packages (such as television receivers and television channels transmitted by broadband). In addition, markets that were once separate entities now increasingly overlap (e.g. mobile phones with integrated radio, camera and access to the internet). These markets are important areas of conspicuous consumption (Veblen, 1899). Social signalling through the possession of advanced technology can be more important than utility value, price and technical quality. However, the main challenge in these markets is to understand the technology and price structures of bundled products.

In addition to the heterogeneity in the heartland of consumer markets displayed in Table 1, new market or quasi-market situations have multiplied in Norway over the last two decades, in particular in the wake of public sector reforms that take as a starting point competitive selection for provision of public services, recasting citizens as 'consumers'. The deregulation of the telecommunication sector, electricity sector and postal services, as well as the introduction of a choice agenda in the provision of welfare, such as education and health care, all constitute new areas to which citizens are expected to pay attention. Although these 'markets' fall outside the scope of this study, they are part of the attention 'mosaic' facing consumers.

This introductory description demonstrates that the nature of consumer areas differs considerably and that, accordingly, different consumer areas demand different consumer competences.

Consumer competence profiles

In this article consumer competence profiles refer to clusters of consumer areas that consumers feel they are well informed on. Admittedly, consumer competence is a much broader concept than consumer information. While some consumer competences are universal, such as numerical skills and knowledge about consumer rights, other competences are more related to specific consumer areas. According to Folke Ölander and Michael Neuner (2007: 93) consumer competences include at least four elements: knowledge, decision-making skills, motivation and need reflection, where consumer knowledge is related to information. Jan Schoormans (1999: 115) defines consumer knowledge as 'information about a product stored in consumers' long-term memory'. Joseph Alba and Wesley Hutchinson (1987) distinguish between consumer expertise and consumer experience. They remind us that relevant consumer information can build on product-related experiences (familiarity with products) as well as on cognitive efforts (expertise in searching).

Some consumer areas are certainly more demanding than others, requiring more time and effort to reach the level of feeling well informed. And it will probably take more for a grandmother, than for her grandson, to feel well informed about the electronic markets. It is also true that two consumers who feel well informed need not possess the same level of objective consumer competences.

It is far from obvious how consumer competences should be measured. Our simple solution is to interpret the feeling of being well informed on a consumer area – independent of time spent on information gathering – as a reflection of mastery of that area. In this article we consider consumers' self-declared level and composition of product and market information as an indicator of which segments of the markets they are prepared to enter and make reflected and well-informed consumer choices on.

The mechanism

To gain new insights it is worthwhile thinking about the mechanisms that govern social processes (Sørensen, 1998). How then can one expect attention deficits, complexity and multiplicity of consumer markets and consumer competence to be linked? This article investigates the idea that consumers'

scarcity of attention on the one hand, combined with complex markets and the fact that consumer areas require different consumer competences on the other, together compose a mechanism leading to what we have conceptualised as CADS. If a consumer's attention cannot cover all the markets, he or she needs to choose which segments they will allocate their attention to. It would be time- and attention-saving to choose areas with similar consumer competence requirements.

If such a mechanism is present and active, this should be manifested by (i) consumer areas where many consumers are not particularly well informed when they make their choices, (ii) that most consumers are affected, and (iii) that consumers' individual competence profiles are often composed of competences in consumer areas of similar competence requirements.

Furthermore, if the way in which consumers cope with attention scarcity is socially 'programmed', it is also of relevance to investigate how CADS are socially distributed among consumers. Since interests and priorities vary between demographic groups, there is reason to believe that CADS also varies by gender, social class and age.

We empirically probe these expectations by quantitative analysis of responses to a survey questionnaire that was carried out for the first time in 2005 and then repeated in 2007 and 2009. The following questions will be approached:

1. How well do consumers keep informed on different consumer areas?
2. How are consumer competences distributed?
3. Is the distribution of CADS differentiated by gender, social class or age?
4. Does consumers' scarce attention imply that they specialise in distinctively different consumer areas of similar nature and hence form different consumer competence profiles?
5. Are some demographic groups more vulnerable to CADS than others?

Data and methods

The analyses are based on the Norwegian SIFO survey, consisting of some questions that are repeated periodically as well as topics of contemporary interest. Similar consumer competence questions were asked and analysed in 2005, 2007 and 2009. This article is based on the 2009 material. We do not include all three data sets in the following analysis because the questionnaires did not cover all the same consumer areas in different years. Despite the fact that the variables differed slightly from year to year, different data collecting bureaus were used, and consumers' attention was stimulated by different contingent events, the main pattern proved to be the same for all three years (Berg, 2009). The overall findings presented in the following analysis can therefore be considered as robust.

