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**Competition policy international:  
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by

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# Competition Policy International

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Interactions between Competition and Consumer Policy

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# Interactions between Competition and Consumer Policy

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*Mark Armstrong*

This paper discusses complementarities and tensions between competition policies and consumer protection policies. The paper argues that markets will often supply adequate customer protection without the need for extra public intervention. Special areas where intervention might be needed are discussed, including the need to combat deceptive marketing and the need to provide additional market transparency (about both headline prices and shrouded product attributes). A few instances are presented of how more intense competition can worsen the outcomes for some consumers. Situations in which poorly designed consumer policies can harm consumers are discussed, including how they can be used to protect incumbent suppliers, how they can relax competition between oligopolists, how they can reduce consumer choice, how they can focus on one aspect of market performance at the expense of others, and how they can lead consumers to take insufficient care in the market.

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## I. Introduction

The objective of both consumer and competition policy is to deliver well-functioning markets, something which requires both a strong supply side (competition) and a strong demand side (consumers). For many products, vigorous competition is the single best protection for consumers, and only minimal consumer protection (general contract law, forbidding deceptive marketing, the ability to return faulty goods, and so forth) is needed. As a former Chairman of the Federal Trade Commission (FTC) writes: “[R]obust competition is the best single means for protecting consumer interests.”<sup>1</sup> However, in some markets some consumers do not always obtain a good deal, even when substantial competition is present, and in such cases additional policies to aid consumers have a role to play.

What prevents markets from delivering good outcomes to consumers? Familiar reasons include abuse of dominance and collusion between suppliers, and these fall broadly within the domain of competition policy. However, there are several other reasons why competition need not work well (e.g., imperfect information about product attributes, imperfect information about market prices, consumer costs of obtaining market information, supplier costs of advertising, or consumers possessing imperfect information about their own needs). These features, which are explored in Section III below, fall broadly under the heading of consumer policy.

It seems hard to define precisely “competition policy” versus “consumer policy”. One could say that competition policy comprises “the set of policies and laws which ensure that competition in the marketplace is not restricted in such a way as to reduce economic welfare.”<sup>2</sup> Whereas consumer policy “consists of preventing sellers from increasing sales by lying about their products or by engaging in unfair practices such as unilateral breach of contract or unauthorized billing.”<sup>3</sup> Alternatively, one can define consumer policy in terms of the fundamental problems it seeks to prevent, cure, or remedy, which are:

- (i) duress and undue sales pressure;
- (ii) information problems pre-purchase; and
- (iii) undue surprises post-purchase.<sup>4</sup>

1 Timothy Muris, *The Interface of Competition and Consumer Protection*, Paper presented at Fordham Corporate Law Institute’s 29<sup>th</sup> Annual Conference on International Antitrust Law and Policy, New York (Oct. 31, 2002).

2 MASSIMO MOTTA, *COMPETITION POLICY: THEORY & PRACTICE* 30 (2004).

3 Muris, *supra* note 1.

4 J. Vickers, *Economics for Consumer Policy*, 125 *PROC. BRIT. ACAD.* 287-310, 289 (2004).

Nevertheless, many policies (such as policies which act to reduce consumer search costs or switching costs, or which reduce industry advertising costs) could be said to fall under both headings.

In the past, consumer policy and competition policy ran along quite separate lines, with little interaction between the two. For better or worse, there was a lot more economics informing competition policy than consumer policy. However, in recent years economists have shown a greater interest in consumer policy. This stems from at least two, probably related, causes. First, the modern consumer arguably faces more difficult decisions, involving more choices, than in the past. Second, the economics profession has recently seen the dramatic rise of “behavioral economics”, a branch of the discipline which takes into account imperfect consumer decision making—consumers can be less “rational”, more prone to various “biases”—more so than in earlier analysis. As leading behavioral economists put it in a 2003 paper: “Recent research in behavioral economics has identified a variety of decision-making errors that may expand the scope of paternalistic regulation.”<sup>5</sup>

Over recent decades, competition policy has tended to be implemented in a more similar fashion across countries than in the past. As the Internet enables more products to be marketed globally, this same trend of convergence is now starting to affect consumer policy too. As Muris (2002) puts it:

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“If different arbiters apply different standards in these areas, then marketers who wish to apply identical techniques across borders may have to design a strategy that complies with the standards of the most restrictive jurisdiction in most countries, a result that might not maximize consumer welfare.”<sup>6</sup>

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This is another reason why there is currently more interest in consumer policy than before.<sup>7</sup>

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5 C. Camerer, S. Issacharoff, G. Loewenstein, T. O’Donoghue & M. Rabin, *Regulation for Conservatives: Behavioral Economics and the Case for “Asymmetric Paternalism”*, 151(3) U. PENN. L. REV. 1211-54 (2003).

6 For a discussion of recent convergence in the area of consumer fraud, see Muris (2002), *supra* note 1.

7 The current European Union *Unfair Commercial Practices Directive* is an important step towards harmonizing consumer policy within Europe. See Directive 2005/29/EC of the European Parliament and of the Council of 11 May 2005 concerning unfair business-to-consumer commercial practices in the internal market, 2005 O.J. (L 149) 22 [hereinafter UCPD].

In this paper, I describe some of the interactions between competition and consumer policies: when are they substitutes or complements, and when does one approach actively interfere in the implementation of the other? In Section II, I give a very brief outline of how competitive markets often offer sufficient protection to consumers without the need for extra publicly provided protection. In Section III, I point out some ways in which competitive markets may fail some consumers, and how consumer policy might then be needed. Some scenarios in which more competition might actually make some consumers worse off are outlined in Section IV, while situations in which poorly designed consumer policies could harm consumers are presented in Section V. Section VI concludes and offers some suggestions for where future research might be most usefully targeted.

## II. Competition on Its Own Can Often Protect Consumers

The aim of this section is not to present the various benefits of competitive markets in general; rather, I wish to discuss the ways in which markets can provide consumer protection measures without additional government intervention. In well-functioning markets, supported by general contract law, competitive pressure means that only those firms which give consumers what they want can prosper. There is little role for consumer policy when all product attributes and prices are easily observed and evaluated at the time of sale, when search costs are not significant, when consumers sample offers from multiple suppliers, and when most consumers are capable of making reasonably good decisions concerning the product in question. These stringent conditions probably apply when someone buys a new diary for the start of the year, for instance.

But many, perhaps most, products do not satisfy these restrictive requirements. In particular, it is rare that all product attributes and prices are known when a choice is made. The more important insight is that even in markets for experience goods, the competitive mechanism can often still work well unaided.<sup>8</sup> Consider novels, for instance, which are a clear-cut experience good since consumers do not know how much they will enjoy a particular book until they read it.<sup>9</sup> Here, many signals of a book's likely quality are available:

IT IS RARE THAT ALL PRODUCT ATTRIBUTES AND PRICES ARE KNOWN WHEN A CHOICE IS MADE. THE MORE IMPORTANT INSIGHT IS THAT EVEN IN MARKETS FOR EXPERIENCE GOODS, THE COMPETITIVE MECHANISM CAN OFTEN STILL WORK WELL UNAIDED.

8 It is conventional to divide products into three classes, depending on the extent of the information problem. "Search goods" are products whose attributes are fully observable at the time of purchase; "experience goods" have attributes which are only revealed after purchase; and "credence goods" have attributes which are not fully revealed even after purchase.

9 See Vickers (2004), *supra* note 4, at 297.

- (i) the consumer enjoyed previous books by the same author (a “brand” effect);
- (ii) there are useful blurbs on the back (which most readers know are not always to be trusted);
- (iii) the bookseller provides informative comments;
- (iv) word-of-mouth from friends may be valuable; and
- (v) electronic versions of word-of-mouth, such as “reader comments” on retailer websites such as Amazon.com, provide useful information.<sup>10</sup>

There is no obvious consumer protection policy which could improve on the laissez-faire outcome in this market.

Even credence goods, the most challenging type of good, can sometimes be supplied effectively in a laissez-faire competitive market. Consider repairing a particular kind of machine (which could be the human body). The consumer does not know the cause, which may be trivial or may require a major repair. An expert can repair the fault to the satisfaction of the consumer, but the consumer might never know if the expert exaggerated what was needed in order to increase the bill. But if the search or diagnosis cost is relatively small, many consumers will shop around for several quotes for repair, and competitive pressure may force the cost of repair close to the minimum cost.<sup>11</sup> Nevertheless, consumer search costs for credence goods may be extremely high (as is plausible for car repair, for instance), and experts may presume that most consumers are captive and the severity of the fault can be exaggerated safely.<sup>12</sup> Moreover, if consumers cannot tell if the repair has been successful ex post (say, the medical treatment only cures the patient some of the time, even when the treatment is appropriate),

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10 On this last point, see J. Chevalier & D. Mayzlin, *The Effect of Word of Mouth on Sales: Online Book Reviews*, 43(3) J. MARKETING RES. 345-54 (2006).

11 U. Dulleck & R. Kerschbamer, *On Doctors, Mechanics, and Computer Specialists: The Economics of Credence Goods*, 44(2) J. ECON. LIT. 5-42 (2006). The result referred to is Lemma 7 in that survey. In addition, in situations where consumers commit to get treatment when they get diagnosis from an expert, and where experts post prices for treatment, competition can, under stringent conditions (such as all consumers having the same probability of needing a serious repair), deliver the ideal outcome (see Proposition 1).

12 Illustrative anecdotes are provided in W. Emons, *Credence Goods and Fraudulent Experts*, 28(1) RAND J. ECON. 107-19 (1997). For instance, in a region in Switzerland the general population had significantly more medical operations than medical doctors and their families, consistent with a degree of over-treatment among the uninformed. Likewise, see H. Schneider, *Agency Problems and Reputation in Expert Services: Evidence from Auto Repair* (2007) (mimeo, Cornell University) reports results from a field experiment where the same faulty car was taken to 40 garages for diagnosis and quotes for repair. He found that 27 percent of garages suggested unnecessary repairs, while real faults were missed in 77 percent of cases.

then under-treatment as well as over-treatment presents a danger, and the market may break down altogether without intervention.<sup>13</sup>

A seller's concern with its reputation is another means by which opaque markets can work relatively well. Reputation can be established through two main channels: via repeat purchases from the same consumer, or via publicity, including word-of-mouth from one consumer to another. The reputation literature is concerned with how and when an appropriate level of product quality is supplied in the market. The term "quality" can be interpreted very broadly and encompasses hidden charges in the small print, unexpected exclusions in insurance contracts, and so forth. For instance, it is quite unrealistic to suppose that consumers are aware of the prices of all products inside a supermarket before they visit, and so many of the store's prices are only observed at the point of sale. The store could set high prices in order to exploit the fact that the consumers are "locked in" once they enter the store. If this were the end of the story, this market would perform very badly, and there would be scope for beneficial consumer policies, such as publicizing price indices for supermarkets.<sup>14</sup> But a supermarket is a leading example of a seller that relies on repeat purchases, and this hold-up strategy is unlikely to be profitable for a store since many consumers will experiment with a rival store if they are exploited by their current choice.

A more serious information problem is that many consumers may not be aware even of the prices of the products they put into their baskets. Therefore, if a supermarket marks up its price for, say, butter by 500 percent, many of its customers will mistakenly buy it, yielding the store a short-run profit. But at least some people will notice the trick, either in the store or once they get home, and there will quickly be substantial negative publicity which will wipe out any short-run gains to the shop. (Note that reputational effects are greatly enhanced when there is a vigorous free media operating in the jurisdiction.) Here, a supermarket's concern to maintain its reputation is a more powerful constraint than any externally-imposed informational remedy could be. Similar issues arise with financial products, where the product often requires signing a lengthy contract involving many clauses and potential hidden charges. Indeed, when a consumer does not realize the importance of a small-print clause or price until after the product is purchased, the effect is very much like an experience good. For instance, a firm concerned with its reputation selling a life insurance policy would not put in exploitative clauses (such as "We will not pay out if death occurs on Tuesday"), even if they were legal, since the negative publicity would be enormous.

Modern technology provides new ways in which the reputation mechanism can be harnessed. For instance, one situation which on the surface seems prob-

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<sup>13</sup> See Dulleck & Kerschbamer (2006), *supra* note 11, at Proposition 4.

<sup>14</sup> See the later discussion of the "Diamond paradox" in Section III.C of this paper.

lematic is buying objects on an Internet platform such as eBay, where a consumer hands over money while having to trust that the seller will actually send the object. Since there is little chance that a buyer and seller will interact repeatedly, or even that a friend of the buyer will interact with the seller, there seems to be little scope for direct reputational concerns to play a role. But the use of “seller ratings”, a kind of collective reputation mechanism, apparently provides a powerful constraint on the seller’s ability to exploit consumer vulnerability (unless the seller has only one item to sell).<sup>15</sup>

All of this suggests that reputation (generally conceived) is a powerful force to constrain firms to behave well, even when they supply highly complicated products. However, in some markets, reputation cannot play a strongly disciplining role, for instance if the product is not purchased repeatedly and if word-of-mouth or other publicity is ineffective.<sup>16</sup> The textbook example is a restaurant in a tourist area, although in reality tourist guidebooks or star rating systems can provide large incentives to provide good food.

Advertising is a prime means by which to get information—price and non-price—to consumers with search costs. Consumers do not always have to visit a retailer physically to find out its prices and other product characteristics. In addition, advertising can provide important information about product characteristics which consumers would otherwise find hard to discover even at the point of sale, thus ameliorating experience or credence good problems. Suppliers of breakfast cereals, for instance, may advertise useful information about the healthiness of their products.<sup>17</sup> While advertisers can be trusted to point out the good aspects of their products, they will not voluntarily advertise the bad product characteristics. However, comparative advertising (when permitted) may step in here, and rivals will often be willing to point out defects in a product to the benefit of all consumers. Even advertising messages which do not contain

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15 P. Bajari & A. Hortacsu, *Economic Insights from Internet Auctions*, 42(2) J. ECON. LIT. 457-86, §5 (2004), surveys the empirical work on the effectiveness of the reputation mechanism in online auctions, which is mixed in its conclusions.

16 G. Jin & P. Leslie, *Reputational Incentives for Restaurant Hygiene*, AM. ECON. J.: MICROECONOMICS (forthcoming 2009) provide evidence showing that restaurant hygiene tends to be higher in local markets which have a greater proportion of repeat buyers. Schneider (2007), *supra* note 12, tests for the impact of reputation by informing some (randomly chosen) garages that he has just moved to the area (thus indicating scope for repeat business) and informing others that he is about to leave the area. He finds that while the potential for repeat business appears to lead to a lower charge for diagnosis, it appears to have no significant affect on the quality of the diagnosis.

17 In 1984, Kellogg launched an advertising campaign focusing on the health benefits of one of its cereals, All-Bran. This was in direct violation of the U.S. Food and Drug Administration’s then-policy which essentially banned health claims on food products. A subsequent relaxation of this ban acted to facilitate information flows to consumers, which led many consumers to change their consumption behavior. Moreover, it seems that government and general information sources before the ban was lifted had little impact on consumer behavior. See P. Ippolito & A. Mathios, *Information, Advertising and Health Choices: A Study of the Cereal Market*, 21(3) RAND J. ECON. 459-80 (1990).

useful information to consumers may indirectly act as a signal of the price or quality of the product. If consumers follow the rule of thumb that a more heavily advertised product is likely to be better or cheaper than its rivals, it may often be in the interests of the better (or lower cost) supplier to advertise most intensively.<sup>18</sup> Finally, advertising—including direct marketing methods—may be the only way to reach those consumers who do not wish to research the market actively themselves.

To aid those consumers who do wish to undertake market research, there is a flourishing market for market information that can help overcome consumer search costs as well as provide information about shrouded product attributes. This market includes commercial magazines and websites offering consumer reports on various items, as well as price comparison websites and the certification intermediaries discussed in the next paragraph. Other commercial websites offer detailed consumer protection advice.<sup>19</sup> The market for market information has several special features which can limit its efficient operation, some of which are discussed later in Section III.B, but it undoubtedly is important in helping active consumers to make better decisions.

