

Assessing the effectiveness of potential remedies in consumer markets

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A report prepared for the OFT by Luke Garrod, Morten Hviid, Graham Loomes and Catherine Waddams Price of the ESRC Centre for Competition Policy

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1 EXECUTIVE SUMMARY

1.1 Consumers play a key role in activating competition and making markets work well. Without their active participation in a market, firms may not have incentives to deliver what consumers want and consumers will not get the full benefits of competition. Consumers may at times not play a very proactive role in the competitive process and there are a number of reasons why this may occur. For example, searching the market for the best deal and switching between suppliers can be a costly and/or confusing business; and suppliers may be able to exacerbate the problem by making consumers' tasks more difficult.

1.2 When markets fail to work well because of poor consumer decisions, policymakers can intervene to facilitate and encourage consumers to take a more informed and active role. This discussion paper considers the effectiveness of interventions that are concerned with helping consumers to:

- obtain information and make comparisons
- make informed choices at the point of sale, and
- switch suppliers.

By surveying the existing literature, the discussion paper highlights the potential benefits and costs of these remedies, and identifies the criteria for when these remedies are likely to have maximum impact upon a market.

Helping consumers obtain information and make comparisons

1.3 Consumers can find it difficult to identify which firm offers the lowest price or which firm's product best satisfies their wants. In some instances firms can be incentivised to provide information, and, if so, are well placed to do so effectively. For example firms offering high quality goods (perhaps healthy option foods) will want to let consumers know, and interventions which make such statements credible will facilitate these valuable communications. Alternatively consumers may have to seek the information about the products in a market themselves, but can face costs of gathering and processing this. Such costs can provide firms with a degree of market power, because consumers may purchase a product even though a rival product is cheaper or could suit their wants better, other

things equal. When more consumers search, more firms will offer better deals to attract them, and the average price in the market falls.

1.4 The measures that may be available to help consumers obtain information and make comparisons include:

- providing information about quality
- standardisation of pricing structures (to facilitate comparisons), and
- price comparison sites.

These measures need to be considered against a background of general consumer and competition law covering issues such as misleading advertising, unfair contract terms, unfair practices and anti-competitive practices.

Providing information about quality

1.5 When a product's quality is difficult to determine before purchase, high quality products can be driven from the market¹. While high quality providers have an incentive to reveal the true nature of the product, they may be unable to do so because their claims are not credible. Such lack of credibility may arise from weak regulation of statements (which could have been provided either through a public body or private enforcement by consumers). Providing information that enables quality comparisons can lead to:

- a greater variety of high and low quality products, and
- more consumers making informed choices.

1.6 As an alternative remedy, a requirement to produce products above a minimum standard can lead to:

- higher quality but also
- higher prices, and
- barriers to entry for firms and new innovative products.

An example of this latter issue arises where professional bodies insist on excessively high standards to restrict entry. An intervention to establish a minimum standard can harm consumers who prefer low quality products at

¹ A classic example is Gresham's Law, which identified 'bad money driving out good' in debasement of coins.

low prices. Moreover it may still be difficult for firms to signal reliably that they offer quality above the minimum.

- 1.7 Providing information about quality is a superior remedy when consumers differ in their preferences for quality and when there is a measure which is a close proxy for product quality. It is important that the information is simple to understand and is sufficiently standardised across product and geographical markets to provide consistent information for consumers².
- 1.8 A minimum standard (for example, product regulation) can be beneficial when the majority of consumers prefer a high quality product and there is no adequate single measure of product quality. This may be particularly important for 'credence goods' where it is difficult for consumers to judge quality even after purchase and where the costs of purchasing poor quality can be high, for example professional services.

Standardisation of pricing structures (to facilitate comparisons)

- 1.9 When pricing structures are complex, consumers may find it difficult to compare between offerings. Implementation of standardised prices can facilitate:

- easier comparisons, and
- more people making informed choices.

This intervention is most likely to be beneficial to consumers when:

- the measure simplifies comparisons
- consumers shop around and will use the comparison, and
- the measure does not neglect important information.

- 1.10 Alternatively, a remedy could seek to limit product differentiation, including the range of allowable pricing structures, to assist comparisons. This can lead to:

- easier comparisons for consumers
- more intense price competition, but

² This will vary across products. For example garden products are likely to be bought locally, while restaurant meals may not be.

- limited choice and variety to satisfy consumers' needs.

This intervention is most likely to be beneficial to consumers when:

- product differentiation is 'spurious'
- the level of product differentiation makes it very difficult for customers to compare products, and
- the benefits of simplification outweigh the loss to customers of reduction in choice.

Price comparison sites

1.11 When gathering information is costly, consumers may not search the market to find the best deal. Price comparison sites can lead to:

- lower search costs, and
- lower prices.

This intervention is most likely to be beneficial to consumers when:

- prices include all charges, (for example, extra taxes, fees and charges in air transport)
- firms do not pay for prominence or inclusion on price comparison sites
- consumers have ability to rank items that are compared
- the price comparison site is independent of the firms who advertise on it
- the price comparison site has incentives to provide an accurate presentation of the available offerings, and
- the price comparison site is well advertised.

There may be a trade-off between independence and prominence. An independent not-for-profit site may not have the resources to ensure that consumers know about it; while commercial sites have both strong incentives and the funds to ensure they are well advertised.

There is concern that such a remedy might facilitate parallel pricing among firms, with potentially detrimental effects.

Helping consumers make informed choices at the point of sale

1.12 At the point of sale (POS) such as in a brick-and-mortar shop or on a web site consumers may be inadequately informed about a product or its complements and substitutes. Even so, they may still choose to make purchases if it is costly to become informed about the deals available in the market more generally. As a consequence, some firms can hold a significant POS advantage over other potential suppliers. This may allow them to profitably offer consumers less attractive price/quality combinations than would be provided by a well functioning market.

1.13 Interventions to reduce a firm's point of sale advantage considered here are:

- written quotations that last for a fixed period
- in-store price comparisons, and
- cooling-off periods.

Other interventions include enforcement of consumer protection laws requiring clear in-store prices and preventing misleading omissions and aggressive selling.

Written quotations

1.14 Written quotations that last for a fixed period can prevent firms from pressure selling at the POS and also provide consumers with the ability to search the market later without losing the original offer. This intervention is most likely to be beneficial to consumers when:

- Customers are unfamiliar with the product before the POS or there is otherwise a risk of pressure selling
- Customers would not benefit from any cost savings enjoyed by firms from selling the product at the original POS, and
- Consumers understand the difference between a written quotation (binding) and an estimate (non-binding).

Written quotations may mean that a consumer has to visit the same store twice. This may not only increase the consumer's cost of shopping but, where consumers are liable to impulse purchases, provide firms with a second opportunity for exploitation.

In-store price comparisons

1.15 In-store price comparisons can offer a substitute to searching before the POS and enable consumers to assess the benefit from purchasing from another firm. This can in turn intensify competition. This intervention is most likely to be beneficial to consumers when:

- products are homogeneous, so comparisons are meaningful, and
- there are few firms in the market, so comparisons are comprehensive and comprehensible.

It is important that any comparison is relevant, easy to understand and monitored by the relevant authorities, since firms themselves may wish to bias the information provided. If firms are required to monitor each others' prices in order to comply (or to share advanced warning of price changes) then this could lead to tacit collusion. An alternative would be to highlight independent means of comparison, such as price comparison websites.

Cooling-off periods

1.16 A cooling-off period offers a different solution to the problem of POS advantage by enabling consumers to return a purchase that they regret after the POS (for example because they were subject to pressure selling³). This intervention is most likely to be beneficial to consumers when:

- consumers have little experience of the market before purchasing the good
- consumers have low hassle costs of returning the product relative to the price of the product, and

³ Where the consumer returns the product because they have found a cheaper one elsewhere, the remedy mirrors a low price guarantee, which has the potential to soften competition. Where the issue relates to ongoing supply, such a 'return policy' would essentially be a meet-or-release clause, also known as an English clause. In *Hoffmann-La Roche* the 'English clause' was found to aggravate the exploitation of the dominant position in an abusive way by allowing Hoffman-La Roche to identify its competitors more easily as a result of the clauses, *Case 85/76 Hoffmann-La Roche & Co AG v EC Commission* [1979] ECR 461 paras 107-108. The clauses are also condemned in the EC Commission Notice - Guidelines on Vertical Restraints [2000] OJ C 291/01 para 152 as an example of abuse of dominant position.

- the period when products can be returned is sufficiently long for consumers to review the purchase, but not so long that consumers 'forget' to use it⁴.

Such remedies can make consumers more likely to purchase products at the POS and increase the cost of returns to firms. A cooling off period is equivalent to a 'no quibble' money back guarantee. While some firms offer these voluntarily, the fact that they are sometimes very restricted indicates that firms are concerned about their use. Some firms may try to erect unreasonable or unfair procedural obstacles if such a remedy is imposed.

Helping consumers switch suppliers

1.17 When switching to a new supplier consumers may face some cost, which is not incurred if the consumer remains loyal to their current supplier. These costs may be financial (for example, penalties for terminating existing supply agreement), time related (in undertaking the transaction) or psychological (that is, uncertainty about the real benefits from an apparently good alternative deal). Such costs can provide firms with a degree of market power as consumers have an incentive to continue purchasing the product from the supplying firm even if a rival, who sells an identical product, is known to be slightly cheaper.

1.18 Interventions that can reduce switching costs are:

- cancellation rights at low or no cost
- product attribute portability, and
- customer information portability.

Cancellation rights

1.19 When consumers enter a long-term contract with a firm they may be committed to purchase the good or service from that firm for a significant period of time, or be able to leave the contract only with notice at specified intervals (for example, annually). Cancellation rights on long-term contracts including an absence of financial penalties for early settlement can:

⁴ In practice, cooling off periods show extreme variations, from no cancellation rights (for example, holiday club salesmen) to more than 30 days (as offered by Marks & Spencer).

- facilitate competition for current customers
- increase customers' confidence in switching, and
- assist entry into the market (particularly if incumbent firms cannot price discriminate between consumers).

This intervention is most likely to be beneficial to consumers when:

- implemented in an immature market where consumers are not familiar with making choices
- there are few firms so comparison is less onerous, and
- firms do not offer the option of a short-term contract so change is less reversible.

Long term contracts can facilitate beneficial effects for consumers, for example investment in energy services by energy supply companies⁵; they also encourage firms to compete more keenly for customers, and so they may offer better terms. In particular, knowing that a long term contract gives them an assured customer base may make firms willing to invest in innovative offerings.

Product attribute portability

1.20 A consumer who has a repeated relationship with a firm can become attached to a certain attribute of the product (such as a personal telephone number), which can lead them to remain loyal to their current supplier. Allowing that attribute to be transferable across firms can lower switching costs and lower prices. This intervention is most likely to be beneficial to consumers when:

- the attribute that customers are attached to is easily identifiable
- the ownership rights of the attribute are easily transferable to rival firms or consumers, and
- there are few other impediments to competition.

There may be benefits from non-portability (for example being able to identify the network to which a call is being made); it is important that any such benefits are small or can be achieved through other means.

⁵ The 28-day rule, abolished by Ofgem in 2007, protected consumers' rights to switch suppliers, but inhibited such investment by firms who could not guarantee to retain the consumer's custom long enough to recoup their investment.

Customer information portability

1.21 When firms cannot determine which consumers are likely to be costly to supply and which are not, some consumers may be offered worse deals than if firms could distinguish between them and offer more cost-reflective prices. For example insurance companies can differentiate between different risk classes if they have the necessary information. Providing firms with information about customer characteristics can lower prices to some consumers because:

- firms are better able to recognise profitable and non-profitable opportunities
- competition is enhanced because incumbent firms have less of an informational advantage over new entrants
- firms' risks and costs are lower⁶, and
- firms are less dependent on their current consumers.

This intervention is most likely to be beneficial to consumers when:

- the information that is made available is a good proxy for a customer's 'quality'
- firms have the ability to provide individualised (cost reflective) prices, and
- firms use similar information to calculate risks.

It is important that any issue over the property rights ownership of customers' information can be resolved. Where such transfer involves the exchange of money, there is a danger that it could facilitate collusion by enabling side payments.

Interventions in potentially collusive consumer markets

1.22 When firms interact repeatedly, they may realise that intense competition is not in their mutual self-interest and form a tacit understanding to keep prices artificially high. Higher prices are sustainable if a firm's short-term benefit from undercutting the collusive price is expected to be outweighed by a sufficiently harsh future competitive regime.

⁶ For example by reducing the default risk in credit markets

- 1.23 Remedies in potentially collusive consumer markets can affect the likelihood of collusive behaviour if:
- the level of consumer activity in a market is increased, and
 - firms' ability to monitor each other's strategies is improved.
- 1.24 Increasing consumer activity will generally undermine collusive understandings and intensify competition. Improving firms' information about each others' strategies can increase the likelihood and severity of firms' responses to a rival's price reduction which facilitates higher prices. The effect on collusion of a remedy depends upon the relative sizes of the two effects.
- 1.25 In many consumer markets it is likely that firms will already have the information necessary to monitor each other's strategies. As a result, remedies in consumer markets might not increase the likelihood of collusion, unless making such knowledge public rather than private, through consumer remedies, increases firms' confidence about their rival's behaviour. As part of the process of evaluating a potential remedy which could increase firms' ability to monitor each other's strategy, policymakers should consider whether the structure of the market has any of the necessary features which makes tacit collusion a possibility.

Conclusions

- 1.26 This paper has presented and assessed a number of remedies that can be used to encourage consumers to play a more active role in finding the best deal. The power of the remedy is, broadly speaking, weaker the further along the consumption path consumers are.
- 1.27 The remedies that aim to improve consumer information either directly or indirectly by encouraging more search appear to be the most powerful. Consumers who enter the point of sale well informed can put pressure on the firms to deliver what the buyer wants at competitive prices. Remedies aimed at protecting the consumer at the point of sale, other than those already in place as a result of consumer protection laws, in general seem more costly to administer both for consumers and any agencies charged with monitoring the remedy. Remedies aimed at encouraging appropriate switching behaviour are all demanding in terms of monitoring and may be difficult to implement cost effectively without a sector regulator who has specialist knowledge and a duty to undertake ongoing monitoring of the industry.

- 1.28 Successful remedies require consumers to respond appropriately. Consumers' time, attention and information-processing powers may be bounded and/or their preferences and motivations may be configured differently from the model used to design and assess the remedy.
- 1.29 The discussion paper identifies some of the area in which future research is needed. As regards theoretical analysis, in particular, better models of behaviour at the point of sale would strengthen our understanding of the proposed remedies. The gap in empirical evidence is more pronounced and even in areas where there is a substantial existing literature, the evidence is often confined to a few industries. This may reflect a limitation of the issues which the remedies are designed to address. For many of the remedies more robust evidence of the effects of these across industries, countries and time is needed.

TABLE 1.1 – SUMMARY TABLE OF HELPING CONSUMERS OBTAIN INFORMATION AND MAKE COMPARISONS

Remedy (and page number)	Problem to solve	Benefits from remedy	Concerns with remedy	When remedy is most effective	Examples of existing remedy
Providing information about quality (p44)	<ul style="list-style-type: none"> • asymmetric information about quality • lack of high quality products • complex choices about price-quality tradeoff 	<ul style="list-style-type: none"> • consumers make more informed choices • provides choice between low and high quality 	<ul style="list-style-type: none"> • firms seek to strategically influence measure of quality • consumers ignore information • who should information be aimed at? 	<ul style="list-style-type: none"> • information is simple to understand • standardised across product and geographical markets • measure is a close proxy of a product's quality 	<ul style="list-style-type: none"> • 'Scores on the doors' for restaurants • Nutritional labelling on food • Energywatch complaints
Minimum standard requirement (p53)	<ul style="list-style-type: none"> • asymmetric information means consumers are unable to assess quality • lack of high quality products 	<ul style="list-style-type: none"> • high quality 	<ul style="list-style-type: none"> • what should be the minimum quality? • higher prices • creates barriers to entry for new firms and new products • restricts choice of lower quality products at lower prices • cannot signal higher quality than minimum 	<ul style="list-style-type: none"> • consumers prefer higher quality products 	<ul style="list-style-type: none"> • Numerous including: <ul style="list-style-type: none"> • ABTA • Mortgage Payment Protection Insurance
Standardisation of pricing structures (to facilitate comparisons) (p54)	<ul style="list-style-type: none"> • complex calculation of price • obfuscation of price • advertised price not representative of final price 	<ul style="list-style-type: none"> • consumers not misled • intensifies competition 	<ul style="list-style-type: none"> • comparison based on average may not help individual consumers 	<ul style="list-style-type: none"> • consumers are in position to make comparisons • enables like-for-like comparison • linked to campaign to promote use 	<ul style="list-style-type: none"> • EC regulation on airline pricing • APR

TABLE 1.1 CONTINUED – SUMMARY TABLE OF HELPING CONSUMERS OBTAIN INFORMATION AND MAKE COMPARISONS

Remedy (and page number)	Problem to solve	Benefits from remedy	Concerns with remedy	When remedy is most effective	Examples of existing remedy
Restricting the range of products and pricing (p61)	<ul style="list-style-type: none"> • complex choices 	<ul style="list-style-type: none"> • simplifies comparisons • intensifies price competition 	<ul style="list-style-type: none"> • restricts variety • restrict innovative tariffs 	<ul style="list-style-type: none"> • differentiation is spurious • complexity reduced more than choice • consumers do not benefit from complex pricing structure 	<ul style="list-style-type: none"> • none
Price comparison sites (p64)	<ul style="list-style-type: none"> • high search costs 	<ul style="list-style-type: none"> • one-stop shop for search (and switching) • lowers search costs • increases competition • empirical evidence of lower prices 	<ul style="list-style-type: none"> • profit-maximising sites have incentive to maintain price dispersion • firms pay for prominence/ranking • firms may strategically make comparisons difficult 	<ul style="list-style-type: none"> • consumers have access to them • consumers can rank products • consumers are made aware of sites' limitations and use more than one site • site is independent (not for profit) 	<ul style="list-style-type: none"> • Energywatch accreditation of commercial comparison sites • FSA financial product comparison tables • numerous profit-maximising sites

TABLE 1.2 – SUMMARY TABLE OF HELPING CONSUMERS MAKE INFORMED CHOICES AT THE POINT OF SALE (POS)

Remedy (and page number)	Problem to solve	Benefits from remedy	Concerns with remedy	When remedy is most effective	Examples of existing remedy
Written quotations (p83)	<ul style="list-style-type: none"> • lack of time to search for alternatives • pressure selling of complementary purchases 	<ul style="list-style-type: none"> • allows search post POS 	<ul style="list-style-type: none"> • consumers visit same firm twice • will consumers search further? 	<ul style="list-style-type: none"> • consumers understand purpose of remedy so search market further • firms do not receive cost saving when selling add-ons at the POS 	<ul style="list-style-type: none"> • OFT/CC case 'extended warranties (EWs) on domestic electrical goods (DEGs)'
In-store price comparisons (p87)	<ul style="list-style-type: none"> • lack of information about rivals' prices 	<ul style="list-style-type: none"> • allows consumers to estimate benefit of further search • intensify competition 	<ul style="list-style-type: none"> • costs of monitoring comparisons • potential impact on collusion (see Annexe A) 	<ul style="list-style-type: none"> • homogeneous products • few firms in market • simple comparison 	<ul style="list-style-type: none"> • considered in OFT/CC case 'EWs on DEGs' • considered in CC investigation 'Supermarket I'
Cooling-off periods (p93)	<ul style="list-style-type: none"> • consumers make uninformed choice 	<ul style="list-style-type: none"> • consumers can undo bad decisions • increase search post POS 	<ul style="list-style-type: none"> • increase consumers' willingness to purchase at POS • consumers may forget to return products • imposes burden of returns on firms 	<ul style="list-style-type: none"> • low hassle cost of return for consumers relative to price • consumers have little experience of market • length is sufficiently long • consumers do not forget to use after purchase 	<ul style="list-style-type: none"> • OFT/CC case 'EWs on DEGs' • Distance sellers • Doorstep sellers • Some financial products

TABLE 1.3 – SUMMARY TABLE OF HELPING CONSUMERS SWITCH SUPPLIERS

Remedy (and page number)	Problem to solve	Benefits from remedy	Concerns with remedy	When remedy is most effective	Examples of existing remedy
Cancellation rights (p110)	<ul style="list-style-type: none"> dynamic lock-in 	<ul style="list-style-type: none"> ensure competition for current customers increase consumers' confidence to switch assist market entry 	<ul style="list-style-type: none"> increases firms' risks since no assured customer base can lose benefits from 'bargain-then-rip-off' pricing 	<ul style="list-style-type: none"> when implemented in an immature market when firms offer no choice for short-term contract 	<ul style="list-style-type: none"> financial products Ofgem 28 day rule CC case 'Northern Ireland Banks'
Product attribute portability (p 115)	<ul style="list-style-type: none"> attribute preference causes switching cost 	<ul style="list-style-type: none"> makes switching easier empirical evidence of lower prices 	<ul style="list-style-type: none"> increase firms' costs lose benefits of non-portability (ability to identify suppliers for mobile phones) 	<ul style="list-style-type: none"> when attribute is main reason for concerns when ownership of attribute is easily transferred 	<ul style="list-style-type: none"> telephony (mobile and land line) CC case 'domestic LPG'
Customer information portability (p 120)	<ul style="list-style-type: none"> a supplier has more information about the profitability of its customers compared with rivals 	<ul style="list-style-type: none"> firms can realise profitable opportunities lowers firms' risks and costs consumers offered better deals empirical evidence of lower prices 	<ul style="list-style-type: none"> who owns the information? potential impact on collusion (see Annexe A) 	<ul style="list-style-type: none"> when information is close proxy for customer 'quality' when firms can price individually when firms use same information to calculate risks 	<ul style="list-style-type: none"> financial markets insurance markets CC case 'Home credit'

2 INTRODUCTION

- 2.1 When there is competition in a market, firms strive to attract custom by meeting the wants and needs of consumers more effectively than its competitors. This is beneficial to both consumers and firms. Competition can provide consumers with low prices, high quality, wide variety, and new and innovative products. Firms will be rewarded by more custom and higher profits if they provide better goods and services than their rivals.
- 2.2 To make markets work well, enough consumers have to play an active role in finding the best deal. Even in a market with many firms, if consumers stay loyal to just one firm (for whatever reason) no firm will feel the pressure from rivals to perform better. The structure of a market may demonstrate that there are many potential competitors, but if consumers are not active, they will not receive the full benefits from competition.
- 2.3 The Office of Fair Trading (OFT) and the Competition Commission (CC) both design remedies in situations where markets fail to work well for consumers. In market references, Section 131(2) (c) of the Enterprise Act identifies customer conduct as a potential market feature which has the ability to prevent, restrict or distort competition. Remedies are normally considered as part of a market study (OFT) or market investigation reference (CC). As part of a market study or prior to making a reference to the CC, the OFT will consider whether problems identified in a market can be addressed under existing consumer or competition law⁷.
- 2.4 Four of the CC's first five market investigations have been conducted in predominantly final consumer markets (only Classified Directory Advertising Services has been mainly B2B). In the other four investigations⁸, the CC found an Adverse Effect on Competition (AEC) in each case, and many of the remedies imposed were focused on enabling consumers to be more active.
- 2.5 Interventions in final consumer markets can improve the nature of competition in a market and protect consumers from being exploited by firms. Without adequate *ex ante* assessment of remedies, which draws upon theoretical analysis and lessons from *ex post* evaluation of similar interventions, a remedy can fail to have the maximum desired effect.

⁷ See OFT 511 and 519.

⁸ Extended Warranties on Domestic Electrical Goods, Store Card Credit Services, Domestic Bulk Liquefied Petroleum Gas, and Home Credit.

The object of the discussion paper

2.6 The OFT's objectives in commissioning this piece of research were to summarise the existing economic theory and empirical evidence underlying a number of remedies in final consumer markets. The aim of the paper is to:

- identify the benefits and costs of the remedies
- identify the conditions under which a remedy is likely to have maximum positive impact on a market
- highlight where there are gaps in our knowledge, and
- propose ways of filling such gaps in our knowledge.

2.7 Given the wide range of possible remedies, the paper restricts its attention to those that are of immediate relevance to the work of the OFT and the CC. The OFT have identified a number of such remedies which can be grouped into four categories; namely helping consumers to:

- search the market
- compare different offerings
- make informed choices, and
- switch suppliers.

For a list of all the specific interventions that fall under the scope of this paper see the contents page (piii-iv).

2.8 The object of the paper is to review the literature, and we have referred to remedies which the OFT and CC have implemented where appropriate. However, we have not attempted a comprehensive summary, discussion or assessment of remedies applied by these agencies or others.

Structure of the paper

2.9 Section 3 provides discussion of why consumers may be inactive in a market. Specifically, there is a brief review of the impact on consumer behaviour and competition of:

- search costs
- switching costs, and

- bounded rationality and non-standard preferences.

In addition, there is discussion of what makes a successful remedy.

2.10 Discussion of the interventions is grouped into three main sections (sections 4 to 6). Each section considers the interventions that can be used to resolve a similar problem, so a **policymaker who is considering an intervention to resolve one of these problems** can quickly become informed of the available interventions. At the start of each section there is a general discussion of how the problem can affect competition. The three main sections are:

- helping consumers obtain information and make comparisons
- helping consumers make informed choices at the point of sale, and
- helping consumers switch suppliers.

2.11 Conclusions are drawn in section 7. In particular there is discussion of the gaps in our knowledge. These are most noticeable when it comes to empirical work on the effect of the discussed remedies. Ways to increase the amount of academic research into the impact of interventions are highlighted.

2.12 At the end of each main section there is a summary table which highlights the main points of all the interventions discussed in that section. The purpose is to enable a **policymaker who is considering whether to implement a certain intervention** to identify which problems the intervention can resolve, the main benefits and costs of the intervention, and the circumstances in which the intervention is likely to work. Cross references direct the reader to the relevant subsections of the text for more detailed discussion.

2.13 In addition to the three sections that discuss the effectiveness of specific remedies, there is an annexe which considers the general impact of interventions in potentially collusive consumer markets. When an intervention has the prospect of affecting collusive behaviour, the reader will be directed from the text and summary tables to the annexe. Specifically, Annexe A provides discussion of:

- when collusion is likely to occur, and
- what are the likely effects.

3 THE ROLE OF CONSUMERS AND INTERVENTIONS

3.1 When considering the causes and effects of market power, industrial economists have commonly focused their attention on supply-side issues such as product differentiation, capacity constraints, collusion, merger and entry prevention. However, it has long been recognised that consumer behaviour can also affect market power (Stigler, 1961). In recent times, there has been an increasing focus among academics and policymakers on demand-side issues that can also lead to markets not working well (Muris, 2002; Waterson, 2003; Vickers, 2003; Sylvan, 2004; and Armstrong, 2008).

3.2 To emphasise the part consumers may play in activating competition, consider a situation where:

- there are two firms in the market that supply homogeneous products with identical marginal costs and no fixed costs
- all consumers are fully informed of the products and prices, and the location of shops, and
- consumers can shop at any firm without incurring any cost.

Under these assumptions consumers will be able to shop at the lowest-priced firm. As a result, economic theory predicts that firms will set price equal to marginal cost and receive zero economic profit in any finite interaction. The intuition is:

- at a price higher than marginal cost each firm has a unilateral incentive to undercut their rival's price slightly and capture the whole market, and
- any price below marginal cost would lead to a firm making a loss.

3.3 This is known as the 'Bertrand paradox'. It is deemed to be a paradox because it predicts that just two competing firms are enough to eliminate the market power that a monopolist experiences. The Bertrand paradox is of particular interest to industrial economists and policymakers, because it predicts that consumers will receive the full benefits from competition even where the number of firms is small.

Consumer inactivity

'If every consumer thinks the competitive process works well, it doesn't work' Waterson (2003)

- 3.4 In the absence of information and a willingness to act on it, consumers may not get the full benefits of competition. For example, consider the same situation as the Bertrand paradox except that consumers pick a seller at random and do not search beyond the first firm they encounter.