The material analysed in this article was collected in February and March 2009 by using computer-assisted telephone interviews (CATI) organised by Respons Analyse Norway; 1000 randomly selected respondents aged 18 to 80 answered the questions. The material was weighted according to gender and age and stratified geographically to make it representative at national level.

Questionnaire design

Choice architecture has great impact on choices and behaviours (Thaler and Sunstein, 2008). This also applies to questionnaire design. To improve the reliability and validity of a survey, it is important to ask simple, unequivocal and non-comprehensive questions which respondents are prepared to answer. The less informed the respondents are about a question, the easier it is to willingly or unwillingly manipulate their answers (as demonstrated in several behavioural economics experiments).

Since the respondents in telephone interviews are only given the questions orally, this method requires a high level of simplicity. A complex phenomenon like consumer competence needs to be transformed into easily understandable questions. The questions were tested orally over the telephone on a small panel of respondents who then gave their opinion on how the questions were perceived and

understood. In the construction of the questionnaire, special attention was given to the succession of the questions to promote flow in the interviews and to minimise ordering effects (see Frey and Oishi, 1995). The question battery used in the present analysis was presented to the respondents at the beginning of the interviews, when their awareness and willingness to give thoughtful answers are high (Elstad, 2010).

Dependent variable construction

The operationalisation of the dependent variable *CADS* rests on consumers' efforts – or actually lack of efforts – to keep themselves informed about 12 different consumer areas. More precisely, *CADS* is measured by the extensiveness of self-declared poorly informed consumers. On a standardised scale from one to five where one is 'very poorly' and five is 'very well', the respondents were asked to self-evaluate their efforts in 12 different consumer areas: *How well would you say that you keep yourself informed about . . . food prices? . . . healthy and unhealthy food? . . . interest rates?* etc.

Except for food, where price and quality were measured by two different variables (price/healthy foods), each variable represents one consumer area. In the introductory univariate analysis, the variables that constitute the dependent variables are presented. These results are displayed according to the original five-point scale that was presented to the respondents. We also investigated the distribution of well-informed consumers (4 and 5 on the five-point scale) on the one hand and of poorly informed consumers (1 and 2 on the five-point scale), signalling *CADS*, on the other hand.

The main dependent variable – total *CADS* – is an index counting the areas about which the respondents reported to be poorly informed (0–13). Based on factor analysis we also made a theoretically anchored and robust index for four types of *CADS* by adding the values on the consumer areas that constituted the various distinct consumer competence profiles (3–15).

The answers are based on respondents' self-evaluations and are, consequently, not objective. Several studies demonstrate that self-evaluation deviates from more objective measures such as tests and examinations. In general consumers are overconfident, and they think they know more than they actually do (Alba and Hutchinson, 2000: 123; Pascarella and Terenzini, 1991). However, there is also some coherence between self-evaluation and more objective measures, especially on judgements about overall memory (Alba and Hutchinson, 2000; Mazzoni and Nelson, 1995). Since it is likely that respondents overestimate rather than underestimate their consumer competences, the *CADS* level revealed by the following analyses is hardly exaggerated. Admittedly, a more sophisticated measurement of consumer competence is desirable, yet the measurement used gives a fair approximation of the phenomenon we examine.

Independent variables

The background variables that were expected to influence consumer competences, and *CADS*, were: gender, age, educational level, economic resources and self-reported class affiliation. Consumers' competences are indeed gendered (Berg and Teigen, 2009). Gender is therefore highly relevant as an independent variable. Since needs, desires and interests vary over people's life courses, age was expected to affect consumers' interests and what they found relevant for attention. Age can also reflect generation effects. Age was therefore included as an independent variable. We included three socioeconomic background variables: for educational level we distinguished between respondents with and without university or college education. Since consumption can depend on both individual and family resources, we included households' financial resources as an independent variable. Because some respondents do not want to give such information to interviewers and others do not know how much their spouses (and sometimes they themselves) earn, we chose to rely on a rough estimate, namely the respondents' own judgement of their household's financial resources. We distinguished between those who said they lived in a household where the financial situation could be described as 'very good', 'good' or 'bad'. Finally, a class variable was included in 2009, asking the respondents to choose the class that best characterised

Table 2. Background variables (percentages; weighted according to gender, age and geography)

	2005	2007	2009
<i>N</i>	1034	1000	999
Women	50	51	50
Young (18–29)	21	20	20
Elderly (60–80)	21	23	22
Higher education	41	42	44
Bad financials	4	5	6
Good financials	39	40	36
Very good financials	57	55	58
Working class			28
Middle class			68
Upper class			1

their situation: working class, middle class or upper class. In other words, class is measured on the basis of the respondents' subjective class affiliation (inspired by Prieur and Rosenlund, 2010). The distribution of the variables included in the analysis is presented in the 2009 column of Table 2. The distribution in 2009 did not differ much from previous years.