Institutions often exist to allow sellers to communicate the quality of their products to consumers. These institutions include advertising (when supported by policy to combat misleading advertising) and “certification intermediaries” who are trusted to convey accurate information about products they test. (An example of the latter is firms seeking to provide “green” certification standards.) When these institutions exist, the opportunity that sellers have to reveal product quality can mean that there is no need for a policy of mandated disclosure, and consumer policy needs merely to facilitate the emergence of these institutions. The basic idea is that a seller with a high-quality product will choose to disclose this information, and (rational) consumers will assume that sellers that choose not to disclose their quality have lower quality. In theoretical models, all sellers can choose to reveal their product quality.<sup>20</sup>

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18 See Kyle Bagwell, *The Economic Analysis of Advertising*, in 3 *THE HANDBOOK OF INDUSTRIAL ORGANIZATION 1701-1844* (M. Armstrong & R. Porter eds., 2007). Likewise, if users of a search engine tend to click on suggested links in the order in which they appear on the page, then websites which are most likely to fit the user’s need will often pay the most to be listed first. (And in this case, consumers indeed should click on the links in the suggested order.) See S. Athey & G. Ellison, *Position Auctions with Consumer Search* (2007) (mimeo, MIT and Harvard University).

19 See, e.g., *Money Saving Expert: Consumer Revenge* (United Kingdom), at <http://www.moneysavingexpert.com> (last visited Jan. 17, 2008).

20 P. Milgrom & J. Roberts, *Relying on the Information of Interested Parties*, 17(1) *RAND J. ECON.* 18-32 (1986). In fact, this “unraveling” argument works even with a monopoly seller, provided that consumers think strategically and have accurate information about the market environment (see Section 2 in that paper). When there is competition, consumers do not need to reason in such a sophisticated way for this result to hold (see Sections 3 and 4 in that paper).

In markets with switching costs, it is likely that rivals will choose to make it as easy to switch as possible. For instance, an energy company might offer to do all of the work involved in switching supplier. More controversially, a firm may offer new customers a better deal than its existing customers, in order to overcome its new customers' cost of switching.<sup>21</sup> The result then is that there could be too much switching in the market, not too little, which could provide a novel role for policy. Finally, several price comparison websites (e.g., for energy, insurance) provide a “one-stop” switching service too.

A contentious issue when discussing the competition versus consumer policy interface is whether more competition acts to simplify the deals offered to consumers (to the appropriate extent), or whether firms in competitive markets resort to trying to “confuse” consumers in order to relax competition. The evidence on this question is very mixed, and often anecdotal. But it is clear that at least sometimes firms compete by offering simpler deals than their rivals, in order to attract those consumers who find consideration of complex tariffs or products psychologically costly. For instance, a mobile phone entrant might try to differentiate itself from incumbents by offering a tariff with a uniform call charge regardless of the network being called or the time of day. Or a firm might “unshroud” a rival's tariff, for instance by pointing out that the price for its car is “all inclusive” while the rival's advertised price excludes some core features. Situations in which firms do attempt to confuse consumers are discussed in Section III.

Markets can deliver products which help consumers deal with their own imperfect decision making. For instance, many consumers have problems of self-control to do with impatience—say, spending too much on a credit card now, and not thinking enough about high interest charges later—and many of these consumers are aware of their weakness of will (e.g., they have learned this over time). These sophisticated, but weak-willed, consumers have a demand for commitment devices to constrain their subsequent choices<sup>22</sup>, which the market will often supply. The most obvious of these are illiquid savings products (e.g., where someone automatically pays in a certain amount of money each month, and it is hard to extract the savings on short notice).<sup>23</sup> Other examples include addiction treatment clinics, where consumers sign up for a period of time and are kept apart from their vice, season tickets to “high-brow” cultural events (where consumers may be tempted to stay in and watch TV if they had to buy a ticket for each performance), and exercise gyms offering lump-sum membership contracts so that

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21 Y. Chen, *Paying Customers to Switch*, 6(4) J. ECON. MGMT. STRATEGY 877-97 (1997).

22 For evidence that consumers have demand for commitment devices, see N. Ashraf, D. Karlan & W. Yin, *Tying Odysseus to the Mast: Evidence from a Commitment Savings Product in the Philippines*, 121(2) Q.J. ECON. 635-72 (2006).

23 D. Laibson, *Golden Eggs and Hyperbolic Discounting*, 112(2) Q.J. ECON. 443-77 (1997).

consumers are not discouraged from exercise by a per-visit fee.<sup>24</sup> Thus, the presence of time-inconsistent, or otherwise boundedly rational, consumers is not a sufficient reason to intervene in a market.

Finally, many retailers compete by voluntarily offering warranties or “no quibble” return policies that are substantially more protective of their consumers than is required by consumer law. In sum, consumer protection in its various forms is undoubtedly a vital service, but it is usually provided without the need for government intervention. The next section considers those situations in which intervention might still be needed.

THE PRESENCE OF TIME-INCONSISTENT, OR OTHERWISE BOUNDEDLY RATIONAL, CONSUMERS IS NOT A SUFFICIENT REASON TO INTERVENE IN A MARKET.

### III. How Consumer Policy Can Sometimes Aid Consumers

#### A. DECEPTIVE MARKETING

An implicit assumption in the discussion in the previous section was that firms could not engage in deceptive marketing. For instance, without constraint a firm could make false claims for its products, or it could advertise one price while consumers find they must pay a higher price once they arrive at the store (or the advertised product is not available in the store, and only the more expensive versions are—the so-called bait-and-switch technique). If firms could do such things, some of them would do so when the practice enhanced profit. Consequently, consumer faith in the reliability of the advertising mechanism would be eroded, to the detriment of consumers and honest firms. However, it is important to recognize that many firms would not take advantage of the ability to make deceptive claims, since their reputation would quickly be harmed.

Similarly, if firms could freely denigrate their rivals’ products, many would choose to do so, and consumers may eventually view advertising as meaningless babble, shutting down this crucial channel of information. (Reputational considerations may have somewhat less force for misleading comparative advertising, since, if the advertising campaign were successful, consumers might not try the rival product and so might not discover that the claims made were deceptive.) Naturally, though, there is a fine line to be drawn between outright deception and adverts which mislead many consumers but which are technically accurate. To cope with this issue, it is common to use “copy tests” to determine how many

<sup>24</sup> S. DellaVigna & U. Malmendier, *Contract Design and Self-Control: Theory and Evidence*, 119(2) Q.J. ECON. 353-402 (2004) and K. Eliaz & R. Spiegler, *Contracting with Diversely Naive Agents*, 73(3) REV. ECON. STUD. 689-714 (2006). An alternative and less benign reason why gyms might set low per-visit charges, with respect to exploiting over-optimism on the part of consumers, is discussed in Section III.E of this paper.

people are misled by a particular advert. The consumer body still needs to decide the vexed question of how many consumers need to be misled in order for the advert to be withdrawn.<sup>25</sup> (In Section V.A, it is argued that past policy in the United States set the barrier too low, requiring only a few people to be misled before an advert was withdrawn.) Such policy can never be perfect, since adverts that are useful for sophisticated consumers may mislead others.

Likewise, if a firm has built up a reputation for high-quality products, a rival firm may wish to pretend to be that firm by choosing a similar brand name or packaging (the phenomenon known as “passing off”) in order to charge the brand price but offer a product of a lower quality, thus harming both consumers and the original brand. Here, trademark laws and their enforcement will be useful for consumers.

Of course, misleading marketing practices can go beyond advertising false prices, and suppliers can make false claims about their products. Common scams include claims that a particular “natural health cure” is effective, that “Professor X can predict the next winning lottery numbers”, or that a stranger genuinely needs to deposit money in my bank account.<sup>26</sup> Sometimes policy towards scams and scam-like products can be hard to formulate. Since people (even policymakers) differ in their beliefs about the efficacy of some products, and objective data can be unavailable, it can be hard to determine whether a product is fulfilling a genuine need or is really a scam. We might agree that Professor X cannot really foresee the winning lottery numbers,<sup>27</sup> but there are many grey areas, including: services which predict the outcome of horse races,<sup>28</sup> clairvoyants, astrology, some

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25 For discussion of this point, see H. Beales, R. Craswell & S. Salop, *The Efficient Regulation of Consumer Information*, 24(3) J.L. & ECON. 491-539, §1B (1981). The UCPD, *supra* note 7, at para. 18, takes the view that a commercial practice is unfair if the average consumer in that market is misled (among other hurdles which need to be passed). If a product is marketed at a particular sub-group of consumers (e.g., the elderly), then the average consumer should be taken with reference to that sub-group. Specifically, the UCPD states that “[t]he average consumer test is not a statistical test. National courts and authorities will have to exercise their own faculty of judgment [...] to determine the typical reaction of the average consumer in a given case.”

26 For a long list of the scams being used in Australia at the time of writing (2008), see ScamNet – Complete Listing of Scams, at [http://www.docep.wa.gov.au/ConsumerProtection/ScamNet/content/pages/full\\_list.html](http://www.docep.wa.gov.au/ConsumerProtection/ScamNet/content/pages/full_list.html) (last visited Jan. 25, 2008).

27 “Claiming that products are able to facilitate winning in games of chance” is one of the 31 practices which are in all circumstances considered unfair in the UCPD, *supra* note 7.

28 For details of recent intervention against a racing tipster, see Press Release, U.K. Office of Fair Trading, OFT obtains injunction against bogus racing tipster (Jan. 22, 2008), available at <http://www.of.gov.uk/news/press/2008/12-08>. In return for a membership fee of GBP 590, members received tips on likely winners in horse races. Some 3,000 consumers signed up for the service. The marketing materials for the service were judged to be misleading, and falsely claimed for instance that the tipster owned a team of race horses and had ridden regularly for some of the most successful horse trainers. In addition, members were told they would make a “minimum of £47,000 in 30 days.”

beauty products, some alternative health remedies, or the health benefits of organic food. The consumer body could publicize warnings about those products it felt confident were indeed scams,<sup>29</sup> but it is perhaps unlikely that those consumers taken in by outlandish claims will be the kind of consumer who browses consumer protection websites. The use of misleading marketing regulations is probably the most effective and proportionate method of controlling exploitative conduct here, and sellers should be prevented from making claims which are false or which cannot be verified. In addition, if there is objective information available about the efficacy or otherwise of these products, then that could usefully be brought to consumers' attention.<sup>30</sup>

Generally, policy to combat fraud and misleading marketing is the least contentious area of consumer policy. (In this regard it is similar to cartel and horizontal merger policy in competition policy.) However, some commentators are skeptical of the need for public intervention even here. For instance, Richard Posner (1969) has written:

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“In the political arena we posit a marketplace of ideas in which good ideas can be expected to prevail in open competition with bad, and one can take the same approach to advertising. Individuals know more about household products than they do about political questions, so if we trust them to evaluate competing and often fraudulent claims by political candidates, we should also trust them to evaluate competing product claims. Since other sellers, like rival candidates, have every incentive to counter the misleading representations of a competitor, false claims should eventually be unmasked.”<sup>31</sup>

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A situation in which even Posner admits may require public intervention is when no seller has an incentive to provide accurate information and no rival has an incentive to unmask a rival's misleading claims. He suggests that cigarettes are an example of such a market, where no supplier has an incentive to advertise that smoking is unhealthy.<sup>32</sup> Here, there may be a role for carefully designed health warnings on cigarette packets, for instance, as well as other education campaigns.

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29 See *supra* note 26.

30 See the discussion of “quacks” in Section III.C.

31 R. Posner, *The Federal Trade Commission*, 37(1) U. CHI. L. REV. 47-89, 62 (1969).

32 Posner (1969), *id.* at 68.

## B. THE MARKET FOR MARKET INFORMATION

Internet-based, price-comparison websites and other information intermediaries mitigate problems of costly consumer search.<sup>33</sup> However, information intermediaries are not a panacea for several reasons. First, while the market may provide market information, it cannot force consumers to undertake market research. For instance, in 2003, only 10 to 12 percent of consumers in a survey who had made price comparisons for energy suppliers that year had used the internet as their source of market information.<sup>34</sup> (Doorstep selling was a much more significant source of information, which at times is indeed a way of forcing consumers to investigate market options.) Of course, though, this does not imply that government intervention to make markets transparent can do any better in this regard.

Second, there is still a good deal of price dispersion on price-comparison websites. A detailed study of one such website over a long period suggests that price dispersion is significant and non-transient: the gap between the lowest and the second-lowest listed prices averaged 23 percent when just two firms listed prices for the product, although this fell to 3.5 percent when 17 suppliers listed prices.<sup>35</sup> Suppliers also change their listed prices frequently over time, so that consumers (and rivals) need to keep on their toes. As discussed in the next section, it is the search cost of the marginal searching consumer which is likely to determine the degree of price dispersion in market, and it could be that the number of consumers who use price-comparison websites is not yet large enough to have a major impact of price dispersion in many markets.

Third, if consumers visit just one such information broker (e.g., because of search costs for using more than one price-comparison website), then a broker will hold a monopoly over providing access by sellers to its exclusive consumers. This will often mean that consumers are treated well by the broker (e.g., they obtain the service for free, as is often observed) while sellers may have to pay inefficiently high charges to list their prices. Moreover, as the broker makes its

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33 J. Brown & A. Goolsbee, *Does the Internet Make Markets more Competitive? Evidence from the Life Insurance Industry*, 110(3) J. POL. ECON. 481-507 (2002) provide evidence that the growth of price-comparison websites for life insurance drove prices down for this product. An interesting study in the pre-Internet era had related findings. In 1974, two districts in Canada were chosen for a market transparency experiment in supermarket pricing. In one district, prices were collected but not publicized; in the other district, average price indices for individual supermarkets in that area were publicized in local newspapers. The result was that price dispersion and price levels fell in the second district relative to the first. See G. Devine & B. Marion, *The Influence of Consumer Price Information on Retail Pricing and Consumer Behavior*, 61(2) AM. J. AGRIC. ECON. 228-37 (1979).

34 OFFICE OF GAS & ELECTRICITY MARKETS (OFGEM), *DOMESTIC COMPETITIVE MARKET REVIEW 2004: A REVIEW DOCUMENT* Tables 2.14 & 2.16 (Apr. 2004); and U.K. OFFICE OF FAIR TRADING (OFT), *INTERNET SHOPPING: AN OFT MARKET STUDY* ¶ 9.18 (Jun. 2007), reports that only 47 percent of Internet shoppers had used a price comparison website.

35 M. Baye, J. Morgan & P. Scholten, *Price Dispersion in the Small and the Large: Evidence from an Internet Price Comparison Site*, 52(4) J. INDUS. ECON. 463-96 (2004).

revenue mainly from the supplier side, it may have an incentive to restrict competition between sellers so that sellers have a better ability to pay high fees for being listed.<sup>36</sup> The result of this skewed pricing could be that too few suppliers choose to be listed on the broker's website or suppliers may choose to bypass the broker and try to market their services directly to consumers. (For instance, we now see the increased use by airlines of their own websites to sell tickets directly to travelers, and some insurers have forbidden their products to be sold on price-comparison websites.) If such bypass goes too far, many consumers will have to search supplier by supplier once more, and the search efficiency introduced by the brokers in the first place will be eroded.

Fourth, the intermediaries are commercial operations, and must be funded from some source.<sup>37</sup> The funding may come from non-discriminatory listing fees (as described earlier), but alternatively it may come from just one or a few suppliers. In such cases, the broker may be biased and give undue prominence to its funders' products. In extreme cases, a "price-comparison website" might just be a marketing front for one supplier. As such, a consumer body needs to be open to consumer complaints about the accuracy of price comparisons, as well as ensuring that the funding basis for the website is transparent. (These issues are already familiar in the market for financial advice.)