In this scenario, firms will set prices at the monopoly level. The intuition is:

- each firm is not constrained by their rivals, because it is certain that consumers who visit their store will buy there, and
- each firm has no unilateral incentive to lower its price as it will not attract consumers from its rival.

- 3.5 The aim of the following subsections is to explore why some consumers may not be active in some markets and understand how this can affect competition⁹. Specifically, there is discussion of:

- Markets with search costs
- Markets with switching costs
- Markets and models of consumer behaviour, and
- What makes a successful intervention?

Markets with search costs

- 3.6 It can be costly (in terms of the money, time and effort expended) for consumers to gather price and non-price information about goods and services. For example, in some markets consumers may incur a cost:

- for each additional outlet searched
- to return to a previously visited outlet, or
- to become informed about all products available and the terms of trade through an information clearinghouse (such as a magazine or price comparison site).

⁹ See Wilson (2006a) for a similar discussion.

3.7 Such 'search costs' can mean that (at least) some consumers are willing to buy a particular good at a certain price even though:

- the same good may be available elsewhere at a lower price, or
- another good which suits their needs better is available at the same price in another store.

For a comprehensive review of the search cost literature, see Baye *et al* (2006).

The Diamond Paradox

3.8 In an early attempt to model the effects of search costs on a market, Diamond (1971) found that if all consumers have a positive search cost of **any** magnitude, there is a unique outcome where all firms set price at the monopoly level and consumers only search one firm. This result was regarded as surprising enough to constitute another paradox.

3.9 To understand the intuition of the 'Diamond paradox', consider a situation where:

- there are two firms in the market that supply homogeneous products with identical marginal costs and no fixed costs
- all consumers are uninformed of firms' prices, but they are fully informed of the products and the firms' locations, and
- all consumers face a positive search cost for each additional firm searched, but if they search a firm they become informed of the firm's price.

Assume consumers randomly visit the first store. Under these assumptions firms set prices at the monopoly level, because if all firms set the same price below the monopoly level, each firm has an incentive to unilaterally increase its price by an amount marginally less than consumers' search costs.

This enables firms to charge higher prices to their consumers without causing them to search other firms. The unilateral incentive to increase price persists at any price below the monopoly level, and only ceases when the monopoly price is reached. As a result:

- with no price dispersion in this market, there is no incentive for consumers to search other stores and so
- there is no incentive for firms to cut prices, as prices remain unobservable, so it will not induce consumers to search.

Tourists and natives

- 3.10 The extreme outcome of the Diamond paradox can be modified by relaxing some of the assumptions. For example, if some consumers do not find search costly, because they enjoy hunting for bargains, firms will have an incentive to attract them.
- 3.11 A model in this spirit is Carlton and Perloff's (1994) tourist-native interpretation of the Salop and Stiglitz (1977) model, where 'natives' go to the lowest-priced firms, because they have more experience of the market and know where the low-priced firms are located, but 'tourists' shop at random.
- 3.12 When firms can supply 'tourists' and 'natives' they have two conflicting incentives. They have an incentive to set:
- a high price to extract the rents from tourists, or
 - a lower price to attract natives.

Given firms' conflicting incentives, price dispersion can occur in equilibrium where firms select a price between an upper bound and a lower bound price.

- 3.13 The upper bound price is the monopoly level if:
- tourists shop at random (Varian, 1980), or
 - tourists consider the expected marginal benefit and marginal cost of an additional search and search costs are sufficiently high (Stahl, 1989).

Otherwise, the upper bound is constrained below the monopoly price if:

- tourists consider the expected marginal benefit and marginal cost of an additional search and search costs are sufficient low (Stahl, 1989).

3.14 The lower bound is given by the price where firms are indifferent between:

- supplying their tourists and attracting natives for certain and
- setting the upper bound price to simply supply tourists¹⁰.

3.15 A common feature in theoretical search models is that the average price in the market falls as the:

- proportion of consumers that search the market increases, or
- the cost of search decreases.

As a result, remedies that aim to make markets with search costs work well for consumers should focus on these two objectives.

Markets with switching costs

3.16 When consumers have previously purchased a good or service from a supplier, they may face some cost when changing to a new supplier, which is not incurred if the consumer remains loyal to their current supplier. These 'switching costs' can take several different forms which, among others, include:

- contract termination charges
- the expected loss of points from a loyalty scheme if a purchase is made elsewhere, or
- the perceived cost of learning to use a new product.

3.17 Switching costs provide firms with a degree of market power as consumers have an incentive to continue purchasing the product from their supplying firm even in the extreme case where a rival, who sells an identical product, is known to be slightly cheaper. The switching cost literature has been reviewed by Klemperer (1995), OFT (2003) and Farrell and Klemperer (2006).

¹⁰ The pricing equilibrium of this problem is solved by mixed strategies, which, roughly speaking, resolves the tension between setting high or low prices through the use of probabilities. While one may have concerns about the stability of mixed strategy equilibria, they have the desired effect of generating a distribution of prices based upon firms' *ex ante* best responses.

Switching costs and pricing

- 3.18 The presence of switching costs has two (*ex post*) effects that dampen competition. When consumers face switching costs:
- a firm has an incentive to unilaterally increase its price relative to its rivals, as a consumer that incurs a switching cost will accept a price that is slightly higher than a rival firm's, and
 - a firm has a smaller incentive to attract a rival's consumers compared to no switching costs, as it needs to offer a larger discount in order to undercut its rival by an amount that is greater than the switching cost.
- 3.19 When all consumers are 'locked-in' (that is, switching costs are large enough to prevent consumers from switching between firms), firms set prices at the monopoly level (Klemperer, 1987a). When consumers are not locked-in, the pricing equilibrium of this problem is solved by a mixed strategy which equalises the incentives to increase and decrease price referred to in the bullet points above (Shilony, 1977).

Bargain-then-rip-off pricing

- 3.20 The *ex post* effects of switching costs (discussed above) can affect *ex ante* competition as firms' current market shares are important determinants of their future profits (Klemperer, 1987b). For example, consider a two-period game where:
- all consumers can initially purchase from any firm without cost in the first period but
 - all consumers face a switching cost in the second period.

In the second period, firms have some market power over consumers who they supply in the first period. As a result, in the first period, firms have an incentive to compete more fiercely for consumers to increase their market share.

- 3.21 This can lead to what is known as 'bargain-then-rip-off' pricing, where prices are initially low (sometimes below cost) to attract consumers to the firm, but in the future prices will be high, as firms attempt to exploit their market power.

3.22 Bargain-then-rip-off pricing is less likely to occur when we relax some of the assumptions of the model above. For example, consider a situation that lasts longer than two periods and where in each period a firm can supply:

- consumers they have supplied in the previous period, who have a switching cost, and
- consumers who have not been supplied by any firm, so have no switching costs.

Assume that firms cannot price discriminate between the two types of consumers and consumers that have been supplied in the previous period are locked-in, so a firm cannot attract another rival's locked-in consumers. Under these assumptions, in each period firms face a tradeoff between:

- setting high prices to extract rents from its existing consumers, and
- setting low prices to attract unattached consumers from whom they may hope to extract rents in the future.

As a result, the level of prices will depend on the relative weights of these two incentives.

The impact on market entry

3.23 Switching costs can have an effect on market entry (Klemperer, 1987c). For example, entry can be deterred when:

- switching costs are high, and
- an incumbent has the majority of the consumers locked-in.

3.24 Entry is deterred because an entrant will have to lower its price significantly in order to attract at least some consumers away from the incumbent. Moreover, consumers that switch will tend to be the ones with lower switching costs. These consumers are less profitable as they are likely to switch back to the incumbent if the entrant attempts to increase its price in the future.

3.25 Alternatively, when switching costs are low, entry may be deterred because an incumbent would be fiercely competitive in the event of entry to try to prevent its consumers from switching to the entrant.

3.26 However, entry can be facilitated if:

- an incumbent has a large number of consumers locked-in
- there are new consumers who do not have switching costs, and
- an incumbent does not have the ability to price discriminate between the two types of consumers.

In this situation entry can be facilitated because the incumbent may react less aggressively to an entrant as it may be more profitable to extract the rents from its locked-in customers rather than competing for unattached consumers.

3.27 Given that switching costs can provide firms with market power, policymakers may wish to intervene in a market in which firms have managed to impose artificial switching costs upon consumers. In such situations, interventions that reduce artificial barriers and allow consumers to switch more easily between firms can make markets work better for consumers.

Markets and models of consumer behaviour

3.28 The models summarised in previous subsections concerning search and switching costs, have tended to assume that consumption decisions result from optimising behaviour by consumers, who have both the desire and ability to gather information, process it appropriately and act upon it in their own self-interest. The problems discussed in those models primarily arose from external constraints or costs that inhibited optimising behaviour and the general principles behind remedies tend to focus on removing such constraints.

3.29 Other issues can arise when some of the assumptions about consumer motivation and ability to optimise are relaxed. When consumers depart from optimising behaviour they may behave in ways that make them economically vulnerable, providing firms with the ability to exploit that behaviour.

3.30 It is possible that both consumers and firms depart from optimal behaviour, but it is usually accepted that firms are likely to have more information about and a better understanding of a market in which they operate compared to consumers. For instance:

- competing firms have much more to gain (and lose) than an individual consumer
- firms can employ specialists to analyse the market more rigorously than consumers can, and
- consumer understanding of a market may be limited if they have minimal experience of a market, if any.

As a result, the majority of research has focused on profit-maximising firms and consumers that depart to some extent from optimisation behaviour. The departures from unconstrained optimising behaviour may be summarised under:

- bounded rationality, and
- non-standard preferences.

Ellison (2005a) provides a recent review of the literature with respect to industrial organisation.

Bounded rationality

'Deliberation about an economic decision is a costly activity'
Conlisk (1996)

- 3.31 The notion of bounded rationality is attributable to Simon (1991, reviewing earlier work dating back to the 1950s). It can be summarised by the concept that the time and attention a person can apply to a task is a scarce resource. As a result, people are bounded in their ability to process (receive, store, retrieve, transmit) the relevant information required to consistently make optimal choices.
- 3.32 Related to this literature is the impact of heuristics on behaviour. For instance, to limit the time, effort and cognitive resources a person expends to solve complex decisions, some people may attempt to use 'rules-of-thumb' that simplify problems in a way that provides solutions which, more often than not, lead to satisfactory but not necessarily optimal outcomes.
- 3.33 In terms of markets and consumers, Ellison (2005a) suggests that cognitive costs that boundedly rational consumers may experience might simply be interpreted as search costs. For example, consider the same situation as

the tourists and natives model¹¹ except that, instead of searching for price information:

- the relevant information is available but
- consumers need to sift through information and perform a number of calculations in order to find out which firm is the cheapest for them.

3.34 In this interpretation, natives can be seen as consumers who have the ability to quickly process information to be able to shop at the lowest-priced firm. Tourists can be interpreted as consumers who are less efficient at processing information, so may have higher costs of solving the problem or choose a heuristic such as picking an outlet at random. As a result, cognitive costs can lead to market power when consumers' tasks are complex to perform.

Non-standard preferences

3.35 Some consumer behaviour may depart from what is assumed and expected by optimal decision making, because consumers' underlying preferences are structured so that, even if individuals can acquire and process all of the relevant information, what they prefer and how they frame the problem is different from the model of optimisation. We refer to this behaviour as non-standard preferences.

3.36 DellaVigna (forthcoming) reviews a substantial and growing body of empirical evidence of people that exhibit non-standard preferences in the field. In the current state of knowledge there is no operational model that is consistently used to analyse the behaviour of people with non-standard preferences. With respect to markets and consumers, however, three main areas have been identified where consumer behaviour systematically differs from what is expected by standard preferences.

Intertemporal decisions

3.37 Consumers may have limited abilities to anticipate and correctly predict their future tastes and actions of themselves and others. Moreover, they may also give greater weight to the present and immediate future relative to the weights given to different points in the future. This can result in a tendency to put off actions that cost time and effort in the short-run and seem (much) more palatable when postponed slightly. This can lead to

¹¹ See paragraph 3.10 onwards.

forms of procrastination which may have much the same implications as the existence of search and switching costs.

- 3.38 In addition, people may encode of some past experience as snapshots, focusing on high/low points, recalling more vividly the most recent elements, and act accordingly, rather than remembering the whole experience and using it as the basis for future choice.

Risk

- 3.39 People may behave as if they are 'excessively' risk averse in some circumstances, while being risk seeking in others, seemingly evaluating gains and losses asymmetrically relative to the status quo. In addition, judgments about the likelihoods of events, especially personal adverse events, may be confounded with and distorted by the nature of the outcome and may systematically fail to follow basic 'laws' of statistics.

Attention

- 3.40 Some individuals are unlikely to attend equally or 'appropriately' to all aspects of a good or service or all facets of a transaction: they are liable to pay less attention to those aspects or characteristics which are less visible or salient. For example, they may neglect various add-ons and extra charges; while at the same time, if 'optional' charges are included, they may not notice that they can opt out. There may be a tendency to act as if underweighting those characteristics which are more difficult to judge and therefore easier comparisons receive relatively greater weight. Uncertainties may be neglected or simplified, probabilities may be found difficult to compute, interest rates difficult to compound, and so on, with short-cuts vulnerable to bias.

Bounded rationality or non-standard preference?

- 3.41 It is not always easy to draw a sharp distinction between:
- limitations of judgment and the heuristics and possible errors that may follow from this, and
 - 'genuine' preferences that are configured differently.

It could be that, in the face of the lack of time and ability to acquire and process appropriately all of the relevant information, many individuals exhibit the same kinds of heuristics, which then take on the appearance of some alternative non-standard model.

- 3.42 For example, with respect to the ways in which people handle decisions involving risk, a number of alternative theories have emerged which relax one or more of the conventional axioms of rational choice¹². But whether these are alternative forms of non-standard preferences, or models which systematise certain subsets of heuristics, is still an open question. Likewise, with respect to the ways in which people handle intertemporal decisions, it is not clear whether people actually discount the future in some non-standard way, or whether their shortcuts and errors tend to operate as if they follow some alternative system of discounting¹³.
- 3.43 It is also possible that limited cognitive ability can be correlated with (and may even cause) non-standard preferences. For example, Benjamin *et al* (2006) conducted a laboratory experiment in which some subjects had to make decisions while their cognitive resources were reduced¹⁴. They find that a lack of cognitive resources exacerbated small-stakes risk aversion and short-run impatience.

What makes a successful intervention?

- 3.44 If policymakers are concerned with maximising the welfare of consumers, they will want to ensure that markets provide consumers with the products they want at prices at (or close to) the competitive level. When a market does not deliver this, a package of remedies may be needed to protect consumers and improve the competitive process in the market.
- 3.45 A successful intervention can be defined as one that benefits consumers to a greater extent than the cost to society of implementing it. Going further, an optimal intervention may be described as one that maximises the benefit to consumers whilst minimising the cost.

¹² See Starmer (2000) for a review.

¹³ As in some form of 'hyperbolic' discounting of the kind discussed by O'Donoghue and Rabin (2001).

¹⁴ This is achieved by a 'cognitive load' manipulation where subjects were required to remember a sequence of seven numbers while they were answering questions, and recall those numbers in order after the session.

- 3.46 In terms of theory, the benefit to consumers is commonly measured by consumer surplus, which is the difference between the total amount that consumers are willing to pay for a good or service and the actual price paid, aggregated across all consumers that purchase the good or service. The cost upon society is usually taken to be the cost to the regulator of implementing the remedy.
- 3.47 When a policymaker follows a consumer surplus standard, the loss of firms' profits due to an intervention is not taken into account in the benefits or costs of the remedy. However, a policymaker may be concerned about imposing too much of the cost upon firms, because it could be passed on to the consumers through higher prices.

Estimating consumer surplus

- 3.48 Estimating a remedy's likely effect upon consumer surplus can be difficult, as it can include making a number of tradeoffs. For example:
- a remedy can benefit an individual consumer in some ways but harm them in others
 - some consumers may be made unambiguously better off by a remedy, but others can be unambiguously worse off. Different weights can be placed on the costs and benefits to different types of consumers
 - consumers may be unambiguously better off in the short term, but worse off in the long run or vice versa.
- 3.49 In addition to these tradeoffs, complications can arise when considering the welfare of consumers that are bounded rational or exhibit non-standard preferences. For instance, consumers that overweigh the present period compared to future periods may be willing to pay more today than if they had standard preferences. As a result, for consumers that are boundedly rational or have non-standard preferences, consumer surplus may not be an adequate measure of consumer welfare. One might assume that taking the consumer surplus that would arise if the consumer is fully rational would be best, but this relies on there being a true measure of consumer surplus, as well as policymakers' ability to measure it.
- 3.50 A simple rule-of-thumb to estimate the benefits of a remedy on consumers is to consider how much the consumers have saved on aggregate from the

intervention taking the past prices as the counterfactual. However, it is more difficult to estimate benefits which are in a non-monetary form.

Principles of good regulation

3.51 In addition to the tangible measures of a good remedy, there are pragmatic issues that arise from regulations. To address these issues the Better Regulation Task Force has produced five principles of good regulations. Since 1997 the Principles of Good Regulation have been widely used to evaluate and improve the quality of regulation and its enforcement. The five 5 principles of good regulation are:

- **Proportionality.** Policymakers should only intervene when necessary. Remedies should be appropriate to the risk posed and penalties proportionate to the harm done. The costs of implementation should be clearly identified and minimised.
- **Accountability.** Regulators must be able to justify decisions to the Government and the general public.
- **Consistency.** New regulations should be consistent with existing regulations.
- **Transparency.** The purpose of the regulation and the penalties for non-compliance should be clearly communicated.
- **Targeting.** Regulation should be focused on the problem, and minimise side effects. There should be *ex post* analysis to find whether the regulation is effective and still necessary.

Section summary

3.52 Firms can have market power when some consumers are unwilling or unable to find the best deal for them. When consumers are inactive they may not receive the full benefits from competition.

3.53 When consumers find price and non-price information costly to gather they may decide to purchase a product at a high price rather than searching the market to find the same product at a lower price or a different product that suits their wants better at the same price. In general, increasing the number of consumers that are willing to search the market reduces firms' market power.

3.54 When consumers incur a cost of changing supplier that they do not experience if they remain loyal to their current supplier, they may decide to

remain with their current supplier even if they know a rival firm sells an identical product at a lower price. In general, increasing the number of consumers that are willing to switch between different suppliers can reduce firms' market power.

3.55 There is a growing literature that suggests that some consumers are likely to behave in ways that are not commonly considered as optimal, which can make them economically vulnerable. Consumers may:

- want to behave in their material self-interest but be bounded in their ability to do so, and
- behave and frame situations differently than what 'standard' economic theory predicts.

In many cases it is difficult to determine whether a person has a non-standard preference for an outcome or whether the outcome is due to imperfect optimisation.

3.56 A package of remedies can help consumers be more active in a market. An optimal intervention may be described as one that maximises the benefit to consumers whilst minimising the cost, but it should also follow the Better Regulation Task Force's five principles of good regulations.

Discussion of the impact of the remedies

3.57 The main remaining sections are:

- helping consumers obtain information and make comparisons
- helping consumers make informed choices at the point of sale, and
- helping customers switch suppliers.

4 HELPING CONSUMERS OBTAIN INFORMATION AND MAKE COMPARISONS

4.1 Consumers may find it difficult to identify which firm offers the lowest price or which firm's product satisfies their wants best. The difficulty arises out of the lack of information and the use made of it. In their decision making consumers can face costs of gathering and processing information about the products in a market.

4.2 Such costs can provide firms with a degree of market power, because consumers may purchase a product even though a rival product is cheaper or suits their wants better, other things equal. Consumers may not search the market because:

- they are unaware of the benefits of searching
- visiting each store requires effort and is time consuming, or
- they find pricing structures and products too complex to understand.

4.3 When consumers are reluctant to search a market, firms can:

- charge high prices or offer low quality, and
- attempt to complicate consumers' tasks to increase search costs further.

4.4 This section discusses the interventions that are available to increase consumer ability to acquire the necessary information to make informed purchasing decisions either through searching the market effectively or using information provided by others. Good information before the point of sale (POS) has the most immediate and obvious beneficial effect on consumer decision making. Hence the remedies discussed in this section are likely to be the most powerful. There are situations where policymakers can rectify informational shortcomings at or after the POS. Such remedies are discussed in sections 5 and 6.

4.5 Remedies can increase the amount of consumers making informed choices by:

- providing consumers with information about products
- assisting consumers to compare offerings when comparisons are complex, and
- reducing the costs of finding the necessary information.

- 4.6 The measures that are available to help consumers obtain information and make comparisons include:
- providing information about quality
 - standardisation of pricing structures (to facilitate comparisons), and
 - price comparison sites.
- 4.7 In consumer markets, policymakers can regulate a good or service, the price of service, or the information provided. Regulating the information is a less intrusive way of making a market work well, which may be beneficial to all, including policymakers as it uses fewer resources. The risks associated with information provision are that they can be ineffective when inadequately designed and can increase the amount of administrative burden on firms, which could increase their costs and prices. In addition, information provision can increase the likelihood of collusion in some situations. See Annexe A for more discussion of the effects of searching and information provision in a potentially collusive consumer market.
- 4.8 Before considering the effects of the remedies mentioned above, we provide a brief discussion of when adequate information will not be provided by the market¹⁵ and problems that can occur when this happens. The next subsection focuses more on quality information, because the problems regarding price information have been discussed in Section 3¹⁶.

¹⁵ See Bagwell (2006) for an in-depth review of the advertising literature.

¹⁶ See paragraphs 3.6 onwards.

The economics of information provision

The unravelling principle

- 4.9 In a competitive market, firms can have incentives to provide consumers with information about the deal they are offering. For example, the 'unravelling principle' suggests that firms have an incentive to provide consumers with complete information about their products if:
- there are differences between products which consumers care about, and
 - firms can make credible statements about their products.
- 4.10 The intuition is that if no firm revealed the relevant information, consumers would assess all firms as 'average' in terms of what they offer. Therefore, the firm offering the best terms has an incentive to disclose its information to consumers in order not to be considered average. Among any group of firms yet to reveal information, there is a firm who is 'best among the rest' which is hurt by being considered one of the rest and who hence also discloses information. This occurs until there is one firm left (that offers the worst deal on the market) and consumers infer its quality from the firm's silence (Grossman, 1981; and Milgrom, 1981).
- 4.11 The unravelling principle rests on the assumption that the truthfulness of revealed information can be verified either directly by consumers or at least by a trusted third party. As a result, the principle suggests that a powerful remedy may be to help firms make credible statements so that they are able to communicate with their consumers. An assessment of the power of this principle is important and we turn to this next.

Does the unravelling principle work?

- 4.12 The unravelling principle may not be as effective when some of the assumptions it is based upon are relaxed. For example:
- Jovanovic (1982) and Cheong and Kim (2004) find that information provision is incomplete where disclosure is costly
 - Farrell (1980) finds that unravelling may not occur where acquiring information is costly for the producer

- Milgrom and Roberts (1986) argue that competition is not generally sufficient to provide decision makers with full information about products if they are strategically unsophisticated¹⁷, and
- Shavell (1989) highlights the importance of the credibility of the firms' statements.

Box 4.1: Empirical evidence of the unravelling principle

Mathios (2000) studies the impact of mandatory labelling in the US on salad dressing during the change in the laws governing that food products must display labels. Before the law changed, displaying nutritional labels was voluntary, although regulation ensured that any statement on a label had to be truthful. Mathios (2000) finds evidence that there is some, if not perfect, support for unravelling. Before the change in legislation, all low fat salad dressings included a label, while the majority of the high fat did not. Making nutritional labels mandatory enabled consumers to make better choices, as the highest fat dressings experienced a significant loss of markets share.

Avery *et al* (2007) analyse the information provided by firms for smoking cessation products when the products move from prescription to over-the-counter (OTC) status. As a result, an expert purchaser (the general practitioner) is no longer involved in the purchasing decision. Advertising should increase when a product moves to OTC status, because, compared to an expert, consumers (a) require more information to make a judgement; and (b) are more susceptible to claims. The results show some evidence for the unravelling principle as OTC status increases advertising.

Jin (2005) provides empirical evidence that the unravelling principle does not work for health maintenance organizations (HMOs) that provide a form of health insurance coverage in the US. Lack of expertise makes it difficult for patients to assess whether the medical intervention is appropriate and properly carried out. Due to HMOs consistent low service quality, they began to be accredited by the National Committee of Quality Assurance (NCQA) in 1991. Controlling for cost and demand factors, Jin (2005) finds that in more competitive markets, HMOs are less likely to disclose through the NCQA.

4.13 Box 4.1 provides evidence that the unravelling principle does exist in reality, but rarely works perfectly. There may be scope for policy intervention

¹⁷ Consumers may not understand the strategic importance of no disclosure by a firm. See Fishman and Hagerty (2003) and Garrod (2007) for similar discussions.

either to provide firms' statements with credibility or through identifying the scope of the message.

Experience and credence goods

- 4.14 Information about the relative qualities of competing products can be difficult to gather, as in many cases consumers have to purchase the product before they can fully assess its quality (Nelson, 1970). Consequently, there can be an information asymmetry pre-purchase as consumers may be unaware of a product's quality, whereas firms are fully informed.
- 4.15 When consumers cannot verify firms' claims about their products, fully rational consumers will disregard any information that is provided. Information from firms is 'cheap talk' as consumers cannot identify which firms are telling the truth and which are not (Farrell and Rabin, 1996). As a result, the unravelling principle fails to provide consumers with the relevant information.
- 4.16 The ability for consumers to verify the quality of different products pre-purchase depends upon the characteristics of each product. Products can be characterised into three separate categories:
- **search goods** where it is easy to assess quality pre-purchase¹⁸
 - **experience goods** where consumers cannot verify a product's quality pre-purchase, but it is easy to assess post-purchase and
 - **credence goods** where consumers are unable to assess a product's quality before or after purchase.
- 4.17 Problems due to information asymmetries are likely to be insignificant for search goods and experience goods that are purchased frequently. A search good's quality can be observed by simple inspection pre-purchase. Previous purchases of an experience good can improve a consumer's information for subsequent purchases and help them to decide whether to repeat-purchase the same product or switch to a different product. Consumers may not possess or rely on past experiences when they have infrequent interaction with firms.
- 4.18 Caswell and Mojduszka (1996) point out that labelling and government monitoring can affect how we might classify a product. 'For example,

¹⁸ Consequently, firms can disclose credible information about its products.

mandatory nutrition labelling makes characteristics such as fat content into search attributes that can be verified by reading the package label, while government oversight of claims increases their credibility. Thus labelling policies are intended to improve the quantity, and often the nature, of quality signalling in markets in order to improve the functioning of markets for quality attributes' (p1252).

Asymmetric information lowers quality

4.19 When firms are better informed than consumers about quality, two types of problems can occur:

- a market may not exist for a good or service, or
- a market is less efficient than if there is symmetric information.

4.20 For example, consider a used car market, where salespeople hold private information on which cars are high quality and which are low quality. Consumers are uncertain of a car's quality until they have purchased the car, and so both high and low quality cars sell for the same price. Consequently, for a car of unknown quality, consumers are willing to pay:

- more than they would for a low quality car, because it may be high quality but
- less than they would for a high quality car, because it may be low quality.

4.21 A market for high quality cars may not exist, because a salesperson is willing to sell a low quality car at a higher price, but is unwilling to sell a high quality car at a lower price. As a result, rational consumers realise that only low quality cars will be on offer so will only be willing to pay the value of low quality cars (Akerlof, 1970).

4.22 If consumers do not have the strategic sophistication to work out that only low quality products will be produced and believe information provided by interested parties to some extent, there is a possibility that consumers will be misled by firms¹⁹.

¹⁹ An example from psychology is provided by Cain *et al* (2005) where subjects are paid for their ability to estimate the number of coins in a jar. Subjects only see the jar from a distance, but they can rely on the information of advisors who can inspect the jar up close. In treatment 1, advisors are paid with respect to how close the subjects' guesses

4.23 The problems arising from asymmetric information can be overcome by firms. This can occur when:

- producers of high quality durable goods offer warranties which low quality producers would not implement, as they expect consumers will use the warranty on too many occasions (Grossman, 1981)
- firms develop a reputation of supplying high quality goods (Tirole, 1988), and
- firms are able to signal their product's quality through price (Milgrom and Roberts, 1984).