Analysis

In the analysis of the quantitative material we applied univariate, bivariate and multivariate techniques. Based on the introductory univariate and bivariate analyses, we expected to find dimensions in the material which indicated that different groups of consumers kept informed about different areas. This was further examined by factor analysis (Kim and Mueller, 1978). Linear regression (Lewis-Beck, 1980) was used to investigate whether some groups were more prone to CADS than others. In the results we present the standardised beta coefficients, i.e. the variables' relative contribution in explaining the variance on the dependent variable. However, being aware of beta coefficients' limited capability to show exact measurements, we only report on whether or not the variable in question gave a significant result and on whether its influence was positive or negative (Sørensen, 1998: 246).

The results cannot be generalised unconditionally to all consumer markets. We did find, however, that our results were consistent over time. And there is reason to believe that the pattern revealed is likely to evolve also in other complex, modern markets.

Results

How well do consumers keep informed about different consumer areas?

One precondition for making reflected choices in the markets is to be informed about the products and to understand how the markets function. Are consumers, in their own judgement, well informed and prepared to make reflected choices in the different markets?

In Figure 2 the consumer areas are arranged according to how well the respondents in 2009 considered that they kept informed. The main message from Figure 2 is that Norwegian consumers' competences are mediocre.

The results presented in Figure 2 indicate a low consumer competence level in several consumer areas. It is not evident, though, how many reflected and well-informed consumers a well-functioning market depends on. Probably the required level also varies by area. Still, in four of our selected 12 consumer areas less than one in four respondents reported themselves to be well informed.

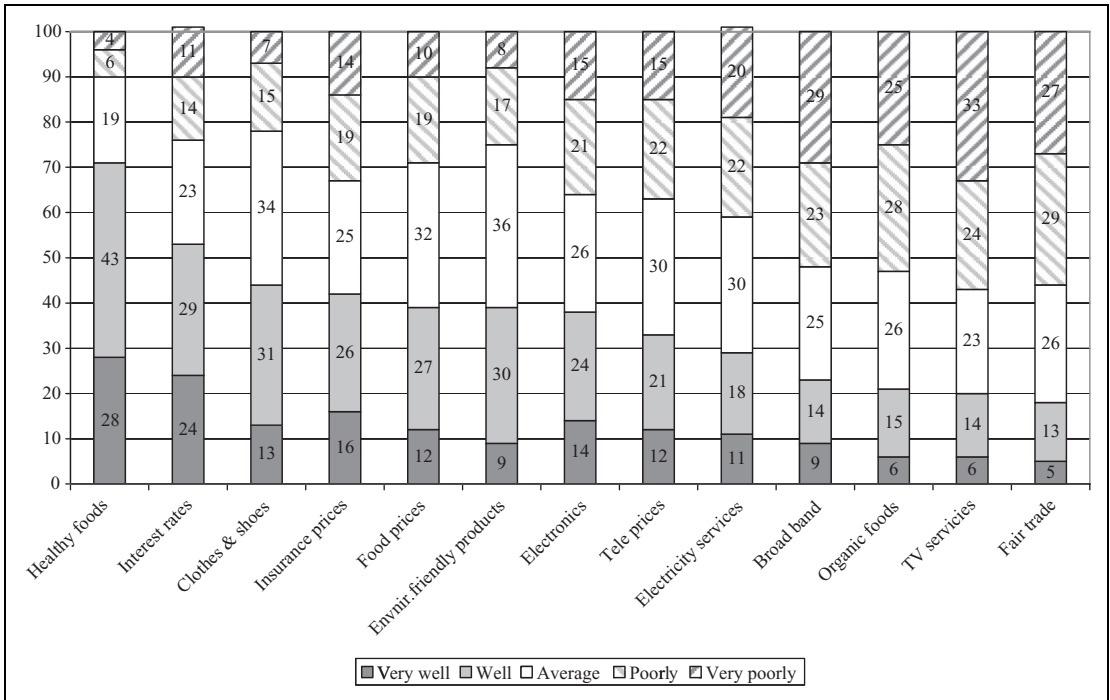


Figure 2. Consumers' self-assessments of how well they keep informed in various consumer areas (percentages; weighted according to gender, age and geography; N = 999).

Our consumers were best informed about healthy and non-healthy foods. As many as 71 percent of the respondents said that they kept informed ('very well' or 'well'). Healthy living and dietary advice have been popular topics in the media in recent years, often combined with simplified and easily accessible information. This result indicates that it is almost impossible to ignore the fact that too much fat, sugar and salt in foods are harmful to health at a general level. In this area it is reasonable to assume that consumers are *being* informed.

Fairtrade products receive least attention. In Norway this is a new and growing consumer area, with relatively few fairtrade products available in 2009. Consumers need to become aware of such products and learn why they should choose them. Only 18 percent of respondents said they kept well informed about fairtrade products (even fewer in 2005: 13 percent).