Fifth, many price comparison websites attempt to rank their various products by price (or give consumers the option to rank in this way), and for this they may be forced to use a single-dimensional measure of "price". This gives suppliers an obvious incentive to publicize a low "headline price" in order to be placed near the top of the list, and to load hidden charges onto the item insofar as this is possible. For instance, a seller could set high postage and handling charges. Even worse, the seller's postage and handling charges may not be observable to the consumer until the consumer has gone to the "checkout" page. Similar issues arise in insurance markets. If price-comparison websites focus consumer attention on the headline premium, many consumers may buy the cheapest product, and this could well turn out to be a low-quality product with many small-print exclusions or excesses. The net result of all this subterfuge is that suppliers at the

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36 The recent literature on two-sided markets is relevant here, one example of which is M. Armstrong, *Competition in Two-Sided Markets*, 37(3) RAND J. ECON. 668-91, §5 (2006). Similar issues arise with the (typically non-price) market information found in Yellow Pages directories, where most consumers consult just one directory. See M. Rysman, *Competition Between Networks: A Study of the Market for Yellow Pages*, 71(2) REV. ECON. STUD. 483-512 (2004). M. Baye & J. Morgan, *Information Gatekeepers on the Internet and the Competitiveness of Homogeneous Product Markets*, 91(3) AM. ECON. REV. 454-74 (2001) present a model with a monopoly intermediary, and show that the intermediary restricts competition among sellers in order to increase the listing fee it can charge them.

37 It is worth noting that consumer-testing organizations often do not permit a good product review to be used in a product's advertising. This is in part because the consumer organization wishes to maintain revenue from consumers buying its magazine or subscribing to its website, but it does act to impede information flows about product quality to the wider consumer population.

top of list may not be the cheapest or best value when the total deal is taken into account.<sup>38</sup> Generally, inefficiency ensues if consumers are misled about the total charge for the product or its quality, or if they have to spend undue effort to understand exactly what is included in the service.

Finally, and related to the previous point, for complicated products, price comparison websites are often opaque and hard to use for many consumers. When consumers differ in their demand for, say, electricity, and suppliers use nonlinear tariffs, to obtain a relevant comparison a consumer must know and key in her typical

THE “MARKET FOR MARKET INFORMATION” HAS SEVERAL SPECIAL FEATURES WHICH IMPLY THAT IT DOES NOT ALWAYS WORK WELL UNAIDED. AS SUCH, WITH THE IMPORTANT CAVEAT THAT POLICY CANNOT FORCE INACTIVE CONSUMERS TO UNDERTAKE MARKET RESEARCH, THERE MAY BE A ROLE FOR PUBLIC POLICY TO PROVIDE ADDITIONAL MARKET INFORMATION.

demand volume.<sup>39</sup> One supplier may well be cheaper for low-demand consumers, but more expensive for higher-demand consumers. In markets with complex products where a consumer’s demand volume or tastes are needed to determine the relevant price comparisons, price comparison websites are not always effective since there is no single price or price index to use in ranking the products. With complex products, making the market transparent is difficult both for commercial intermediaries and for public policy.

In sum, the “market for market information” has several special features which imply that it does not always work well unaided. As such, with the important caveat that policy cannot force inactive consumers to undertake market research, there may be a role for public policy to provide additional market information.<sup>40</sup> The impact of these

38 Recent papers present evidence that obfuscation strategies, such as presenting a low headline price together with high small-print charges for postage, can confuse consumers and reduce firm-level demand elasticities. See G. Ellison & S. Fisher Ellison, *Search, Obfuscation and Price Elasticities on the Internet* (2004) (mimeo, MIT) and T. Hossain & J. Morgan, *Plus Shipping and Handling: Revenue (Non)equivalence in Field Experiments on eBay*, 6(2) *ADVANCES IN ECON. ANALYSIS & POL’Y* 1429 (2006). OFT (Jun. 2007), *supra* note 34, at 125-27, documents a survey which revealed that the majority of listed prices do not make clear whether delivery is included, and in a sample of airline ticket bookings the final price was above the original listed price in 47 percent of cases (furthermore, for these cases, the median price increase was 19 percent).

39 Related issues arise with attempts to measure the life-time cost of a product. Such is the case with printers, which may have different per-page costs, or cars, which may have different running costs, where the lifetime cost depends on the usage made of the durable product. Matters are even worse with multi-product markets such as telecommunications and supermarkets, where consumers must key in their estimated demands for many products to get a valid comparison of suppliers.

40 In the United Kingdom, several regulators have accredited price-comparison websites listed on their own websites, and one regulator, the Financial Services Authority, has its own comparison website. See FSA: *Money made clear*, at <http://www.moneymadeclear.fsa.gov.uk> (last visited Jan. 28, 2008). In addition, the introduction of an approved price-comparison website was one of the remedies to market failure in U.K. COMPETITION COMMISSION, *HOME CREDIT MARKET INVESTIGATION* 10 (2006).

policies is discussed in the next two sections. Section III.C discusses the impact of market transparency policies about headline prices and product attributes; Section III.D discusses further the problems caused by hidden charges and how transparency policies may be helpful in overcoming these problems.

### C. THE IMPACT OF MARKET TRANSPARENCY POLICIES

There are a number of plausible situations in which consumers differ in how well-informed they are about products in the market. In part, this may reflect how much effort they have put into market research. Here, situations fall into three broad types:

- A:** where uninformed consumers exert a negative externality on the informed consumers;
- B:** where informed consumers benefit from the presence of the uninformed; and
- C:** where there is no cross-subsidy between the consumer groups.

Much consumer policy aims to improve market transparency in a general sense in order to increase the number of informed consumers. Such a policy is relatively uncontroversial in **A** and **C** situations, but in **B** situations it could harm the informed consumers and can be more contentious. This section considers some examples of **A** situations, where increasing the number of informed consumers benefits all consumers. (The next section provides some examples of **B** situations and Section III.E discusses **C** situations.)

A classic model by Varian (1980) is instructive.<sup>41</sup> Here, a number of symmetric firms offer an identical product to a population of consumers who each wish to consume a single unit of the product. The only way in which consumers differ is that a fraction of them, given by  $\lambda$ , know all of the prices in the market, and the remaining consumers know none of the prices.<sup>42</sup> The informed con-

41 H. Varian, *A Model of Sales*, 70(4) AM. ECON. REV. 651-59 (1980). A closely related model is S. Salop & J. Stiglitz, *Bargains and Ripoffs: A Model of Monopolistically Competitive Price Dispersion*, 44(3) REV. ECON. STUD. 493-510 (1977).

42 For instance, as emphasized by Brown & Goolsbee (2002), *supra* note 33, the well-informed consumers could be those who use price-comparison websites on the Internet, while the remainder are those who must painstakingly search supplier by supplier. The discussion in the text assumes that suppliers cannot set different prices for online and offline consumers, as was the case in Brown & Goolsbee's data. If suppliers could set different prices to informed and uninformed consumers (e.g., by making the price depend on whether the sale was online or offline), the model would have a very different prediction: informed consumers would pay competitive prices and uninformed consumers would pay monopoly prices, and the prices in each case would not depend on the number of suppliers or the fraction of informed consumers. Thus, informed consumers would not protect the uninformed at all. Here, a policy which boosts the fraction of informed consumers is good for aggregate consumer welfare, but it has no impact on those consumers who remain uninformed.

sumers will buy their item from the lowest-price supplier, while the uninformed consumers will buy from a random supplier. In this framework, firms have to trade off the benefit of setting a low price which may attract the informed consumer against the benefit of setting a high price which exploits the “vulnerable” uninformed consumers. A firm chooses its price randomly, so that rivals cannot predict its price. One can show that both the average price paid by informed consumers and the (higher) average price paid by the uninformed consumers decreases as the fraction of informed consumers,  $\lambda$ , rises. In particular, informed consumers are harmed by the presence of the uninformed consumers, while uninformed consumers benefit from (or free-ride on) the presence of the informed. Consumer policy that increases market transparency, in the sense of raising  $\lambda$ , will improve the welfare of both groups of consumers. However, price dispersion varies non-monotonically with the fraction of informed consumers. When  $\lambda$  is close to zero, almost all prices are close to the monopoly level, and when  $\lambda$  is close to 1, almost all prices are close to the competitive level. In either case, there is little price dispersion, and so price dispersion is maximal at some intermediate level of  $\lambda$ . In particular, starting from a low level of consumer price awareness (where  $\lambda$  is small), a market transparency policy that increases  $\lambda$  may also increase price dispersion.<sup>43</sup>

Likewise, consumer policy that acts to reduce consumer search costs will tend to benefit all consumers.<sup>44</sup> When consumers have low search costs, both the average level of prices and their dispersion tend to be low. To illustrate, consider this variant of Varian’s model.<sup>45</sup> Instead of supposing that consumers fall exogenously into two groups, the informed and the uninformed, suppose a consumer has the option to learn all market prices for a cost  $s$ . (This “all or nothing” search

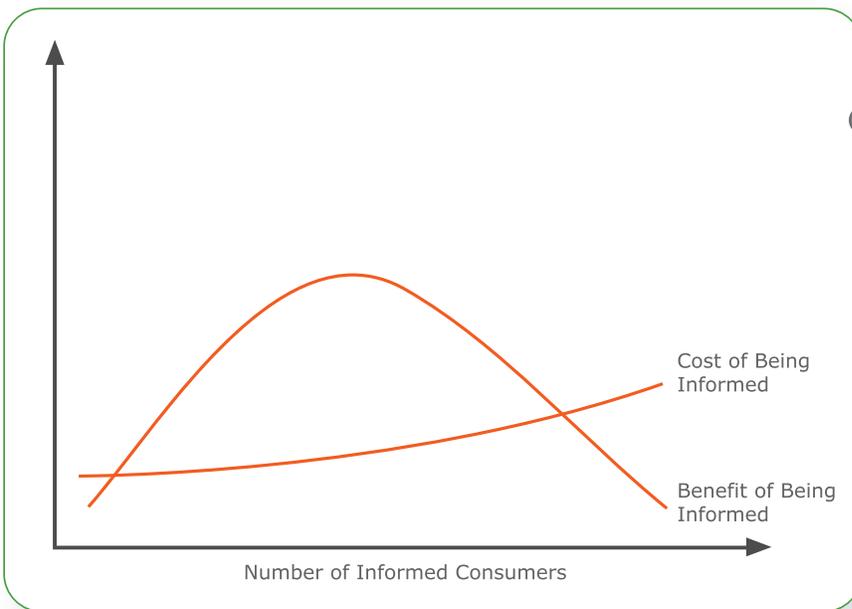
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43 Brown & Goolsbee (2002), *supra* note 33, find support for this effect in the early part of their data where the fraction of consumers who used price-comparison websites was small.

44 Markets differ greatly in their consumer search costs. For instance, petrol has a rather low search cost since many consumers are already in their car when buying the product. As a result, prices are reasonably competitive and exhibit little dispersion within a local area. Funerals and condoms, by contrast, are often purchased by consumers with little appetite for market research. Car tires are frequently purchased by consumers who are not very mobile. In one study, 71 percent of consumers wanting to buy tires contact no other outlet apart from the one at which they buy. For details and further discussion, see M. Waterson, *The Role of Consumers in Competition and Competition Policy*, 21(2) INT’L J. INDUS. ORG. 129-50 (2003). However, the case of petrol presents an interesting danger: given that the market is understood by consumers to be reasonably competitive, consumers may not even bother checking the prices when they fill up, and this leaves a profit opportunity for unscrupulous (but legal) suppliers. For instance, in 1996, a Mr. Mole in Lancashire (United Kingdom) operated a number of petrol stations where petrol was nearly twice as expensive as his competitors. See *Garage fuels price protest*, LANCASHIRE TELEGRAPH, Jan. 19, 1996.

45 See Salop & Stiglitz (1977), *supra* note 41 and K. Burdett & K. Judd, *Equilibrium Price Dispersion*, 51(4) ECONOMETRICA 955-69 (1983). Related insights are obtained in the model with sequential search in S. Anderson & R. Renault, *Pricing, Product Diversity, and Search Costs: a Bertrand-Chamberlin-Diamond Model*, 30(4) RAND J. ECON. 719-35 (1999). In that model, there is no price dispersion and the market price is an increasing function of the search cost.

process simplifies the discussion, but does not alter the qualitative conclusions.) This search cost may vary across consumers. There is a subtle two-way interaction between consumer and firm behavior in such a market. The fraction of consumers who choose to become informed affects the level and dispersion of prices, which in turn determines the incentives for consumers to become informed in the first place. As just discussed, price dispersion is a non-monotonic function of the number of informed consumers. Since the incentive to become informed depends on the dispersion (rather than the level) of prices, we expect that the benefit of becoming informed will depend non-monotonically on the number of other informed consumers, as illustrated in Figure 1.



**Figure 1**

The Cost and  
Benefit of  
Being  
Informed

A consumer will choose to become informed if the private benefit to her exceeds her search cost  $s$ , and an equilibrium degree of search is when the cost of the search for the marginal searching consumer equals the benefit from searching, as depicted on Figure 1. From the diagram, it is clear that there will probably be two (interior) equilibria, one with relatively few informed consumers and the other with relatively many. On the assumption that it is the latter equilibrium which is observed (this is the stable equilibrium of the two), a reduction in all search costs (in the sense that the search cost schedule in Figure 1 is shifted downwards) will lead to more consumers choosing to become informed, which in turn leads to a more competitive market and lower average prices. However, it is the search cost of the marginal searching consumer who determines price levels and dispersion. If a large number of infra-marginal consumers (whose search cost is anyway below the marginal searcher's cost) experience a fall in their search cost, this may have little impact on market prices. Thus, if the use of price-comparison websites has not yet reached the marginal

searching consumer (as discussed in Section III.B), then such websites may not yet have had a major impact on price levels or dispersion.

Notice that, provided that all consumers have positive search costs, in this theoretical framework there is also always a third equilibrium and this involves (i) all firms setting monopoly prices and (ii) no consumers choosing to become informed. The reason is that if all firms set the same price (in this case, the monopoly price), no consumer finds it worthwhile to incur the search cost  $s$  to find the best deal; and if no consumer is informed, then each firm will set the monopoly price to exploit those consumers who randomly come to it. This is the famous “Diamond paradox”.<sup>46</sup> It provides a stark example of how simplistic competition policy, interpreted as a policy to increase the number of suppliers but without decreasing search costs, may have no beneficial impact on consumer welfare.

As well as reducing search costs, another powerful form of consumer protection is to remove restrictions on advertising, as advertising typically intensifies competition between firms. Consider the classical model of informative advertising by Butters (1977).<sup>47</sup> In this model, many firms compete to sell a homogeneous product. The only way consumers can find out about the product is by seeing an advert from one or more firms. Firms send out (non-misleading) adverts to consumers at random with information about the product’s existence and its price, with an advertising cost  $c$  per recipient. One can show that (i) total quantity sold (i.e., the number of consumers who observe at least one advert) decreases with  $c$ , and (ii) the average price paid for the product increases with  $c$ . Thus, policy which acts to lower  $c$  (e.g., a policy which removes restrictions on non-misleading price advertising in the specified market) will intensify competition and benefit consumers.<sup>48</sup> However, sometimes policy towards advertising needs to balance two conflicting kinds of consumer protection. Since many consumers do not like being on the receiving end of direct marketing, one consumer protection policy is to allow consumers to opt out of direct marketing campaigns. (An example of this is the U.S. “Do Not Call” policy launched in 2003 to which some 145 million people have signed up.) But if a significant number of consumers

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46 P. Diamond, *A Model of Price Adjustment*, 3(2) J. ECON. THEORY 156-58 (1971).