Main points

- It is possible that firms provide consumers with the necessary information.
- A key factor is the ability of firms to provide credible statements about product characteristics and prices.

Interventions

4.24 The following subsections discuss the potential effects of:

- providing information about quality
- standardisation of pricing structures (to facilitate comparisons), and
- price comparison sites.

Providing information about quality

4.25 Consumers can be uncertain of a product's quality pre-purchase, and only be able to assess it post-purchase, if at all. Information provision about quality can enable or require firms to disclose a product's quality or some information closely related to act as a proxy²⁰. The information can be

are to the actual amount, but in treatment 2 they are paid with respect to how high they are. Despite the advisors' incentives being common knowledge, guesses are on average 28 per cent higher in treatment 2, which suggests that the subjects are influenced by advisors despite the conflict of interests.

²⁰ Factual information can be provided for the nutritional content on food, for example. Information about the quality of a meal in a restaurant can be more difficult to provide, but past quality may be a good proxy of present quality. Generally, factual information is more difficult to provide for services than for goods.

provided with a product, on a product's packaging, in a firm's store window, or on a website.

4.26 Providing consumers with the ability to assess quality pre-purchase can:

- enable consumers to make informed choices pre-purchase, and
- increase the average level of quality in the market.

4.27 Providing information about the terms and conditions of a good or service is similar to providing information about a restaurant's hygiene quality. If consumers are not aware of a product's terms and conditions pre-purchase, they will be unable to assess their 'quality' until post-purchase, when consumers may need to seek redress. As a result, the lack of awareness about terms and conditions can mean that a product is an experience good, despite many other quality attributes being verifiable pre-purchase.

4.28 This section focuses on providing consumers with information to enable consumers to make better choices pre-purchase by changing experience goods into search goods. See section 5 and 6 for discussion of cooling-off periods and cancellation rights, respectively. Cooling-off periods provide consumers with the ability to return a product immediately after purchase if it is not the desired quality. Cancellation rights cover a longer contract period where quality emerges during use.

4.29 Following this section there is discussion of 'minimum standard requirements' which impose a lower bound on the quality of a good or service within a market. This remedy can increase the average quality in the market and so can be used as a substitute for information provision about quality.

When will information provision be effective?

4.30 Information provision enables consumers to make better pre-purchase choices, but for the remedy to be effective:

- consumers must believe the information is credible
- the information must be simple to use
- the information must be a close proxy of quality, and
- the information must enable comparisons between products.

Box 4.2: Empirical evidence of quality information provision

Jin and Leslie (2003) study the effect of an increase in quality information of restaurants in Los Angeles between 1996 and 1998. The Los Angeles County government passed an ordinance that required restaurants to display a letter-grade card (A, B or C) prominently in their window corresponding to the result of their most recent Department of Health Services hygiene inspection. Before grade cards were introduced firms' revenues were insensitive to changes in hygiene scores. After the regulation, an A-grade (the best) increases revenue by 5 per cent compared to a B-grade (second best), on average. There is also evidence that Health inspection scores increase over the period and foodborne illness hospitalisations decreased by 20 per cent, which implies that restaurants increased their quality due to grade cards. The effect upon price is unknown.

Chipty and White (1998) study the effects of information provision in the child care industry. It finds that providing information about quality intensifies competition.

BRE and NCC report (2007) also found evidence in their focus groups that consumers believed that this form of 'scores on the doors' would be helpful to consumers in the UK when considering food hygiene inspection information.

Plain and simple

4.31 The Better Regulation Executive (BRE) and National Consumer Council (NCC) report (2007) argues that regulators need to provide consumers with better information which is easier to process and understand. In a number of consumer focus groups the research finds that current information requirements do not have the desired effect in several different situations, varying from health and safety warnings on toasters to information on consumer credit agreements. The main findings of the focus groups are:

- consumers are unwilling to spend time reading a considerable amount of information that is available²¹
- consumers are commonly confused by information because of the language (formal, legal) it is written in. Responses in the focus groups suggested consumers considered complex information to be irrelevant

²¹ This is especially true for 'small print', which is unattractive due to its dense format.

and boring, which can make some low literacy consumers feel 'humiliated', and

- there was confusion as to whom information is aimed at, as focus group members believed that the benefit of some legalistic information was for the provider and not for themselves, and consequently it can be neglected²².

4.32 Carlton and Perloff (1994) argue that a 'sensible' consumer would process information up to the point where the marginal benefit of processing the information equals the marginal cost. This implies that some consumers may not make use of all of the available information²³, other things equal, when:

- the information is complex and extremely costly to understand, and
- the expected benefit of processing the information is limited.

4.33 Consequently, consumers are likely to be uninformed about products that are complex and difficult to understand or products that are less expensive, other things equal²⁴. With this in mind, information provision is going to be most effective when it lowers the costs of consumers processing the information for expensive products. This would be the case where in the absence of the remedy, firms are unable or unwilling to provide consumers with the information in an adequate format.

Different needs

4.34 Consumers differ in their ability and willingness to process information. For the information provision to be effective policymakers need to consider who the information is aimed at, as different consumers may require different bits of information to make choices.

²² For example, a warning to wear eye protection during use of a newly bought drill may be interpreted by some consumers as protection for the drill manufacturer from potential lawsuits brought by consumers that unwittingly damaged their eye-sight whilst using the drill, rather than protecting the consumer from harming themselves.

²³ A fully rational consumer that has no cost of processing information would process all information. A boundedly rational consumer that faces costs of processing information may decide not to use all information that is available.

²⁴ Products that are more expensive can be more complex to understand, so information provision for these types of products will be especially effective, as consumers have more to benefit from making informed choices.

- 4.35 The BRE and NCC report (2007) finds that all consumers prefer the information to be as simple as possible, but possibly for different reasons. For example, low literacy consumers prefer simpler information because it is easier to understand, while high literacy consumers do so because it saves time processing it. If this has more general validity this simplifies the task of designing a remedy²⁵.

Too simple?

- 4.36 Where quality may vary along a continuous scale, but available information only distinguishes between high and low quality, firms will only have an incentive to produce the minimum quality to get into each quality bracket. Thus the inability to provide precise information can reduce the amount of quality variants provided in the market.
- 4.37 In addition, it may be difficult or inadequate to simplify some information. For example, when there is a large amount of information to be processed, such as information of terms and conditions of complex products, reducing the quantity may limit the usefulness of the terms and conditions because the devil is in the detail.

Standardisation of information

- 4.38 Information provision needs to be consistent across products and localised markets. Standardisation allows consumers to make quick comparisons and provides them with confidence in the choices they are making. A recent example of where standardisation of information has become important is food label signposting of nutritional content.

Food label signposting

- 4.39 To help consumers adopt a healthy balanced diet, clearer nutritional information is required to be provided in a simple format on the front of the product's packaging.
- 4.40 Research by the Food Standards Agency²⁶ identified two signposting techniques as superior at signalling the nutritional levels than no signposting:

²⁵ Research on nutritional labels on food products finds that different groups react differently to information. See paragraph 4.41.

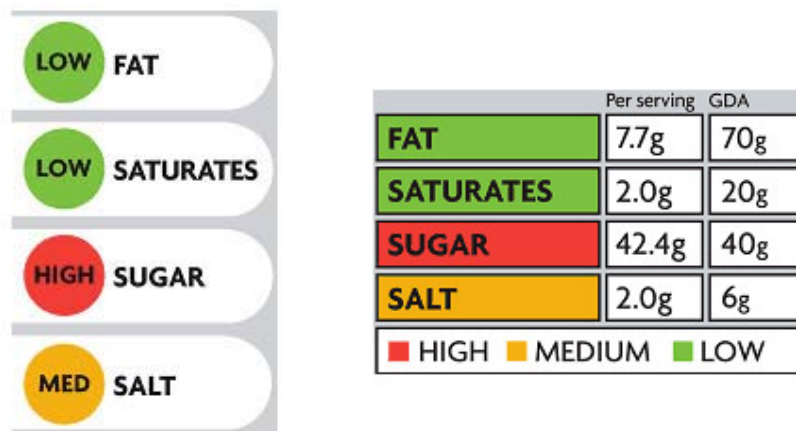
²⁶ For more details see: www.food.gov.uk/foodlabelling/researchandreports/

- a multiple traffic lighting (MTL) system, simply indicates green if the product has a low amount of a certain nutrient, red if it has a high amount, but amber if it has an intermediate amount, and
- a coloured guideline daily amounts (CGDA) system, adding information about the levels of four key characteristics in terms of an average person's guideline daily amount.

4.41 However, their research also finds that consumers may prefer different types of information. Although the majority of consumers (65 per cent) preferred the CGDA, a significant minority were unable to use the more complex CGDA information correctly, because:

- they did not have a good understanding of percentages, and
- there was confusion as to whether the percentage represented the level of a nutrient or the proportion that the product contributed to the GDA for a given nutrient.

Figure 4.1 – Example of MTL and CGDA food label signposting



(a) MTL

(b) CGDA

Source: Food Standards Agency website (www.food.gov.uk)

4.42 Standardisation of labels is complicated further, because consumers have different nutritional needs. The traffic light system and the guideline daily amount are usually calculated for consumption of an average adult woman. As a result, men and children (or their parents) may disregard the

information, because they have different nutritional needs compared to women, or they may be misled by the information, which can mean that children consume over their guideline daily amount.

What are the negative aspects and how can they be minimised?

Manipulated information

- 4.43 When a product's actual quality is difficult to measure, past quality of the product or service can be used if it is a good proxy for present quality. Firms may have an incentive to free ride on a high quality score (given by past performance) by selling or producing low quality to reduce costs in the present.
- 4.44 Firms may try to influence their quality ratings in other ways. Dranove *et al* (2003) analyse the impact of publicly reporting the physician and hospital mortality rates for coronary artery bypass graft (CABG) surgeries. The study concludes that New York and Pennsylvania hospitals began to avoid operating on unhealthy patients, who spent large amounts on hospital bills in the year before their surgeries, to limit the likelihood of affecting their mortality rates negatively. The authors noted that this is only a short-term effect, and that the long-term effect is unknown.

Incentives to inform

- 4.45 Mandated disclosures may not convey information which firms would have chosen to disclose. The impact of disclosures can be affected by the way they are presented or 'framed'. The use of legalistic language can create the impression that the information is there to protect firms rather than to inform consumers who will then ignore it²⁷.
- 4.46 The BRE and NCC report (2007) argues that an alternative to regulating information disclosure is to allow firms to provide the information in any format they wish, but monitor the level of consumer understanding in the market. If the level of understanding is below some threshold, firms are

²⁷ The BRE and NCC report (2007) suggests information requirements are dealt with by a legal or compliance department, rather than a marketing department, which may have more expertise in gaining consumers' attention and understanding. This can occur because many information requirements are highly prescriptive to avoid businesses manipulating the meaning.

fined²⁸. This may be beneficial as firms are better able to communicate to their customers than policymakers (Bertrand *et al*, 2006), so firms should be able provide information in a format that is easier to understand²⁹.

Problems with proscription

4.47 There are some practical problems with the implementation of this remedy. Firstly, information provision is unlikely to lead to standardised messages. For example, some retailers are using their own version of the labels shown in Figure 4.1. The benefits of better communication about a single firm's offering may be at the expense of making comparisons between offerings more difficult thereby reducing consumer search.

4.48 Secondly, fines have to be structured carefully to provide the right incentives. Unless the fine relates both to a firm's share of consumers who have not searched elsewhere and who remain uninformed, there are incentives to free ride³⁰. This may provide an unbiased measure of how effective a firm's information is. However, there remain several difficulties with implementation:

- it is important to link information provision to specific firms
- an adequate measure will be provided only if a significant proportion of consumers do not search other firms, which is counter to what policymakers want
- it may provide firms with an incentive to focus their attention solely upon consumers that have not searched the market, as the other consumers are not factored into the incentive scheme³¹

²⁸ Alternatively, if firms can demonstrate that they have the incentives and ability to provide consumers with the correct information, policymakers could withdraw more prescriptive provisions.

²⁹ A similar result is found in Ippolito and Mathios (1995) who examine changes in consumption during two regulatory regimes in the US. One regime was characterised by attempts by government and others to educate the public about links between fats and disease risks. The other gave firms incentives to provide this education themselves through advertising and labels. Their main finding was that while consumers responded to information flows throughout the two periods by reducing their fat consumption, the rate of change of fat consumption was higher in the second period where the information was provided by the firms.

³⁰ Firms that do not provide information can afford to attract consumers informed elsewhere through lower prices. Thus a fine based solely on the share of uninformed consumers will harm those providing information disproportionately.

³¹ This may not always be a bad feature as consumers that search the market are likely to be more informed anyhow.

- it will increase the costs of firms, consumers and regulators, and
- monitoring of consumer understanding must be completed at or shortly after the point of sale, so consumers are able to recall their experiences.

4.49 As a result, using fines to provide incentives for firms is likely to be difficult to implement. Doing so may be possible in some limited cases. For example, it may be effective where:

- there are significant benefits to providing firms with flexibility
- firms have the ability to provide consumers with adequate information
- a lack of standardised information is not a problem
- it is likely that the firm that makes the sale is the firm that provides the information, making the remedy relatively easy to monitor, and
- costs imposed on firms, consumers and regulators are low.

Main points

4.50 When consumers find a product's quality difficult to determine before purchase, high quality products can be driven from the market. Information about a product's quality can lead to:

- a greater variety of products with different qualities
- an increase in the average quality in the market, and
- more consumers making informed choices.

This intervention is most likely to be beneficial to consumers when:

- consumers differ in their preferences for quality
- the information is credible and a close proxy for quality
- the information is simple to understand
- the information is standardised across product and geographical markets, and
- firms do not have ability or incentive to influence information strategically.

There is robust theoretical analysis and empirical evidence of this intervention's potential effects.

Minimum standard requirement (versus information provision)

4.51 Minimum standard requirements that impose a lower bound on the quality of goods or services within a market are commonly used as alternatives to information provision. Compared to providing information, this type of restriction also increases the average quality in the market, but the significant difference is that the variety of products within the market can be reduced.

Effect on choice

4.52 Any increase in product quality required to adhere to a minimum standard is likely to raise firms' costs and the prices faced by consumers. Consumers who prefer to purchase products with quality below the minimum requirement at lower prices will be denied the opportunity to do so. The welfare effects of such a policy are dependent upon whether the increased quality or higher prices dominate (Leland, 1979a; Leland, 1979b). As a result, minimum standard requirements can be beneficial to consumers when most prefer high quality goods and services, but high quality is not supplied by the market.

4.53 The minimum requirement will also not enable firms to provide products with quality above the minimum requirement if they remain unable to signal the product's quality pre-purchase.

Barriers to entry

4.54 This type of quality standardisation also has the potential to increase barriers to entry for potential new firms. Given that firms must invest in high quality technology they are more likely to be put off by the higher (marginal and sunk) costs.

4.55 Carlton and Perloff (1994) argue that restrictions upon quality may also prevent new innovative products entering the market. They discuss how US model plumbing and building codes required pipes to be made out of copper. As a result, manufacturers that produced plastic pipes, which were less costly to produce and could be installed more quickly by a less skilled labourer, were restricted from entering the market³².

³² It is claimed that the plumbing union supported the restrictive codes to increase demand for their trade.

Main points

4.56 A requirement to produce products above a minimum standard can lead to:

- higher quality at higher prices, and
- potential barriers to entry for firms and new innovative products.

This intervention is most likely to be beneficial to consumers when:

- information cannot be simplified to enable consumers to choose between offerings, and
- most consumers prefer high quality products at high prices.

Standardisation of pricing structures (to facilitate comparisons)

4.57 Firms' pricing structures can be complex making them difficult to compare against each other. Some degree of standardisation of prices can make consumer choices easier, as it reduces the number of dimensions that consumers need to consider to find the best deal. This is likely to enable more consumers to make comparisons, which can increase competition.

4.58 Consumers can be confused by different types of pricing structures. For example, consumers can find comparisons difficult when:

- firms separate prices into different cost components, which can lead to some consumers being inattentive to less salient parts of the price
- comparisons require more than one characteristic to be compared, such as a price-quantity comparison, and
- the total cost to the consumer depends upon usage, such as non-linear tariffs³³.

4.59 As a result, remedies that attempt to help consumers make comparisons can take different forms. This section focuses on remedies that require firms to advertise a common headline price or a standard pricing comparison³⁴. The following section considers a more restrictive remedy that requires firms to set the same pricing structure (or produce identical products).

³³ The total cost of a non-linear tariff is given by a flat rate, which is paid per period, and variable rates, which are dependent upon how much is used.

³⁴ A common headline price includes setting all-inclusive prices rather than separating the cost of add-ons and extra fees from a base line price. A standard pricing comparison requires firms to advertise an average price that captures the total cost of the product.

4.60 Standardisation of price comparisons may make it easier for firms to observe each other's pricing strategies. In some situations this may lead to tacit collusion. For more discussion of collusion see Annexe A.

When will standardisation of price comparisons be effective?

4.61 Standardisation of price comparisons can help consumers compare between offerings, but for the remedy to be successful:

- the price comparison must make it easier for consumers to compare between offerings
- consumers must be willing to search the market, so they are in a position to compare between products, and
- any limitations of the comparison must be minimised.

Complex decisions

4.62 When time, effort and cognitive resources are scarce, some consumers may make quick comparisons between offerings. When pricing structures are complex some consumers may not select the tariff which is best for them.

Box 4.3: Empirical evidence of the success of consumer choices

Wilson and Waddams Price (2007) provide evidence of the successfulness of 472 consumers' switching decisions in the UK retail electricity market. Even though the sample only included people that stated price as the sole reason for switching:

- only 8-19 per cent of consumers selected the cheapest supplier, which is just higher than the expected level (7-14 percent) if they selected a firm at random
- switchers appropriated between 28-51 per cent of the gains available, which means they are better off by £16-22 per annum, on average and
- 20-32 per cent of consumers selected a more expensive supplier, losing £14-35, on average, per annum.

The authors argue that consumers' ability to select a cheaper firm is impaired by the difficulty of comparing firms' complex non-linear tariffs.

4.63 When consumers are not adept at choosing between complex offerings, firms may have an incentive to make consumer tasks more difficult. For example, Spiegel (2006) analyses a theoretical model where consumers use heuristics to overcome their inability to understand a product's multiple characteristics: they pick one characteristic and select the product that from their analysis is best. In this model firms respond to an increase in the number of competitors by spuriously increasing the complexity of their product, which can be detrimental to consumers as they become poorer at selecting a good deal, so competition is less intense.

The common standard effect

4.64 Gaudeul and Sugden (2007) argue that in theory firms may not be able to increase the complexity of consumers' decision problems if there is a common standard across tariffs, which simplifies comparisons. A firm that employs the common standard signals that its products offer value for money. As a result, competition may force firms to use common standards and set competitive prices, even if consumers are liable to make sub-optimal choices when faced with non-common standard comparisons.

4.65 Although this is a plausible argument, the results of the theory depend upon there being a common standard across products³⁵ and that consumers recognise when comparisons are standard and when not³⁶.

Common headline price

4.66 Pricing strategies which separate baseline prices with other associated costs have long been standard parts of the marketing toolkit. If consumers are aware of each part of the components that make up the total cost, the price of each component can be driven down without detriment to consumers. However, when some parts of price are more prominent than others consumers may neglect or place less emphasis on some of the components that make up the total price.

³⁵ This is not always the case. See paragraph 4.72.

³⁶ See paragraph 4.69.

Box 4.4: Empirical evidence of consumer inattention to obscure prices

Chetty *et al* (2007) show that consumers' inattention to taxes not included in the headline price is substantial in the US. First, they conduct field experiment where tax-inclusive prices are posted for 750 products over a three week period (where prices are usually posted exclusive of tax). They find that demand for these products falls by 8.8 per cent compared to control products and nearby control stores, as tax-inclusive prices appear to be higher. Second, they find that alcohol consumption is more sensitive to a tax increase, when it is included in the headline price as opposed to when it is added upon purchase.

Hossain and Morgan (2006) find evidence that consumers are inattentive to postage and packaging charges in a series of field experiments on an auction website. It is common practice for distance sellers to separate a product's total price into the price for the item itself and the price for postage and packaging. If consumers are fully aware of the total price, it would not matter how the price is divided, as only the total price matters. It is found that starting an auction for a CD at a lower opening price and charging a higher shipping cost leads to earlier bidding, more total bids, and a 21 per cent higher final price.

- 4.67 Separating prices into cost components can be detrimental to inattentive consumers as they may visit a store which they believe to be the cheapest, but can be charged more in extra fees once the consumer is at the point of sale³⁷. For example, OFT (2007) finds that some internet retailers defer unavoidable extra charges until the end of the transaction when consumers are set on buying the product. It is estimated that such unexpected charges costs consumers between £50-85 per unaware online consumer per annum, which amounts to between £60-100 million per annum³⁸.
- 4.68 A remedy that requires all associated costs to be brought together so that consumers are presented with a single all-inclusive price can resolve consumers' inattention to price components. There is some theoretical evidence which suggests that this type of remedy can lower prices (Iossa, 2007; Garrod, 2007).

³⁷ See section 5 for more discussion of the effects of a point of sale advantage.

³⁸ OFT (2008a) finds that 40 per cent of 400 UK-based retailers whose websites were examined did not indicate that compulsory charges would be added when price was first shown.

- 4.69 This remedy was used in the European airline industry when in 2006 the European Commission passed regulations that require airlines to quote online prices inclusive of taxes, fees and charges (TFCs) to prevent them from misleading consumers³⁹. The Air Transport Users Council (AUC) believed that airlines used low base prices on their websites to attract consumers who were unaware that advertised prices did not include firm-specific TFCs until they were set on purchasing the flights (AUC report, 2005).
- 4.70 Requiring firms to set an all-inclusive price is easy to implement when the extra fees are unavoidable and paid by all consumers. It may be more difficult for firms to show the true cost of a product when it varies from one consumer to another, because of complementary purchases⁴⁰ or difference in usage.

Standard pricing comparison

- 4.71 Standard price comparisons, such as a price per unit, allow consumers to make simple choices between products when firms attempt to cater for heterogeneous preferences by bundling their products in different sizes. In the UK, firms are required to provide standard price comparisons by the Consumer Protection Act 1987.
- 4.72 Standard price comparisons are unlikely to arise naturally from competition when products are complex and there is no obvious comparison that captures the total cost of the product. As a result, it may be necessary for policymakers to create a standard that can be compared. An example of this is the annual percentage rate (APR) of charge for credit.

Annual percentage rate of charge for credit

- 4.73 Due to the complex nature of credit, comparing how much different deals will cost can be difficult for consumers. For example, borrowers are usually required to pay interest and extra charges on the credit, which vary with the length of time the money is borrowed for and how much is borrowed. In addition, the calculation of the interest and extra charges can vary

³⁹ See European Commission Press Release, 'More competition and better quality: European Commission wants to strengthen the Single Market for Aviation,' 18 July 2006, available at: http://europa.eu/index_en.htm.

⁴⁰ See paragraph 5.10 onwards for a full discussion of the issues related to add-ons at the point of sale.

between lenders. As a result, the lenders' interest rates do not generally provide useful information to determine which deal is best.

- 4.74 To make comparing credit deals easier for consumers The Total Charge for Credit Regulations, made under section 20 of the Consumer Credit Act 1974, introduced APR. The APR is a measure of the overall cost of credit expressed as an annual percentage rate. This allows consumers to consider the cost of credit across products, whatever rate or method of charging is used by different lenders.

APR comparison problems

- 4.75 Although APR simplifies comparisons, OFT (2004) warns that it is unlikely to capture all information the consumer needs to consider when choosing the best deal for credit: 'For example, the deal with a lower APR might require monthly payments the borrower cannot afford, or run for much longer than the borrower wants or than the goods bought with the credit are likely to last, or the goods might be cheaper from another store, making that a better deal even though the credit charges are higher.'
- 4.76 To alleviate this problem, OFT (2004) also found that consumers supported the idea of a simple summary box, which contained information of the APR charge and other key financial information⁴¹.
- 4.77 Research conducted by Which? in 2007 found that APR for credit cards does not provide consumers with an adequate like-for-like comparison, because the top 20 credit card providers use 12 different methods to apply interest charges to their customers' accounts. This effectively means that two different cards with the same APR that are used in a similar manner could charge significantly different levels of interest. Therefore, Which? argued that the OFT should standardise the way credit card companies calculate interest.
- 4.78 The OFT concluded that, rather than focusing on standardisation of interest repayment calculation methods, a greater impact could be achieved by helping consumers chose the best deal⁴². OFT (2008b) recommended an

⁴¹ The Consumer Credit (Advertisements) Regulations 2004 requires typical APR to be displayed prominently upon advertisements and other documentation.

⁴² OFT (2004) found that 3 of 4 credit cardholders, from a representative sample of 1,890, did not know what APR applies to their card. OFT (2008b) found that about 70

introduction of an independent credit card price comparison site run by the FSA.

Main points

4.79 When pricing structures are complex, consumers may find it difficult to compare between offerings. Implementation of a standard comparison can lead to:

- easier comparisons, and
- more people making informed choices

This intervention is most likely to be beneficial to consumers when:

- the measure simplifies comparisons
- consumers shop around and will use the comparison, and
- the comparison does not neglect important information.

There is limited theoretical analysis and empirical evidence of this intervention's potential effects. More research is needed.

Restricting the range of products and pricing

4.80 As an alternative to providing standardised pricing structures to facilitate comparisons, policymakers can assist consumers to make comparisons by restricting firms to set prices or package products in a standardised way. This can help consumers pick the best deal, because the number of dimensions a consumer has to consider is reduced.

4.81 Restricting pricing structures and product attributes can limit product differentiation and increase competition (Waterson, 1989). However, the benefits of lower prices come at the cost of limited product variety, as consumers are less able to purchase a good or service that satisfies their wants and needs⁴³.

per cent of consumers who have taken out a credit card in the last three years did not shop around at all, so standardisation would not affect those consumers anyway. Note that credit card holders who clear their account every month will not be affected by the APR.

⁴³ For example, a remedy that requires firms to set a two-part tariff that has the same flat rate simplifies comparisons, as consumers only need to compare variable rates to work out which firm is cheaper. This is likely to intensify competition. However, high-usage consumers will prefer a higher flat rate and a lower variable rate compared to low-usage

4.82 This remedy has the potential to lead to tacit collusion, because it restricts the dimensions that firms can compete on. See Annex A for more details.

Too much choice!

4.83 Evidence from psychology suggests that people can be harmed by 'too much' choice. It is argued that a great variety complicates decisions and so people avoid making choices altogether, even when there are acceptable options available ('choice avoidance').

Box 4.5: Empirical evidence of 'choice avoidance'

Iyengar and Lepper (2000) provided consumers with the opportunity to taste a number of jams in a grocery store before purchase. Consumers were offered six varieties of jams in treatment 1, and 24 in treatment 2. There is evidence that when more jams were on offer, more consumers sampled the jam, but significantly fewer consumers purchased the jam.

Iyengar *et al* (forthcoming) present evidence from the US that the participation rates of 401(k) (pension) plans increase when individuals have fewer options to invest in.

Choi *et al* (2007) show that participation rates of 401(k) plans increase if non-participating members are sent a reminder with only one option.

Bertrand *et al* (2005) analyse the take up of 50,000 mailed loan offers in South Africa. They show that when the advertisement only lists one loan option example, significantly more people take-up loans than compared to an advertisement which has four examples. The effect is equivalent to reducing the monthly interest rate by 2.3 percentage points.

4.84 Choice avoidance could be driven by high cognitive costs of selecting a deal which is the best. When a consumer cannot work out which deal is best they may decide to procrastinate on the decision, even when they know there are gains to be made, because they believe (rightly or wrongly) that they will be able to find which deal is best in the near future.

households. As a result, this remedy would restrict the ability of some consumers to get a deal that suits them. To the extent that there are cost differences in supplying the two groups the remedy would also make prices less cost reflective.