The healthy food and fairtrade examples both illustrate that consumers' information levels depend not only on their own efforts. Factors such as availability, media attention, as well as the marketing of products, mean a lot in how easy it is to acquire – or avoid – information. While it was almost impossible not to be oriented about what is healthy and what is unhealthy in 2009, more individual effort is needed to keep informed about the fairtrade products market. As shown in Figure 2, this also seems to apply for organic foods.

The broadband and television channel markets are examples of two markets that increasingly overlap. Despite the fact that the old analogue television network was dismantled in 2008 and that the respondents at the time of the interviews had been forced to switch to the new digital systems and choose among private broadband and television channel providers quite recently, very few respondents said they kept informed. Only one in five gave the impression that they have mastered these markets. These results demonstrate that many consumers choose broadband suppliers and television service suppliers based on quite a low degree of information.

Neither the electricity nor the telephone service markets are consumer favourites. In Norway, as in many other European countries, these markets were deregulated at the end of the last century. Only one in three said they kept informed about these markets. What distinguishes the electricity market is that it is only the price that varies; expensive electricity is not of a better quality than more reasonably priced electricity. Not only in Norway but in many other countries, consumers' low switching activity in the electricity markets is considered a problem (European Commission, 2009: 13; Mair, 2009).

When the majority of consumers fail to choose the better alternatives in a market, this is an indication of malfunctioning. The electricity market is the prime example of a market affected by CADS. We see problems also in the telephone subscription market, where suppliers have intentionally made it more difficult for consumers to make well-informed choices by 'bundling' telephone subscriptions to mobile phones. Consumers are only free to choose among all the suppliers after a 'lock-in period' (Schjøll and Lavik, 2010). The telephone service market is an example of a market introducing arrangements – read bundling products – that probably contribute to the development of CADS.

A total of 38 percent of respondents said they kept well informed about the electronics and computer markets despite their complicated products. These markets are closely associated with status, pleasure and recreational time. These markets are complicated and demanding, characterised by rapid development. New software requires new hardware. Consumers continuously need to upgrade their knowledge in order to remain well informed, nonetheless a fairly large share of respondents indicated that they pay attention to these markets.

Figure 2 shows that many respondents said they kept informed about interest rates. To choose among banks and insurance companies is first of all a matter of comparing prices, even though the quality of the service, counselling and accessibility can have more relevance here than for selecting electricity and telecommunication suppliers. In times of financial crisis it is perhaps not surprising that people's attention was focused on their bank affairs. More than half of the respondents said they kept informed about interest rates, and 42 percent said that they kept informed about insurance prices. However, consumer politicians are concerned about the functioning of these markets. Both the bank and the insurance markets are accused of offering complex, non-transparent and misleading products that make it difficult for consumers to make good choices. The monitoring of consumer markets in the European Union in 2010 revealed that among 50 consumer areas, financial product services obtained the lowest score (European Commission, 2010b: 26).

One might believe that clothes and shoes, which vary in both price and quality, would be more enjoyable to keep informed about than interest rates. Nevertheless, as the results show, there were actually fewer who said they kept well informed about clothes and shoes than about interest rates. One reason for this could be that, while it is almost impossible to keep fully informed about qualities and prices in the clothes and shoes markets, less effort is required to keep informed about interest rates. The 2008 financial crisis seems to have encouraged newspapers to periodically present simplified information comparing banks, hence making it easy for consumers to keep informed.

How are consumer competences distributed?

Can consumers be divided into empowered, sophisticated consumers on the one hand and powerless, confused consumers on the other? If so, the distribution of consumer competences will form a U-curve. If on the contrary consumer competences are more equally distributed, i.e. that most consumers tend to be affected by some kind of CADS, the distribution will be more like a Gaussian curve.

According to Figure 3, the distribution of consumer competences – or lack of such – is more equal to the normal distribution Gaussian curve than to the U-curve. Almost none of the respondents said that they mastered all consumer areas, and few respondents said that they mastered none. The average consumer keeps well informed on about four out of twelve areas and is poorly informed on about five areas.