47 G. Butters, *Equilibrium Distributions of Sales and Advertising Prices*, 44(3) REV. ECON. STUD. 465-91 (1977).

48 For instance, empirical studies of opticians and legal services in the United States have investigated how relaxing a state ban on price advertising typically led to lower prices. See L. Benham, *The Effect of Advertising on the Price of Eyeglasses*, 15(2) J.L. & ECON. 337-52 (1972); L. Benham & A. Benham, *Regulating Through the Professions: A Perspective on Information Control*, 18(2) J.L. & ECON. 421-47 (1975); and D. Haas-Wilson, *The Effect of Commercial Practice Restrictions: The Case of Optometry*, 29(1) J.L. & ECON. 165-86 (1986). See also the review of related studies on the impact of advertising on prices in Bagwell (2007), *supra* note 18, at 1745-46.

choose to opt out of advertising, it is possible that competition between firms is thereby lessened to the detriment of consumers as a whole.<sup>49</sup>

Further insights into the benefits of market transparency are obtained from a pair of 2006 models by Ran Spiegler. Consider first Spiegler's model of credence goods.<sup>50</sup> Here, word-of-mouth does not necessarily work well when consumers are not sophisticated. There are a number of suppliers of treatment for a given medical condition and each supplier has an associated probability of successful treatment. If no treatment is given, there is also a chance that a consumer gets better anyway. Without policy intervention, consumers do not observe a supplier's probability of success, but instead hear from friends whether they have had success or suffered failure with each supplier (with, for simplicity, one "anecdote" for each supplier, including the no-treatment default). Instead of understanding that treatment success is probabilistic, consumers behave as though each anecdote predicts what will happen to them for sure. In particular, each consumer will choose the supplier who offers the lowest price (or no treatment, which has a zero price) from among the successful treatments she hears about. Spiegler shows that, even when all suppliers offer "treatment" that does not involve higher probability of success than getting no treatment at all (i.e., the suppliers are "quacks"), the market for quacks is active and consumers are worse off relative to the case where quacks are not present. In fact, when the disease is unlikely to be cured (so the no-treatment default and quack success probabilities are both small), the quacks charge a higher price, for the reason that a consumer is unlikely to hear of more than one success story, which weakens competitive pressure. In addition, when suppliers differ in their treatment success rates and have the ability to reveal their success probability to consumers, none of them, including the best one, unilaterally wishes to do so. (Given the anecdotal basis of consumer decision making, they prefer to set high prices to those consumers who hear about their successful treatments than to get a moderate price from consumers who know the real success probability.) Thus, there is a role for consumer policy to publicize the treatment success rates for the various suppliers. Such a policy will induce those consumers who see the public-

THERE IS A ROLE FOR CONSUMER POLICY TO PUBLICIZE THE TREATMENT SUCCESS RATES FOR THE VARIOUS SUPPLIERS. SUCH A POLICY WILL INDUCE THOSE CONSUMERS WHO SEE THE PUBLICITY TO CHOOSE THE BEST VALUE TREATMENT.

49 More generally, while new technologies often facilitate information flows to consumers, they can sometimes also help consumers avoid adverts. For instance, personal video recorders in broadcasting and "pop-up blockers" on the Internet allow consumer to avoid adverts. Since many consumers dislike viewing adverts, but there is a competitive benefit to consumers as a whole when more consumers receive adverts, it is possible that the increased use of ad-avoidance devices may harm aggregate consumer welfare. A simple model of broadcasting in which the ability to opt out of advertising harms viewers can be found in M. Armstrong, *Public Service Broadcasting*, 26(3) FISCAL STUD. 281-99, 295 (2005).

50 R. Spiegler, *The Market for Quacks*, 73(4) REV. ECON. STUD. 1113-31 (2006a).

ity to choose the best value treatment.

Second, consider Spiegel's model of "confusing prices".<sup>51</sup> Here, a number of identical firms compete to sell a homogeneous product to identical consumers. However, instead of revealing their true price, each firm publicizes an unbiased noisy signal of its true price. Each consumer sees a price signal from each supplier, and buys from the supplier with the lowest signal. This could be because consumers mistakenly take the signal they see to be the price they will actually pay, or consumers might be more sophisticated and, in the absence of other information, assume that the firm with the lowest signal is most likely to be the firm with the lowest true price. Spiegel shows that firms do not want to set transparent prices.<sup>52</sup> Instead, firms choose to offer noisy prices in equilibrium, where the amount of noise depends on the number of suppliers. Remarkably, in this model the equilibrium true price does not depend on the number of suppliers, while the noise becomes more pronounced as the number of suppliers increases. Thus, firms respond to "more competition" (in the simplistic sense of there being more suppliers) with "more obfuscation". Firms make positive profits as a result of their obfuscation strategy, even though products are homogeneous. Consumer welfare would be improved if policy either forces firms to publicize their true prices or ensures that some other platform publicizes the true prices. When all consumers base their decision on the true prices, Bertrand competition and zero profits ensue.

Finally, a very different kind of market transparency policy involves the accurate labeling of experience and credence goods. Despite the predictions of theoretical models that mandated disclosure may not be needed (see Section II), history does not make one confident that the market will, on its own, ensure that firms always adequately label their products.<sup>53</sup> For instance, a future Chairman of the FTC wrote:

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51 R. Spiegel, *Competition Over Agents with Boundedly Rational Expectations*, 1(2) THEORETICAL ECON. 207-31 (2006b). Spiegel interprets his model in terms of a product with many pricing attributes, where a consumer's inability to process many pieces of information implies that she just looks at a small number of price attributes for the product, while the expected price eventually paid depends on all pricing attributes.

52 Suppose the unit production cost is  $c$ . If all firms offer transparent prices, there is Bertrand competition and price is equal to  $c$ . Suppose instead that one firm sets a noisy price, where its true price is  $2c$  and its (unbiased) signal is either zero or  $4c$  with equal probability. This seller will have the lowest signal in the market half the time, and in these cases it will make the sale and make a positive profit while doing so.

53 A. Mathios, *The Impact of Mandatory Disclosure Laws on Product Choices: An Analysis of the Salad Dressing Market*, 43(2) J.L. & ECON. 651-77 (2000) discusses how a change to a mandatory policy for food labeling affected disclosure of fat content in salad dressing. With a voluntary labeling regime there was substantial disclosure by low-fat suppliers, but the dressings with no disclosure had a wide range of fat content. Mandatory labeling thus improved the information available to consumers. Likewise, G. Jin, *Competition and Disclosure Incentives: An Empirical Study of HMOs*, 36(1) RAND J. ECON. 93-112 (2005) shows that only some health suppliers chose to make use of a (costly) accreditation service.

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“Until the government intervened and required or induced disclosure, accurate information was not available in the market concerning the durability of light bulbs, octane ratings for gasoline, tar and nicotine content of cigarettes, mileage per gallon for automobiles, or care labeling of textile wearing apparel.”<sup>54</sup>

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As already mentioned, credence goods are a particularly challenging type of product, since repeat purchases or word-of-mouth may not adequately discipline the market. In response, it could be valuable for policy to publicize and verify suppliers’ professional qualifications. For a novice consumer, the ability or effort of a lawyer is hard to determine. In such cases, one thing which may help to some extent is to mitigate information asymmetries about an expert’s ability (even if the effort problem remains), which can be done by publicizing a recognized system of professional qualifications. Thus, if a consumer consults a qualified solicitor, she may be reasonably confident that the expert at least knows how to do the task, even if the under- or over-treatment problems remain. In practice, this transparency policy often goes alongside a policy which sets a minimum qualification barrier to entry, although the two policies are distinct and need not go together. I discuss this second, more interventionist policy in Section V.B.

A second labeling issue involves the accurate listing of ingredients in a product. To illustrate, consider the salt content of a particular kind of snack food. Without access to a chemical laboratory, a consumer cannot determine salt content, even after consumption. Suppose a supplier can make its product tasty in two ways: an expensive way involving high-quality ingredients, or a cheap way which just involves adding salt. Consumers know the tastiness of a snack, but they do not know whether it is due to high-quality ingredients or to too much salt. Suppose that excessive salt consumption in the long term has adverse health effects, and many consumers would prefer to avoid this if possible (despite the higher cost of the alternative). In this situation, a competitive market may not, on its own, deliver a good outcome. Firms cannot attract customers by using the more costly, high-quality method of production, and so they make greater profit by putting too much salt in the snack. This is true even if consumers are smart enough to work out a firm’s incentives, and foresee that salt is used. If consumer policy somehow ensures accurate labeling of ingredients, then it is more likely that consumers will at least have the option to consume a healthier snack. Although it will not be perfect, consumer policy might be reasonably effective through the “deceptive-marketing” route: firms have the ability to publicize the

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54 R. Pitofsky, *Beyond Nader: Consumer Protection and the Regulation of Advertising*, 90(4) HARV. L. REV. 661-701, 664 (1977). In fact, Posner (1969), *supra* note 31, at 69, claims that the FTC acted in the early 1960s to prevent the disclosure of tar and nicotine content in cigarette advertising.

salt content of the snack and market the product accordingly, while the consumer body makes periodic laboratory checks on the accuracy of the claims. Similar issues arise with the provenance of a product (e.g., “free-range”, “organic”, “U.K.-bred”, or “fair-trade”).

Powerful evidence of the impact of mandatory labeling of credence goods comes from a study of hygiene ratings cards for restaurants in Los Angeles.<sup>55</sup> In 1998, restaurants in parts of Los Angeles were forced to make prominent the results of recent hygiene inspections. The result was that (i) average hygiene scores increased, (ii) consumer demand became sensitive to changes in hygiene, and (iii) hospitalizations due to food poisoning in the local area declined. Moreover, the policy intervention was superior to the *laissez-faire* situation in which reputational concerns were the main incentive to have clean kitchens, suggesting a significant role for policy in this market.<sup>56</sup>

#### **D. ADD-ON PRICING, HIDDEN CHARGES, AND THE SMALL PRINT**

A possible limitation of Spiegler’s model of confusing pricing discussed in Section III.C is that firms were somehow forced to advertise an unbiased signal of their true price: some consumers get the impression that the price is higher than it really is; some consumers think it is lower. However, in a wide range of plausible situations, firms systematically give the impression that the price is lower than it will in fact turn out to be. A common reason for this is that part of the service which many consumers will want is not included in the “headline” price used in marketing, as discussed in Section III.B. Although many of these situations are similar to the bait-and-switch method of deceptive marketing discussed in Section III.A, and their impact on consumer behavior can be similar, they do not fall foul of consumer law if the various charges are included in the advert’s small print. In this section, I discuss this issue of hidden charges.

Consumers often seem to pay a lot for “add-on” products, such as extended warranties on electrical goods, payment protection insurance on loans, house insurance linked to a new mortgage, hotel phone and minibar charges in the hotel room, printer ink cartridges for a computer printer, or treats at the supermarket checkout line after the main shopping is done. They may be willing to do this in order to eliminate the hassle of buying complementary items from several different suppliers. However, if this was the only story, we would expect to see suppliers compete in terms of the total charge for all items, and consumer choice would not be distorted. But very often the price of the add-on is not voluntarily

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55 G. Jin & P. Leslie, *The Effect of Information on Product Quality: Evidence From Restaurant Hygiene Grade Cards*, 118(2) Q.J. ECON. 409-51 (2003).

56 G. Jin & P. Leslie (2009), *supra* note 16, at 1. The authors conclude that “even when there is merit to the argument that reputational incentives operate as a market-based mechanism for mitigating information problems, they may be a poor substitute for full information.”

publicized when the main item is marketed (electrical retailers do not tend to post prices for extended warranties on their shop windows, for example), which suggests that other factors are also at work.

Suppose, for whatever reason, the market operates so that the price of the main item is transparent to all consumers, but the price for a secondary product, the add-on, is not revealed until after a consumer has decided to purchase the main item. One example of this might be supermarkets, where a retailer can advertise its prices for a few selected prominent items, but the prices for other items can only be discovered once in the store. In a static context, it is plausible that a retailer will advertise very low prices for the prominent items (perhaps below cost), since that is the only way it can attract shoppers into the store, but the remaining items have something like monopoly prices.<sup>57</sup> Formally, the situation is much like the “bargains then rip-offs” prices seen in markets with switching costs.<sup>58</sup> As such, there will be an undesirable pattern of prices, which could harm consumer welfare whenever the demand for the add-on is not completely inelastic.

Another version of this kind of problem is the following.<sup>59</sup> A contract drawn up between a seller and a consumer includes a clause which comes into effect only in a relatively unlikely event. For instance, this could be the payout from an insurance contract in a particular scenario. The efficient negotiation of this clause would lead to a pay-off to the consumer of  $v$  and a pay-off to the seller of  $\pi$ . However, if the seller knows that the consumer does not, for whatever reason, read this clause, it could draft the clause so that it obtains payoff  $\pi^* > \pi$  while the consumer then obtains just  $v^* < v$ . If the consumer has a “reading cost”  $k$  to read and understand this clause in the contract, she will not bother to read it when  $k > r(v - v^*)$  where  $r$  is the small probability that the clause is implemented. That is, if the reading cost is large, or the perceived probability that the clause is relevant is small, the consumer will not bother to check that the clause has been efficiently drafted. In this case, sellers will draft the clause in their own interests, and inefficiency will result. This is true even if consumers are sophisticated and foresee that they will be exploited in the small print. Notice that, although the probability  $r$  might be almost negligible for an individual consumer, the fact that a firm deals with many consumers means that the profits it obtains from exploiting consumers in the small print could be significant.

57 R. Lal & C. Matutes, *Retail Pricing and Advertising Strategies*, 67(3) *J. Bus.* 345-70 (1994).

58 For a survey, see Joseph Farrell & Paul Klempere, *Coordination and Lock-In: Competition with Switching Costs and Network Effects*, in 3 *THE HANDBOOK OF INDUSTRIAL ORGANIZATION 1967-2072* (M. Armstrong & R. Porter eds., 2007).

59 See M. Eisenberg, *The Limits of Cognition and the Limits of Contract*, 47(2) *STANFORD L. REV.* 211-59 (1995), as well as the discussion of that paper and related literature in B. Hermalin, A. Katz & R. Craswell, *Contract Law*, in 1 *THE HANDBOOK OF LAW & ECONOMICS* §2.3.4 (M. Polinsky & S. Shavell eds., 2007).

In the situations described in the previous paragraphs, even if consumers had a very small, but positive, cost of investigating the small print or the add-on prices, it remains an equilibrium for all sellers to set monopoly terms for unobserved prices or clauses: if sellers are predicted to do this, there is no reason for consumers to incur the cost of finding out the hidden terms, and if no consumers look at the hidden terms, there is no reason for any seller to attempt to lure consumers by offering a better deal in the hidden terms. This is essentially the Diamond Paradox discussed in Section III.C, except applied to small print rather than to headline terms. The important difference is that when sellers exploit consumers in the small print, we do not expect industry profits to be excessive in markets with many sellers (unlike the situation with the usual Diamond Paradox): sellers will use the “rip-off” profit obtained from the monopoly small-print terms to fund “bargain” prices for the main item.

As a variant on this situation, suppose that a fraction of consumers (the “sophisticates”) either observe or foresee the high price of the add-on product, and can substitute away from it at little cost. For instance, they could bring a mobile phone to a hotel rather than pay the high hotel phone charges. Or they could decide in advance whether or not to buy the extended warranty on their new TV, rather than have to make this decision under pressure from the sales assistant. In these cases, the sophisticates will not buy the add-on when they expect it to have a high price. By contrast, “naive” consumers do not consider that they may want the add-on product until they have purchased the main item. If sellers cannot distinguish sophisticates from naive consumers, and so must

A CONSUMER POLICY THAT ACTS TO REDUCE THE PRICE FOR THE ADD-ON WILL LIKELY CAUSE HARM TO SOPHISTICATED CONSUMERS, AND SO WILL BE MORE CONTROVERSIAL THAN THE A-TYPE SITUATIONS.

charge the same price for the main item, it follows that in competitive markets the main item will be subsidized to some extent, to reflect the fact that a fraction of consumers (the naive consumers) will go on to buy the high-priced add-on. Therefore, electronics retailers may offer a TV at a low price, in the hope of selling profitable warranties to a subset of purchasers. As such, the sophisticates, who obtain the main item at a subsidized rate and do not buy the add-

on, will benefit from the presence of naive consumers. This is an example of a **B**-type cross-subsidy, in the terminology from Section III.C. A consumer policy that acts to reduce the price for the add-on (either by improving information about add-on prices, or by direct regulation of these prices) will likely cause harm to sophisticated consumers, and so will be more controversial than the **A**-type situations discussed in Section III.C.<sup>60</sup>

<sup>60</sup> This effect is akin to the so-called “waterbed effect” seen in markets such as mobile telephony. There, if one charge is reduced by policy, it does not necessarily have an impact on equilibrium industry profits, but it will cause another price to rise correspondingly.