4.85 The evidence on choice avoidance suggests that some consumers may not always be harmed by a reduced variety in the market. At the present it is unknown in which situations consumers will avoid making choices. Intuitively, it seems possible that some consumers may avoid making choices when:

- they have limited and infrequent experience in a market, as choices will become less complex as they are made more often
- the benefits from making a choice are realised in the future, so the incentive to make a choice is reduced, and
- they have a rolling-contract of supply of a good or service, as it is not necessary for the consumer to make a choice⁴⁴.

Will standardisation lower prices?

4.86 Standardisation of prices is likely to assist consumers to compare between offerings, but this may not always be transferred into lower prices, as the introduction of the Euro has illustrated.

The impact of the Euro

4.87 In 2002 the Euro standardised currencies across 12 European countries, which had the potential to improve consumers' ability to make comparisons across participating nations, as they do not have to calculate prices in terms of their own currency. Baye *et al* (2006) provide empirical evidence that online prices in the Euro Zone increased compared to prices outside the Euro Zone, despite the widespread belief that standardisation would intensify competition and lower prices.

4.88 Baye *et al* (2006) argue that standardisation caused higher prices because it became more profitable for firms to set prices to extract rents from their captive consumers rather than competing for consumers that searched the market⁴⁵.

⁴⁴ Requiring firms to send annual renewal notices may prompt consumers into making choices. In effect such a remedy would aim to increase the consumers' perceived cost of procrastination. Whether such costs should be included in the assessment of the remedy is an open question.

⁴⁵ An alternative explanation is that uninformed consumers become aware of what other people are charged preventing the firms from giving preferential treatment to informed consumers. See Hviid and Møllgaard (2006).

4.89 For example, standardisation enables consumers to compare products of a greater number of firms, as they become aware of firms that they did not previously consider. When this occurs and firms can supply loyal consumers, who purchase from the firm, and non-loyal consumers, who search for the lowest-priced firm, there are two effects (Janssen and Moraga-González, 2004):

- a 'business stealing' effect which means firms are willing to set lower prices⁴⁶, and
- a 'surplus appropriation' effect which means that firms are more likely to set high prices to extract rents from loyal consumers, because they are less likely to attract non-loyal consumers after the number of competitors has increased.

As a result, prices may increase if the surplus appropriation effect outweighs the business stealing effect.

Main points

4.90 A variety of (horizontally differentiated) products provides consumers with choice, but making a choice is more difficult. Limiting product differentiation can lead to:

- easier comparisons for consumers
- more intense price competition, and
- reduced choice and variety to satisfy consumers' needs.

This intervention is most likely to be beneficial to consumers when:

- product differentiation is spurious, and
- variety makes consumers' decisions difficult (relative to benefit from choice).

There is robust theoretical analysis on this intervention, but no empirical evidence.

⁴⁶ In terms of the model discussed in 3.12, the lower bound price falls.

Price comparison sites

- 4.91 When information is costly to gather, consumers may not search exhaustively for the supplier that offers the best terms. Price comparison sites provide consumers with a list of prices for similar products that are available from multiple firms. This can lower search costs as consumers can quickly locate the best deal, which can intensify competition.
- 4.92 Price comparison sites can be operated by a regulator or a private company⁴⁷. Price comparison tables can be internet-based but need not be. The advantages of being internet-based include:
- consumers having up-to-date information
 - they can be easily accessed when the consumer wants, and
 - they can assist consumers to find what they want by presenting other information such as shopping guides, third party reviews and consumer reviews⁴⁸.
- 4.93 A price comparison site can increase the amount of information in the market for firms as well as consumers. As a result, there is an increased likelihood of tacit collusion in some markets. For more discussion of the conditions likely to lead to collusion see Annexe A.

When are price comparison sites likely to be effective?

- 4.94 Price comparison sites have the ability to lower search costs and reduce prices, but for them to be most effective:
- sites must reduce search costs⁴⁹

⁴⁷ For example, FSA operate a price comparison table for financial products, and there a number of private firms operating sites for insurance and utility switching; financial products; hotels and holiday packages; and consumer products, such as laptops, digital cameras and TVs, among others. Energywatch sponsors a voluntary code for price comparison sites. For more details see:

www.energywatch.org.uk/help_and_advice/saving_money/index.asp

⁴⁸ Hollenbacher and Yerger (2001) find that a negative evaluation of a make of a car by a consumer report provided by a third party could have an adverse effect on the value of at least some classes of second hand cars. According to the authors, this is the first study to find any such adverse effect, suggesting that even when it comes to big ticket items such as cars, consumers may ignore readily available information.

⁴⁹ OFT (2008b) recommends the FSA to introduce a price comparison site for credit cards to reduce search costs for consumers. Research shows that about 70 per cent of consumers who have taken a credit card out in the last three years did not search the market.

- sites must cover a large number of products available in the market
- consumers have access to the medium on which the site is provided and are familiar with its use, and
- consumers must trust the site to provide them with what they want.

Price comparison sites lower prices

4.95 The ability to search the market with a single click of a mouse button radically reduces search costs and intensifies competition. Some academics believed that the internet would create intense price competition and the law of one price would prevail (Bakos, 1991). Current research suggests that this belief was optimistic, despite robust evidence that price comparison sites have lower prices.

Price dispersion⁵⁰

'The law of one price is no law at all' (Varian, 1980)

Box 4.6: Empirical evidence of price comparison sites

Scott-Morton *et al* (2001) show that consumers pay on average 2.2 per cent less for cars using a referral site, which is a saving of \$450 for an average car.

Brown and Goolsbee (2002) provide evidence that price comparison sites in the US lowered prices for life insurance by 8-15 per cent between 1992 and 1997.

Ellison and Ellison (2004) show that demand for computer memory becomes extremely price sensitive when a price comparison site plays a dominant role, but price dispersion of about 5 per cent remains.

Baye *et al* (2004b) show that prices are more dispersed on a price comparison site when fewer firms list prices. Specifically, average price dispersion between the lowest and second lowest price is 23 per cent when there are two firms, but this falls to 3.5 per cent when there are 17.

⁵⁰ The economic literature of online price dispersion is reviewed by OFT (2007) Annexe F, chapter 5.

Box 4.6 (continued): Empirical evidence of price comparison sites

Smith and Brynjolfsson (2001) show that there is 33 per cent (\$16.54) price dispersion between the lowest and the mean price for homogeneous books.

Pan *et al* (2001) show that suppliers of electronic goods differentiate themselves across shopping convenience, reliability, product information, shipping fees and pricing policy, but despite controlling for this, price dispersion is still large.

Number of users

- 4.96 Price comparison sites will not eliminate price dispersion in the market if only some consumers use the facility. Varian (1980) models an information clearinghouse, such as a price comparison site, where those consumers who use the clearinghouse are able to purchase a homogeneous product from the lowest-priced supplier, but those who do not, shop at random⁵¹. The model shows that increasing the amount of consumers using the information clearinghouse lowers prices, and prices tend to marginal cost if all consumers use the information clearinghouse⁵².

Profit-maximising sites

- 4.97 Baye and Morgan (2001) model a situation where the price comparison site is a profit-maximiser. They show that the price comparison site can lower prices, but price dispersion will remain on the sites even if all consumers use the site to shop at the lowest-priced firm. The intuition is that:
- if the price comparison site is so efficient that there is no price dispersion, the price comparison site has no informational value and receives no profit
 - intense competition in the product market leads to zero profit for subscribing firms, which eliminates the rents the price comparison site can extract from the firms, and
 - a price comparison site that is extremely efficient at allowing consumers to shop at the lowest-priced firm is likely to make rivals exit the market to leave just one firm.

⁵¹ This is another version of the tourist-native model, see paragraph 3.11 onwards for more discussion.

⁵² OFT (2007) suggests that 47 per cent of consumers have used at least one price comparison site, but about 20 per cent of consumers do not search other firms' sites when purchasing online.

Brand loyalty

- 4.98 Varian (1980) and Baye and Morgan (2001) assume that consumers shop at the lowest-priced firm when they use an information clearinghouse. Baye *et al* (2004a) provide evidence that this is not the case for price comparison sites as they find that only 13 per cent of consumers on average purchased from the lowest-priced retailer of electronic products.
- 4.99 One explanation is that consumers are unwilling to purchase from the lowest-priced firm if it is an unknown brand. Trust is important for online consumers as they rely on firms to provide the product after they have paid for it. As a result, firms can differentiate themselves on the quality of their delivery service, as firms that are reliable can attract consumers that are concerned with the firms' credibility whilst still charging a higher price⁵³.
- 4.100 It is possible for internet retailers to address some of the reputation effects through consumer assessments included on price comparisons sites. Adding such an extra dimension to a price comparison site increases its informational content, but also adds complexity for the consumer.

Box 4.7: Empirical evidence of online brand loyalty

Baye *et al* (2002) estimate that 17 per cent of online price dispersion for electronic goods can be attributed to brand loyalty.

Smith and Brynolfsson (2001) find that consumers use brand as a proxy for retailer credibility and shipping reliability, so well-known book retailers can maintain a \$1.72 price premium, on average, over lesser known retailers.

Baye and Morgan (2004) show that as consumers exhibit more brand loyalty for electronic products price dispersion falls, but the average and lowest prices increase.

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⁵³ Other reasons for consumers not purchasing from the lowest-priced firm can include obfuscation strategies by firms, which are aimed at dampening competition and making comparisons between offerings difficult, and paying for prominence. These are discussed

⁵⁴ See 'British consumers wary of price comparison websites' (27 August, 2007) available at: www.bizreport.com

Box 4.7 (continued): Empirical evidence of online brand loyalty

OFT (2007) finds that consumers are willing to pay a premium for goods at a 'bricks and clicks' retailer compared to a retailer that is online only, as this provides more security if the product is faulty.

An Online Shopping Report commissioned by Quidco⁵⁴ in 2007 found that one in three consumers go directly to well-known brand's websites as an alternative to using price comparison sites.

What are the negative aspects and how can they be minimised?

Comparing firms from one site

- 4.101 Price comparison sites may not cover all firms within a market⁵⁵. As a result, consumers may need to use more than one price comparison site to increase their chance of finding the firm that offers the best terms. Consumers may overestimate the ability of comparison sites to deliver the best outcome for them. OFT (2007) estimates that if consumers use only one of ten price comparison sites, they would have only a 50 per cent chance of finding the lowest price.
- 4.102 OFT (2007) finds that approximately one million internet shoppers only use one price comparison site, because they are unaware of the benefits available from searching other price comparison sites. It is suggested that if these internet consumers used each price comparison site as effectively as they should they could gain between £150-240 million per annum.
- 4.103 Consequently, consumers should be made aware of the limitations of individual comparison sites in terms of their coverage of the market and the way in which the coverage affects their ability to find the best deal. Similarly, they should be made aware that independent price comparison sites, if available, have no incentive to exclude some firms from the comparison and may be a better resource to use.

⁵⁵ Baye and Morgan (2001) show that profit-maximising price comparison sites prefer to list only some of the firms in the market, because this generates price dispersion. See paragraph 4.95.

Paying for prominence

4.104 Consumers may be unwilling to spend time and effort on checking each firm's offerings even though it can take a single click of a mouse button. They instead focus on the products that are most prominent. Evidence of this is summarised in Box 4.8.

Box 4.8: Empirical evidence of limited online search

Brynjolfsson *et al* (2004) show that only 16 per cent of consumers search more than one firm on a price comparison site and as little as nine per cent clicked through subsequent search pages.

De Vos and Jansen (2007) suggest that consumers spend only 11 seconds viewing search results.

Jansen *et al* (2000) showed that about 67 per cent of 18,113 users do not search beyond their first enquiry on a major search engine.

4.105 This behaviour provides firms with an incentive to pay to be prominently displayed at the top of the list⁵⁶. This may lead consumers paying more for their products if they expect the products to be listed in terms of price or quality⁵⁷.

4.106 According to the 2007 Online Shopping Report commissioned by Quidco, paying for prominence has lowered consumers' confidence in price comparison sites. One in three consumers have stopped using them and 47 per cent said they would not use them again after finding out that results are often biased by which firm pays the most.

⁵⁶ OFT (2007) finds that 14 per cent of internet retailers pay to have their products featured more prominently on price comparison sites.

⁵⁷ OFT (2007) suggests 61 per cent of internet users were aware that firms pay to be included and 50 per cent were aware that price comparison sites placed a retailer higher in the list if it paid. Even if consumers are aware it is not always likely that they will take account of this. See paragraph 4.23.

4.107 As a result, price comparison sites will be more effective if consumers have the ability to select how the information is ordered⁵⁸. This will make consumers' search tasks easier and limit the incentive for firms to pay for prominence, which may increase consumer confidence in price comparison sites and increase usage.

Obfuscation

4.108 The more complex products become, the more difficult it can be to rank them in anyway or for consumers to select from a wide range of attributes. Firms can attempt to limit the competitive effects of price comparison sites by making products more complex. Ellison and Ellison (2004) show that suppliers of CPUs and memory upgrades have adapted to intense price competition under a price comparison site by introducing obfuscation strategies that prevent consumers from searching a market as effectively as they would otherwise. There is evidence that firms create multiple versions of similar products thereby complicating consumers' understanding of a product's quality to such an extent that consumers find it difficult to understand what is on offer, and which products should be compared.

4.109 In addition, Ellison and Ellison (2004) suggest that the internet retailers use 'bait and switch' strategies in that they offer low priced and low quality products on the price comparison site to attract consumers to their webpage, but then are able to sell more medium and high quality goods with higher margins. Consumers may use price comparison sites to find out who the lowest-priced firms are and then search within these sites to find a product that better fits their preferences, but there is no guarantee that the retailer is the lowest-priced provider.

Main points

4.110 When gathering information is costly, consumers may not search the market to find the best deal. Price comparison sites can lead to:

- lower search costs
- lower prices.

This intervention is most likely to be beneficial to consumers when:

- consumers have access to the sites, for example, the internet

⁵⁸ OFT (2007) finds that this is possible on 50 per cent of price comparison sites.

- consumers are aware of the sites
- firms do not pay for prominence or offer commissions which can bias recommended rankings
- consumers have ability to rank items that are compared
- firms do not spuriously differentiate products that are compared
- consumers use more than one price comparison site
- consumers are made aware of the range of products covered and use sufficient sites to cover the market, and
- the price comparison site is independent and not for profit (but well advertised).

There is robust theoretical analysis and empirical evidence of this intervention's potential effects. Implementing this can increase the likelihood of collusion. See Annexe A for a discussion of collusion.

Section Summary

4.111 Consumers find price and non-price information costly to gather and, in some situations, difficult to process. As a result, consumers may not be as active in a market as is necessary for them to get the best deal. When this occurs policymakers can implement interventions that attempt to eliminate or overcome the obstructions that consumers face when searching the market.

4.112 In some cases firms have an incentive to provide consumers with relevant information. Interventions that help firms make credible statements are directly beneficial to consumers. Examples of such interventions are certification of claims and regulation of untruthful or misleading statements.

4.113 Consumers can find it difficult to choose the best deal when they are faced with a choice between several complex products or pricing structures. An intervention that attempts to resolve the complexity of the task by limiting the choice available to consumers can reduce the likelihood that consumers will find a product to best suited to their wants and needs. Therefore, less intrusive interventions that aim to assist consumers to make informed decisions without affecting the choice available in the market may be superior in the majority of cases.

4.114 When consumers find information costly to process they may misunderstand the message or choose to ignore much of the information

provided. As a result, interventions that attempt to increase ability of consumers to make informed choices will be most effective when the information is simple and easy for consumers to grasp. In addition, information requirements should not be overly prescriptive preventing firms from communicating with consumers effectively. The effectiveness of the interventions will be enhanced if the interests of firms can be aligned with policymakers.

4.115 When designing a remedy account must be taken of the sophistication of consumers and their access to information. It is not enough that the information is available to consumers they must also be willing and able to act upon it.

TABLE 4.1 – SUMMARY TABLE OF HELPING CONSUMERS OBTAIN INFORMATION AND MAKE COMPARISONS

Remedy (and page number)	Problem to solve	Benefits from remedy	Concerns with remedy	When remedy is most effective	Examples of existing remedy
Providing information about quality (p44)	<ul style="list-style-type: none"> • asymmetric information about quality • lack of high quality products • complex choices about price-quality tradeoff 	<ul style="list-style-type: none"> • consumers make more informed choices • provides choice between low and high quality 	<ul style="list-style-type: none"> • firms seek to strategically influence measure of quality • consumers ignore information • who should information be aimed at? 	<ul style="list-style-type: none"> • information is simple to understand • standardised across product and geographical markets • measure is a close proxy of a product's quality 	<ul style="list-style-type: none"> • 'Scores on the doors' for restaurants • Nutritional labelling on food • Energywatch complaints
Minimum standard requirement (p53)	<ul style="list-style-type: none"> • asymmetric information means consumers are unable to assess quality • lack of high quality products 	<ul style="list-style-type: none"> • high quality 	<ul style="list-style-type: none"> • what should be the minimum quality? • higher prices • creates barriers to entry for new firms and new products • restricts choice of lower quality products at lower prices • cannot signal higher quality than minimum 	<ul style="list-style-type: none"> • consumers prefer higher quality products 	<ul style="list-style-type: none"> • Numerous including: <ul style="list-style-type: none"> • ABTA • Mortgage Payment Protection Insurance
Standardisation of pricing structures (to facilitate comparisons) (p54)	<ul style="list-style-type: none"> • complex calculation of price • obfuscation of price • advertised price not representative of final price 	<ul style="list-style-type: none"> • consumers not misled • intensifies competition 	<ul style="list-style-type: none"> • comparison based on average may not help individual consumers 	<ul style="list-style-type: none"> • consumers are in position to make comparisons • enables like-for-like comparison • linked to campaign to promote use 	<ul style="list-style-type: none"> • EC regulation on airline pricing • APR

TABLE 4.1 CONTINUED – SUMMARY TABLE OF HELP CONSUMERS OBTAIN INFORMATION AND MAKE COMPARISONS

Remedy (and page number)	Problem to solve	Benefits from remedy	Concerns with remedy	When remedy is most effective	Examples of existing remedy
Restricting the range of products and pricing (p61)	<ul style="list-style-type: none"> • complex choices 	<ul style="list-style-type: none"> • simplifies comparisons • intensifies price competition 	<ul style="list-style-type: none"> • restricts variety • restrict innovative tariffs 	<ul style="list-style-type: none"> • differentiation is spurious • complexity reduced more than choice • consumers do not benefit from complex pricing structure 	<ul style="list-style-type: none"> • none
Price comparison sites (p64)	<ul style="list-style-type: none"> • high search costs 	<ul style="list-style-type: none"> • one-stop shop for search (and switching) • lowers search costs • increases competition • empirical evidence of lower prices 	<ul style="list-style-type: none"> • profit-maximising sites have incentive to maintain price dispersion • firms pay for prominence/ranking • firms may strategically make comparisons difficult 	<ul style="list-style-type: none"> • consumers have access to them • consumers can rank products • consumers are made aware of sites' limitations and use more than one site • site is independent (not for profit) 	<ul style="list-style-type: none"> • Energywatch accreditation of commercial comparison sites • FSA financial product comparison tables • numerous profit-maximising sites

5 HELPING CONSUMERS MAKE INFORMED CHOICES AT THE POINT OF SALE

5.1 The point of sale (POS) is the location at which consumers purchase goods and services. This can include a supplier's bricks and mortar store, a website and a visit by a firm to a consumer's home. At the POS firms can have a significant advantage over other potential suppliers ('point of sale advantage') if:

- consumers are poorly informed about the products, their substitutes and their complements when they access the POS, and
- it is costly (in terms of time, effort and/or psychological pressure) to leave the POS without making a purchase to gather more information or shop elsewhere.

5.2 Consumers may be uninformed at the POS for various reasons⁵⁹:

- consumers may 'choose' to be uninformed for behavioural or search cost reasons⁶⁰
- it may be the first store they have visited as part of their search strategy
- they may receive an impromptu visit from a doorstep salesperson, and
- consumers may be faced with product offers they did not expect such as upgrades or add-ons.

5.3 When firms have a POS advantage, they can:

- introduce products to consumers they had not previously considered
- charge high prices or offer low quality terms and conditions, and
- use a range of pressures to tempt consumers to make ill-considered decisions.

5.4 In this section we discuss the interventions that are available to protect consumers from being exploited at the POS. If successful, some of the remedies discussed in the Section 4 may ensure consumers are better

⁵⁹ The likelihood that a consumer will be uninformed at the POS is greater when consumers have only limited experience of the market, if any. See Section 4 for more details.

⁶⁰ See paragraph 3.33.

informed when they reach the POS. The interventions discussed in this section can be complements to remedies that increase consumer information before the POS or substitutes when interventions before the POS are likely to be ineffective.

5.5 The behaviour of firms at POS is regulated through a fairly complex set of consumer protection law and by a number of agencies, including trading standards, OFT and the Advertising Standards Authority plus sectoral regulators covering food standards, financial services and energy. Some of the proposed remedies discussed below may interact with existing legislation. Care must be taken when formulating a remedy to avoid overlaps and inconsistencies.

5.6 Remedies at the POS can attempt to limit a firm's POS advantage by:

- enabling consumers to defer purchasing decisions until they have the ability to make informed choices
- providing consumers with an enhanced ability at making choices, or
- allowing consumers to revise purchases after the POS.

5.7 The measures that are available to potentially help resolve the issues at the POS include:

- written quotations, which last for a fixed period of time
- in-store price comparisons
- cooling-off periods.

5.8 Other forms of market interventions to address the POS advantages can include price control and preventing the sale of certain goods at particular locations. The focus here is on interventions that seek to change consumer behaviour.

5.9 Before we review the impact of the remedies, we focus on the issues that arise when consumers believe they have searched adequately, but at the POS are faced with an unexpected choice of upgrade or add-on, such as the opportunity to buy an extended warranty. In the literature these are referred to as add-ons.

The economics of add-ons

5.10 There are hundreds of examples of add-ons. Ellison (2005b) argues that 'it can be a challenge to think of a business that doesn't sell add-ons'. For example:

- consumers buy popcorn at the cinema
- at a restaurant consumers may wish to enjoy a bottle of wine with their meal
- when staying in a hotel room, consumers may wish to sample refreshments from the room's mini bar
- an extended warranty can be purchased with a washing machine, and
- when buying a printer, consumers need to buy ink cartridges.

5.11 Add-on sold at the POS prices can be high priced because it is convenient for consumers to purchase a complementary product at the same store rather than visiting another store to purchase a similar product. Firms' ability to set high prices for add-ons is aided by the fact that consumers are usually poorly informed about add-ons at the POS. For example:

- Cruickshank (2000) finds that just under half of respondents of a Treasury survey said they had 'no idea' about the fees for their bank's additional financial services, and
- Hall (2003) reports that only 3 per cent of printer owners claim to know the cost of printing when purchasing a printer.

5.12 For the purpose of this discussion, there is a distinction to be made between (i) add-ons that complement a base good without impairing the effectiveness of the base good⁶¹; and (ii) add-ons that are consumable and are necessary to make the base good work at all⁶². In this section, we are more concerned with the former, as in most situations the latter are usually bought as replacements at a later date, so firms do not benefit from a POS advantage⁶³.

⁶¹ An example is as an extended warranty for a washing machine.

⁶² Such as ink cartridges for printers and new blades for razors.

⁶³ This is not to say that add-ons bought at a later date are unproblematic. Competition can be affected as consumers may be locked-in to a certain consumable brand. Moreover, consumers may find it difficult to estimate the life cost of the product when purchasing

Add-on pricing

'There's no such thing as a free lunch!'⁶⁴

5.13 The Chicago School argues that there may be no detriment to consumers when firms charge excessive prices for add-ons, if competition exists for the base good. Lal and Matutes (1994) and Verboven (1999) show that in theory positive profits for add-ons will intensify competition for the base good and the rents will be competed away. For instance, if firms make an £X profit on each add-on sold, they have a greater incentive to attract consumers with lower base good prices to realise the add-on profit. Therefore, firms are willing to undercut each other on base goods until the price is £X below cost where firms receive normal profits⁶⁵.

5.14 Ellison (2005b) extends the Chicago School's analysis and shows that positive profits can be sustained if firms supply some consumers that do not purchase the add-on. Firms face an adverse selection problem because if a firm lowers its base good price, it attracts a number of consumers who will not purchase the add-on. This reduces their incentive to set base good prices below marginal cost compared to a situation where all consumers purchase the add-on, because:

- it attracts rents from consumers that purchase the excessively priced add-on but
- it results in losses from consumers that do not purchase the add-on.

Therefore, the possibility of attracting consumers who will not purchase the add-on dampens competition for the base good, which allows firms to maintain positive profits.

the base good. See section 6 for a discussion of these types of switching costs. The focus here is on firms with POS advantages.

⁶⁴ The phrase refers to the past tradition of US saloons providing a 'free' lunch to patrons, who were required to buy at least one drink.

⁶⁵ The results of these models are driven by a similar intuition as the 'bargain-then-rip-off' pricing when consumers face switching costs (discussed further in section 6).

Applying pressure

'Would you like fries with that?'

- 5.15 When add-on prices subsidise low base good prices, firms have a greater incentive to encourage consumers to purchase their add-ons. The high profit margins for add-ons make a large volume of sales attractive. More importantly, because of the cross-subsidy firms' profits are reduced when they fail to sell the high-priced add-on. As a result, firms may begin to employ pressure selling tactics when consumers are uninformed about the add-on at the POS.

Making searching hard

- 5.16 Consumers' inability and unwillingness to find information about add-ons before the POS is exacerbated in some situations where firms seem to make gathering more information difficult by obfuscating prices and not advertising add-on information. For example, in the CC/OFT case for extended warranties (EWs) on Domestic Electrical Goods (DEGs) the CC argued that 'Most manufacturers do not actively promote their own EWs'.
- 5.17 Gabaix and Laibson (2006) present a model of add-ons that focuses on firms' incentives to advertise or shroud add-on prices. They consider a market in which consumers have the possibility to substitute away from add-ons before the POS, but:
- some consumers are sophisticated, in the sense that they correctly forecast firms' add-on prices if they are not advertised, and
 - some consumers are myopic, in that they do not consider purchase of the add-on until the POS of the base good.
- 5.18 The model shows that when there is a sufficient proportion of consumers that (myopically) select a firm on the base price alone, firms find it profitable to obfuscate add-on prices before the POS. Firms exploit myopic consumers by attracting them with low base good prices but set add-on prices at the monopoly level. Sophisticated consumers take advantage of low base good prices but substitute away from high priced add-ons. When there is a sufficient proportion of sophisticates, firms unshroud add-on prices and set prices of the base good and add-on at a more cost reflective level.

- 5.19 Shapiro (1995) argues that obfuscation of add-on prices is likely to be unsustainable as firms will have a unilateral incentive to advertise add-on prices before the POS as this is likely to prompt consumers to consider the impact of the add-on on their purchasing decision⁶⁶. Therefore, firms should have an incentive to increase its base good price closer to marginal cost and advertise a lower add-on price, so that sophisticated consumers can realise that overall purchasing at the firm is a better option.
- 5.20 Gabaix and Laibson (2006) show in their model that it is not profitable for a firm to unilaterally reveal its add-on price when other firms have obfuscated, even when it educates some myopic consumers to become sophisticated, thereby considering the impact of add-on prices before the POS. The intuition is that sophisticated and educated myopic consumers prefer to purchase from firms that set high add-on prices, because:
- they can avoid high priced add-ons by purchasing before the POS, and
 - they benefit from lower prices for the base good.