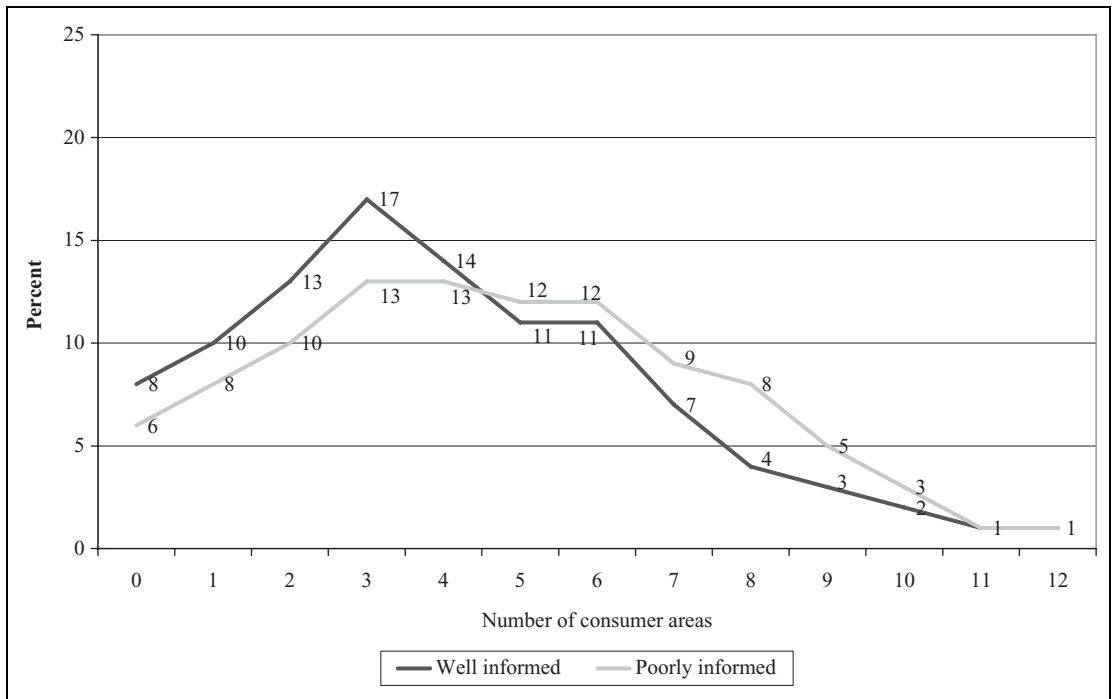


Figure 3. Number of consumer areas consumers report feeling well-informed or poorly informed on (percentages; weighted according to gender, age and geography; $N = 999$).

Is the distribution of CADS differentiated by gender, social class or age?

To investigate the social distribution of CADS, gender, education, self-reported class affiliation, household financial resources and age were checked in bivariate comparisons in the selected consumer competence areas. Table 3 is based on 65 bivariate cross-tabulations, only labelling the groups that reported to be poorly informed (signalling CADS) significantly more often others.

Table 3. Groups with significantly higher probability of suffering from CADS in different areas ($p < 0.05$; weighted according to gender, age and geography; $N = 999$)

Consumer areas	Gender	Education	Self-reported class affiliation	Household financials	Age
Healthy diets/foods	Men	Low	Working class		
Food products	Men				Young
Clothes and shoes	Men		Working class	Good	
Sustainable products	Men	Low			
Organic foods	Men	Low	Working class		
Fairtrade products	Men	Low	Working class		
Telecom services	Men	Higher	Middle class	Good	30–60
Insurance products	Women	Higher		Bad	Young
Electricity services	Women	Higher		Bad	Young
Interest rates	Women	Low		Bad	Young
Electronics and computers	Women				Old
TV packages	Women	Higher	Middle class		Young
Broadband services	Women				

First of all, Table 3 confirms that consumer competences are strongly gendered. While men significantly more often than women said they did not keep informed about healthy diets, food prices, clothes and shoes markets, environmentally friendly consumption, organic foods, fairtrade products and telecommunication prices, women more often said they kept poorly informed about insurance prices, electricity prices, interest rates, electronics and computers, and the television and broadband services markets.

By ordering the consumer areas according to these gendered biases, it appeared that CADS areas dominated by uninformed men tended to correspond with areas dominated by people with lower education and with self-reported working-class background. Women, people with higher education as well as those with bad financials often had overlapping CADS areas. Table 3 also shows that in some areas consumers from the middle class and households with good financials had higher probability than others of being affected by CADS. Nor did higher education seem to prevent CADS. Finally, the bivariate analyses indicated that in many consumer areas (but not electronics and computers) people become more competent with age. Several factors can underlie the effect of age, e.g. differences in social values if older generations are more frugal and price-conscious than younger generations, or that 'attention budgets' become less tight as people pass through different stages of life.

Different consumer competence profiles

We have argued that the nature of consumer areas differs considerably and therefore requires qualitatively different consumer competences. The previous analysis shows that people's consumer competences are not impressive (Figure 2). Based on the respondents' self-reports the distribution of consumer competences is approaching the normal distribution, namely few omniscient and few totally deprived consumers. One probable explanation for this pattern is that consumers' scarce attention resources lead them to specialise in consumer areas that are similar in nature, since their competences cannot easily be transferred from one type of consumer area to another. Did our material reveal such consistent consumer competence profiles? This question can be approached by factor analysis. Do consumer competences tend to cluster in distinctive groups reflecting that consumers have different consumer competence profiles?