This discussion applies readily to penalty charges for late payment on credit cards or unauthorized banking overdrafts. If a bank sets a high charge for unauthorized overdrafts, this will generate profit from those consumers who naively get overdrawn. This profit will, in a hypothetical competitive market, be used to subsidize the main item (i.e., the bank account in this example). Therefore, high penalty charges could lead to free banking for those consumers who can avoid getting unexpectedly overdrawn. However, banks and credit card companies differ in one important respect from hotels and electronics retailers. A hotel, for instance, has no obvious way to determine whether a customer will or will not use its in-room add-ons, and so must charge a common room rate to all consumers. But a bank or credit card company has a long-term relationship with its consumers, and can learn about its consumers' behavior. Thus, a bank might be able accurately to identify those customers who do not get unexpectedly overdrawn. Since, according to this model, such consumers are loss-making for the bank, it is plausible that the bank will be tempted to raise charges to its solvent consumers (sometimes under the banner of "premium services" for preferred customers), or even to withdraw service from these consumers if free to do so.

The discussion to this point has taken as given the shrouded nature of add-on and small-print prices. An important point is whether firms in competitive markets do have an incentive to publicize all relevant prices (or other aspects of product quality), even when they could easily do so. It is possible to construct models where firms collectively prefer to keep their add-on prices hidden from consumers, so that industry profits in equilibrium are higher with hidden prices than with transparent prices.<sup>61</sup> But it seems plausible that competitive pressure will give a firm a unilateral incentive to make its prices transparent, and better aligned with consumer interests than the bargain-then-rip-off prices. The reason this is plausible is that the bargain-then-rip-off prices are an inefficient way to deliver utility to consumers, and the firms can extract more profit for a given level of consumer utility by increasing the price of the "bargain" and reducing the "rip-off".<sup>62</sup> This is just the usual argument that deadweight losses are reduced as prices are brought into line with costs.

However, there are also realistic scenarios in which firms do not even have a unilateral incentive to publicize their own, or their rivals', hidden charges.<sup>63</sup>

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61 G. Ellison, *A Model of Add-on Pricing*, 120(2) Q.J. ECON. 585-637 (2005).

62 See Ellison (2005), *id.* at Proposition 4 and C. Shapiro, *Aftermarkets and Consumer Welfare: Making Sense of Kodak*, 63(2) ANTITRUST L.J. 496 (1995).

63 X. Gabaix & D. Laibson, *Shrouded Attributes, Consumer Myopia, and Information Suppression in Competitive Markets*, 121(2) Q.J. ECON. 505-40 (2006). The numerical example which follows is essentially taken from section 1 of their paper. In a very different model Spiegel (2006a), *supra* note 50, also shows that firms do not wish to "de-bias" consumers. These recent results go against the claim in Beales et al. (1981), *supra* note 25, at 502, and many other authors, that "if information dissemination were costless to sellers, theory suggests that disclosure would be complete."

Advertising the add-on price acts as an “eye-opener” for naive consumers, and if it is advertised these consumers are converted into sophisticated consumers who take account of both prices. This can render unprofitable a decision to make charges transparent.

A numerical example serves to illustrate the point. Suppose all hotel rooms cost \$100 to supply and that there is a range of add-ons in the room which, for the sake of simplicity, costs the hotel nothing to supply. All consumers are willing to pay up to \$20 for these add-ons. The sophisticates think about add-ons in advance, and they can buy the add-on items beforehand if they believe the hotel’s add-on charges will be excessive. If the add-on price is not advertised, these consumers will naturally assume the worst and expect high prices once in the room. They can buy the add-ons in advance at the competitive rate, which here is zero. Naive consumers do not buy these items in advance, and will buy them from the hotel if the add-on charge is no higher than \$20. Suppose that a fraction  $\lambda$  of consumers are sophisticated. In this case, if hotels do not make transparent their add-on charges, the price  $P$  for a room in a competitive market satisfies

$$P + 20(1 - \lambda) = 100$$

since a hotel knows that a fraction  $(1 - \lambda)$  of the consumers will end up buying the add-ons in the room, which generates profit of \$20 each time, and this revenue can be used to help cover the cost of the room. In particular, a hotel is willing to set the room rate below cost in order to obtain the profit opportunity to exploit naive consumers. The sophisticates foresee that the in-room charges will be high, and buy their add-ons in advance, and so pay  $P = 80 + 20\lambda$  for the whole service. Naive consumers, however, pay  $100 + 20\lambda$  for the whole service. Thus, the sophisticates benefit from the presence of the naive consumers (if all consumers were sophisticated, the hotel room rate would be \$100); and, the naive consumers are harmed by the presence of the sophisticates.

What happens if one hotel advertises its add-on charges to potential consumers? By assumption, this makes even the naive consumers think about their consumption of add-ons. As such, the hotel cannot levy a positive price for its add-ons, since otherwise all of its consumers will buy the add-ons in advance. Therefore, to break even the hotel must charge \$100 for its rooms, which will attract no consumers since consumers can get a room for a subsidized rate at rival hotels. Thus, hotels in this example have an incentive to shroud the price of add-ons.

A policy of increased market transparency could have somewhat perverse consequences in this setting. If public policy acted to increase the fraction  $\lambda$  of consumers who were sophisticated, this raises the price for the total service paid by both types of consumer. (However, aggregate consumer welfare does not depend on the fraction  $\lambda$  in this model.) For instance, if policy made almost all consumers pay attention to hotel add-on prices, the result would be that the room

rate simply reflected the cost. (A hotel would not anticipate making any significant profit from add-ons.) Those few inattentive consumers remaining would then pay the full room cost, plus the monopoly add-ons.

In a richer model, it is plausible that aggregate consumer welfare is harmed by excessive add-on prices, since the balance of prices is inefficient.<sup>64</sup> This suggests a potential role for consumer policy to correct this market failure. This policy could either make sufficiently prominent the “small-print” clauses and charges or directly regulate the add-on charges.<sup>65</sup> The more interventionist policy is discussed later in Section V, so for now consider market transparency policies. Since firms do not always choose publicize add-on prices, or consumers do not always think hard enough about such prices, there is a potential role for consumer policy to improve information flows to consumers. The effect of such a policy may act to educate the naive consumers to be more aware of the danger of add-on prices, and also to clarify what the add-on charges are (which is useful for sophisticated consumers too). To facilitate information flows, one could, for instance, require electrical retailers to post the price of the relevant extended warranty next to the main price for its televisions, so consumers could consider the two prices jointly.<sup>66</sup> This would be likely to have two effects: (i) consumers would be able to consider whether to buy the add-on without pressure from the sales assistant and (ii) the retailer may react by setting a more efficient balance of prices. In February 2007, the U.K. Office of Fair Trading warned travel providers to include all non-optional costs and taxes in their basic advertised prices, and in May that year it announced its intention to bring enforcement proceedings against airlines failing to comply.<sup>67</sup> Likewise, one could (somehow) force printer manufacturers to publicize the per-page printing costs of using their tied ink cartridges.<sup>68</sup> In a similar spirit, one might, I suppose, require hotels to publicize their

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64 In a competitive market, the excess profits made on the add-on will be passed back to consumers in the form of inducements to buy the main item, and industry profits will not be excessive overall. In this case, the consumer harm consists just of the deadweight loss “triangles” rather than the monopoly profit “rectangles” which result from excessive pricing of add-ons. As such, the consumer welfare loss may be relatively small. See Shapiro (1995), *supra* note 62, at 497-98.

65 As an example of the latter policy, Gabaix & Laibson (2006), *supra* note 63, report that policy in Singapore required that hotels price their international phone calls at marginal cost plus a maximum of 30 Singaporean cents.

66 This was a remedy in U.K. COMPETITION COMMISSION, EXTENDED WARRANTIES ON DOMESTIC ELECTRICAL GOODS (2003).

67 OFT (Jun. 2007), *supra* note 34, at 127.

68 This assumes the printer controls the retail price of its cartridges, and would also require a standardized “page” to facilitate comparisons. The general issue of establishing standardized scoring systems, and how a public body might act as a useful coordination device for this, is discussed in Beales et al. (1981), *supra* note 25, at 523-27.

in-room telephone charges on their webpages, but one would not wish to force hotels to read out a whole list of possible add-ons whenever a potential consumer calls up asking for the room rate.

This last point reminds us that consumers find information costly to digest. In particular, consumers may simply not take in the information that firms provide about aspects of their service. Thus, banks certainly provide details of their various charges in their contracts to new customers, but many customers do not read the contracts in detail.<sup>69</sup> Of course, one may be able to improve the presentation of the various charges, which will increase the proportion of consumers who are aware of the level of these charges. For instance, the consumer body could decide which of the various bank charges were important, and instruct the bank to present these charges in a prominent “summary box”. But with a complex product all charges cannot be fitted into a summary box (without the box losing its function), and a danger is that consumers may react to the summary box by paying even less attention to the remaining small-print charges. In addition, a supplier could respond by inventing new categories of charges. As mentioned in Section III.B, with complex products it is hard for both firms and public policy to make all product attributes salient.

In addition, another reason why consumers do not always pay sufficient attention to some charges, even when they are made prominent, is that they (mistakenly) believe they will not get into a situation where the charges are payable. For instance, they optimistically believe they will always pay their credit card on time and do not look at the associated charge. Simple transparency policies cannot work well then. The next section discusses these situations of mistaken beliefs.

## E. MISTAKEN CONSUMER BELIEFS ABOUT FUTURE TASTES OR NEEDS

If some consumers systematically misperceive their future tastes or needs (e.g., the probability that a new TV will break down, or that they will be able to pay their credit card on time each month), then even a competitive market will exploit them. The reason that competition does not help in these cases is that competition is good at giving consumers what they think they want, not what they end up consuming.

To take one example in detail, if exercise gyms have experience that suggests that new consumers will end up visiting the gym less often than the consumers anticipated, the gym may make more money by setting fixed membership fees instead of per-visit charges, as the former will be perceived by members as offer-

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69 U.K. FINANCIAL SERVICES AUTHORITY, LEVELS OF FINANCIAL CAPABILITY IN THE UK: RESULTS OF A BASELINE SURVEY (2006) reports that when buying a financial product, about half of survey respondents read the terms and conditions “in detail”, while 10 percent did not read them at all. See also the references in R. Korobkin, *Bounded Rationality, Standard Form Contracts, and Unconscionability*, 70 U. CHI. L. REV. 1203-95, n. 45 (2003) and the references listed in note 38 *supra*.

ing better value for money.<sup>70</sup> To be specific, suppose the gym sets a fixed annual charge for membership  $F$  together with a per-visit charge  $p$ . Suppose all consumers will visit the gym  $Q(p) = 1 - p$  times if the marginal price per visit is  $p$ . (Here, the number of visits when each visit is free is normalized to one.) However, suppose all consumers think they will visit twice as often and believe their demand is given by  $Q_N(p) = 2(1 - p)$  where  $N$  denotes “naive”. In this case, a consumer’s perceived surplus at the time they consider the contract is

$$v = (1 - p)^2 - F.$$

Here,  $(1 - p)^2$  is a consumer’s surplus (the area under the demand curve and above the price  $p$ ) corresponding to his predicted demand  $Q_N(p) = 2(1 - p)$ . The gym’s profit from each consumer will actually be

$$\pi = (1 - p)(p - c) + F,$$

assuming the gym incurs cost  $c < 1$  when a consumer visits. In a competitive market, a gym will maximize perceived consumer surplus  $v$  subject to profit  $\pi$  being non-negative. If negative prices for visiting the gym are not feasible, one can check that this entails  $p = 0$  and  $F = c$ , so that only a membership fee is levied and each visit is free. Thus, this simple model suggests that the gym will offer a contract with only a fixed membership charge, even though there is a per-visit cost involved in providing gym services. The reason is that the firm and consumer evaluate a contract using a different prediction for the number of visits, and a fixed membership fee contract is mistakenly perceived to be good value by over-optimistic consumers.

An interesting feature of this situation is that the presence of sophisticated consumers need not help, or harm, the naive consumers at all.<sup>71</sup> That is to say, this is a type-C situation, using the terminology of Section III.C. To see this, suppose there is a second group of consumers who are more sophisticated and accurately predict they will visit the gym  $Q(p) = 1 - p$  times. This group will just be offered marginal-cost prices in a competitive market, so that  $F = 0$  and  $p = c$ . Neither type of consumer wishes to choose the contract targeted at the other type. (The contract targeted at each type of consumer maximizes that consumer’s perceived utility subject to a break-even constraint.) Thus, in a competitive market a gym will offer two kinds of contracts: a membership fee contract aimed at the over-optimistic consumers and a per-visit contract aimed at the realistic consumers. The fraction of consumers who are sophisticated does not affect the form of these contracts.

70 DellaVigna & Malmendier (2004), *supra* note 24, and S. DellaVigna & U. Malmendier, *Paying Not to Go to the Gym*, 96(3) AM. ECON. REV. 694-719 (2006). Their 2006 paper provides evidence showing that many consumers choose a gym membership, even though they end up going so rarely they would be better off with pay-per-visit arrangement.

71 A related feature is observed in a monopoly context in Milgrom & Roberts (1986), *supra* note 20, at Proposition 3.

Note also that a gym does not have an incentive to de-bias consumers, even if it could somehow convince the naive consumers that their demand would in fact be lower than they expect. (It is hard to imagine how this de-biasing could be achieved, however.) If a consumer became aware of her true future demand, she would choose the per-visit contract aimed at the sophisticated consumers, which is already available in the market.

Similar issues arise in more important markets, such as medical or motor insurance. There is ample evidence to suggest that many people are over-optimistic about the likelihood that they will not have a serious illness or about their relative driving skills.<sup>72</sup> In such cases, the market may provide inadequate insurance to these over-optimistic consumers, since consumers will underweight the insurance policy's payout in the event of illness or an accident. Similarly, if consumers underestimate their propensity to get into debt, it may be profitable for a credit card company to offer up-front inducements to use the card (e.g., interest-free periods or no joining fee) combined with steep interest charges. Naive consumers will pay too little attention to the interest rate (until it is too late) since they do not believe it will apply to them. Ausubel (1991) emphasizes how even intense competition in the market does not overcome this problem.<sup>73</sup>

An issue related to over-optimism is that some consumers may be over-confident in their prediction of future tastes. For instance, a mobile telephone user has to forecast her future usage in order to choose amongst various calling plans. An over-confident consumer may have something like a point-estimate for her future usage, and neglect the likelihood that she may under- or over-use the service relative to this estimate. In such cases, it may be profitable for a firm to offer her a "three-part" tariff (i.e., a tariff which involves a fixed monthly fee, a number of inclusive minutes of calls, and then a high price for calls beyond the free allowance). This consumer will downplay the high price for making excess calls, and will not mind paying for calls she might not use in her free allowance, since she does not think either situation will apply to her.<sup>74</sup>

It is often hard to see how consumer policy can realistically improve these kinds of market failures, except via informational remedies. A more interventionist policy would involve intervening in the details of contracts, and this is rarely some-

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72 See, respectively, N. Weinstein, *Unrealistic Optimism About Future Life Events*, 39(5) J. PERSONALITY & SOC. PSYCHOL. 806-20 (1980); and O. Svenson, *Are We All Less Risky and More Skillful than our Fellow Drivers?*, 47(2) ACTA PSYCHOLOGICA 143-48 (1981).

73 L. Ausubel, *The Failure of Competition in the Credit Card Market*, 81(1) AM. ECON. REV. 50-81 (1991).

74 M. Grubb, *Selling to Overconfident Consumers* (2007) (mimeo, MIT). As well as providing the theoretical analysis outlined here, Grubb presents empirical data in support of the hypothesis that consumers are overconfident in their predictions of future usage. See Eliaz & Spiegler (2006), *supra* note 24, for closely related theoretical work in the context of time-inconsistent consumers.

thing a consumer body should attempt.<sup>75</sup> Should a regulator control the price for mobile phone calls beyond the monthly allowance? If so, at what level? Section V revisits this issue and discusses some examples of small-print regulation. For some products, though, information remedies may help to de-bias consumers. For instance, informative warnings on cigarette packets may cause smokers to re-think.<sup>76</sup> Driving tests (and advanced driving tests) may serve to reveal a driver's aptitude.<sup>77</sup> And the way statistical information is presented can have a major effect on many consumers' ability accurately to process that information. To take a simple example, many consumers put too much weight on low-probability events, especially if the outcome from such an event is particularly salient (e.g., a national lottery). If a (kill-joy) consumer policy is trying to de-bias consumers to have a better understanding of the likelihood of winning a lottery, the odds might usefully be represented as a metaphor (imagine choosing one ping-pong ball out of a large swimming pool filled with balls) or as a relative-odds comparison (winning the lottery is about as likely as being struck by lightning next week).<sup>78</sup>

IT IS OFTEN HARD TO SEE HOW CONSUMER POLICY CAN REALISTICALLY IMPROVE THESE KINDS OF MARKET FAILURES, EXCEPT VIA INFORMATIONAL REMEDIES.