Add-ons and remedies

- 5.21 It is important to notice that excessively high add-on prices is a necessary but not sufficient condition to establish that a market is not competitive, as rents can be passed through from add-ons to consumers via low prices for base goods. When the profit margin is used to subsidise low base good prices, any remedy that attempts to lower the prices of add-ons can increase the price for the base goods, because firms' incentives to compete for the base good are reduced. This may be a benefit to consumers that purchase the add-on, but detrimental to those who do not.
- 5.22 Problems from add-ons can be reduced by activating consumers in the base good market, so that rents are passed through. For example, if in the Ellison (2005b) model firms have the ability to price discriminate between consumers that do and do not purchase the add-on, firms would not face a problem of adverse selection which would enable them to pass through the rents from high priced add-ons.

⁶⁶ In the language of Gabaix and Laibson (2006), Shapiro (1995) believes this advertisement will turn consumers from being myopic to sophisticated.

5.23 However, even if all rents are passed on to consumers, there may be sufficient consumer protection arguments that mean policymakers may prefer the pricing of add-ons and base goods to be more cost reflective. There may also be distributional issues if a certain type of vulnerable consumers purchase the high-priced add-on which subsidises low prices for the base goods.

Main points

- Add-on prices can be high and poorly advertised.
- Rents from add-ons may be passed through to consumers via low prices for the base good.

Interventions

5.24 The following sections discuss the potential effects of the following remedies:

- written quotations, which last for a fixed period of time
- in-store price comparisons, and
- cooling-off periods.

Fixed-period written quotations

5.25 Written quotations are contracts lasting for a given period of time, that provide consumers with the right to purchase a product after the POS at the same terms that are available at the POS. This remedy provides consumers with the time to search the market without the terms of trade worsening if they decide to return. This may reduce the likelihood that consumers will purchase the good at the POS, which reduces a firm's POS advantage.

5.26 Competition can drive firms to offer consumers written quotations regardless of legislation to do so. This commonly occurs in insurance markets. Firms can use written quotations to signal to consumers that the price on offer is low and that they are confident that consumers will return to purchase the product. High-priced firms may be unwilling to offer written quotations, as consumers that search will be more likely to find a firm with

a lower price, so they will want consumers to purchase the product immediately.

- 5.27 If this signal is believed by consumers, it may persuade them not to undertake further search, so high-priced firms may be able to use written quotations to masquerade as low-priced firms. This incentive disappears if enough consumers are willing to search the market to verify that written quotations mean low prices.

When will written quotations be effective?

- 5.28 A written quotation provides a consumer with the time to search the market, but for the remedy to be successful consumers must:
- understand what they are expected to do with that time, and
 - be willing and able to search the market.

Understand the purpose

- 5.29 If consumers misunderstand the purpose of the written quotation firms may be able to frame the quote in a positive manner. For example, if consumers are uninformed of the availability and terms of trade for substitute products, firms may be able to convince consumers that their offering is unbeatable⁶⁷. Therefore, it is important that consumers are informed of the reason why they are presented with a written quotation to prevent firms from manipulating the written quote to their advantage.
- 5.30 A written quotation may also signal to consumers that they have the ability to purchase the product from other firms. This may indirectly accomplish what could be achieved by requiring firms to specifically inform consumers that there is no tie between the base good and add-on.

Willing and able to search

- 5.31 Consumers may be unwilling to search the market if the written quotation does not either increase the consumers' marginal benefit of search or reduce the marginal cost of search.
- 5.32 When firms are able to frame the product's price as a 'special offer' that is only available at the POS, they may fear that further search could invalidate

⁶⁷ As discussed in paragraph 5.27.

the low price implied by the 'special offer'. This type of 'special offer' can increase the expected search cost. A written quotation prevents firms from using this strategy, so consumers may be more willing to search the market.

High search costs

5.33 Written quotations are aimed at encouraging post-POS search. When search costs are high for other reasons than given above, written quotations will have limited impact upon search. Therefore, it is likely that written quotations will be most effective when:

- firms worsen the terms of trade after the POS, and
- searching the market for alternatives is simple and not very time consuming.

As a result, when firms worsen the terms of trade and other search costs are high, written quotations need to be complemented by other interventions that enable consumers to gather further price and non-price information more easily.

Underestimate benefits

5.34 A written quotation may also fail to have a positive impact on search if consumers underestimate the benefits of search. For example, a written quotation will not increase the consumers' willingness to search if:

- consumers have no cost of searching the market but
- they are willing to purchase at the POS because they (incorrectly) presume that there is no benefit to search⁶⁸.

In this case, written quotations may need to be complemented by information about the benefits of search.

⁶⁸ Similar to the situation discussed in paragraph 3.4.

What are the negative aspects and how can they be minimised?

Estimate or written quote?

- 5.35 It is important that consumers recognise the difference between written quotations and 'estimates' that have been commonly used in services for home improvements. A quotation is legally binding, but an estimate simply gives a rough idea of how much the good or service will cost. If consumers are unsure of their rights it may be possible for a supplier to pass an estimate off as written quotations, but add extra costs to the estimate after the job is completed. A consumer information campaign setting out the differences between written quotations and estimates may limit any adverse effect.

Cost savings

- 5.36 Written quotations may be detrimental if firms receive cost savings when they supply the products as a bundle at the POS. In this situation it may be efficient for firms in a competitive market to offer consumers lower prices if they purchase the bundle at the POS.
- 5.37 When firms are required to provide written quotations, they may be less inclined to offer a low price for consumers that purchase the bundle at the POS, as firms have to honour the price whether the consumer purchases the bundle at the POS or on separate occasions when the firm receives no cost saving. This may become unprofitable for the firm if the cost for supplying the products separately is substantially greater than supplying the bundled products⁶⁹.

Two visits

- 5.38 Fixed-period written quotations can have a similar impact to rain check remedies. A rain check remedy allows consumers to purchase the discounted product at the advertised price at some point in the future. They can be implemented when firms use heavily discounted items to attract consumers to a store but strategically run out of stock, so consumers may purchase high-priced substitutes at the POS.

⁶⁹ The same problem may occur when costs are likely to increase during the lifetime of a written quotation, which can occur when costs are volatile.

5.39 The literature on rain checks shows that this policy can have a detrimental effect upon consumers as they have to visit the store twice (Hess and Gerstner, 1987). This can occur when firms sell:

- shopping goods, which consumers use to select a store, and
- consumable impulse goods, which consumers do not compare across stores.

5.40 In this situation, firms can set prices for shopping goods at loss-leader prices and earn profits from impulse products⁷⁰. If firms have a rain check policy they get to sell high-priced impulse products to the same consumer twice. This relies on the impulse good being a consumable product because if the impulse product is durable then consumers will not purchase a second time.

Forget to purchase

5.41 A concern raised by the firms in the CC's market investigation for EWs on DEGs was that consumers may forget to buy an extended warranty if they did not purchase it at the time they bought the DEG. As a result, some consumers may be without cover for their product that would be beneficial for them. The magnitude of this effect is likely to depend on the specifics of the product. For example, the consumer is more likely to be reminded to purchase the product when the add-on improves the performance of the base good compared to add-on that complement the base good.

5.42 Moreover, if purchases are moved away from the POS it is likely that the added competition in the market will increase advertising for the product which may prompt consumers that have forgotten to purchase the product and minimising the number of consumers that are without their potentially beneficial cover.

Main points

5.43 When an uninformed consumer is at the POS, a firm may pressurise the consumer to purchase a complementary product immediately rather than allowing the consumer to search the market to become informed. Implementing written quotations can:

⁷⁰ This is similar to the impact of add-ons on competition.

- prevent firms from worsening the terms of trade after the POS, and
- provide consumers with time to search the market.

This intervention is most likely to be effective when:

- firms worsening the terms of trade after the POS is the main reason for consumer inactivity, and
- when it is complemented with other remedies that reduce other search costs.

There is no theoretical analysis or empirical evidence of this intervention's potential effects. More research is needed.

In-store price comparisons⁷¹

5.44 In-store price comparisons are statements about rivals' prices at the POS, which are monitored and verified (to some extent) to provide them with the necessary credibility⁷². When consumers are at the POS and have not had the opportunity to search the market thoroughly, they may be uncertain of (or underestimate) the benefits of searching other firms. In-store price comparisons can provide consumers with information needed to enable them to determine whether the marginal benefit of visiting another store to purchase the product is greater than the marginal cost. This may increase the likelihood of consumers not purchasing the product at the POS, which can reduce a firm's POS advantage.

5.45 In-store price comparisons can also increase competition within the market (Wilson, 2005). For example, consider a situation where:

- consumers are uninformed of prices, and
- all consumers have a positive search cost to find out a price of a rival store.

⁷¹ Such comparisons can be either voluntary or mandatory. The analysis in this section does not, except for paragraph 5.62, depend on this distinction.

⁷² Other possible comparisons at the POS include comparisons with a past price, for example 'now £X, was £Y', or with a reference price, 'X% off recommended retail price'. The focus in this section is on present price comparisons with rivals' prices. See OFT (2005) for discussion of the impact of other price comparisons on consumer behaviour.

The Diamond paradox suggests that prices will be at the monopoly level⁷³. However, this result only holds because firms do not have the means to credibly inform consumers of a price cut. In-store price comparisons provide firms with this ability, so prices will be reduced as a result.

- 5.46 Given that in-store price comparisons may increase the firms' ability to monitor each other's strategies more closely, in some situations there is a possibility that this type of remedy may increase the scope for tacit collusion in markets with certain structures and characteristics. Some discussion of implementing consumer remedies in potentially collusive markets is found in Annexe A.

When will in-store price comparisons be effective?

- 5.47 In-store price comparisons provide consumers with information about rivals' prices, but for them to be effective they must:
- be credible, and
 - simple to understand.

Credibility

- 5.48 For in-store price comparisons to be effective, some regulation is needed to monitor the comparisons to provide a source of credibility for firms' price comparisons and to prevent consumers from being misled. For example, if there is no regulation:
- economic theory suggests that rational consumers should disregard the price comparisons, as all firms have incentives to claim they are the cheapest to prevent further search but
 - if some consumers are not fully rational they may be misled by untruthful price claims.
- 5.49 The Consumer Protection Act 1987 provides clear rules for price comparisons, which are enforced by local Trading Standards offices. Their powers of enforcement are considerable and providing misleading price comparisons is potentially a criminal offence. Other consumer laws protect against misleading, false or inaccurate statements by sellers. The main

⁷³ See paragraph 3.9.

issue is who monitors such statements and whether consumers are aware of both the level of protection and monitoring.

- 5.50 In markets where prices fluctuate frequently, price comparisons may be ignored (rational consumers) or become misleading (non-rational consumers) if they are not kept up-to-date. While covered by the Consumer Protection Act 1987, a remedy may want to specify the frequency with which firms monitor rivals prices⁷⁴. Such remedies may impact on the frequency of price revisions.
- 5.51 The ease and costs of monitoring price comparisons is likely to vary from industry to industry. When the POS is a bricks and mortar shop or a website, monitoring price comparisons is likely to be relatively easy in principle (although potentially costly), because the comparisons and prices are public knowledge and can be verified easily. When the POS is on a consumer's doorstep, monitoring can be much more difficult, and some consumers will be less likely to trust the comparisons and those that do are more likely to be misled.

Homogeneous products

- 5.52 When sufficient regulatory monitoring occurs, in-store price comparisons are likely to be more effective for homogeneous products. For instance, when the products have non-price differences, consumers will be less price sensitive compared to a situation when consumers perceive the products to be homogeneous. Thus, consumers may not search even if they are informed that a rival's product is cheaper because they may be unsure of its quality.
- 5.53 Price information may still assist consumers to take account of the actual price effects on their purchasing decisions rather than forming expectations of the likely price dispersion across the market. The consumers could then use this information to understand whether their non-price preferences are strong enough to warrant purchasing the product at the POS.
- 5.54 A caveat to this is required when firms are vertically differentiated, as this remedy may provide an incentive for firms to lower their product's quality to reduce costs in the pursuit of becoming the cheapest firm.

⁷⁴ See Annexe A.

Which prices should be compared?

Firms

- 5.55 It would be necessary for the policymaker to carefully consider the definition of the market to make the correct decision of which firms should be included in and excluded from the price comparisons.
- 5.56 If there are a large number of firms in the market, excessive amounts of information about firms' prices may lead to information overload at the POS. This can reduce, if not eliminate, the purpose of the price comparisons should consumers choose to ignore the information.
- 5.57 A compromise could require that firms compare their price with the lowest-priced rival. This would provide consumers that are only interested in price with the information needed for them to shop at the lowest-priced store. It would also provide firms with a greater incentive to set the lowest price as it would receive free advertising in each of its rival's stores, which is likely to increase competition further.

Products and bundles

- 5.58 In-store price comparisons can also be difficult to implement when firms bundle their products differently. In this situation, the in-store price comparison may prevent consumers from searching other stores if all information is not provided on the comparison. For example, consider a duopoly where:
- Firm A sells the product on its own but
 - Firm B sells the product singularly and bundled with another product.

If firm A is required only to compare its product with firm B's unbundled product consumers may be encouraged to buy at the POS if they observe a positive price comparison. If consumers are better off purchasing the bundled product from firm B but are induced not to search the market, they may be harmed by the price comparison.

- 5.59 When firms are required to include all information on the comparison, it may provide incentives to create many different bundles to overload

consumers with information at the POS so they ignore the price comparisons.

What are the negative aspects and how can they be minimised?

Misleading consumers

- 5.60 Nelson (1974) conjectured that moderate monitoring of in-store price comparisons could allow firms to deceive consumers with false claims that are missed by the policymaker, since consumers would trust firms' messages to some extent.
- 5.61 Wilson (2005) formalises Nelson's (1974) conjecture for a homogeneous good duopoly model. The theory shows that there is a probability that fully rational consumers can be deceived by false comparisons when a regulator monitors only a proportion of comparison signs. The paper identified two effects:
- the 'deception effect': an increase in the number of signs monitored leads to the increased consumer confidence in the signs, which can lead to more consumers being misled, and provides firms with an incentive to increase price
 - the 'competition effect': as price comparisons becomes more credible, lowering price becomes more profitable

Wilson (2005) shows that the competition effect is much larger than the deception effect.

Increasing firms' risks

- 5.62 Another concern is that making in-store comparisons mandatory can place considerable risk on the firm because of the existing consumer protection legislation. Compliance risks may be a particular problem for smaller firms, who have fewer resources to keep up-to-date with all relevant legislation and to monitor prices. Exempting smaller firms may place them at a competitive disadvantage.

Main points

5.63 When consumers at the POS are uninformed of rivals' prices and it is costly for them to become informed, they will be willing to pay a premium to purchase the product at the POS. In-store price comparisons can:

- provide consumer with information about rivals' prices
- enable consumers to estimate the benefit from search better and
- intensify competition or lead to tacit collusion.

This intervention is most likely to be beneficial to consumers when:

- monitoring provides credibility of price comparison
- there are few firms in the market
- products are homogeneous, and
- price comparison is simple and easy to understand.

There is limited theoretical analysis of this intervention's potential effects, but no empirical evidence. More research is needed.

Cooling-off periods

5.64 A cooling-off period provides consumers with the ability to unconditionally cancel a contract or return a product to receive a full refund from the firm during a given period. Consumers who have not considered purchasing a product until the POS are more likely to be unsure of the product's quality and its benefit to them. Thus, consumers may make decisions at the POS that they wish to revise at a later date. If consumers are inadequately informed at the POS, firms can provide unfavourable refund terms and conditions to prevent the product being returned. A cooling-off period allows consumers to return the product after the POS if they subsequently decide that the product is not of the standard they expected⁷⁵.

5.65 Cooling-off periods may also help competition in markets where some consumers are inactive before the POS, because consumers are able to switch away from goods and services *ex post*, which may be a substitute

⁷⁵ A distinction needs to be made in this paper with cancellation rights, which are available at any point during the contract rather than just a short period. The effects of cancellation rights are discussed in section 6.

for *ex ante* search. This has the potential of reducing *ex ante* search if consumers perceive *ex post* switching as a substitute. Consumers may prefer to try a product out with the intention of returning the good if it is not of the required quality rather than doing research about the available products.

- 5.66 Despite limited theoretical and empirical research into the effects of cooling-off periods (McChesney, 1984), we can draw inferences of the effectiveness of cooling-off periods from research of similar practices. For instance, in some ways cooling-off periods are similar to money back guarantees (MBGs) that are sometimes used as a marketing strategy by firms. Both cooling-off periods and MBGs reduce consumers' risk of purchasing a product that does not match their preferences⁷⁶.
- 5.67 Firms can offer cooling-off periods regardless of regulations and, as the literature on MBGs has highlighted, in some situations this can be profitable for firms. For example, if consumers cannot verify the quality of a product until after the POS, firms may only produce low quality goods (Akerlof, 1970). However, if consumers have the ability to return low quality products this will increase their willingness to pay and enable firms to produce high quality. This is formalised in a theoretical model for MBGs by Moorthy and Srinivasan (1995).
- 5.68 While firms in some cases offer 'no quibble' MBGs, there are reasons why firms either restrict MBGs or do not offer it at all. For example:
- where the value of the product is reduced if it is returned
 - when consumers can 'free rent', that is use the product but take it back (Davis *et al*, 1998), and
 - for high-priced add-ons that subsidise below-cost prices for base goods.

When will cooling-off periods be effective?

- 5.69 In situations where firms have no incentive to offer MBGs, a cooling-off period provides a consumer with the ability to return a product post-purchase, but for the remedy to be successful consumers must:

⁷⁶ It is worthwhile noticing that, as opposed to cooling-off periods, MBGs are usually conditional on a consumer's dissatisfaction with a firm's product. Therefore, hassle costs are likely to be lower for consumers that exploit cooling-off periods compared with MBGs.

- be aware that a cooling-off period is available at all and when it expires
- revise their purchasing decision post-purchase, and
- be willing to return the product.

Post-purchase revision

- 5.70 If consumers do not revise their purchases after the POS, they will not realise when they have made a poor purchasing decision and not take advantage of a cooling-off period. Consumers' willingness and ability to revise their decisions is likely to differ from product to product. For example, consumers are less able to revise purchasing decisions for credence goods compared to experience goods⁷⁷. Distance selling, such as internet retailing and catalogue purchases, are more likely to be revised as the consumer has a limited ability to inspect the product pre-purchase.
- 5.71 Loewenstein *et al* (2002) argue that firms' pressure selling techniques at the POS can put a consumer into a 'hot state' which increases the likelihood that they will make a purchase at the POS that they would not when they are in a 'cool state' after the POS. If this is what induces consumers to purchase at the POS, whether the purchase was good or bad may dawn on them shortly after the POS.
- 5.72 When the product on offer means consumers must calculate some risk, they may be willing to pay a high premium as they overestimate the probability of a bad state of the world occurring⁷⁸. In this situation consumers are unlikely to obtain information within the length of the cooling-off period, which would lead to revise their risk calculations.
- 5.73 Consumers may be prompted into reconsidering a purchasing decision if they come across a lower-priced substitute. This is more likely to happen for products that consumers have more interaction with, for example, where they frequently encounter alternative offers.

⁷⁷ See paragraph 4.17.

⁷⁸ Loomes and Mehta (2007) show that people overestimate the probability of being burgled.

Hassle costs

- 5.74 Cooling-off periods will be effective when consumers' hassle costs are low. Consumers incur hassle costs when employing a cooling-off period, because they must spend time and effort returning the product to the firm⁷⁹. When these hassle costs are high, consumers are less likely to use cooling-off periods. Hassle costs may be relatively lower when the product that is being redeemed is expensive, because consumers have a greater incentive to return the unwanted product when it is more expensive. This may be tempered by firms increasing these hassle costs for returns. As a result, mandated cooling-off periods may need to be complemented by measures to ensure that firms inform consumers of their rights and to prevent firms from unfairly increasing hassle costs.

What are the negative aspects and how can they be minimised?

Increased purchases at the POS

- 5.75 Cooling-off periods can potentially cause a problem of moral hazard as they may make consumers more risk loving when purchasing a product, because they have the ability to return the product if they are not satisfied. This is formalised for MBGs by Mann and Wissink (1988, 1990). An increase in risk-loving behaviour may increase the number of uninformed purchases consumers make and increase the number of returns. This result appears more likely if firms encourage consumers to purchase at the POS because the cooling-off period insures them against a poor purchase.
- 5.76 A cooling-off period may be detrimental if it increases consumers' uninformed purchases, but at the POS they underestimate the hassle costs of employing the cooling-off period in the future. As a result, consumers may not use the cooling-off period and accept more bad purchases that they would have done without a cooling-off period (Mulholland, 2007).
- 5.77 If consumers have the ability to correctly predict the hassle cost of returning the product at the POS, one would expect that cooling-off periods are consumer welfare enhancing. Otherwise consumers would not factor it in to their purchasing decisions and they would behave as if a cooling-off period was not available.

⁷⁹ Consumers may never entirely be refunded as they cannot be reimbursed for the effort and time taken.

Length of period

- 5.78 Cooling-off periods are generally imposed in order to give consumers the opportunity to reconsider purchases of goods they have not previously seen, contracts they have not had the opportunity to read, or products purchased under pressure. Mandated cooling off periods tend to be of 1, 2 or 4 weeks⁸⁰. Such periods may not be long enough to find out more about some experience goods.
- 5.79 When considering the optimal length of a cooling-off period, there may be a tradeoff that policymakers need to consider. For example:
- a lengthy cooling-off period may allow consumers to analyse whether the product is of a desirable standard but
 - a shorter period may mean that consumers will not delay redeeming their refund and so do not eventually forget to do so.
- 5.80 Silk (2006) finds evidence that consumers forget to redeem rebates when the redemption period is long. A rebate is similar to a cooling-off period in that consumers need to expend some effort to receive a refund on some proportion of the price, but differs in that consumers still own the good or receive the service after they redeem the rebate.
- 5.81 In an experiment, subjects are able to buy two cinema tickets for \$11 or for \$13 with a \$6 or \$9 rebate, which could be redeemed by mail within 1, 7 or 21 days depending upon the treatment. Since the majority of subjects selected the more expensive price with the rebate, it shows that consumers expected to redeem the rebate, otherwise they would purchase at the lower price.
- 5.82 There is evidence that between 25-35 per cent of consumers that purchased the product with a rebate did not redeem it. There is also evidence that the likelihood of redeeming a rebate falls as the length of the period increases and that a larger rebate increases the likelihood that it will be redeemed. It is argued that consumers expect they will take advantage of a rebate to receive a lower price and put it off until later, but then forget to do so. The longer the period the more likely they are to forget to redeem.

⁸⁰ The cooling-off period lasts longer (45 days) for EWs on DEGs.

5.83 The optimal length of a cooling-off period is likely to vary between different goods, and without further research this is likely to remain unknown. If consumers are more likely to forget to use cooling-off periods it may be worthwhile requiring firms to remind consumers that the cooling-off period is approaching its end. This is likely to increase marginal cost for some firms if communications are conducted by telephone or by post, but for internet retailers, where communications are usually conducted by email, an automatic reminder would add very little cost for firms.

Cost of returns on firms

5.84 Cooling-off periods also impose costs on firms which can take two separate forms:

- the cost of administering returns and
- the lost value of the returned good (if any).

5.85 If returned goods are unable to be resold as new, increasing returns will increase firms' costs, which may be passed on to consumers through higher prices. An extreme example of this is what is referred to as 'free renting', for example, wedding outfits returned immediately after the wedding. The importance of these costs are illustrated by Davis *et al* (1998), who show that firms impose hassle costs on MBGs to prevent consumers purchasing products with the intention of returning the product after limited use.

5.86 For services, such as insurance, it is less likely that costs would increase as a result of a return of the product during the cooling-off period, because the value of the returned 'product' has not changed. One exception to this is where fixed costs of selling the 'product' have not been recovered.

Main points

5.87 An uninformed consumer at the POS may be unsure of the benefit of purchasing a product, so firms can pressurise them into buying without allowing the consumer to search the market further. A cooling-off period can:

- enable consumers to return a purchase that they regret
- increase search after the POS

- increase consumers' willingness to make a risky purchase at the POS, and
- increase burden of returns upon firms.

This intervention is most likely to be beneficial to consumers when:

- there are low hassle costs of returning the product relative the product's price
- consumers have little experience of the market
- the length of the cooling-off period is sufficiently long, and
- consumers correctly predict their future ability and willingness to use the cooling-off period at the POS.

There is limited theoretical analysis of this intervention's potential effects, but no direct empirical evidence. More research is needed.

Section summary

5.88 The remedies discussed in this section are aimed at resolving the problems that occur when consumers are inadequately prepared at the POS. The remedies are aim at either:

- giving consumers more time to search for information themselves, or
- directly providing consumer with information.

5.89 The former are only effective when consumers are willing and able to search the market. The incentive to search may be affected by whether the consumer already possesses the good (cooling-off periods) or can purchase it at known terms of trade at a later date (written quotations). They are more likely to be effective where unexpected add-ons are introduced at the POS, because in this case there may be good reason for the lack of pre-POS search⁸¹.

5.90 The latter can be effective where goods are relatively homogeneous and there are few firms. However, these conditions mirror those identified in Annexe A as most likely to cause concern about tacit collusion.

⁸¹ Recall that paragraph 5.13 explains that high-priced add-ons may not cause detriment if there is competition for the base good.

5.91 A common feature of the remedies discussed in this section is the lack of direct empirical evidence of likely impacts. The existing evidence is more indirect arising from research on MBGs and rebates. In addition, apart from add-ons, the theoretical analysis is also sparse.

TABLE 5.1 – SUMMARY TABLE OF HELPING CONSUMERS MAKE INFORMED CHOICES AT THE POINT OF SALE (POS)

Remedy (and page number)	Problem to solve	Benefits from remedy	Concerns with remedy	When remedy is most effective	Examples of existing remedy
Written quotations (p83)	<ul style="list-style-type: none"> • lack of time to search for alternatives • pressure selling of complementary purchases 	<ul style="list-style-type: none"> • allows search post POS 	<ul style="list-style-type: none"> • consumers visit same firm twice • will consumers search further? 	<ul style="list-style-type: none"> • consumers understand purpose of remedy so search market further • firms do not receive cost saving when selling add-ons at the POS 	<ul style="list-style-type: none"> • OFT/CC case 'extended warranties (EWs) on domestic electrical goods (DEGs)'
In-store price comparisons (p87)	<ul style="list-style-type: none"> • lack of information about rivals' prices 	<ul style="list-style-type: none"> • allows consumers to estimate benefit of further search • intensify competition 	<ul style="list-style-type: none"> • costs of monitoring comparisons • potential impact on collusion (see Annexe A) 	<ul style="list-style-type: none"> • homogeneous products • few firms in market • simple comparison 	<ul style="list-style-type: none"> • considered in OFT/CC case 'EWs on DEGs' • considered in CC investigation 'Supermarket I'
Cooling-off periods (p93)	<ul style="list-style-type: none"> • consumers make uninformed choice 	<ul style="list-style-type: none"> • consumers can undo bad decisions • increase search post POS 	<ul style="list-style-type: none"> • increase consumers' willingness to purchase at POS • consumers may forget to return products • imposes burden of returns on firms 	<ul style="list-style-type: none"> • low hassle cost of return for consumers relative to price • consumers have little experience of market • length is sufficiently long • consumers do not forget to use after purchase 	<ul style="list-style-type: none"> • OFT/CC case 'EWs on DEGs' • Distance sellers • Doorstep sellers • Some financial products

6 INTERVENTIONS TO HELP CONSUMERS SWITCH SUPPLIERS

6.1 A large number of products and services involve further (repeat) purchasing after the POS. Many service contracts may be of indefinite duration or subject to automatic renewals. Consumers can face a cost when switching to a new supplier which is not incurred if the consumer remains loyal to their current supplier.

6.2 Such switching costs provide firms with a degree of market power as consumers have an incentive to continue purchasing the product from their supplier even if a rival, who sells an identical product, is known to be slightly cheaper. Consumers may not switch suppliers because:

- they are unaware of the opportunity and benefit of switching
- they expect to face significant costs of switching suppliers, or
- they are unable to understand the conditions under which they may switch.

6.3 When consumers are reluctant to switch supplier, firms can:

- charge high prices
- enjoy high entry barriers, and
- attempt to strengthen their position by increasing switching costs further.