The factor analysis reduced the included 13 variables to four factors or dimensions. As shown in Table 4, all variables, except keeping informed about telecommunication prices,² fitted in well with one of the factors. The estimates in Table 4 show how strongly the original variables relate to each of the factors. The factors were named according to the weight of the original variables: financial, technological, eco-ethical and everyday consumption competences. If compared with the descriptive qualities of the different consumer areas presented in Table 1, these factors are understandable and reasonable.

The main message from Table 4 is that consumers possess different consumer competence profiles: factor 1, *financial* consumer competences, is composed of competences related to interest rates and electricity and insurance prices. These are subscription service markets, typically abstract in character. Recommended consumer practices first of all require economic rational reasoning and calculating skills.

Factor 2 is named *technological* consumer competences. Those with technological competences are well informed about both broadband and television services (channel packages) as well as about electronics and computers. To compare many of these products requires high-tech competences, probably only possessed by a few experts.

The third factor is *eco-ethical* consumer competences, including keeping informed about environmentally friendly consumption, fairtrade and organic product markets. Contrary to the other three dimensions or factors, eco-ethical competences require that consumers consider more than their own private interests before making choices in the markets (see Table 1). Eco-ethical choices presuppose knowledge and insight into what a purchase means for the community, the future and the environment.

The fourth factor is *everyday consumption* competences. This factor captures consumers' efforts to keep informed about food prices and what is healthy and unhealthy, as well as keeping informed about

Table 4. Factor analysis of consumer competence profiles, 2009 (rotated component matrix; $N = 999$)

Consumer areas	Factor 1: Financial	Factor 2: Technology	Factor 3: Eco-ethical	Factor 4: Everyday consumption
Bank interest rates	.76	.08	.01	.14
Electricity services	.82	.16	.07	.07
Insurance products	.73	.28	-.02	.02
Food products	.30	-.01	.16	.59
Healthy foods	.08	-.14	.26	.74
Clothes and shoes	-.03	.36	.04	.73
Electronics	.08	.80	-.01	.12
Broadband services	.24	.81	.00	.02
TV services	.27	.69	.14	-.06
Environmentally friendly products	.17	.08	.71	.28
Organic foods	.02	.00	.81	.19
Fair trade products	-.03	.06	.82	.00
Telecom services	.44	.33	.18	.22

Note: Kaiser-Meyer-Olkin measure of sampling adequacy .798. Bartlett's test of sphericity $p = 000$. Total variance explained = 61%.

the clothes and shoes markets. These markets are complex, but concrete and quite simple, where the quality of a commodity is often visible.

Are some demographic groups more vulnerable to CADS than others?

By multivariate analysis it is then possible to distinguish groups that are vulnerable to CADS in the four main consumer areas. To investigate whether or not we could identify particularly deprived or powerless consumers, we also constructed a variable measuring the total incidence of CADS (see Table 5, column 1).

In accordance with the distribution of CADS and consumer competences as shown in Table 3, the first column in Table 5 shows that we could not distinguish one social group as more vulnerable to CADS than others; only age shows significant results. The other columns, however, demonstrate that different social groups tended to neglect different consumer areas: all other variables kept constant, women tended to neglect the financial and technological markets to a greater degree than men, while men tended to neglect the eco-ethical and the everyday consumption markets to a greater degree than women. We also found that higher education had an independent effect on the tendency to neglect the technological markets, while respondents without higher education were more likely to neglect the eco-ethical markets. Living in households with scarce finances increased respondents' probability to signal financial CADS, while consumers with good finances are less attentive than others when they visit the everyday consumption markets. The age pattern shows that CADS is more frequent among the younger than the older consumers. One exception was technology CADS, which seemed to be equally distributed between older, middle-aged and younger respondents, all other variables kept constant.

Based on these results one can identify those who are most likely to suffer from different kinds of CADS: the typical representative for financial CADS is a young woman living in a household with bad financials. The typical representative for technology CADS is a woman with higher education. The typical representative for eco-ethical CADS is a man under 60, with little education, probably from the working class. And the typical representative for everyday consumption CADS is a man who is well off financially. The main message is that CADS does not seem to affect specific social groups; it will affect all consumer groups, but somewhat sorted on different consumer areas.