Finally, another example of how some consumers mis-forecast their future tastes is what is termed "projection bias", whereby a consumer extrapolates her current preferences too far into the future.<sup>79</sup> For instance, the excitement of test-driving a new car may lead to an impulse purchase, whereas after a few days the desire may end. In such cases, a mandated "cooling-off period", or a required waiting period before purchase is possible, may be a useful policy to counter-act this effect. Historically, the same reasoning applied to mandated notice periods for getting married.<sup>80</sup> Likewise, excessively onerous notice peri-

75 DellaVigna & Malmendier (2004), *supra* note 24, at §II.G, discuss possible regulatory intervention in the contracts offered by, say, gyms. They come to the pessimistic conclusion that "it requires extensive information which the government is unlikely to have [...]. A better policy for the government, in general, is to educate partially naive users and make them aware of their naiveté." No specific guidelines for how to do this are given, however.

76 Here, the form of the warning is likely to be very important. See C. Jolls & C. Sunstein, *Debiasing Through Law*, 35(1) J. LEGAL STUD. 199-241 (2006).

77 A. Sandroni & F. Squintani, *Overconfidence, Insurance, and Paternalism*, 97(5) AM. ECON. REV. 1994-2004 (2007).

78 Taken from Camerer et al. (2003), *supra* note 5, at 1231.

79 G. Loewenstein, T. O'Donoghue & M. Rabin, *Projection Bias in Predicting Future Utility*, 118(4) Q.J. ECON. 1209-48 (2003).

80 Camerer et al. (2003), *supra* note 5. Of course, another reason for cooling-off periods is when there is a danger that the contract may have been signed under duress. In this case, the cooling-off period will both protect the consumer from being locked into a contract she did not freely sign, and lessen the incentive to engage in aggressive selling practices in the first place.

ods or early contract termination payments seem a fairly clear cut area for intervention, unless the supplier has made specific durable investments which need to be recovered via a long-term contract (such as offering a free mobile handset in return for twelve months guaranteed service). There is no obvious efficiency reason why an exercise gym, for instance, needs several months' notice for a contract to cease. As was the case earlier, projection bias is one reason why many consumers do not pay sufficient attention to contractual arrangements for ceasing service at the time they sign up, since they may not anticipate their tastes changing.<sup>81</sup> (For the same reason, perhaps too few couples consider signing prenuptial contracts when they marry.)

## IV. Can Competition Worsen Outcomes?

An important issue is whether competition can sometimes make things worse for consumers. (The previous section discussed several situations in which competition simply did not help.) Athletes sometimes claim that competitive pressure “forces” them to take banned substances, and that when their rivals use banned substances, they must do the same to stand a chance of success. Can the same phenomenon occur in markets too?

While this idea seems plausible, and is often stated casually, it is not straightforward to formalize. For instance, in the “salty snack” example from Section III.C, a monopoly snack provider has a strong profit incentive to use the cheaper, less healthy method. Indeed, one could say that it has a stronger incentive than a firm in a highly competitive market (which makes zero profit no matter which method it uses).<sup>82</sup> One simple attempt to analyze this point is Model 1 in the Technical Appendix at the end of this paper. In this model, when firms face consumers who are more likely to be price-aware (this is what we simplistically take to mean by “more competitive” in this context, since firms face higher own-price elasticity of demand), the product quality chosen by firms falls. In a related model in which all consumers observe market prices but only a fraction observe market qualities, one can show that increasing the number of suppliers (a simplistic form of “increasing competition”) will increase the fraction of suppliers which “cheat” (that is, offer the inefficiently low-quality product), unless the fraction of consumers who pay attention to quality is particularly low.<sup>83</sup> Also, recall from Section III.C that Spiegler’s model of confusing prices had the feature that, while the actual price chosen by firms was not affected by the number

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81 See DellaVigna & Malmendier (2004), *supra* note 24, at §IV.

82 When Korobkin (2003), *supra* note 69, at 1235-36, discusses this point, he does not analyze a monopolist’s incentive to supply the low-quality product.

83 M. Armstrong & Y. Chen, *Inattentive Consumers and Product Quality* (2007) (mimeo, University College London and University of Colorado at Boulder).

of suppliers, the “price noise” increased when there were more suppliers. In this sense, competition worsens outcomes. In some situations, moving from unregulated monopoly to duopoly can actually cause market prices to rise.<sup>84</sup>

Intensifying competition can also have a differential impact on different consumer groups. Specifically, a more competitive market may be better at delivering to vigilant consumers what they want, but may end up exploiting more vulnerable consumers even more than before. Consider Varian’s model of sales once more. If the number of suppliers is increased—which is one measure of increasing competition in this symmetric oligopoly—one can show that the average price paid by the informed consumers goes down, but the average price paid by the uninformed actually increases (with limit equal to the monopoly price). Thus, in highly competitive (or rather, fragmented) markets the uninformed consumers do not gain any benefit at all from competition.<sup>85</sup> This differential impact of increasing competition on the two groups raises the distributional issue—which consumers are we aiming to protect? We could frame this question as “advantaged versus vulnerable consumers” or “careful versus lazy consumers”, for instance, which may lead to different policy conclusions.

Another issue is not so much that firms behave worse when competition is stronger, but that some consumers are less able to make good decisions when faced with more options. There is some evidence that some consumers make worse choices, or do not choose at all, when they have a larger choice set.<sup>86</sup> In a field experiment, for instance, lending offers in a number of different formats were sent to a large number of potential borrowers. One of a number of interesting results from this study was that the take-up of a lending offer went down (all else equal) if more than one option for the loan size and loan maturity was given in the offer letter.<sup>87</sup>

While these and related studies are suggestive, it is not clear at this stage how they should impact consumer or competition policy. For one thing, there is at best a weak link between competition and the number of options which consumers face: a single firm could offer a bewildering number of options, or a number of firms could compete by offering simple deals to consumers. I would guess that very few people seriously advocate limiting the number of suppliers purely in order to

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84 Y. Chen & M. Riordan, *Price-Increasing Competition* (2006) (mimeo, University of Colorado at Boulder and Columbia University).

85 This is discussed in Armstrong & Chen (2007), *supra* note 83, rather than in Varian’s article itself.

86 A famous psychology experiment is described in S. Iyengar & M. Lepper, *When Choice is Demotivating: Can One Desire Too Much of a Good Thing?*, 79(6) *J. PERSONALITY & SOC. PSYCHOL.* 995-1006 (2000).

87 M. BERTRAND, D. KARLAN, S. MULLAINATHAN, E. SHAFIR & J. ZINMAN, *WHAT’S PSYCHOLOGY WORTH? A FIELD EXPERIMENT IN THE CONSUMER CREDIT MARKET* (Nat’l Bureau of Econ. Research, Working Paper No. 11892, 2005).

help consumers make easier choices, and few would suggest public policy should intervene directly to reduce the number of options supplied by any given firm.

Nevertheless, it is clear that when some consumers face more choice (or any choice at all), they may make poor choices.<sup>88</sup> In terms of policy, this is most likely to be important when a hitherto monopolized market is opened to competition for the first time. There may be a special role for consumer policy in newly liberalized markets until consumers have found their feet in the new environment (a kind of “infant consumer” argument).

For instance, in 2003, the U.K. market for directory inquiries was opened to competition. Instead of having one familiar telephone number for telephone directory inquiries, consumers had a choice of more than 200 numbers they could call. Moreover, in the interests of maintaining a level playing field for entrants, the old number was withdrawn and consumers were forced to choose a new number. Since most consumers did not use the service more than once a month, it was hard for consumers to remember the new numbers. In addition, different operators offered different pricing schemes (e.g., per minute, per number, and so forth). The result was a good deal of consumer confusion and price dispersion, and many consumers paid more for the service than they did under the previous monopoly regime. Indeed, total demand for the service fell in the immediate aftermath of liberalization. However, after a year had passed, the market consolidated and just two (highly memorable) numbers supplied 80 percent of the market.<sup>89</sup> In fact, it may have been worth keeping the old number in place in the new liberalized regime: consumers who were confused by the plethora of new numbers (or did not want to go to the trouble of finding out) could stay with the familiar service, while more active consumers could take advantage of the lower prices or product innovations of the new services. (The favored number could then be auctioned off, in order to pass the rents from the incumbency advantage back to tax-payers.) This last point suggests a possible tension between consumer protection and competition policies that aggressively assist entrants in newly liberalized markets by means of banning the incumbent from the market.

When a market is newly liberalized, there is extra scope for transparency and consumer education policies. For instance, many consumers may be unaware for some time that they actually have a choice of supplier. Some consumers may initially overestimate how hard it is to change supplier.<sup>90</sup> While it seems likely that

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88 For data indicating that many consumers do not choose the best electricity supplier for their needs even when they switch supplier, see CHRIS WILSON & CATHERINE WADDAMS PRICE, DO CONSUMERS SWITCH TO THE BEST SUPPLIER? (Centre for Competition Policy, Working Paper No. 07-6, 2007).

89 All of this is taken from U.K. NATIONAL AUDIT OFFICE, DIRECTORY ENQUIRIES: FROM 192 TO 118 (Mar. 2005).

90 Waterson (2003), *supra* note 44, at Table 7, presents a survey in which one-third of consumers thought it would take at least a day to switch electricity supplier, when in fact it would probably take less than an hour.

the new entrants would be in a better position to educate their potential customers than a consumer body, there may also be a role for policy to provide market information at this time. Given consumer unfamiliarity with market conditions, together with the fact that some newly liberalized products are offered with nonlinear tariffs (which, as explained in Section III.B, makes price-comparison websites and adverts less useful), it makes sense to have a permissive attitude to direct marketing of various forms by entrants. Of course, alongside this tolerance of direct marketing, one would want other consumer protection policies in place to combat the danger of aggressive selling on the doorstep.

WHILE IT SEEMS LIKELY THAT THE NEW ENTRANTS WOULD BE IN A BETTER POSITION TO EDUCATE THEIR POTENTIAL CUSTOMERS THAN A CONSUMER BODY, THERE MAY ALSO BE A ROLE FOR POLICY TO PROVIDE MARKET INFORMATION AT THIS TIME.

## V. When Bad Consumer Policies Can Harm Consumers

### A. CONSUMER PROTECTION AS INDUSTRY PROTECTION

Although its aims may be honorable, there is a long history of consumer protection being used as an excuse for industry protection, which is a form of protection that consumers do not want. An early example of consumer protection being used to limit competition and consumer choice is the legal monopoly held by the BBC in the 1920s and 1930s. The BBC was felt to broadcast high-quality content, and commercial rivals might tempt listeners to lower their own standards. Lord Reith, the first Director General of the BBC, wrote that a broadcasting monopoly was “essential ethically, in order that one general policy may be maintained throughout the country and definite standards promulgated.”<sup>91</sup> Like many forms of consumer protection, the policy seems to have benefited one consumer group more than others:

“Though the programme policy of the [BBC] gave the lower social classes what they ought to have, it gave the educated classes what they wanted; or, at any rate, more of what they wanted than they thought they would obtain with what was believed to be the only alternative – commercial broadcasting.”<sup>92</sup>

91 As quoted in RONALD COASE, *BRITISH BROADCASTING: A STUDY IN MONOPOLY* 186 (1950).

92 See COASE (1950), *id.* at 177.

Somewhat more recently, in the 1950s and 1960s, the FTC often took a very expansive view of which adverts were misleading, and this was used to protect incumbent firms from new entrants. The problem was that an advert could be ruled as misleading even when it deceived only the “ignorant, unthinking, and credulous”, which in practice could include many adverts.<sup>93</sup> Pitofsky (1977) wrote:

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“When the government acted as a surrogate enforcement arm for competitors, as it often did in ad regulation in the 1950’s and early 1960’s, it characteristically become entangled in nit-picking, literalistic disputes over the meaning of words in ads. During this period, many enforcement actions against advertisers grew directly out of competitor complaints and appear to have been primarily intended to protect sellers against competition from cheaper substitutes. Moreover, many of these cases involved disputes over relatively inconsequential items of information – e.g., [...] the percentage content of fibers in a fabric (90% wool/10% nylon, when wool content actually varied between 89.9% and 94.9%), or the definition of “free”. After an analysis of some 200 decisions and orders entered by the [FTC] during the period July 1, 1962 to June 30, 1963, Professor Posner persuasively concluded that the FTC achieved “precious little consumer protection”.<sup>94</sup>

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In Section III, I argued that consumer policies should facilitate advertising, since advertising might be a valuable channel through which consumers obtain information about prices and product attributes in the market. Therefore, it is ironic that in the past (as illustrated in the previous quote), consumer policies often acted to restrict advertising. Just one example of this is how the U.S. Food and Drug Administration essentially forbade firms to make health claims for their food in adverts.<sup>95</sup> Many professional bodies—sometimes acting with the blessing of consumer bodies—historically have had codes of conduct that unduly restricted advertising. Opticians and lawyers in some U.S. states were forbidden from advertising their prices. At least until 2006, lawyers in Scotland had tight restrictions on advertising, including comparative advertising.<sup>96</sup> Rules prohibiting comparative advertising are often justified on the basis that they prevent

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93 See Beales et al. (1981), *supra* note 25, at 497.

94 Pitofsky (1977), *supra* note 54, at 674. The report by Professor Posner alluded to was expanded to become Posner (1969), *supra* note 31.

95 See note 17, *supra*.

96 See SCOTTISH EXECUTIVE, REPORT OF THE RESEARCH WORKING GROUP OF THE LEGAL SERVICES MARKET IN SCOTLAND ch. 6 (2006).

misleading advertising from occurring. But this objection has no force if there is an effective consumer policy in place to prevent misleading advertising.

As well as taking an inappropriately restrictive line on advertising, there are several historical examples where other restrictive trading practices have been permitted under the banner of consumer protection. For instance, there is the danger that professional bodies may require unduly stringent conditions for new entrants to be licensed. In Section III.C, I argued that making professional qualifications transparent was likely to be a useful policy in credence goods markets such as law or medicine. A distinct policy is to require minimum qualifications to be able to enter the market. Again, this may sometimes be justified if vulnerable consumers do not make good decisions and if a poor decision is very costly. But there is also the danger that the licensing body sets excessively stringent minimum qualifications, with the result that supply and competition is restricted. For instance, “black cab” taxis in London may lobby against unlicensed minicabs being permitted to enter the market, not just because the latter may not know the streets well enough, but because they will cause the market price to fall. Other famous examples include restrictive rules that only licensed pharmacists can sell drugs, or only licensed funeral directors can supply coffins.<sup>97</sup> The website of the Hairdressers’ Registration Board in Western Australia states that one goal of licensing is to protect incumbents from competition by preventing “unqualified people from opening a salon next to you and practising as a hairdresser in an attempt to impact on your established clientele.”<sup>98</sup> The general point is that self-regulation by professional bodies cannot be relied on to deliver good outcomes for consumers. Moreover, as well as restricting supply, such a policy also restricts the choices available to consumers, as discussed in the following section.

## B. CONSUMER POLICIES THAT RESTRICT CONSUMER CHOICE

Other highly contentious consumer policies are those that act to restrict the choices available in the market. The reason for this is that such policies harm those consumers who vigorously defend their interests, even if they sometimes help the more vulnerable consumers.<sup>99</sup> Such policies are usually highly re-distributive between consumer groups, and often have the flavor of putting fences alongside cliff-top paths: they protect careless or vulnerable walkers from falling

97 See *Muris, supra* note 1. *Muris* quotes the FTC as writing in a court statement that “[r]ather than protect[ing] consumers by exposing funeral directors to meaningful competition, the [law] protects funeral directors from facing any competition from third-party casket sellers.”