6.4 Competition may also not be fully effective when firms do not have the same information about rivals' customers. A firm can have better information about their customers' attributes compared to its rivals. For example, where costs of supply differ across customers and it is not easily identifiable by a rival, this firm cannot offer a cost reflective price. Hence, a rival offer is likely to attract relatively more high cost-of-supply consumers making such an offer unprofitable. This asymmetric information problem can lead to consumers not being offered an alternative deal from a rival that they might receive if firms had symmetric information.

6.5 This section discusses the interventions that are available to intensify competition between firms by increasing the likelihood of the consumer switching firms. To switch between firms customers would require the necessary information about rival offers and hence any reluctance to search

would also hamper switching. Issues that arise out of lack of price and non-price information and associated remedies are discussed in Section 4⁸².

6.6 Remedies can increase customers' willingness to switch by:

- preventing consumer lock-in
- lowering the tangible and intangible costs that consumers incur when switching suppliers, and
- enabling firms to offer cost reflective prices.

6.7 The measures that are available to potentially help resolve the issues after the POS include:

- cancellation rights or limitations on contract duration
- product attribute portability, and
- customer information portability.

6.8 Before analysing the likely impact the remedies may have on markets, we provide a brief review of the economics literature on switching costs⁸³. The next subsection analyses more closely the differences between certain types of switching costs and consider what can occur when switching costs are lowered in a competitive market.

The economics of switching

6.9 OFT (2003) define switching costs as 'the real or perceived costs that are incurred when changing supplier but which are not incurred by remaining with the current supplier.' The extent and nature of switching costs can vary for different products. In some cases they can be observable and quantifiable by third parties, whereas in others, switching costs may only be perceived by consumers themselves.

⁸² Some people treat search and switching costs as a single cost. Research by Wilson (2006b) and Chang and Waddams Price (2008) show that there are important differences between these costs and that incorrect inferences may be made if grouping these costs together.

⁸³ In paragraph 3.16 onwards there is a general overview in of how switching costs can affect markets. For more discussion of the effects of switching costs in a potentially collusive market see Annexe A.

- 6.10 As outlined by Klemperer (1995) and OFT (2003), switching costs can fall into the following six categories.

Transaction costs

- 6.11 For some goods and services there can be significant transaction costs of switching supplier. These costs can include the opportunity cost of time taken or the monetary costs that a consumer has to incur to switch supplier. For example, cancelling a contract with a phone supplier and switching to another may be time consuming, and consumers may even have to pay an administration fee to do so. In addition, if consumers have to change phone numbers, it may be costly for consumers to inform their friends and family of their new number.

Contractual costs

- 6.12 Firms can construct loyalty programs that provide consumers with benefits each time they purchase from their brand. This can provide consumers with incentives to repeat purchase at a firm as they usually receive lower rewards if they switch between different firms. For example, consumers have the opportunity to enrol on airlines' frequent-flyer programmes so each flight with an airline increases their 'air miles' which provides benefits in the future.

Informational costs

- 6.13 For some differentiated products, consumers may incur a cost of learning how to use a new product which they would not incur if they continued purchasing the product from their previous supplier. For example, after using a Nokia mobile phone in the past, if a consumer were to switch they would experience a cost of learning how to use a Sony Ericsson, which has similar features in a slightly different format.

Compatibility costs

- 6.14 Compatibility costs can occur when consumers purchase a durable base good and a complementary add-on, as the add-on of a specific brand may not be compatible with another brand's base good. As such, consumers have to purchase the durable base good of another brand to be able to buy that brand's add-on. For example, some razor blades are only compatible

with some razors and a games console can only run the games created for it⁸⁴.

Uncertainty costs

- 6.15 Consumers may be reluctant to switch supplier if they are less certain of a product's quality compared with a brand they use frequently. For example, a customer may believe that their current supplier provides good customer service in the event of their boiler breaking down because they have first-hand experience, but they could be unsure of the quality of rivals' services.

Psychological costs

- 6.16 Even when there is no identifiable reason for consumers to exhibit brand loyalty, purchasing a product in the past or an effective advertising campaign may change a consumer's preferences. For example, despite no tangible differences between rival products consumers may prefer one brand of the product over an otherwise identical alternative.

The interaction of different switching costs

- 6.17 The effects upon competition of the different types of switching costs can vary. Nilssen (1992) suggested that transactional costs have more of an impact upon a market than informational costs since consumers incur costs each time they cancel a contract, but learning only needs to be done once. For example, if a consumer switches from brand A to brand B, returning to brand A would not require them to learn how to use the product, but they would experience the hassle of terminating one contract and beginning another⁸⁵.
- 6.18 Transaction costs and contractual costs are also more likely to provide firms with the capability to price discriminate between new consumers and locked-in consumers (Klemperer, 1995). In these situations old consumers are likely to have contracts with firms that make them distinguishable from new potential consumers.

⁸⁴ For some further discussion of the impact of add-ons upon competition see section 5.

⁸⁵ This result relies on consumers not forgetting how to use the product.

- 6.19 Transaction costs may be more of a concern than contractual costs, other things equal, as consumers receive rewards for not switching in the latter rather than incurring costs for switching in the former.
- 6.20 Firms may have the potential to endogenously select the level of contractual costs and transactional costs. In a theoretical model, Koh (1993) shows that to dampen price competition firms prefer to commit to positive switching costs before they compete.
- 6.21 A firm will attempt to increase costs of switching away from its product while trying to reduce the cost of switching to it, so as to be able to attract its rivals' consumers but keep its own customers locked-in. For example, Adams (1978) describes how the manufacturers of razors and profitable razor blades attempted to make their razor blades compatible with other manufacturers' razors, but their razors only compatible with their own razor blades.

Lowering switching costs

'...public policy should discourage activities that increase consumer switching costs ... and encourage activities that reduce them' (Klemperer, 1995)

- 6.22 If firms face some consumers who are locked-in into the their product and some who are not, and if firms cannot price discriminate between the two, firms face a tradeoff⁸⁶ between:
- setting high prices to extract rents from captive consumers, and
 - low prices to increase their market share.
- 6.23 As a result, the effect on prices of lowering switching costs is ambiguous, as in any one period, firms would balance the effect of capturing new consumers with low prices, and exploiting locked-in consumers with higher prices. Therefore, lower switching costs lead to an incentive to set either:
- lower prices to prevent captive consumers switching to rivals, or
 - higher prices because new customers are less valuable in the future as the rents that can be extracted from them are smaller.

⁸⁶ As discussed in paragraph 3.22.

Lower prices

6.24 Despite this ambiguous theoretical result, Klemperer (1995) makes three points to suggest why firms are likely to charge high prices to extract rents from captives. When switching costs are reduced firms are likely to lower prices to maintain their captive consumers.

- Firms discount the future, so they prefer to receive a given amount of profit in the present compared with the future. As a result, other things equal, firms are more likely to be concerned with extracting rents from captives than increasing their future market share.
- Firms have a lower incentive to compete for unattached consumers, because, other things equal, a greater market share for rivals reduces price competition in the future since rivals are likely to set higher prices to extract rents from their captives rather than compete for each other's captives.
- If consumers consider the impact of future prices on their purchasing decisions, they are less responsive to price in the present as they realise that a low price now may mean a high price in the future. Consequently, there is a smaller incentive to set lower prices to attract new consumers⁸⁷.

Price discrimination

6.25 Lower switching costs can also intensify competition when firms have the ability to price discriminate between their customers and their rivals' customers. For example, Chen (1997) analyses a two-period duopoly model where firms can offer discounts to a rival's customers. Customers have heterogeneous switching costs which are unknown by the firms, so customers with low switching costs may switch firms.

⁸⁷ This result relies on consumers' ability to forecast the future correctly. Consumers that expect price cuts to be maintained in the future are more responsive to price in the present as their expected benefits from switching are greater. As a result, firms may have an incentive to initially set low prices. Consumers soon find their beliefs to be incorrect, however, as firms have an incentive to increase price once consumers become locked-in (Von Weizsäcker, 1984).

6.26 The model shows that offering discounts to a rival's customers means that firms face more elastic demand, as consumers are more likely to switch. This intensifies competition compared to a situation where firms have not got the ability to price discriminate. Despite more intensive competition, consumers may not always be better off because:

- switching is costly, and
- compared with a situation where price discrimination is not possible, some consumers may be charged higher prices although others may be charged lower prices.

Right to switch

6.27 Consumers may be willing to switch but are unaware of their rights to do so. As a result, providing consumers with information about their rights can increase the number of switchers within a market and increase competition. This was highlighted in the OFT's market study into new car warranties.

New Car Warranties

6.28 When consumers purchase a new car they are provided with a warranty that covers components that fail due to manufacturing faults. However, it is common for the car owner to pay the servicing costs. The OFT conducted a market study in 2003 into how competition in car servicing is affected by restrictions upon where cars may be serviced during the lifetime of warranties.

6.29 The OFT found that franchised garages that are part of a manufacturer's network were on average £80 more expensive compared with the same service at an independent garage, even though there was no significant difference in service quality. It was argued that consumers were unaware they could take advantage of the lower prices of independent garages, because many consumers believed that their warranty had restrictive clauses upon where they could service their car, even though this was only the case for some warranties.

6.30 In early 2004 the OFT launched an information campaign to improve consumers' understanding of the terms of their warranty, and later that year all manufacturers dropped the restrictive clauses on their warranties to avoid the possibility of formal action by the OFT under EC competition law.

6.31 An independent review of the intervention suggested that due to these remedies consumers saved between £120-170 million over two years⁸⁸. The main findings were:

- car warranties allow owners to have their car serviced at any garage, although some warranties still strongly recommend the use of garages attached to franchised dealers
- the information campaign was successful in increasing consumers' understanding of the terms and conditions on their warranties, although if the information was targeted better and sustained for longer it could have had a bigger impact.

It was also found that some consumers remain confused over the terms and conditions involved in their warranties and continue to get their cars serviced at franchised dealer garages. According to the report, these car owners overpay for servicing by £40-£90 million in total per year.

Main points

- Switching costs can provide firms with market power
- Lowering switching costs can intensify competition

Interventions

6.32 The following sections discuss the potential effect of the following remedies:

- cancellation rights
- product attribute portability, and
- customer information portability.

Cancellation rights

6.33 Consumers may be tied into a continuous service contract by means of a minimum term, commonly one year but often 18 to 24 months. Cancellation rights allow consumers to terminate a contract after giving

⁸⁸ See OFT (2006) for more details.

notice for a certain period sometimes at no cost or at a *pro rata* amount⁸⁹. This can mean that consumers have the ability to escape from a contract they have realised is not correct for them after signing a contract or when they realise that another contract is better. This can allow entry to occur in the market and an entrant may be able to provide incentives for consumers to cancel their contracts with the incumbent and switch to the entrant.

- 6.34 Consumers entering into a long-term contract with a firm may be committed to purchase the good or service from that firm for a significant period of time. This can be directly detrimental to consumers if:
- the quality of service is not of the standard the consumer expected when signing the contract
 - they have been misled in the terms and conditions of the contract, or
 - find that they have overlooked better bargains elsewhere.
- 6.35 This can mean that consumers have to tolerate a suboptimal product until the contract has expired rather than switching to a better supplier. In addition, this can be indirectly detrimental to consumers, as entry may be difficult in an industry where the majority of consumers are locked-in to long term contracts with an incumbent, so prices may be higher than they would if consumers are not locked-in to an incumbent.
- 6.36 The effects of cancellation rights in this situation are very similar to those of cooling-off periods⁹⁰. To avoid duplication of these arguments this section focuses on the impact of cancellation rights when the contract is for ongoing supply and cancellation can happen after longer periods, say, 12 months, as opposed to shorter periods, say, 30 days.

When will cancellation rights be effective?

- 6.37 Cancellation rights provide consumers with the ability to cancel a contract, but for the remedy to be successful consumers must:
- understand the conditions under which they can cancel current and future contracts
 - be well-informed about competing offers, and

⁸⁹ An example of cancellation rights is Ofgem's 28 day rule, which allowed consumers to get out of a contract after giving 28 days' notice, although firms could charge 'a reasonable cancellation fee' (Ofgem, 2003). This rule has recently been removed, see paragraph 6.44.

⁹⁰ See paragraph 5.64 onwards for discussion.

- be willing and able to cancel and switch.

Consumer confidence

6.38 Cancellation rights can provide consumers with confidence in switching suppliers. Consumers may be unwilling to switch suppliers if they are concerned with being locked-in to a suboptimal future contract for a significant period of time. Where the price or quality of the product may vary over time, consumers may fear that either:

- a low introductory price offer may be followed up by a later 'rip-off' price, or
- the firm's quality is lower than expected or may be degraded over the course of the contract.

Consumers may be reluctant to switch if they are locked-in to a new supplier for an extended period of time. This is an example of uncertainty cost⁹¹.

6.39 Uncertainty costs are more likely to occur in immature markets where consumers have not had the ability to switch before or markets where switching is infrequent. Chang and Waddams Price (2008) find that people that switch in one market are more likely to switch in another suggesting that experience leads to confidence.

Lack of choice for short-term contracts

6.40 Cancellation rights are especially beneficial when firms have market power and only offer one (long-term) contract. This provides consumers with the ability to purchase the product or service for a period that suits them, rather than being locked into the product for longer than necessary.

Entry

6.41 Cancellation rights may be indirectly beneficial to consumers as long-term contracts may create (large-scale) barriers to entry. Firms will find it difficult to enter the market if they cannot attract consumers from the

⁹¹ See paragraph 6.15.

incumbents. This can occur when the majority of consumers are locked-in to an incumbent's long-term contracts.

- 6.42 These barriers to entry may not be significant when the market is growing. In each period a potential entrant has the ability to solely attract a growing proportion of unattached consumers. When firms do not have the ability to price discriminate between captive and unattached consumers entry may be easier still, as incumbents may prefer to set higher prices to extract rents from their captives rather than attempt to compete for non captive consumers⁹².

What are the negative aspects and how can they be minimised?

Reductions in 'bargains'

- 6.43 Cancellation rights may prevent consumers receiving some benefit from commitment to a longer-term relationship with their current supplier. Contracts which offer bargains up front may not be available if firms are not certain of supplying consumers for a long period. For instance, in terms of theory, long-term contracts allow some consumers to be locked-in for the duration of their contract, which can lead to 'bargain-then-rip-off pricing'. When it is less likely that consumers will be locked-in during the rip-off phase of the pricing, firms are less likely to offer the bargains at the beginning of the contract. This can be detrimental if consumers would otherwise not be able to afford innovative products offered as incentives to sign up to the long-term contract. The rip-off period can be seen as a way for consumers to spread the financing of such products.
- 6.44 Ofgem has recently removed the 28 day rule enabling customers to cancel their contracts with that period's notice. Ofgem's reasoning in cancelling this rule was to create incentives for suppliers to invest in long-term energy saving measures, as firms may choose to compete on energy-saving measures during the 'bargain' phase of the pricing cycle. Since firms are more certain that the cost will be paid back over the contract, they are more likely to invest in expensive measures, which can have a positive externality on the environment⁹³.

⁹² See paragraph 3.26.

⁹³ This is similar to the contracts for mobile phones, as consumers that sign up for longer contracts are provided with more expensive and innovative mobile phones.

Assessing the lifetime costs and benefits

- 6.45 Where consumers do not adequately foresee the cost and benefits of the contract, the 'bargains' may not compensate for later 'rip-offs'. For example, Ausubel (1999) analyses a field experiment undertaken by a credit card company. There were three offers, mailed out at random:
- the 'standard' offer was to charge 6.9 per cent on balances for the first 6 months and 16 per cent thereafter
 - the 'pre-teaser' offer also charged 16 per cent after the first 6 months but offered 4.9 per cent for those first 6 months, and
 - the 'post-teaser' variant started with 6.9 per cent but offered 14 per cent after the first 6 months.
- 6.46 Given the actual amounts of borrowing observed among those who took up an offer, the post-teaser treatment was at least as advantageous as the pre-teaser (relative to the 'standard'). However, the take-up rate for the pre-teaser was about 2.5 times greater than that for the post-teaser. One possible explanation of this result is that consumers place excessive weight on the first 6 months, believing that they can take advantage of the attractive initial rate while reducing their post-6-month borrowing sufficiently to come out ahead; but that they underestimate their capacity to rein in their borrowing⁹⁴.

Increasing firms' risks

- 6.47 More fundamentally, firms may be unwilling or reluctant to enter or remain in a market where they are uncertain about covering their fixed costs. Building a loyal customer base on long-term contracts can provide firms with a degree of security in this regard. The firms' cost of capital may be directly effected by the likelihood that it can cover its fixed costs so that a larger secured customer base reduces the firms' costs, which may be passed through as lower prices to customers. As a result, introducing cancellation rights may increase prices either through decreased competition or increased costs of capital.

⁹⁴ It has been suggested by that people may discount more heavily between the present and the future than between different future time periods. See Laibson (1997), O'Donoghue and Rabin (2001) and DellaVigna and Malmendier (2006).

Main points

6.48 When consumers enter a long-term contract with a firm they may be committed to purchase the good or service from that firm for a significant period of time. Cancellation rights can:

- provide consumers with the ability to switch
- increases consumers' confidence in switching
- assist entry into the market (if firms cannot price discriminate), and
- make prices may be more cost reflective (if firms can price discriminate).

This intervention is most likely to be beneficial to consumers when:

- implemented in an immature market with few firms, and
- firms offer one long-term contract.

There is robust theoretical analysis of this intervention's potential effects in general terms, but there is no empirical evidence.

Product attribute portability

6.49 When consumers repeatedly interact with a firm, consumers may become attached to a certain attribute of the firm's product or service. If this attribute is not fully transferable to other firms when consumers switch, they can incur a significant switching cost. For example, in the mobile telephony market a consumer may become attached to the phone number they have been assigned at the beginning of a contract. Having to inform friends and family of their new number may be very costly. As a result, if switching means consumers must have a new phone number, consumers are less willing to switch suppliers⁹⁵.

When will attribute portability be effective?

6.50 Product attribute portability allows consumers to retain features that they value, but for the remedy to work:

- the attribute must be identifiable
- the attribute must be the main impediment to switching, and

⁹⁵ An alternative example is switching bank accounts where consumers may be concerned that existing direct debits can be transferred without error.

- property rights must be easily transferable.

Ease of portability

- 6.51 In some situations the attribute that consumers are attached to may be owned by the firms. For example, when renting a washing machine, consumers face a switching cost. When they switch firms they must disconnect the washing machine, take it back to the store, go to another store and return with a new product, and install it. However, the ownership of the washing machine cannot be transferred to a consumer as it is likely that the consumer is unwilling or unable to buy the product in the first place. As a result, this type of attribute portability may become difficult to implement because firms will need to be adequately compensated for allowing the attribute to be transferable.
- 6.52 The Competition Commission (CC) came across this type of problem, among others, in their recent market investigation into the supply of bulk liquefied petroleum gas (LPG) for domestic use in the UK. They found that when customers switched suppliers of LPG it was common practice for the outgoing supplier to remove its tank, so that it could be replaced with a similar tank by the incoming supplier. Due to the costly nature of removing and installing tanks, consumers faced charges from both the incoming and outgoing supplier for the process. Consequently, the amount of customers that switched between suppliers was limited.
- 6.53 To remedy the problem, the CC enabled the tanks to be transferable between suppliers. This is achieved by providing an incoming supplier with the right to buy the existing tank from the outgoing supplier at a negotiated price, but the outgoing supplier is obligated to accept a 'backstop price' determined by a methodology. This reduces the switching costs experienced by domestic LPG customers and so is likely to increase consumers' willingness to switch.
- 6.54 An alternative solution could have included assigning property rights of the tanks to the customers. However, LPG is a hazardous product and on safety grounds the CC decided that transferring ownership of tanks between suppliers was a safer way to achieve lower switching costs.
- 6.55 Attribute portability is likely to be significantly easier to implement when the attribute can be transferred to the consumer without imposing

significant costs upon the firms. An example where this has occurred in recent times is phone number portability for mobile and land line telephones.

Box 6.1: Empirical evidence of the impact of number portability

Lyons (2006) studies a dataset on mobile number portability (MNP) which includes information from up to 38 countries for 22 quarters from 1999 to 2004. There is evidence that consumer switching is increased when mobile numbers are portable and the switching process takes less than five days, but not if it takes longer. There is also evidence that, in markets where increased switching has been observed, average prices are reduced by 6.6 per cent in the short-term (one quarter) but the effect in the long-term is much greater at 12 per cent.

Viard (forthcoming) provides evidence for toll-free 800-numbers in the US, which provide callers with the ability to contact firms without paying for the call themselves. In 1986 Federal Communications Commission (FCC) decided toll-free calls should be routed based upon the next 3 digits after 800 (800-NXX-YYYY) with each inter-exchange carriers (IXCs), who provide toll-free services, assigned a NXX code. Although this allowed entry into the market after AT&T (American Telephone and Telegraph) was divested in 1984, it provided a significant switching cost upon toll-free users. In 1993 the FCC introduced a new system which allowed IXCs to switch providers without changing numbers. Using this natural experiment, Viard (forthcoming) suggests that this attribute portability is competition enhancing when firms do not have the ability to price discriminate between new and existing consumers. There is evidence that prices fell, on average, by 4.4 per cent after the period when phone numbers became portable⁹⁶.

Oftel (1997) estimated the gain of MNP in the UK at approximately £98 million over ten years, which includes benefits that are obtained by switching to lower priced companies; benefits from lower prices due to more intensive competition fuelled by number portability; and benefits that can be made from calls to ported numbers, which is expected to be far smaller than the other two effects.

⁹⁶ Lyons (2006) and Viard (forthcoming) provide evidence of the impact of number portability upon competition. The major difference between the two papers is that mobile companies have the ability to price discriminate between new and existing users, whereas IXCs do not. In both cases competition has been enhanced and prices have fallen.

- 6.56 It is worthwhile noting that the evidence from Viard (forthcoming) is a business-to-business (B2B) market. One may not expect a considerable difference between the behaviour of a B2B market compared to a business-to-consumer (B2C) market, except that the switching cost is likely to be greater for small businesses compared with consumers. Businesses are more likely to advertise their phone numbers, so switching mobile phone companies can mean increasing advertising costs, and could lead to firms losing consumers.
- 6.57 Despite empirical evidence that number portability has intensified competition in the markets, to estimate the overall benefit to consumers it is necessary to factor in the prices of related goods. For example, Buehler and Haucap (2004) conjecture that although the price of phone calls have fallen as a result of introducing MNP it is likely that the price of handsets have increased, because firms have a smaller incentive to compete *ex ante* for customers as their *ex post* profit is limited⁹⁷. Therefore, consumers may not have benefited from MNP as much as the evidence suggests.

What are the negative aspects and how can they be minimised?

Benefits from non-portability

- 6.58 When attributes are not transferable they may have an alternative benefit to consumers that can be lost if the attribute becomes transferable. For example, when mobile numbers are not transferable between firms, people can recognise which company the phone user is with as each company's numbers begins with the same numbers. This can be beneficial to consumers as they are more likely to have a clearer idea of the cost of the phone call if they know which company the person they are calling is with. Portability can undermine this.
- 6.59 Firms may have an incentive to increase the prices paid by consumers if they are unable to distinguish between different networks. In theoretical models:
- Buehler and Haucap (2004) show that if MNP eliminates switching costs the effect is unambiguously beneficial for consumers. However, if MNP means telephone numbers no longer identify companies,

⁹⁷ See paragraph 3.20.

termination charges increase, with an ambiguous net effect on mobile customers.

- Gans and King (2000) examine the influence of mobile network competition on the prices of fixed-to-mobile calls. When fixed line consumers can distinguish between the different mobile networks they are calling, fixed-to-mobile call prices will fall.

6.60 Buehler *et al* (2006) describe how the loss of transparency can be overcome. In Finland and Germany consumers can call a toll-free number to find out which company a particular number is assigned to, whereas in Portugal, Ireland and Belgium an audio sound signals that the consumer is making an off-net call. These remedies can be costly themselves and 'are often considered a nuisance by many consumers' (Buehler *et al*, 2006)⁹⁸.

Increasing firms' costs

6.61 Making an attribute transferable between firms is likely to result in some increase in the costs imposed on firms. If this occurs some proportion of the cost may be passed on to consumers, so the benefits of reducing switching costs could be offset by higher prices⁹⁹. This is likely to be a short-term increase in marginal cost as firms will learn how to implement switching more cheaply as they become more experienced, as argued by Ellig (2005) and Aoki and Small (1999) for MNP. Any increase in cost would need to be set against benefits.

Main points

6.62 A customer that has a repeated relationship with a firm can become attached to a certain attribute of the product, which can lead them to remain loyal with their current supplier. Allowing that attribute to be transferable across firms can:

- lower switching costs, and
- increase the amount of consumers that are willing to switch.

This intervention is most likely to be beneficial to consumers when:

⁹⁸ An alternative to solving the loss of transparency is to impose the 'receiving party pays' (RPP) regime for termination charges as opposed to the 'calling party pays' (CPP) regime which eliminates the need for consumers to be informed of the network they are calling. See Dewenter and Kruse (2005) and Littlechild (2006) for further discussion of the impact of the RPP and CPP regimes.

⁹⁹ For example, for calls due to higher marginal costs of providing call services.

- the attribute that consumers are attached is easily identifiable
- the ownership rights of the attribute is easily transferable to rival firms or consumers
- the attribute is the main impediment to competition, and
- benefits from non-portability can be achieved in other ways.

There is robust theoretical analysis and empirical evidence of this intervention's potential effects. However, it is noticeable that most of the research relates directly to telephony markets.

Customer information portability

6.63 When a consumer and a firm interact repeatedly, the firm may obtain better information about the consumer's attributes compared to rival firms. Where the cost of supplying consumers varies, the current supplier can offer low-cost consumers a better deal. Rivals without this information would have to offer a single price to new consumers based on some measure of average costs to supply. Such offers would only be attractive to high cost of supply consumers. Getting such an adverse selection of consumers makes it unprofitable for a rival to attempt to attract new consumers¹⁰⁰.

6.64 For example, Ausubel (1991) and Calomiris and Mester (1995) provide evidence that credit card rates are unresponsive to market fluctuations because banks may not wish to unilaterally lower rates. They argue that this may occur because:

- consumers with low defaults search less as low risk consumers 'do not intend to borrow for long', so searching for lower prices is less beneficial
- more credit worthy consumers are less likely to change lender as they receive more favourable terms from their current lenders, and
- consumers with large debts may have a greater difficulty switching because those that are trying to switch are indistinguishable from those that wish to acquire more debt.

¹⁰⁰ The problems described above are usually observed in the credit market, where firms can be unsure of the credit worthiness of consumers, and in insurance markets, where firms can be unsure of the risks involved of insuring certain individuals.

6.65 The problem here is not that consumers do not look for a better offer. Instead no such offer is forthcoming. Asymmetric information among firms dampens competition in the market¹⁰¹.

6.66 This adverse selection problem can be solved if the information that is available to a supplying firm is also made available to rivals. This information will enable rival firms to offer consumers a price dependent on the cost of supplying them. This will increase competition for profitable consumers and provide them with better terms of trade.

When will customer information portability be effective?

6.67 Customer information portability increases firms' willingness to compete for customers, and the remedy is likely to be more successful:

- when information is directly related to 'cost of supply' differences
- firms can use cost reflective pricing, and
- firms use information in the same manner.

Adequate information

6.68 If customer information provision is to be effective it is essential that it provides firms with the ability to distinguish between profitable and non-profitable consumers. For instance, if credit history is a good indicator for future performance in the credit market, then firms may benefit from information about consumers' past behaviour in the credit market. In addition, it is necessary that firms have the ability to set individualised prices, so they can act upon the information they are provided with.

¹⁰¹ The adverse selection problem discussed in this section has similarities with the adverse selection problem discussed in section 4, where consumers cannot determine the quality of the product they are buying pre-purchase. If that section is concerned with consumers lacking information of product quality, this section is concerned with firms lacking information about consumer 'quality'. The problem in this section also draws parallels with the switching cost literature discussed above. The main difference in this situation is that firms pay the cost of consumers switching (Klemperer, 1995).