Table 5. Who are more likely to be affected by CADS? Five linear regression models (standardized betas weighted according to gender, age and geography; $N = 999$)

	Total CADS (0–13)	Financial CADS (3–15)	Technology CADS (3–15)	Eco-ethical CADS (3–15)	Everyday consumption CADS (3–15)
Explained variance:	$r^2 = .02$	$r^2 = .09$	$r^2 = .10$	$r^2 = .07$	$r^2 = .13$
Women= 1	-.01	.13**	.30**	-.18**	-.34**
Young: 18–29 years= 1	.10**	.19**	.00	.04	.06
Elderly: 60–80 years= 1	-.07*	-.11**	.01	-.08*	-.04
Higher education= 1	-.00	.04	.07*	-.13**	-.01
Middle class= 1	-.01	.02	.02	-.06	-.05
Bad financials= 1	.03	.11**	.04	-.06	-.06*

Note: Dummy variables: age=30–59 years, self-reported class = working class, household financials = good and very good.
* $P < 0.05$. ** $P < 0.01$

Conclusion and implications

Since the nature of consumer areas differs and thus requires different kinds of consumer competences, such competences cannot be easily transferred from one consumer area to another. In complex consumer societies, consumers only have attention capacities for some segments of the market. To economise their attention they tend to specialise in consumer areas that are similar in nature. Our data support the idea that it is almost impossible for anyone to master every consumer area in today's heterogeneous and complex markets.

The complex attention mosaics that ordinary consumers are placed within is not only a problem at the level of the individual consumer; the market, too, will suffer from badly informed or non-reflected consumers.

This study demonstrates that many consumers – according to their own judgements – are not prepared to make well-informed choices when they enter a market. In addition, being well informed is no guarantee that consumers will make reflected choices in the purchase situation, which is precisely when they become targets for marketing and the suppliers' sales-stimulating choice architecture. It has been well documented through behavioural economics experiments that so-called *choice architecture* can 'nudge' people by simple means to make specific choices (Thaler and Sunstein, 2008). As an example, retailers – based on solid knowledge – structure the spatial environment for shoppers and charge product providers for lucrative shelf space (Dulrud and Jacobsen, 2009). Another example is the way clever presentations of price impact consumers' decision-making (Office of Fair Trading, 2010b). In particular, consumers suffering from CADS will be put in a disadvantaged situation by such and similar choice architectures.

If choice architecture proves to be more effective for the sales numbers than improving the products, suppliers will probably choose the first option. We might then get a vicious rather than a virtuous circle between consumers and competitive suppliers. The principles of the market could be violated, hence contributing to neither fair prices, nor better quality.

Within the overall mediocre level of consumer competences, we have also seen the extent to which consumers are heterogeneous: some consumers master the financial markets, others the technology or everyday consumption markets. Finally, some consumers are more concerned about the environment, fairness and the community than about what is the best buy measured by value for money here and now. This consumer heterogeneity implies that consumer competences are not lumped together in one or two areas. Consequently we do not find consumer markets that are totally without reflected consumers.

Our analysis indicates that the choice of markets to which consumers direct their attention is also affected by social constraints. Different demographic groups tend to master different segments of the market and hence suffer from different kinds of attention deficit problems. However, the analysis did not reveal differences in the *total amount* of consumer competences between groups; we did not find

any 'super' consumer group, or single groups that constituted particularly vulnerable or deprived consumers. However, further study that would include a broader range of factors affecting consumer practices, particularly purchasing skills, might reveal such differences between socioeconomic groups.

This article started out with the question: Are today's modern, heterogeneous and complex markets manageable for consumers? Judging from the data examined in this article the answer is probably no. The ubiquitous and composite nature of the attention deficit phenomenon leads us to see this as a syndrome that is endemic to modern markets. Consumers' 'attention budget' is perpetually 'in the red'. Numerous factors influence the functioning of consumer markets, and with the data at hand we cannot ascertain the extent to which attention deficits pose a problem for consumer markets. Yet, as we have shown, it is reasonable to assume that this is a key condition for the way consumer markets function. This concern is also reflected in consumer policy, as consumer politicians typically want to see reflective consumers who play an active part in the market forces game (European Commission, 2010a), i.e. consumers who make well-informed, reflected choices.

If CADS, that is to say, the low level of information and reflection related to consumers' practices, is interpreted as a problem, what are the implications? In the next paragraphs we sketch some theoretical and policy implications.

Theoretical implications

First, we see implications for the theoretical understanding of consumer choice. These insights into real-life consumer practices add to the challenges of rational choice assumptions of neoclassical theory. Such challenges are, of course, not new but have been posed for decades within the institutional paradigm (March and Olsen, 1989), the information paradigm (Stiglitz, 2002) and behavioural economics (Kahneman, 2003; Kahneman and Tversky, 1979; Thaler and Sunstein, 2008). In particular, economic theories have modified the assumption of instrumental rationality, pointing to conditions that are relevant for understanding consumer practices such as informational asymmetries, incomplete information and transaction costs, as well as a range of behavioural biases. In this article the emphasis has been on an aspect of bounded rationality that has received less scrutiny in theories of consumer choice, namely, scarcity of attention (Simon, 1971, 1976). The argument has been that understanding the way in which attention is allocated is critical for understanding decisions. This insight seems to have been acknowledged by, and incorporated into, the study of political practices and organisational decision-making more than in the study of markets and consumer practices.