98 PRODUCTIVITY COMMISSION OF AUSTRALIA, REVIEW OF AUSTRALIA’S CONSUMER POLICY FRAMEWORK 9 (2007).

99 However, information remedies which educate naive consumers can also make sophisticated consumers worse off in the **B**-type situations described in Section III.D. But there is a difference between correcting an “unfair” cross-subsidy caused by inattentive consumers, and harming sophisticated consumers in order to support inattentive consumers.

off, but they reduce the utility of everyone else. Such policies are often heavily paternalistic, and involve a danger that they reflect the tastes of policymakers—either their innate tastes, or the tastes of the special interest groups who have captured the policymakers—rather than citizens as a whole (as is Coase’s point in the quote in the previous section).<sup>100</sup> A strong expression of distaste for this form of policy opens a 2006 paper by Klick and Mitchell:

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“Several years ago the ethicist Daniel Wikler provocatively asked, “If we claim that relative intellectual superiority justified restricting the liberties of the retarded, could not exceptionally gifted persons make the same claim concerning persons of normal intelligence?” Wikler’s question, posed originally to raise doubts about paternalism directed at the developmentally disabled, possesses a new relevance today, as legal elites increasingly claim that “persons of normal intelligence” exhibit numerous irrational tendencies that justify restrictions on market and non-market transactions.”<sup>101</sup>

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A somewhat related point can be made in a less contentious way: “[I]nformation remedies allow consumers to protect themselves according to personal preference rather than place on regulators the difficult task of compromising diverse preferences with a common standard.”<sup>102</sup>

A frequent way in which consumer policies can restrict choice is by imposing stringent minimum quality standards on a market. Of course, if quality is not observed by consumers, if reputational concerns are not effective, and if information remedies are not feasible, then it may be sensible to impose minimum standards. But the situation is rarely that bad. An example of a simplistic consumer policy might be to require all airline flights to offer a full meal service, for instance. This policy bundles together the flight and a full meal, and denies those consumers who prefer not to pay for the meal that option.<sup>103</sup> (It may also act to deter entry by “no frills” carriers.)

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100 Also, in democracies majorities may vote to outlaw choices made by minorities. For instance, in 1998 a California referendum voted to outlaw the sale of horsemeat in restaurants. See Alvin Roth, *Repugnance as a Constraint on Markets*, 21(3) J. ECON. PERSP. 37-58 (2007).

101 J. Klick & G. Mitchell, *Government Regulation of Irrationality: Moral and Cognitive Hazards*, 90 MINNESOTA L. REV. 1620-63 (2006).

102 Beales et al. (1981), *supra* note 25, at 513.

103 Likewise, in 2005 the European Commission required airlines to compensate consumers for cancelled flights, regardless of the cause, thus bundling together the flight and travel insurance.

A model which captures the trade-off between dealing with information problems and giving consumers with diverse tastes what they want is described by Leland (1979).<sup>104</sup> Consider, say, the market for doctors. Because of the credence good nature of the market, consumers can only observe the average skill of doctors active in the market, not the skill of an individual doctor. Without policy intervention, a “lemons” problem may be present, and highly-skilled potential doctors may prefer another profession which better rewards their abilities. Doctors differ in their skill, and consumers differ in their willingness-to-pay for that skill. By setting a minimum skill standard, the lemons problem is alleviated. However, the policy also removes the ability of those consumers who do not value skill highly (say, because their medical problem is routine) to find a low-quality service at a low price. Moreover, Leland shows that self-regulation will lead to excessively high minimum standards, in line with the discussion in Section V.A.

A somewhat similar model is presented as Model 2 in the Technical Appendix at the end of this paper, which analyzes the impact of minimum quality restrictions in a market with three kinds of consumers: consumers who want a low-quality good, consumers who want a high-quality good and think about quality when they purchase the good, and consumers who innately want a high-quality good but do not (for some reason) consider quality when they buy. This last group buys purely on the basis of price. As analyzed in the Appendix, a policy which permits only high-quality products to be sold has two effects:

1. it protects those consumers who do not pay attention to quality but who do care about quality, and
2. it harms those consumers who truly want the lower quality item.

Whether such an interventionist policy is merited depends on the relative numbers of the two groups and their respective gains and losses.<sup>105</sup> Sometimes it is fairly clear that the low-quality item should be forbidden; for instance, if hardly anyone would really want it, if many would not think about this aspect of quality until it is too late, and if the harm to inattentive consumers is great. Some examples might include a contract clause which makes it extremely difficult to cease service, a mortgage contract which doubles all future interest payments if a consumer defaults on just one monthly payment, or perhaps an obscure clause couched in legal jargon which limits forum selection and a consumer’s ability to sue. But other cases are much less clear-cut, such as the credit card penalty

104 H. Leland, *Quacks, Lemons and Licensing: A Theory of Minimum Quality Standards*, 87(6) J. POL. ECON. 1328-46 (1979).

105 As Korobkin (2003), *supra* note 69, at 1251-52, puts it: “ex ante mandatory terms are desirable when a simple rule or an only moderately complicated rule can insure that the mandated content will be efficient for a relatively large proportion of contracts.”

charges discussed shortly. In such cases, the information needed to be confident that the benefits of banning a particular product outweigh the losses is hard for a consumer body to find. In these situations, the consumer body should investigate carefully whether there is an information remedy that might do almost as well at protecting the inattentive consumers without restricting choice.

This trade-off for consumer policy—between protecting vulnerable or careless consumers who do not read the small print, and giving sophisticated consumers the finely tuned contract they want—is underemphasized in much research. Many of the simplest behavioral models assume that all consumers have the same tastes, in which case a “one-size-fits-all” policy remedy is usually straightforward. For instance, if all consumers want the same insurance contract but only some consumers look at the small print, then without regulation it is likely that some firms will offer a contract with exploitative small-print terms. The remedy for this is simple: force all firms to set the unanimously desired small-print terms.<sup>106</sup> If all consumers prefer an expensive healthy snack to a cheap salty snack (see Section III.C), one could just enforce maximum salt content rules. Likewise, in the example of gym contracts in Section III.E, a solution to the market failure in that theoretical model would simply be to force gyms to levy charges on a per-visit basis. But this is obviously an absurd policy in reality, since there are several other reasons why gyms might wish to give consumers the option of a fixed monthly contract (such as to offer a commitment device to weak-willed consumers who will be put off by a per-visit charge, or to price discriminate between low-usage and high-usage consumers). In reality, different consumers have different requirements and may want different contractual terms, in which case the simple remedy to ban “inefficient” contract terms no longer works well.

Consider in more detail the case of late payment charges on credit cards. As an alternative (or in addition) to an informational remedy, such as making these charges more prominent when the consumer signs the contract, one could directly control the level of such a charge. Set against the beneficial impact on those consumers who end up paying the charge and did not realize it applied to them, there are at least five drawbacks to such a policy. First, as discussed in Section III.D, the impact will likely be to harm the careful consumers who do always pay on time, and so the benefit in terms of aggregate consumer welfare is unlikely to be great. Second, there may be consumers who actively want to have this particular charging structure. For instance, a consumer who is aware that he suffers from self-control problems might like the extra discipline that high penalty charges bring, so that the high charge acts as a commitment device.

The third problem is that a credit card supplier might legitimately wish to deter adoption of its product by less credit-worthy consumers, and may use a high

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<sup>106</sup> See Armstrong & Chen (2007), *supra* note 83.

charge for late payment as a means of doing so.<sup>107</sup> Fourth, as a practical matter it may be very resource intensive for a consumer body to have to determine permitted price levels in the small print of contracts. Generally, one does not want a consumer or competition body to need to have a detailed knowledge of the many industries it oversees. Unless it is completely arbitrary, in order to calculate the basis for a “fair” small-print charge, the authority will have to investigate detailed costs incurred by many firms on an ongoing basis, which will be resource-intensive for both the authority and the industry.<sup>108</sup>

Finally, the fifth reason for caution is that such a policy may be the thin end of the wedge.<sup>109</sup> If policy to control the level of small-print or add-on charges is deemed appropriate in this instance, why not in other markets such as: hotel phone charges; printer ink cartridges; extended warranties on electrical goods; charges for going beyond one’s monthly allowance for mobile phone calls; the hypothetical expensive butter in the supermarket in Section II; and so forth?

As a practical matter, though, it is important to recognize that a consumer body operates in an established legal environment, and its options for intervening in the small print may be rather limited. For instance, realistically the consumer body may only be able to choose between (i) not being pro-active in participating in legal challenges to high small-print charges and leaving matters to the courts and individual actions, or (ii) being pro-active on behalf of consumers and mounting (or threatening to mount) a legal challenge whenever the relevant small-print charge is above some threshold. In the second approach, this

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107 Of course, then such a firm would not put the charge in the small print. Alternatively, a credit card company might require its customers to agree to pay a minimum monthly payment (or even the entire balance) by direct debit each month. The supplier may thus hope to attract credit-worthy customers and also to remove the need to run a large “debt collection” office. However, this point conflicts with the discussion in Section III.D of this paper, where I discussed how a credit card company might make more money from its less solvent customers.

108 In 2006, the OFT announced that it regarded penalty charges (for all kinds of default, including spending beyond the agreed credit limit) higher than GBP 12 as being unfair, and that such charges would lead it to intervene. The legal framework for this decision is provided by the 1999 Unfair Terms in Consumer Contracts Regulations. A “core term” (e.g., the headline price, or interest rate in the case of credit cards) in a contract can essentially be set at any level, but other items in a standard contract (to which some consumers will not pay attention when they sign) are subject to a “fairness” constraint. In the case of breach of contract (which is what late payment technically is), the fairness constraint broadly allows the supplier to have its additional administrative costs covered by the penalty charge. The OFT estimated these administrative costs at GBP 12, and gave some broad (but unquantified) indications of how it estimated these costs. It states that “on the basis of our analysis we consider that the threshold is robust and there are unlikely to be grounds to consider any higher threshold for our action over the short or medium term.” See U.K. OFFICE OF FAIR TRADING, *CALCULATING FAIR DEFAULT CHARGES IN CREDIT CARD CONTRACTS: A STATEMENT OF THE OFT’S POSITION* (Apr. 2006).

109 In addition to this list, one could point out that in the United Kingdom there has been so much recent publicity about credit card penalty charges that the number of consumers who are now unaware of such charges has shrunk substantially, thus mitigating to some extent the need for further intervention in this area.

threshold is presumably chosen in anticipation of courts judging a charge above this threshold to be unfair. Whether the threshold should be chosen to be the smallest threshold acceptable to the courts is less clear, for the reasons given earlier. A crucial advantage of the second approach is that there are major economies of scale in litigation; that is, while an individual consumer may find it not worthwhile to bring a court case if she receives a single excessive penalty charge, a consumer body may well find it worthwhile to bring a test case on behalf of many affected consumers.

It seems fair to say that current economic understanding of good policy towards small-print terms is limited, and one of the most fruitful avenues for future research at the law and economics interface would be to investigate these issues further. For instance, what should determine a “small-print term”? How

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many consumers need to take into account the term before it can be considered a “core term”? Could the high charges for making mobile phone calls beyond the monthly allowance be considered a small-print charge, and therefore needing explicit control? Can a supplier make a contract term small print for some consumers but, by making appropriate adjustments, a core term (and so not governed by small-print regulations) for other, perhaps more sophisticated, customers? And, what economic principles govern the appropriate level of charges in those terms deemed to be small print in standard-form contracts? For example, one would not wish to

permit mobile phone companies to be able to set arbitrarily high charges for phone calls beyond the monthly allowance, since at least some consumers will mistakenly go over the allowance. On the other hand, there is no reason to think that the company should be forced to sell these extra calls at cost.

### C. CONSUMER PROTECTION AND MORAL HAZARD

Related to the previous discussion, a general and powerful point is that, if consumers are over-protected in their market transactions, moral hazard may ensue and they may not pay sufficient attention to making the best choices.<sup>110</sup> If a consumer is fully insured, she will take less care protecting her possessions. An efficient insurance contract will trade off the benefits of insurance to risk-averse consumers with the need to ensure that the consumer takes care. Likewise, in markets with complex products, the consumer needs to invest effort to choose what product is the best for her. For instance, if consumer protection ensures she

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110 This view is emphasized in Klick & Mitchell (2006), *supra* note 101. In particular, §1A of that paper surveys the ample, though not unanimous, evidence that subjects in laboratory experiments make better decisions when their stakes are higher.

will face no bad surprises in the small print, she may be less likely to read the contract at all. As Posner (1969) puts it:

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“Just as the cheapest way to reduce the incidence of certain crimes, such as car theft, is by inducing potential victims to take simple precautions (locking car doors), so possibly the incidence of certain frauds could be reduced at least cost to society by insisting that consumers exercise a modicum of care in purchasing, rather than by placing restrictions on sellers’ marketing methods.”<sup>111</sup>

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It seems plausible that consumers learn market skills over time and, moreover, these market skills are often not specific to one market, but spill over to many markets. For instance, the victim of a scam, or an unexpectedly high credit card penalty charge, will usually be more vigilant in future. It does not take many bad experiences with scams to learn the maxim that “if it seems too good to be true, it probably is.” Unless a consumer is particularly vulnerable or the product is particularly harmful, it is probably best to let consumers develop their own imperfect rules of thumb to defend themselves in the market. Some consumers will no doubt harm themselves by inexpertly cooking a chicken (say, by not reading the small print of the cooking instructions), but the solution is not to remove raw chicken from the market.<sup>112</sup> The general point is that excessive consumer protection may be inimical to the development of market skills in consumers.<sup>113</sup>

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111 Posner (1969), *supra* note 31, at 67.

112 However, just because there is moral hazard does not mean insurance should not be offered at all. One might balk at permitting sales to the general public of Japanese pufferfish, which is fatal if prepared even slightly incorrectly.

Staying with the food theme, another related issue is the widespread use of “use-by” dates on food. Many consumers never use food beyond its use-by date. Given that the use-by date is chosen so that the foodstuff is almost certain to be edible regardless of local conditions (e.g., how often the consumer’s fridge is opened), it is plausible that inefficiency arises from this policy. If use-by dates were less widespread (say, in the days when many consumers purchased meat from a butcher rather than a supermarket), consumers would likely have better skills in detecting whether food is edible (e.g., by smell). This is another instance of how arguably excessive protection leads to consumers possessing too few market skills. Of course, though, one cannot sniff a “ready meal”.

113 There is a plausible lifecycle effect here. Younger consumers may not yet have learnt their market skills, whereas some of the elderly may have learnt, but forgotten, their skills. In particular, policy might sometimes exempt the latter group from this caution about over-insulating consumers against market risk. See S. AGARWAL, J. DRISCOLL, X. GABAIX & D. LAIBSON, *THE AGE OF REASON: FINANCIAL DECISION-MAKING OVER THE LIFECYCLE* (MIT Department of Economics, Working Paper No. 07-11, 2007) for some evidence that consumers reach their decision-making peak for financial products at around 53 years of age.

SOME CONSUMERS WILL NO DOUBT HARM THEMSELVES BY INEXPERTLY COOKING A CHICKEN (SAY, BY NOT READING THE SMALL PRINT OF THE COOKING INSTRUCTIONS), BUT THE SOLUTION IS NOT TO REMOVE RAW CHICKEN FROM THE MARKET.

To take a specific example, a consumer policy that acts directly to limit price dispersion in such a market could have somewhat perverse effects. (In some jurisdictions, for instance, usury laws operate so that an interest rate which is more than a specified distance above the market average for the relevant loan cannot be legally enforced. It is plausible that such a policy will reduce interest rate dispersion.) If price dispersion is reduced, this reduces the incentive for a consumer to become informed (i.e., the benefit curve in Figure 1 is shifted down), and so is likely to reduce the number of informed consumers. The net result of reduced consumer search could well be that average prices in the market increase, thus harming consumers. Similar effects might arise with imposing minimum quality standards on a market, which could reduce the number of consumers who monitor quality and hence the average quality supplied.