Box 6.2: The impact of customer information portability

Klapper (1994) and Mester (1997) provide evidence that a portable and reliable credit history will lower costs for firms in the credit market

Avery *et al* (2004) suggest the information on consumers' credit histories that credit-reporting agencies maintain in the US has lowered the risk of supplying consumers with credit which lowers the cost.

Miller (2003) suggests accurate and portable credit rating could increase lending and reduce price for credit worthy consumers.

Barron and Staten (2000) show both positive and negative information help creditors make a good decision. They provide evidence that this makes the market more competitive and this reduces prices.

Cohen (2008) studies the effects in Israel insurance industry where there is no portability. It is found that:

- insurers make more profit on repeat customers and that this is driven by profits made on customers with good records with the insurer
- this profit is higher the longer the relationship between insurer and customer and
- the price to the low risk customers is not fully reflected in the premium offered. The low risk customers who do not switch pay lower premia, but not as low as they might have been with more intense competition.

6.69 An accurate and portable credit history also increases the options available to consumers as it reduces the risk in attracting new consumers and so there is less dependence upon firms' existing consumers as lenders are able to develop trust with new borrowers quicker. Since consumers with good credit histories will receive lower prices, they will be more likely to be able to repay the loan, which will give them a better credit rating in the future¹⁰².

The way firms use information

6.70 Sharing information about consumer characteristics is most valuable to firms, and hence more likely to increase competition for consumers, if firms

¹⁰² See also Competition Commission's case on Home Credit.

rely on and use this information in a similar way. Where different measures or different ways of calculating such measures are used, customer information portability will have less of an impact. For example, different firms have different ways of calculating the risks involved with supplying consumers with credit and insurance. As a result, firms are unlikely to collect data which is irrelevant to them, but relevant to a rival supplier. There may be a need to standardise the information collected, which enables all firms to calculate their risks. This may increase the costs of firms, which can lead to an increase in price¹⁰³.

What are the negative aspects and how can they be minimised?

Ownership rights

- 6.71 There may be an issue with who owns the customer information and whether firms collect the same information. Consumers may not like firms having the ability to look at their information, especially after the problems with sensitive data over the last year or so. Consumers could be asked for permission to go on these lists and be told of the benefit of doing so.

Auditing information

- 6.72 For firms to trust information provided by a rival there must be some way of auditing this information. Concerns about the information may arise in some markets for which customer information portability is a key issue, because it would be valuable for a firm to offload high cost customers to a rival¹⁰⁴. Such auditing would provide direct information about their rivals without improving the information to consumers. This scenario is particularly problematic when it comes to tacit collusion (see Annexe A).

Main points

- 6.73 When firms cannot determine the differences in cost of supplying consumers, they may be offered worse deals than if firms could differentiate between them. Providing firms with information about consumers can:

¹⁰³ It may also raise concerns about tacit collusion. See Annexe A.

¹⁰⁴ Sunday Times (Good payers face being axed by credit card firms, 3 February 2008) reported that 'Credit-checking agencies say banks are beginning to weed out clients with faultless borrowing histories because they can make little profit from them'.

- help firms set cost reflective prices
- lower firms' risks and costs
- increase firms' willingness to seek out new customers, and
- lower prices.

This intervention is most likely to be beneficial to consumers when:

- when information available is a good proxy for a customer's 'quality'
- firms have the ability to differentiate prices
- there is no issue over property rights ownership of consumers' information, and
- firms use information in similar ways.

There is robust theoretical analysis and empirical evidence of this intervention's potential effects. However, it is noticeable that most of the empirical research relates directly to either credit or insurance markets.

Section Summary

6.74 The remedies discussed in this section are aimed at resolving the problems that occur when consumers are or perceive themselves to be partially or fully locked-in to their current supplier for a non-trivial period of time. The remedies are aimed at either:

- preventing lock-in
- lowering switching costs, or
- expanding the number and likelihood of competitive rival offers.

6.75 Throughout the section we have assumed that search costs are not so high as to negate any positive incentive to switch. The remedies discussed in this section are more effective the lower are search costs and hence in many cases the remedies in this section need to be combined with other remedies, such as those discussed in section 4, that reduce search costs.

6.76 Switching costs can have a detrimental effect on competition. A remedy which bans identified behaviour and actions by firms solely aimed at making switching technically difficult without offering counterbalancing benefits to consumers is uncontroversial.

6.77 In a situation where switching costs are intangible and consumers appear to avoid switching even with clear net gains from doing so, behavioural economics may suggest relevant remedies. For example, if consumers suffer from choice avoidance¹⁰⁵, a specific remedy aimed at activating such consumers would be to require that contracts for ongoing services have to be renewed periodically. The expectation is that the renewal notice will active at least some of these consumers. Since such a remedy imposes significant costs on both provider and customer, a very detailed assessment of the relevant sector would be necessary.

6.78 Table 6.1 below summarises the features of each of the three remedies discussed in this section. Both from the table and from the text above, it is noticeable that with a single exception, Liquid Petroleum Gas, all other examples are from sectors or industries for which there is a sector specific regulator. Interventions that help consumers overcome dynamic switching problems may require more detailed information and more monitoring, for which only a sector regulator may be efficient.

¹⁰⁵ See paragraph 4.82 onwards.

TABLE 6.1 – SUMMARY TABLE OF HELPING CONSUMERS SWITCH SUPPLIERS

Remedy (and page number)	Problem to solve	Benefits from remedy	Concerns with remedy	When remedy is most effective	Examples of existing remedy
Cancellation rights (p110)	<ul style="list-style-type: none"> dynamic lock-in 	<ul style="list-style-type: none"> ensure competition for current customers increase consumers' confidence to switch assist market entry 	<ul style="list-style-type: none"> increases firms' risks since no assured customer base can lose benefits from 'bargain-then-rip-off' pricing 	<ul style="list-style-type: none"> when implemented in an immature market when firms offer no choice for short-term contract 	<ul style="list-style-type: none"> financial products Ofgem 28 day rule CC case 'Northern Ireland Banks'
Product attribute portability (p 115)	<ul style="list-style-type: none"> attribute preference causes switching cost 	<ul style="list-style-type: none"> makes switching easier empirical evidence of lower prices 	<ul style="list-style-type: none"> increase firms' costs lose benefits of non-portability (ability to identify suppliers for mobile phones) 	<ul style="list-style-type: none"> when attribute is main reason for concerns when ownership of attribute is easily transferred 	<ul style="list-style-type: none"> telephony (mobile and land line) CC case 'domestic LPG'
Customer information portability (p 120)	<ul style="list-style-type: none"> a supplier has more information about the profitability of its customers compared with rivals 	<ul style="list-style-type: none"> firms can realise profitable opportunities lowers firms' risks and costs consumers offered better deals empirical evidence of lower prices 	<ul style="list-style-type: none"> who owns the information? potential impact on collusion (see Annexe A) 	<ul style="list-style-type: none"> when information is close proxy for customer 'quality' when firms can price individually when firms use same information to calculate risks 	<ul style="list-style-type: none"> financial markets insurance markets CC case 'Home credit'

7 CONCLUSION

- 7.1 This paper has presented a number of remedies that can be used to encourage consumers to play a more active role in finding the best deal. It has set out the benefits and costs of such remedies, and has tried to highlight the situations when the remedies are likely to work best.
- 7.2 Of the remedies considered, those that aim to improve consumer information either directly or indirectly by encouraging more search appear to be the most powerful. Where consumers enter the point of sale well informed about prices and characteristics of the alternatives on offer in the market, they are more likely to choose the price-quality combinations which suit them the most. This puts pressure on the firms to deliver what consumers want at competitive prices.
- 7.3 Remedies aimed at protecting the consumer at the point of sale, other than those already in place as a result of consumer protection laws, in general seem more costly to administer both for consumers and any agencies charged with monitoring the remedy. If firms do not voluntarily offer such remedies, they are likely to resist their implementation, and costs may be raised further.
- 7.4 Remedies aimed at encouraging appropriate switching behaviour are distinguished by their use almost exclusively in industries with specific sector regulators. This is unlikely to be a coincidence and may result partly from the novelty of choice in these markets. The remedies are all demanding in terms of monitoring and may be difficult to implement cost effectively without a sector regulator with specialist knowledge of the industry and a duty to undertake ongoing monitoring of the industry.
- 7.5 There is another potential limit to the effectiveness of the proposed remedies: namely, the fact that consumers' time, attention and information-processing powers are themselves bounded and/or their preferences and motivations may be configured differently from the standard model. This may result in behaviour, including responses to the remedies themselves, which is difficult to explain or predict conventionally.
- 7.6 A secondary concern is that if consumers are fully insured from any mistakes they may make, whether through inadequate search, bad judgement or abusive behaviour by sellers, their incentives to be active are severely limited. The more consumers face the full force of bad decisions,

the more one would expect to see them taking steps to minimise mistakes and to learn from the past. Where the cost of errors and of learning are not too large, restricting attention to general consumer education to help consumers help themselves may be a better way to make markets work well than measures to protect the consumer.

- 7.7 For all the remedies, we considered not only the industrial economics literature, but also the behavioural economics, marketing and psychology literatures. Taken as a whole, this literature suggests that remedies aimed directly at consumers where both the problem and the remedy are easy to understand will be the most effective. It also suggests that incentivising firms to communicate relevant information to consumers, and supporting them in these activities, may be more powerful than direct remedies.
- 7.8 Increasing transparency in the market may not just help consumers to make markets work better, but also help firms to soften competition by facilitating tacit collusion. Annexe A in particular describes examples of where this has occurred in practice.

Future research needs

- 7.9 The survey also identified where knowledge and understanding is slight and where more work is needed. For some of the remedies discussed in this paper, robust theoretical analysis backed with sophisticated empirical evidence enable a clear assessment of their likely impact. For other remedies more research is needed.
- 7.10 While the theoretical analysis is far ahead of empirical research, there are still gaps in our theoretical understanding of a number of the remedies considered in this paper. In particular, better models of behaviour at the point of sale would strengthen our understanding of the proposed remedies.
- 7.11 The gap in empirical evidence is more pronounced. More work on the effect of standardisation, of price comparisons whether on the web or in the store, of comparative advertising and of the post sale remedies is particularly needed. For some remedies, there is empirical evidence, but only from a few industries. Robust evidence of the effects of the remedies across industries, countries and time is also lacking. The biggest hurdle to such empirical work would appear to be access to appropriate data. To assess the remedies, the researcher would need data from before and after the

implementation of a remedy. Getting the 'before' data is a particular challenge because it is difficult to foresee when a remedy will be imposed.

- 7.12 The paucity of existing empirical studies and the growing use of 'consumer remedies' present both a requirement and an opportunity for *ex post* analyses of past remedies. Policymakers collect data but may not have sufficient resources to analyse them in depth; academics have the incentive, interest and ability to analyse them and publish the results, but little access to data because of commercial confidentiality. Where these confidentiality constraints can be circumvented, and academic analysis of authorities' data undertaken, this would provide powerful information for the regulatory authorities in their design of future remedies.

ANNEXE

A INTERVENTIONS IN POTENTIALLY COLLUSIVE CONSUMER MARKETS

- A.1 When firms interact repeatedly, they can form a tacit understanding to dampen competition, which may enable them to maintain higher prices and acquire larger profits than they can when they compete more intensely. Some remedies that attempt to increase consumers' ability to shop around can facilitate or undermine this type of collusive understanding. The purpose of this annexe is to consider the effect of remedies when firms are likely to (or, at least, have the potential to) act collusively; and to identify the remedies and the characteristics of markets where there is a risk of facilitating collusion, and where there is not. Ivaldi *et al* (2003) provide an in-depth discussion of the vast collusion literature.
- A.2 We use the term 'collusion' throughout this section for the want of a better word. Unfortunately the definition of this term can cause confusion among economists and lawyers. Primarily, when using the term 'collusion' we have tacit collusion in mind, where firms simply recognise their interdependence and realise that fierce competition is not in their mutual self-interest¹⁰⁶.
- A.3 Tacit collusion is distinct from firms that illegally participate in a cartel by explicitly communicating with each other to raise prices, despite both being modelled in the same way by economic theorists. We focus on tacit collusion because if a competition authority believes firms have illegally fixed prices, the appropriate remedy is to break up the cartel, rather than implementing remedies to activate consumers.

When is collusion likely to occur?

- A.4 In theory terms, higher prices are sustainable if firms expect that a short-term benefit from 'deviating' from a collusive understanding (undercutting a collusive price or expanding output) will be eliminated by a sufficiently

¹⁰⁶ In terms of the European Commission's merger policies collusion is also commonly termed 'collective dominance', and in the United States, 'coordinated effects'. We consider these terms to be interchangeable, but for consistency we use collusion throughout this paper.

harsh long-term response by its rivals¹⁰⁷. In general, the market structure and industry characteristics affect the incentives of maintaining the collusive understanding. These characteristics can influence:

- the profit from maintaining collusion
- the short-term gain of deviating, and
- the firms' long-term response to a deviation.

Transparency

A.5 A prerequisite for collusion, first discussed by Stigler (1964), is that firms must have the ability to monitor each other's behaviour. When there is uncertainty over rivals' actions, a firm may not respond harshly to a potential deviation, because it will not know for sure whether a deviation has occurred. As a result, firms will have a unilateral incentive to deviate, so prices above the competitive level are unsustainable.

A.6 This idea is captured in a theoretical model developed by Green and Porter (1984). In the model:

- firms face uncertain and unknown demand, and
- rivals' prices and quantities are unobservable.

In a period when a firm's quantity supplied is low, the firm is unsure whether a deviation has occurred or whether there is simply low demand. In this situation firms must respond harshly as if a rival has deviated (even if low demand is the reason for a firm's low sales), because otherwise collusion is unsustainable as firms will not expect a sufficiently harsh punishment. This strategy lowers profits from collusion, so makes it more difficult to sustain.

Market Structure

A.7 It is commonly accepted that collusion is less likely to occur in markets with:

- more firms, as collusive profits are divided between more firms so collusion becomes less attractive

¹⁰⁷ While terms such as retaliation and punishment are often used in this context, the future losses may simply arise because firms no longer trust their rivals to keep prices high and hence adjust their prices downwards on that realisation.

- asymmetry in firms' market shares, because the firm with the smallest market share has a greater incentive to deviate as it benefits less from the collusion
- low entry barriers, because possible entry reduces the likelihood that firms will receive future collusive profits, and
- infrequent interaction between firms, because reactions to deviations becomes weaker if they are delayed.

A.8 Davies and Olczak (2007) provide empirical evidence of the number of firms and the amount of symmetry in firms' market shares needed for a market to be potentially collusive in the eyes of the European Commission (EC). They analyse data from the EC's merger documents to find when the EC expects a post-merger market structure is likely to lead to collusion. They find that the EC is usually concerned with the possibility of collusion, given other prerequisites for collusion are satisfied, when:

- there are only two large firms in the market (with the largest firm having a market share greater than 25 per cent), and
- there is close symmetry in market shares (difference no greater than approximately 10-15 per cent).

Product substitutability

A.9 It is also usually accepted that limited product heterogeneity facilitates collusion. This is despite horizontal product differentiation having an ambiguous effect in theoretical terms. For example, when products are differentiated:

- a firm that deviates attracts fewer consumers compared to homogeneous products, which facilitates collusion, but
- the long-term punishment is weaker compared to homogeneous products, because competition is not as intense, which makes collusion harder to sustain.

The outcome is dependent upon the relative size of the two effects.

A.10 However, theory does not take into account that when products are similar in their characteristics it may be easier for firms to tacitly coordinate on a mutually beneficial outcome. For example, when firms only compete on

price, it is easier to come to an understanding compared to a situation where firms can also compete on quality.

Business cycle

A.11 The market conditions in the present and future can also play a significant role in sustaining collusion. For example:

- collusion is easier to sustain in growing markets, as the expected punishment is harsher in the future compared to a market that is not growing¹⁰⁸
- collusion is difficult to sustain during boom periods, because there is a greater incentive to deviate since deviation profits are greater but the expected punishment after the boom remains constant or is weaker (Rotemberg and Saloner, 1986; Haltiwanger and Harrington, 1991), and
- when firms' capacities are constrained, collusion is easier to sustain during a boom compared to firms with unconstrained capacities, because firms are limited in the proportion of the market they can supply, so there is a smaller incentive to deviate when demand is high (Staiger and Wolak, 1992).

Other factors

A.12 There are a number of other factors that can affect collusion. For example:

- asymmetries in cost structure undermine collusion, because a low-cost firm will want to set a lower collusive price and is harmed less during the punishment phase compared to firms with higher costs
- asymmetries in capacity constraints undermine collusion, because the largest firm has a greater incentive to deviate as it gains more and is harmed less during the punishment phase compared to rivals (Compte *et al*, 2002)
- multi-market contact facilitates collusion, because it increases firms interaction with each other and softens the impact of asymmetries across individual markets (Bernheim and Whinston, 1990), and
- innovation undermines collusion, because it can allow a firm to gain a significant advantage over its rivals, which reduces the expected benefit of collusion and reduces the harm rivals can inflict on the innovative firm.

¹⁰⁸ The reverse is true for markets with declining demand.

The impact of interventions in collusive consumer markets

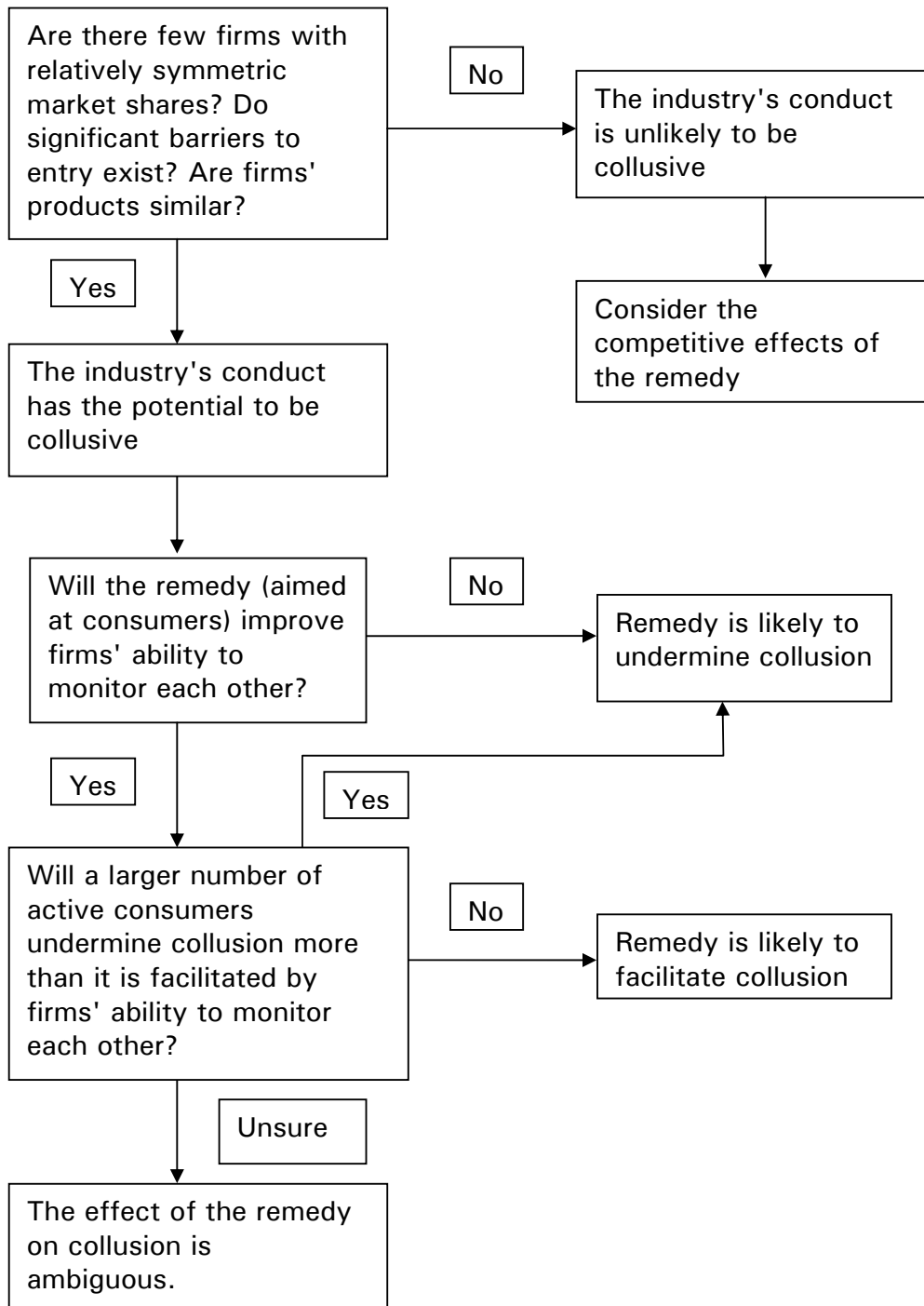
A.13 In this section, we only consider interventions in consumer markets in a very general way. Here we assume that a remedy can:

- increase consumer activity in a market, and
- increase firms' ability to monitor each other's strategies¹⁰⁹.

A.14 Figure A.1 presents a flow chart that a policymaker should follow when implementing a remedy in a consumer market. It illustrates when a remedy is likely to facilitate or undermine collusion. Below we consider the relative strengths and weaknesses of the arguments that lead to the predictions of when collusion will be facilitated and when it is undermined.

¹⁰⁹ In this subsection we take the market structure as given. In the following subsection (paragraph A.28 onwards) we consider whether a specific remedy has the ability to change the market structure to make it more conducive to collusion.

FIGURE A.1 – IS THE INTERVENTION LIKELY TO FACILITATE COLLUSION?



A.15 When considering whether to implement a remedy in a consumer market, a policymaker should consider whether the market structure after implementation is likely to sustain collusion¹¹⁰. If the conduct of the market is not likely to be collusive, the specific effects of the remedy should be considered (see relevant sections in the main text). If it is likely that the

¹¹⁰ See paragraph A.4 onwards.

market structure could sustain collusion, the policymaker should next consider whether the remedy has the potential to improve the firms' ability to monitor their rivals. If the remedy does not do this, figure A.1 suggests that collusion can be undermined by the remedy. The intuition is discussed in the following section.

Increasing consumer activity

A.16 Møllegaard and Overgaard (2005) show that in a general theoretical model the effect on prices of increasing consumer activity, other things equal, is ambiguous. The intuition is that, compared to the status quo, increased consumer activity:

- provides firms with a greater incentive to deviate, as a lower price will attract a greater number of its rivals' more active consumers but
- strengthens firms' long-term response, because competition becomes more vigorous with increased consumer activity.

As a result, the collusive understanding may be undermined if the former effect is greater than the latter.

A.17 This result can be found to be unambiguous in theoretical models with more specific assumptions, but in either direction depending upon the assumptions. For instance:

- Schultz (2005) shows that price transparency on the consumer side is unambiguously good for consumers
- Ireland and Waterson (2006) show that, other things equal, search costs can facilitate collusion, and
- Farrell and Klemperer (2006) conjecture that switching costs may make it easier for firms to monitor collusion, because larger price changes are necessary to attract consumers, which may be easier to observe. They also argue that switching costs may provide focal points that enable the market to be divided easier.

But, on the other hand:

- Padilla (1995) and Anderson *et al* (2004) suggest that switching costs make collusion difficult to sustain¹¹¹, and
- Møllegaard and Overgaard (2002) show that imperfect market transparency on the consumer side undermines collusion when there are a limited number of firms in the market.

A.18 Here we follow the belief of recent policy papers by Kühn (2001) and OECD (2001) where it is argued that an increase in consumer activity is likely to make collusion more difficult to sustain as, according to these papers, the short-term incentive to attract consumers is likely to dominate the long-term effects of making firms' retaliation harsher.

A.19 It is important to note, however, that to our knowledge there is no empirical evidence that tests this conjecture, and so more research is needed to further understand the general impact of increasing consumer activity in a collusive market. Given the lack of empirical evidence and ambiguous theoretical results, it is worthwhile for a policymaker to consider the impact on collusion of increased consumer activity on a market-by-market case.

A.20 Figure A.1 suggests that if the remedy increases firms' ability to monitor each other's strategies, the effect upon collusion is dependent upon whether the undermining effect of increasing consumer activity is greater than the facilitating effect of improving firms' ability to monitor each other's strategies. The section below discusses the effect of increasing firms' information and when it is likely to occur¹¹².

Increasing firms' ability to monitor each other's strategies

A.21 Attempting to increase the market transparency for consumers has the potential to increase the ability for firms to monitor each other, which can facilitate collusion. For example, notice in Green and Porter's (1984)

¹¹¹ If the switching cost is a type of brand preference or a perceived difference between heterogeneous products, this result is in accordance with the widely accepted view on product substitutability despite a similar ambiguous result (see paragraph A.9).

¹¹² It is possible for an increase in consumer activity to provide firms with more information, as consumers that search the market may provide firms with information. For example, firms can use meet or beat the competition clauses to acquire information on rivals, as they usually require consumers to provide evidence of the rival deal the firm is required to meet or beat. See, for example, Arbatskaya *et al* (2004).

model¹¹³ that firms can directly detect which rival has deviated when they can observe:

- rivals' prices, or
- rivals' quantities

and they can indirectly infer that a deviation has occurred when they observe:

- the level of demand.

As a result, collusion is easier to sustain when firms can observe at least one of these three pieces of information.

A.22 Firm-specific data is likely to help sustain collusion, but the amount of information firms require to infer their rivals' strategies is minimal. For instance, in the example above, it is only necessary to provide firms with generalised data about the total quantity sold in the market or the level of demand to make collusion easier to sustain.

Box A.1: Empirical evidence of information that facilitates collusion

Albæk *et al* (1997) show that firm-specific transaction prices facilitated collusion in the Danish ready-mixed concrete market in 1993. The Danish Competition Council published the data to encourage buyers to shop around for better deals. However, within one year prices had increased by 15-20 per cent, despite no evident increase in demand or input prices, or reduction in firms' capacities. In contrast, inflation only increased by 1-2 per cent over the same period. The increase in transparency had inadvertently provided firms with a means of detecting deviations from a tacit understanding, which enabled firms to enforce higher prices. In 1996 the Danish Competition Council ceased publishing transaction prices.

¹¹³ Discussed in paragraph A.6.

Box A.1 (continued): Empirical evidence of information that facilitates collusion

In 1986 contract disclosure rules were established in the US by the Interstate Commerce Commission (ICC) to force railroads to disclose firm-specific contractual information for freight to prevent a large agriculture shipper from getting more favourable contract offers. Fuller *et al* (1990) found that, holding constant effects for demand and supply, shipment characteristics and shipping region, there was a significant upward trend in the level of freight rates which was between 10-15 per cent depending upon the region, despite a significant downward trend before the introduction of the remedy.

Kauffman and Wood (2005) argue that electronic commerce technology has enabled online booksellers to tacitly collude, as firms are extremely responsive to rival price changes, which aids the collusive process.

A.23 Returning to Figure A.1 suggests that when an intervention provides firms with some beneficial information that can help sustain collusion, the impact upon the collusive understanding will depend upon the benefit firms receive from the extra information compared to the effect of increased consumer activity. There is likely to be some degree of uncertainty about which effect dominates, because:

- it will be difficult to estimate the effect of an increase in consumer activity, which is the result of a tradeoff¹¹⁴, and
- there will be uncertainty of how much the firms benefit.

As a result, policymakers should be cautious when firms' ability to monitor each other is improved and the market structure is conducive to collusion.

A.24 However, when a remedy increases the information available in a market, it is not always guaranteed that firms' ability to monitor each other's strategies will be improved. Colluding firms have an incentive to monitor rivals' strategies, so it is likely that the firms would already possess the relevant information they need to sustain the collusive understanding.

A.25 It is especially easy for firms in consumer markets to gather the required information, as it is usually available (to someone that searches hard enough). Therefore, it is tempting to conclude that in the majority of

¹¹⁴ See paragraph A.16.

consumer markets implementing an informational remedy will not improve firms' ability to monitor each other, so collusion should be undermined.