The kind of distribution of consumer competences which this analysis has revealed is consistent with what attention-oriented decision-making theory tells us about how individuals behave in complex decision-making situations and choice mosaics (March, 2008). Bringing this insight into the study of consumer practices adds to the understanding of this phenomenon. This in turn could be a stepping stone towards a deeper understanding of why some markets work well and others do not. We realise that the literature is still far from providing all the answers as to which mechanisms come into play when consumers, who are also citizens, parents, workers, holidaymakers, husbands and wives, encounter a myriad of consumer choice opportunities in real life.

Policy implications

This brings us to the potential implications for competition and consumer policy. The evidence presented here supports the call to reinforce the consumer dimension of markets and to change the focus of regulatory policy towards the consumer (Office of Fair Trading, 2010a; European Commission, 2009, 2010a, 2010b, 2011). Yet, given the attention problems pointed to here, there is a reverse side to such a consumer-oriented policy if it is based on unrealistic assumptions about how consumers behave and the role that they can be expected to play in securing their own welfare, while at the same time securing the

healthy functioning of markets. We claim that consumers of today are assigned too many roles which they are unable to fulfil.

Some policy-related lessons from consumer practices in complex and multiple markets can be drawn. The main message is that a consumer-oriented policy cannot just revolve around creating arrangements that reduce uncertainty in consumer choice and adding more formal consumer rights; it should also address the complexity of consumer choice.

First, this can be done by *reducing the number of choices*. To remove choice situations from the market is, of course, to venture into a politically contentious area. It concerns the very heart of the discussion on the role of competition, and market intervention. These are political decisions and hence cannot be framed as ‘technical’ remedies to attention deficit problems. Nevertheless, a relevant question for policy-makers to ask would be: Are consumers being presented with choices which we know they are unlikely to pay attention to and failing as consumers?

A second, less contentious, implication concerns the following. In modern abundant, complex and rapidly changing markets, information overload poses a core problem. Part of the solution, as proposed by the proponents of the information paradigm, could be to *ban misleading information* and to increase transparency, as opposed to intentionally complex and opaque presentation of products. A sensible approach to attention deficit problems would then be to create and strengthen existing arrangements that can act as intermediaries, but such intermediaries would have to be trustworthy and act with integrity.

Third, to follow the old competition paradigm of securing fair competition on the supply side will not solve the CADS problem. As an alternative to regulations, Richard Thaler and Cass Sunstein (2008) recommend that politicians utilise *libertarian paternalism*. One solution often put forward is to create choice architecture that ‘nudges’ consumers and citizens into making the right choices (Goldstein et al., 2008). If, however, most choice architecture is constructed by retailers’ sophisticated marketing people (e.g. buy three for the price of two), this will aggravate rather than alleviate CADS. The main message from behavioural economics experiments is that confused, non-informed consumers are easily manipulated by choice architecture and that this might cause malfunctioning markets. A solution to this problem proposed by the Office of Fair Trading (2010a: 31) is to *empower* (confused) consumers through consumer education and information, for example, by the media making the consumers aware of their biases and thus preventing further manipulation. Such proposals are commendable to the extent that this could serve to reduce complexity. One might on the other hand suspect that such interventions are unlikely to counterbalance firms’ manipulation of consumers through strategic choice architecture. Given what we know about consumers’ limited attention and ‘amateurishness’, firms’ knowledge and application of choice architecture will confuse even more consumers, as when companies make purchases more complex and less transparent by complex pricing frames, bundled products, priming, and so on. Relying on the supply side’s self-regulation in this context seems unrealistic. Our analysis also demonstrates that the power of learning by information is limited, since the greater part of consumers’ attention is already ‘consumed’ by today’s information overload.

Finally, in situations where multiple demands are made on individuals, citizens and consumers, consumer decisions are less about following the logic of rational choice, than about how they *allocate their limited attention*. This implies that the potential market failure that this amounts to cannot be addressed in a market-by-market regulatory system. It is the characteristics of the *totality* of the consumer markets that systematically place the consumer at a disadvantage. Seen from the perspective of one single market, it might be possible to arrange the relationship between producers and consumers in such a way that – in theory – consumers could act as worthy, competent and attentive counterparts to producers. However, there are strong indications that these assumptions collapse before the realities of the complex ecology of consumer markets facing consumers today.

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Notes

1. For example, the European Commission conferences: *Competition and Consumers in the 21st Century*, 21 October 2009, Brussels; *Behavioural Economics, So What: Should Policy-Makers Care?* 22 November 2010, Brussels.
2. This means that it is difficult to predict which other areas those who master telecommunication prices will also master.

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