#### D. MARKET TRANSPARENCY POLICIES

As discussed in Section III, a consumer policy of price transparency is often valuable. However, market information supplied by government bodies is not a panacea, just as it is not when supplied by commercial bodies. For instance, a policy-induced focus on headline price may lead to worse performance on other attributes (such as product quality or small-print charges). In Model 1 presented in the Technical Appendix at the end of this paper, it is shown that when more consumers become aware of prices in the market, this can result in lower quality products being offered by firms.<sup>114</sup> The reason for this is quite intuitive. With increased consumer focus on price, price competition is intensified and lower price-cost margins result. Therefore, a firm has a reduced incentive to expand its market share by boosting its product quality, and so chooses to offer a lower quality than before.<sup>115</sup> The implication of this is that policies to improve market transparency need to be carefully designed not to give undue emphasis to just one aspect of market performance (such as headline prices), since worse performance on other dimensions could unravel any welfare gains.<sup>116</sup> Empirical evidence for this danger can be found by examining the impact of the publication of

114 The first model presented in the appendix is similar to (but simpler than) D. Dranove & M. Satterthwaite, *Monopolistic Competition when Price and Quality are Imperfectly Observable*, 23(4) RAND J. ECON. 518-34 (1992).

115 S. Huck, G. Lünser & J.-R. Tyran, *Pricing and Trust* (2008) (mimeo, University of College London), presents experimental evidence which is consistent with this discussion.

116 This insight is similar to that in the principal-agent literature, where when an agent's overall performance depends on several kinds of effort, excessive focus on one kind of effort may lead to poor overall performance. See B. Holmstrom & P. Milgrom, *Multitask Principal-Agent Analyses: Incentive Contracts, Asset Ownership, and Job Design*, 7(special issue) J.L. ECON & ORG. 24-52 (1991).

patient outcomes for individual hospitals and physicians.<sup>117</sup> The introduction of this transparency measure appears to have induced many health care providers to be more selective in the healthiness of the patients they take on, so as to make their “report card” more impressive. Data on cardiac surgery suggests that, in the short run at least, this effect outweighed the benefits of improved matching of patients to hospitals, and overall patient welfare declined.

When prices are made more transparent to consumers, they are also made more transparent to rival suppliers, and this can relax competition between firms. There are two aspects to this issue. First, there may be an increased danger of collusion. For instance, evidence suggests that a price transparency policy in the Danish ready-mixed concrete market may have relaxed price competition.<sup>118</sup> Effective competition policy should be able to counteract this effect to some extent, but it cannot be perfect (especially if collusion is tacit rather than explicit). The second aspect of this issue is that transparency requirements could have the effect of making suppliers set a standard tariff to all consumers, rather than setting “personalized” prices to individual customers. The impact of this is akin to a ban on price discrimination in the market, which is well-known to have ambiguous effects on consumer welfare. There are several plausible situations in which price discrimination acts to intensify competition to the benefit of consumers.<sup>119</sup>

## VI. Conclusions

This paper has explored the interactions between consumer and competition policies. In many respects there was no tension between the two approaches. Indeed, in most competitive markets, firms succeed by giving consumers what consumers want to buy, and there is little need to provide customer protection beyond what firms themselves supply. Specific situations in which consumer policies can help markets function better include a number of information policies: the provision or accreditation of price comparison websites; attempts to increase the number of consumers who are aware of market conditions; attempts to reduce consumer search costs; attempts to “unshroud” (rather than directly control) hidden charges; removing constraints on advertising (including comparative advertising); attempts to provide product information which it is not in the industry’s

117 D. Dranove, D. Kessler, M. McClellan & M. Satterthwaite, *Is More Information Better? The Effects of “Report Cards” on Health Care Providers*, 111(3) J. POL. ECON. 555-88 (2003). See ARCHON FUNG, MARY GRAHAM & DAVID WEIL, *FULL DISCLOSURE: THE PERILS & PROMISE OF TRANSPARENCY* (Cambridge University Press, 2007) for a detailed analysis and evaluation of various transparency policies such as this one.

118 S. Albæk, P. Møllgaard & P. Overgaard, *Government-Assisted Oligopoly Coordination? A Concrete Case*, 45(4) J. INDUS. ECON. 429-43 (1997).

119 See, e.g., Mark Armstrong, *Recent Developments in the Economics of Price Discrimination* §3.3, in II *ADVANCES IN ECONOMICS & ECONOMETRICS* 97-141 (R. Blundell et al. eds., 2006).

interest to provide itself; and policies to provide accurate labeling of credence goods. Somewhat related to these are policies that prevent misleading or outright fraudulent marketing.

Competition policies can occasionally harm some consumers. For instance, if a fixed fraction of consumers observe market prices while the remainder shop in ignorance, having more suppliers in the market can sometimes cause the prices paid by the uninformed shoppers to rise. A newly liberalized market can be particularly confusing for vulnerable consumers. Policies which protect “infant suppliers” may conflict with policies to protect “infant consumers”.

Poorly conceived consumer policies can easily cause tension with competition policies and consumer freedom of choice. Such policies might include unduly strict licensing of professions (or lax monitoring of self-regulation) and unduly strict interpretations of misleading marketing regulations which act to protect market incumbents rather than consumers. In addition, ill-focused information remedies can act to relax competition between suppliers, and also cause other de-emphasized aspects of market performance to falter. Generally, if consumers are overly protected in their market transactions, there is a danger of moral hazard and consumers may not develop the market skills to defend themselves against future exploitative conduct.

Moving beyond information remedies, many remaining consumer policies are paternalistic in flavor. The most palatable of such policies are those that help vulnerable consumers who do not always make good decisions for themselves, without significantly harming more sophisticated consumers.<sup>120</sup> Default rules provide a good example of such a policy. For instance, a motor insurance contract might have as its default that a driver has a full right to sue after an accident, or alternatively the default might be a more limited right to sue. Sophisticated consumers will probably make the same decision in either case (given that the cost of putting a tick in the relevant box is small), but inattentive consumers will be more likely to go along with the default. Therefore, policymakers can choose the default to maximize (their view of) the interests of the inattentive consumers, without unduly impacting the sophisticated consumers.<sup>121</sup> The problem, however, is that there may not be many such “no trade-off” policies available.

More common is the danger with some consumer policies of tensions between different consumers. Several of the more interventionist consumer policies benefit one group of consumers at the expense of another. At the mild end of this spectrum are policies against misleading advertising; a policy that prevents

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120 The philosophy behind such policies is sometimes termed “asymmetric paternalism” by Camerer et al. (2003), *supra* note 5, or “libertarian paternalism” (or even “anti-anti-paternalism”) by R. Thaler & C. Sunstein, *Libertarian Paternalism*, 93(2) AM. ECON. REV. 175-79 (2003).

121 See Camerer et al. (2003), *supra* note 5, at 1226.

adverts from misleading the “ignorant, unthinking, and credulous” may prevent adverts that are useful or entertaining to more sophisticated consumers. At the more extreme end are policies that forbid certain products—which some consumers may actively want—in order to protect vulnerable or careless consumers. Such policies should only be contemplated if no information or education remedy would work instead. Even so, it would be reassuring if they were accompanied by a rigorous cost-benefit analysis (which is usually sorely lacking in consumer policy). As exemplified by Model 2 in the Appendix, the informational requirements needed to assess the likely benefits of the intervention are formidable in even the simplest situations.

This paper has also highlighted the need for more research, in particular:

- more analysis of when “opt-out policies”, in which consumers can choose not to receive marketing from firms, might conflict with the generally pro-competitive benefits of advertising and direct marketing;
- more analysis of the economic basis of controlling both the definition and the content of small-print contract terms; and
- more analysis of when excessive consumer protection leads to moral hazard in consumer decision making.

MORE COMMON IS THE DANGER WITH SOME CONSUMER POLICIES OF TENSIONS BETWEEN DIFFERENT CONSUMERS. SEVERAL OF THE MORE INTERVENTIONIST CONSUMER POLICIES BENEFIT ONE GROUP OF CONSUMERS AT THE EXPENSE OF ANOTHER.

Finally, it is noticeable that redistributive aims are rarely included in competition policy analysis, where the objective is typically to maximize the (possibly weighted) sum of aggregate consumer welfare and industry profit.<sup>122</sup> The idea behind this is that other instruments (such as taxation) are better targeted at income redistribution between consumers. The aim is also more appropriate for elected politicians than unelected bureaucrats to pursue. However, some of the more interventionist consumer policies are explicitly aimed at benefiting vulnerable consumers at the expense of sophisticated consumers. It would be worthwhile to investigate if there is indeed a valid role for redistribution via consumer policy.

<sup>122</sup> See, e.g., Motta (2004), *supra* note 2, at §1.3.1.

## Technical Appendix

### MODEL 1: THE "PERVERSE" IMPACT OF MARKET TRANSPARENCY

Suppose that two firms, 1 and 2 say, are located at each end of a Hotelling line of unit length. Consumers are uniformly located along this line, and must pay a transport cost  $t$  per unit distance traveled. The two firms potentially differ in the price they offer,  $p$ , and the quality of their product,  $v$ . If a consumer pays  $p_i$  for a product with quality  $v_i$ , her surplus (excluding transport costs) is  $v_i - p_i$ . It makes the algebra easier (but does not significantly affect results) if we suppose that choosing quality only affects a firm's fixed costs, and a firm's marginal cost does not depend on quality and always equals  $c$ . If a firm chooses quality  $v_i$ , suppose its fixed cost is

$$\frac{kv_i^2}{2} .$$

Suppose that a fraction  $1 - \lambda$  of consumers do not observe market prices and a fraction  $1 - \mu$  of consumers do not observe market qualities. (It does not matter about the correlation between the two kinds of inattentive consumers.) If a consumer observes neither prices nor qualities, she will simply buy from the nearer firm. (She, correctly, predicts that both firms set the same price and the same quality.) Those consumers who observe prices but not qualities assume both firms offer the same quality and so buy purely on the basis of price. Likewise, those consumers who observe quality but not price buy on the basis of quality. The remaining consumers know all market information, and in particular they can respond to a price cut (or a cut in quality) by a firm.

The market share of firm  $i$  can then be shown to be

$$\frac{1}{2} + \mu \frac{v_i - v_j}{2t} - \lambda \frac{p_i - p_j}{2t} .$$

Therefore, the firm chooses  $p_i$  and  $v_i$  to maximize

$$\pi_i = \left( \frac{1}{2} + \mu \frac{v_i - v_j}{2t} - \lambda \frac{p_i - p_j}{2t} \right) (p_i - c) - \frac{1}{2} kv_i^2 .$$

The first-order conditions for this problem are

$$\frac{\partial \pi_i}{\partial p_i} = \left( \frac{1}{2} + \mu \frac{v_i - v_j}{2t} - \lambda \frac{p_i - p_j}{2t} \right) - \frac{\lambda}{2t} (p_i - c) = 0 ; \text{ and}$$

$$\frac{\partial \pi_i}{\partial v_i} = \frac{\mu}{2t} (p_i - c) - kv_i = 0 .$$

At a symmetric equilibrium, it follows that

$$p = c + \frac{t}{\lambda} ; \text{ and } v = \frac{\mu}{2\lambda k} . \quad (1)$$

The second-order condition requires that

$$0 > \frac{\partial^2 \pi_i}{\partial p_i^2} = -\frac{\lambda}{t},$$

which is always the case, and also that

$$0 < \frac{\partial^2 \pi_i}{\partial p_i^2} \frac{\partial^2 \pi_i}{\partial v_i^2} - \left( \frac{\partial^2 \pi_i}{\partial p_i \partial v_i} \right)^2 = \frac{k\lambda}{t} - \left( \frac{\mu}{2t} \right)^2. \quad (2)$$

This inequality requires that  $k$  is sufficiently large (i.e., that it is not too easy to improve quality since otherwise it would be in a firm's interest to expand quality so as to attract the entire population of consumers). Notice that condition (2) ensures that firms at least break even in equilibrium. Therefore, assume that parameters are such that condition (2) holds.

Note that equilibrium quality in (1) is decreasing in the fraction of price-aware consumers. This is intuitive: increasing the number of price-aware consumers will cause equilibrium prices to fall, and this reduces the firm's return from expanding market share by means of offering higher quality. Thus, a consumer policy (or a commercial price comparison website) which increases market focus on price, boosting  $\lambda$ , will cause quality to fall. In this simple model with unit demand and full coverage, quality is the only variable which affects total welfare, and the socially optimal quality is

$$v^* = \frac{1}{2k}.$$

From (1), quality is too low in equilibrium whenever  $\mu < \lambda$  (i.e., when consumers pay less attention to quality than they do to price, as often seems plausible). Thus, whenever  $\mu < \lambda$ , boosting  $\lambda$  further by making prices more transparent will actually harm overall welfare. Since quality is increasing in  $\mu$ , though, boosting  $\mu$  through a market transparency policy which focuses on quality awareness will improve welfare.

## MODEL 2: THE PROS AND CONS OF SETTING SMALL-PRINT TERMS AT "EFFICIENT" LEVELS

Suppose a product (e.g., an insurance contract) can be supplied at two levels of quality,  $q_L$  and  $q_H$ , and the respective unit costs of providing this product are  $c_L$  and  $c_H$ . There is a competitive market for this product, and each variety is available for a price equal to its cost of provision. In terms of preferences, there are two types of consumers: those who value the high-quality product highly, and those who do not. Specifically, the consumers who value high quality have utility

$$\theta_H q - p$$

if they consume a product with quality  $q$  and price  $p$ , while the remaining consumers have utility

$$\theta_L q - p, \text{ where } \theta_H > \theta_L ,$$

with the same product. Suppose that it is efficient for the type- $\theta_H$  consumers to buy the high-quality product and the others to buy the low-quality product, so that

$$\theta_H q_H - c_H > \theta_H q_L - c_L \text{ and } \theta_L q_L - c_L > \theta_L q_H - c_H . \quad (3)$$

Suppose that a fraction  $\alpha$  of consumers have taste parameter  $\theta_H$ .

As well as having these taste differences, consumers also differ in how much attention they pay to quality when they choose their product. Specifically, suppose that a fraction  $1 - \mu$  of the type- $\theta_H$  consumers do not think about quality when they decide on their product, and buy simply on the basis of price. (It does not matter whether the type- $\theta_L$  consumers think about quality or not, as they will buy the appropriate product even if they buy only on the basis of price.) Unlike Model 1 in this appendix, assume that all consumers pay attention to prices.

In a laissez-faire market, all type- $\theta_L$  consumers buy the low-quality product for a price  $c_L$ , as do that fraction of the type- $\theta_H$  consumers who do not pay attention to quality. The remaining type- $\theta_H$  consumers buy the high-quality product for a price  $c_H$ . In sum, welfare without intervention is

$$(1 - \alpha)(\theta_L q_L - c_L) + \alpha[(1 - \mu)(\theta_H q_L - c_L) + \mu(\theta_H q_H - c_H)] .$$

On the other hand, suppose that consumer policy forbids the supply of the low-quality product, in order to protect those consumers who mistakenly buy it but who would prefer the high-quality product. In this case, on the assumption that the type- $\theta_L$  consumers prefer buying the high-quality product to buying nothing, welfare when choice is restricted is

$$(1 - \alpha)(\theta_L q_H - c_H) + \alpha(\theta_H q_H - c_H) .$$

One can check that welfare is increased by the policy intervention whenever

$$(1 - \alpha)[\theta_L(q_H - q_L) - (c_H - c_L)] + \alpha(1 - \mu)[\theta_H(q_H - q_L) - (c_H - c_L)] > 0 .$$

From (3), the first term in square brackets is negative while the second term in square brackets is positive. Thus, whether the policy intervention improves welfare depends on the relative sizes of  $\alpha$  and  $\mu$  (keeping other parameters constant). If there are many consumers who value the low-quality product, the policy is harmful; if there are many consumers who do not pay attention to quality, the policy may be beneficial (assuming there is no market transparency policy which acts to improve the attentiveness of these consumers without restricting the choice of the type- $\theta_L$  consumers). Except in extreme cases, the informational requirements needed to be confident that the policy is desirable are substantial. ▼