A.26 There are two reasons why this argument may not hold. Firstly, in some consumer markets it may in fact be difficult for firms to monitor each other. This is especially likely to occur in markets where:

- consumers bargain for prices
- firms offer secret price cuts to consumers, or
- information on rivals is costly to gather or required frequently.

A.27 Secondly, it may not be common knowledge that all firms possess the required information to facilitate collusion, so a firm may be unsure whether rivals have the required information to sustain collusion or not. This has the ability to undermine a collusive understanding, because a rival may not expect a sufficiently harsh retaliation in the event of a deviation. In this situation, an informational remedy could facilitate collusion by making it common knowledge that rivals have the information needed to react accordingly to a deviation.

Which remedies are likely to facilitate collusion?

A.28 Some of the remedies considered in this document potentially can have an impact upon collusion¹¹⁵. A remedy can facilitate collusion in two ways:

- making the market structure and characteristics more susceptible to collusion¹¹⁶, and
- improving firms' ability to monitor each other's strategies.

A.29 Table A.1 provides of a brief summary of whether a specific remedy can have an effect on the market structure and characteristics in a way that facilitates collusion and/or directly improve firms' ability to monitor each other or not by providing consumers and firms with more information. This table is presented as a guide and policymakers should consider the likely

¹¹⁵ All of the remedies, with the exception of minimum standard requirements, directly attempt to increase consumer activity, which can have an impact on collusion. See paragraph A.16.

¹¹⁶ The market is more likely to be collusive if (i) few firms are left in the market as a result of an intervention making firms exit the market; (ii) barriers to entry are increased (see paragraph A.7 for an explanation); and (iii) firms have fewer strategies they can compete on (see paragraph A.10).

impact upon collusion of a specific remedy on a market-by-market case, as there may be market-specific effects which cannot be generalised across markets.

TABLE A.1 – SUMMARY TABLE OF HOW REMEDIES MAY AFFECT COLLUSION

Remedies that:	can reduce the strategies firms compete on*	do not reduce the strategies firms compete on*
can improve firms' ability to monitor each other	<ul style="list-style-type: none"> • minimum standard requirements • restricted products and pricing • standardised pricing comparisons 	<ul style="list-style-type: none"> • in-store price comparisons • price comparison sites • information provision of quality • customer information portability
do not improve firms' ability to monitor each other	<ul style="list-style-type: none"> • product attribute portability 	<ul style="list-style-type: none"> • written quotations • cooling-off periods¹¹⁷ • cancellation rights¹¹⁸

Notes: * This can include reducing product heterogeneity as well as limiting competition on pricing structures or innovation.

Main points

A.30 Tacit collusion has the potential to occur in a market with:

- few firms
- symmetry in firms' market shares
- limited product heterogeneity, and
- high entry barriers

A.31 A remedy that attempts to increase consumer activity can have an effect on a collusive market. Other things constant, collusion can be:

- undermined if the remedy increases consumer activity in a market, but
- facilitated if it improves firms' ability to monitor each other's strategies.

¹¹⁷ Where a cooling-off period or a cancellation right is used because the consumer has received a better offer elsewhere, this remedy could inform a firm about a rival's pricing behaviour and hence improve firms' ability to collude. See also footnote 113.

¹¹⁸ See footnote 118.

A.32 Firms' information can be increased directly by the remedy itself or by the increased activity of consumers.

A.33 Caution should be used when a remedy is likely to improve firms' ability to monitor each other. Firms may already possess the information needed to tacitly collude, but an informational remedy is likely to improve the firms' information in markets where:

- consumers bargain for prices
- firms offer secret price cuts, or
- when information on rivals is costly to gather or required frequently.

REFERENCES

- Armstrong, M (2008) 'Interactions Between Competition and Consumer Policy,' mimeo, University College London
- Arbatskaya, M, Hviid, M and Shaffer, G (2004) 'On the Incidence and Variety of Low-Price Guarantees,' *Journal of Law and Economics*, 47(1), 307-32
- Adams, R (1978) *King C Gillette: The Man and His Wonderful Shaving Device*, Little Brown and Co: Boston
- Akerlof, G (1970) 'The Market for 'Lemons': Quality Uncertainty and the Market Mechanism,' *Quarterly Journal of Economics*, 84(3), 488–500
- Albæk, S, Møllgaard, P and Overgaard, P (1997) 'Government-Assisted Oligopoly Coordination? A Concrete Case,' *Journal of Industrial Economics*, 45(4), 429-443
- Anderson, E, Kumar, N and Rajiv, S (2004) 'A Comment on: Dynamic Duopoly with Consumer Switching Costs,' *Journal of Economic Theory*, 116, 177-186
- Aoki, R and Small, J (1999) 'The Economics of Number Portability: Switching Costs and Two-Part Tariffs,' Working Paper, University of Auckland
- AUC Report (2005) 'Taxes, Fees and Charges: An AUC Report on Pricing on Airlines' Websites,' available at: www.auc.org.uk
- Ausubel, L (1991) 'The Failure of Competition in the Credit Card Market,' *American Economic Review*, 81(1), 50-81
- Ausubel, L (1999) 'Adverse Selection in the Credit Card Market,' Working Paper, University of Maryland
- Avery, R, Calem, P and Canner, G (2004) 'Credit Report Accuracy and Access to Credit,' Federal Reserve Bulletin Summer Issue, 297-322
- Avery, R, Kenkel, D, Lillard, D and Mathios, A (2007) 'Regulating Advertisements: The Case of Smoking Cessation Products,' *Journal of Regulatory Economics*, 31 (2), 185-208
- Bagwell, K (2006) 'The Economic Analysis of Advertising,' 2005, Sections 1-3, in Armstrong, M and Porter, R (eds), *Handbook of Industrial Organization*, Vol 3,

Amsterdam: North-Holland

Bakos, J (1991) 'A Strategic Analysis of Electronic Marketplaces,' *MIS Quarterly*, 15(3), 295-310

Barron, J and Staten, M (2000) 'The Value of Comprehensive Credit Reports: Lessons from the US Experience,' Credit Research Centre, Georgetown University

Baye, M, Gatti, J, Kattuman, P and Morgan, J (2006) 'Did the Euro Foster Online Price Competition? Evidence from an International Price Comparison Site,' *Economic Inquiry*, 44(2), 265-279

Baye, M and Morgan, J (2001) 'Information Gatekeepers on the Internet and the Competitiveness of Homogeneous Product Markets,' *American Economic Review*, 91(3), 454-474

Baye, M and Morgan, J (2004) 'Price Dispersion in the Lab and on the Internet,' *RAND Journal of Economics*, 35(3), 449-466

Baye, M, Morgan, J and Scholten, P (2002) 'Pricing and Reputation in Online Consumer Electronics Market,' working paper, Indiana University

Baye, M, Morgan, J and Scholten, P (2004a) 'Temporal Price Dispersion: Evidence from an Online Consumer Electronics Market,' *Journal of Interactive Marketing*, 18(4), 101-115

Baye, M, Morgan, J and Scholten, P (2004b) 'Price Dispersion in the Small and in the Large: Evidence from an Internet Price Comparison Site,' *Journal of Industrial Economics*, 52 (4), 463-496

Baye, M, Morgan J and Scholten, P (2006) 'Information, Search, and Price Dispersion,' in (eds) Hendershott, T *Handbook of Economics and Information Systems*, Elsevier

Benjamin, D, Brown, S and Shapiro, J (2006) 'Who is 'Behavioral? Cognitive Ability and Anomalous Preferences,' mimeo, University of Chicago

Bernheim, D and Whiston, M (1990) 'Multimarket Contact and Collusive Behavior,' *RAND Journal of Economics*, 21(1), 1-26

Bertrand, M, Karlan, S, Mullainathan, S, Shafir, E and Zinman, J (2005) 'What's Psychology Worth? A Field Experiment in the Consumer Credit Market,' NBER Working Paper No 11892

Bertrand, M, Mullainathan, S and Shafir, E (2006) 'Behavioral Economics and Marketing in Aid of Decision Making Among the Poor,' *Journal of Public Policy and Marketing*, 25(1), 8-23

BRE and NCC Report (2007) 'Warning: Too Much Information Can Harm,' an interim report by the Better Regulation Executive and National Consumer Council

Brown, J and Goolsbee, A (2001) 'Does the Internet Make Markets More Competitive? Evidence from the Life Insurance Industry,' *Journal of Political Economy*, 110(3), 481-507

Brynjolfsson, E, Smith, M and Montgomery, A (2004) 'The Great Equalizer? Consumer Choice Behavior at Internet Shopbots,' MIT Sloan Working Paper No 4208-01

Buehler, S, Dewenter, R and Haucap, J (2006) 'Mobile Number Portability in Europe,' *Telecommunications Policy*, 30(7), 385-399

Buehler, S and Haucap, J (2004) 'Mobile Number Portability,' *Journal of Industry, Competition and Trade*, 4(3), 223-238

Cain, D, Loewenstein, G and Moore, D (2005) 'The Dirt on Coming Clean: Perverse Effects of Disclosing Conflicts of Interest,' *Journal of Legal Studies*, 34, 1-25

Calem, P and Mester, L (1995) 'Consumer Behaviour and the Stickiness of Credit-Card Interest Rates,' *American Economic Review*, 85(5), 1327-1336

Carlton, D and Chevalier, J (2001) 'Free Riding and Sales Strategies for the Internet,' *Journal of Industrial Economics*, 49, 441-462

Carlton, D and Perloff, J (1994) *Modern Industrial Organization*, Third edition, Addison Wesley Longman

Caswell, J and Mojduszka, E (1996) 'Using Informational Labeling to Influence the Market for Quality in Food Products,' *American Journal of Agricultural Economics*, 78, 1248-1253

Chang, Y and Waddams Price, C (2008) 'Gain or Pain: Does Consumer Activity Reflect Utility Maximisation?' CCP Working Paper (forthcoming)

Chen, Y (1997) 'Paying Consumers to Switch,' *Journal of Economics and Management Strategy*, 6, 877-897

Cheong, I and Kim, J (2004) 'Costly Information Disclosure in Oligopoly,' *Journal of Industrial Economics*, 52 (1), 121-132

Chetty, R, Looney, A and Kroft, K (2007) 'Salience and Taxation: Theory and Evidence,' NBER Working Paper No 13330

Chipty, T and White, A (1998) 'Effects of Information Provision in an Vertically Differentiated Market,' NBER Working Paper No W6493

Choi, J, Laibson, D, Madrian, B and Metrick, A (2004) 'For Better or For Worse: Default Effects and 401(k) Savings Behaviour,' in Wise, D (eds) *Perspectives in the Economics of Aging*, Chicago: University of Chicago Press

Cohen, A (2008) 'Asymmetric Learning in Repeated Contracting: An Empirical Study,' NBER Working Paper No W13752

Compte, O, Jenny, F and Rey, P (2002) 'Capacity Constraints, Mergers and Collusion,' *European Economic Review*, 46(1), 1-29

Conlisk, J (1996) 'Why Bounded Rationality?' *Journal of Economic Literature*, 34 (2), 669-700

Cruickshank, D (2000) 'Review of Banking Services in the UK,' (London: HM Treasury)

Davies, S and Olczak, M with Coles, H (2007) 'Tacit Collusion, Firm Asymmetries and Numbers: Evidence from EC Merger Cases,' CCP Working Paper 07-7

Davis, S, Hagerty, M and Gerstner, E (1998) 'Money Back Guarantees: Matching Products to Consumer Tastes,' *Journal of Retailing*, 71(1), 7-22

DellaVigna, S and Malmendier, U (2004) 'Contract Design and Self-Control: Theory and Evidence,' *Quarterly Journal of Economics*, 119, 353-402

- DellaVigna, S (forthcoming) 'Psychology and Economics: Evidence from the Field,' *Journal of Economic Literature*
- De Vos and Jansen (2007) 'Visual Attention to Online Search Engine Results,' A study by Market Research Agency De Vos & Jansen in cooperation with full service Search Engine Media Agency Checkit
- Dewenter, R and Kruse, J (2005) 'Calling Party Pays or Receiving Party Pays?' Helmut-Schmidt-University Hamburg Working Paper
- Diamond, P (1971) 'A Model of Price Adjustment,' *Journal of Economic Theory*, 3, 156–168
- Dranove, D, Kessler, D, McClellan, M and Satterthwaite, M (2003) 'Is More Information Better? The Effects of 'Report Cards' on Health Care Providers,' *Journal of Political Economy*, 111(3), 555-588
- Ellig, J (2005) 'Costs and Consequences of Federal Telecommunications and Broadband Regulations,' Working Paper, George Mason University
- Ellison, G (2005a) 'Bounded Rationality in Industrial Organisation,' in *Advances in Economics and Econometrics: Theory and Applications*, Ninth World Congress, Cambridge: Cambridge University Press
- Ellison, G (2005b) 'A Model of Add-on Pricing,' *Quarterly Journal of Economics*, 120 (2), 585-637
- Ellison, G and Ellison, S (2004) 'Search, Obfuscation, and Price Elasticities on the Internet,' MIT Department of Economics Working Paper 04-27
- Farrell, J (1980) 'Price as Signals of Quality,' PhD Dissertation, Brasenose College, Oxford University
- Farrell, J and Klemperer, P (2006) 'Coordination and Lock-In: Competition with Switching Costs and Network Effects,' in (eds) Armstrong, M and Porter, R *Handbook of Industrial Organization*, Vol 3, Amsterdam: North Holland
- Farrell, J and Rabin, M (1996) 'Cheap Talk,' *Journal of Economic Perspectives*, 10 (3), 103-118

- Fishman, M and Hagerty, K (2003) 'Mandatory Versus Voluntary Disclosure in Markets with Informed and Uninformed Customers,' *Journal of Law, Economics and Organization*, 19, 45-63
- Fuller, S, Ruppel, F and Bessler, D (1990) 'Effect of Contract Disclosure on Price: Railroad Grain Contracting in the Plains,' *Western Journal of Agricultural Economics*, 15(2), 265-271
- Gabaix, X and Laibson, D (2006) 'Shrouded Attributes, Consumer Myopia, and Information Suppression in Competitive Markets,' *Quarterly Journal of Economics*, 121 (2), 505-540
- Gans, J and King, S (2000) 'Mobile Network Competition, Customer Ignorance and Fixed-to-Mobile Call Prices,' *Information Economics and Policy*, 12, 301-327
- Garrod, L (2007) 'Price Transparency and Consumer Naivety in a Competitive Market,' CCP Working Paper 07-10
- Gaudeul, A and Sugden, R (2007) 'Spurious Complexity and Common Standards in Markets for Consumer Goods,' CCP Working Paper 07-20
- Green, E and Porter, R (1984) 'Non-cooperative Collusion under Imperfect Price Information,' *Econometrica*, 52, 87-100
- Grossman, S (1981) 'The Informational Role of Warranties and Private Disclosure about Product Markets,' *Journal of Law and Economics*, 24, 461-483
- Hall, R (2000) 'The Inkjet Aftermarket: An Economic Analysis,' Working Paper, Stanford University
- Haltiwanger, J and Harrington, J (1991) 'The Impact of Cyclical Demand Movements on Collusive Behavior,' *RAND Journal of Economics*, 22(1), 89-106
- Hess, J and Gerstner, E 'Loss Leader Pricing and Rain Check Policy,' *Marketing Science*, 6(4), 358-374
- Hollenbacher A and Yerger, D (2001) 'Third party evaluations and resale prices in the US used vehicle market,' *Applied Economics Letters*, 8, 415-418

- Hossain, T and Morgan, J (2006) 'Shrouded Attributes and Information Suppression: Evidence from Field Experiments,' mimeo, University of California, Berkeley
- Hviid, M and Møllgaard, P (2006) 'Countervailing power and price transparency,' *Scandinavian Journal of Economics*, 108(3), 499-512
- Iossa, E (2007) 'Modelling changes to consumer welfare caused by reduced price transparency,' FSA Occasional Paper
- Ippolito, P and Mathios, A (1995) 'Information and Advertising: The Case of Fat Consumption in the United States,' *American Economic Review*, 85, Papers and Proceedings, 91-95
- Ireland, N & Waterson, M (2006) 'Cartels and Search,' The Warwick Economics Research Paper Series 770, University of Warwick
- Ivaldi, M, Jullien, B, Rey, P, Seabright, P and Tirole, J (2003) 'The Economics of Tacit Collusion,' Final Report for DG Competition, European Commission
- Iyengar, S, Wei, J and Huberman, M (forthcoming) 'How Much Choice Is Too Much? Determinants of Individual Contributions in 401(k) Retirement Plans,' in Mitchell, O and Utkus, S (eds) *Developments in Decision-Making under Uncertainty: Implications for Retirement Plan Design and Plan Sponsors*, Oxford University Press: Oxford
- Iyengar, S and Lepper, M (2000) 'When Choice is Demotivating: Can One Desire Too Much of a Good Thing?' *Journal of Personality and Social Psychology*, 79(6), 995-1006
- Jansen, B, Spink, A and Saracevic, T (2000) 'Real life and real users: a study and analysis of user queries on the Web,' *Information Processing and Management*, 36(2), 207-27
- Janssen, M and Moraga-González, J (2004) 'Strategic Pricing, Consumer Search and the Number of Firms,' *Review of Economic Studies*, 71, 1089-1118
- Jin, G (2005) 'Competition and Disclosure Incentives: An Empirical Study of HMOs,' *RAND Journal of Economics*, 36(1), 93-112

- Jin, G and Leslie, P (2003) 'The Effect of Information on Product Quality: Evidence from Restaurant Hygiene Grade Cards,' *Quarterly Journal of Economics*, 118(2), 409-51
- Jovanovic, B (1982) 'Truthful Disclosure of Information,' *Bell Journal of Economics*, 13, 36-44
- Kauffman, R and Wood, L (2005) 'Analyzing Competition and Collusion Strategies in Electronic Marketplaces with Asymmetric Information,' University of Minnesota Working Paper 00-21
- Klapper, L (1994) 'Development of Credit Reporting around the World,' The World Bank, Development Research Group
- Klemperer P (1995) 'Competition When Consumers Have Switching Costs: An Overview with Applications to Industrial Organisation, Macroeconomics and International Trade,' *Review of Economic Studies*, 62, 515-539
- Klemperer, P (1987a) 'Market with Consumer Switching Costs,' *Quarterly Journal of Economics*, 102, 375-394
- Klemperer, P (1987b) 'The Competitiveness of Markets with Switching Costs,' *RAND Journal of Economics*, 18, 138-50
- Klemperer, P (1987c) 'Entry Deterrence in Markets with Switching Costs,' *Economic Journal*, 97, 99-117
- Koh, D (1993) 'Competition by Endogenous Switching Time,' UCLA Graduate School of Management Working Paper
- Kühn, K (2001) 'Fighting Collusion by Regulating Communication between Firms,' *Economic Policy*, 32, 169-204
- Laibson, D (1997) 'Golden Eggs and Hyperbolic Discounting,' *Quarterly Journal of Economics*, 112(2), 443-477
- Lal, R and Matutes, C (1994) 'Retail Pricing and Advertising Strategies,' *Journal of Business*, 67, 345-370

- Leland, H (1979a) 'Quacks, Lemons, and Licensing: A Theory of Minimum Quality Standards,' *Journal of Political Economy*, 87, 1328-1346
- Leland, H (1979b) 'Minimum Quality Standards in Markets with Asymmetric Information,' in Rotemberg, S (eds) *Occupational Licensure*, Washington DC: American Enterprise Institute
- Littlechild, S (2006) 'Mobile Termination Charges: Calling Party Pays versus Receiving Party Pays,' mimeo, University of Cambridge
- Loewenstein, G, O'Donoghue, T and Rabin, M (2000) 'Projection Bias in Predicting Future Utility,' UC Berkeley Economics Working Paper E00-284
- Lohse, G, Bellman, S and Johnson, E (2000) 'Consumer buying behaviour on the Internet: findings from panel data,' *Journal of Interactive Marketing*, 14(1), 15-29
- Loomes, G and Mehta, J (2007) 'The sensitivity of subjective probability to time and elicitation method,' *Journal of Risk and Uncertainty*, 34(3), 201-216
- Lyons, S (2006) 'Measuring the benefits of mobile number portability', working paper, Trinity College, Dublin
- Mann, D and Wissink, J (1988) 'Money-Back Contracts with Double Moral Hazard,' *RAND Journal of Economics*, 19 (2), 282-285
- Mann, D and Wissink, J (1990) 'Money-Back Warranties vs Replacement Warranties,' *American Economic Review*, 80 (2), 432-436
- Mathios, A (2000) 'The Impact of Mandatory Disclosure Laws on Product Choices: An Analysis of the Salad Dressing Market,' *Journal of Law and Economics*, 43, 651-677
- McChesney, F (1984), 'Regulating Without Evidence: The FTC's 'Cooling-Off' Rule,' *Journal of Contemporary Studies*, 7, 57-70
- Mester, L (1997) 'What's The Point of Credit Scoring?' Federal Reserve Bank of Philadelphia Business Review (September-October), 3-16
- Milgrom, P (1981) 'Good News and Bad News: Representation Theorems and Applications,' *Bell Journal of Economics*, 12(2), 380-391
- Milgrom, P and Roberts, J (1986) 'Price and Advertising Signals of Product Quality,' *Journal of Political Economy*, 94(4), 796-821

- Milgrom, P and Roberts, J (1986) 'Relying on the Information of Interested Parties,' *RAND Journal of Economics*, 17(1), 18-32
- Miller, M (2003) 'Credit Reporting Systems and the International Economy,' MIT Press
- Møllgaard, P and Overgaard, P (2002) 'Market Transparency: A Mixed Blessing?,' mimeo, Copenhagen Business School & University of Aarhus
- Møllegaard, P and Overgaard, P (2005) 'Information Exchange, Market Transparency and Dynamic Oligopoly,' in Collins, W (eds) *Issues in Competition Law and Policy*
- Moorthy, S and Srinivasan, K (1995) 'Signaling Quality with Money-Back Guarantees: The Role of Transaction Costs,' *Marketing Science*, 14, 442–466
- Mulholland, J (2007) 'Behavioural Economics and the Federal Trade Commission,'
- Muris, T (2002) 'The Interface of Competition and Consumer Protection,' Remarks at the 29th Annual Conference on International Antitrust Law and Policy
- Nelson, P (1970), 'Information and consumer behaviour,' *Journal of Political Economy*, 78, 311-29
- Nelson, P (1974) 'Advertising as Information,' *Journal of Political Economy*, 82, 729-754
- Nilssen, T (1992) 'Two Kinds of Switching Costs,' *RAND Journal of Economics*, 23(4), 579-589
- O'Donoghue, T and Rabin, M (2003) 'Studying Optimal Paternalism, Illustrated by a Model of Sin Taxes,' *American Economic Review*, 93 (2), 186-191
- OECD (2001) 'Price Transparency,' OECD, France: Paris
- Ofgem (2003) 'Consumer Protection in Energy Supply: The Role of the 28 Day Rule,' Ofgem submission to the Energy Services Working Group, July 2003

OFT (2003) 'Switching Costs,' Economic Discussion Paper 5, prepared for the OFT and DTI by NERA, April 2003

OFT (2004) 'Credit card survey,' Prepared for the OFT by FDS International Ltd

OFT (2005) 'Research into Misleading Price Comparisons,' prepared for the OFT by the Nottingham Business School, June 2005

OFT (2006) 'Evaluating the impact of the car warranties market study,' prepared for the OFT by Europe Economics

OFT (2007) 'Internet Shopping,' An OFT Market Study, June 2007

OFT (2008a) 'Web sweep analysis,' An report by the OFT

OFT (2008b) 'Credit Card Comparisons,' A report by the OFT

Oftel (1997) 'Economic Evaluation of Number Portability in the UK Mobile Telephony Market,' Issued by the Director General of Telecommunications

Padilla A (1995) 'Dynamic Duopoly with Consumer Switching Costs,' *Journal of Economic Theory*, 67, 520-530

Pan, X, Ratchford, B and Shankar, V (2001) 'Why Aren't the Prices of the Same Item the Same at Me.com and You.com? Drivers of Price Dispersion among e-Tailers,' mimeo, eBusiness Research Center, Pennsylvania State University

Rotemberg, J and Saloner, G (1986) 'A Supergame-Theoretic Model of Price Wars during Booms,' *American Economic Review*, 76, 390-407

Salop, S and Stiglitz, J (1977) 'Bargains and Ripoffs: A Model of Monopolistically Competitive Price Dispersion,' *Review of Economic Studies*, 44, 493-510

Schultz, C 'Transparency on the consumer side and tacit collusion,' *European Economic Review*, 49, 279-297

Scott Morton, F, Zettelmeyer, F and Silva-Risso, J (2003) 'Consumer Information and Discrimination: Does the Internet Affect the Pricing of New Cars to Women and Minorities?' *Quantitative Marketing and Economics*, 1(1), 65-92

Shapiro, C (1995) 'Aftermarkets and Consumer Welfare: Making Sense of Kodak,' *Antitrust Law Journal*, 63, 483-511

- Shavell, S (1989) 'Sharing of Information Prior to Settlement or Litigation,' *RAND Journal of Economics*, 20, 183-195
- Shilony, Y (1977) 'Mixed Pricing in Oligopoly,' *Journal of Economic Theory*, 14, 373-388
- Silk, T (2006) 'Getting Started Is Half the Battle: The Influence of Deadlines and Effort on Consumer Self-Regulation to Redeem Rewards,' Working Paper, University of British Columbia
- Simon, H (1991), *Models of My Life*, Basic Books, New York
- Smith, M and Brynjolfsson, E (2001) 'Consumer Decision-making at an Internet Shopbot,' *Journal of Industrial Economics*, 49(4), 541-558
- Spiegler, R (2006) 'Competition over Agents with Boundedly Rational Expectations,' *Theoretical Economics*, 1, 207-231
- Stahl, D (1989) 'Oligopolistic Pricing with Sequential Consumer Search,' *American Economic Review*, 79, 700-712
- Staiger, R and Wolak, F 'Collusive Pricing with Capacity Constraints in the Presence of Demand Uncertainty,' *RAND Journal of Economics*, 23 (2), 203-220
- Starmer, C (2000) 'Developments in Non-Expected Utility Theory: The Hunt for a Descriptive Theory of Choice under Risk', *Journal of Economic Literature*, 38, 332-82
- Stigler, G (1961) 'The Economics of Information,' *Journal of Political Economy*, 69(3), 213-225
- Stigler, G (1964) 'A Theory of Oligopoly,' *Journal of Political Economy*, 72, 44-61
- Sylvan, L (2004) 'Activating Competition: The Consumer - Competition Interface,' *Competition and Consumer Law Journal*, 12, 191-206
- Tirole, J (1988) *Theory of Industrial Organisation*, Cambridge: MIT Press
- Varian, H (1980) 'A Model of Sales,' *American Economic Review*, 70(4), 651-659

- Verboven, F (1999) 'Product Line Rivalry and Market Segmentation—With an Application to Automobile Optional Engine Pricing,' *Journal of Industrial Economics*, 47, 399-425
- Viard, V (forthcoming) 'Do Switching Costs Make Markets More or Less Competitive?: The Case of 800-number Portability,' *RAND Journal of Economics*
- Vickers J (2003) 'Economics for Consumer Policy' British Academy Keynes Lecture
- Von Weizsäcker, C (1984) 'The Cost of Substitution,' *Econometrica*, 52(5), 1085-1116
- Waterson, M (1989) 'Models of Product Differentiation,' *Bulletin of Economic Research*, 41(1), 1-27
- Waterson, M (2003) 'The role of consumers in competition and competition policy,' *International Journal of Industrial Organization*, 21(2), 129-150
- Wilson, C (2005) 'The Effects of Consumer Protection on Sales Signs, Consumer Search and Competition' CCP Working Paper 05-9
- Wilson, C (2006a) 'Some Essays on the Links between Consumers and Market Power,' PhD Thesis, University of East Anglia
- Wilson, C (2006b) 'Markets with Search and Switching Costs,' CCP Working Paper 06-10
- Wilson, C and Waddams Price, C (2007) 'Do Consumers Switch to the Best Supplier?' CCP Working Paper 07-6