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Working Paper

THE CURIOUS CASE OF COMPETITION AND QUALITY

Ariel Ezrachi^{*} & *Maurice E. Stucke*^{**}

I. INTRODUCTION

A central mantra of competition policy is that competitive market forces, besides lowering prices, can increase efficiency, product quality, the level of services, the number of choices, and ultimately consumers' welfare. Indeed, the antitrust community generally accepts a relationship between greater competition and lower prices and uses the latter as the prime metric in assessing competitive behavior and the effects on consumer welfare. Alongside the consideration of price, competition authorities recognize that quality can be as, if not more, important in some markets.

But as competition authorities also recognize, identifying the dimensions of competition important to many consumers is difficult. Even when these dimensions of quality are identified, measuring them represents additional challenges.

To circumvent these challenges, competition authorities rely on several heuristics when assessing a merger's, cartel's or monopolistic restraint's impact on quality. One heuristic is that more competition will generally increase quality for a given price or reduce price for a given level of quality. A second heuristic is that when prices and quality vary, consumers will weigh the offerings using an internal price-quality metric. Price adjusts for quality, and consumers rely on the heuristic "you get what you pay for." Often the heuristics work well for the competition authorities.

However, at times, market realities are more complex and these heuristics fail to reflect the relationship between competition and quality. In this paper we focus on these instances in which the positive correlation

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between competition and quality breaks down. We explore two necessary, but not sufficient, variables, which affect that correlation. The first relates to the consumers' limited ability to accurately assess quality differences. The second concerns imperfect information flows that make it difficult or costly to convey to consumers the products' or services' inherent quality differences. Companies recognize that neither they nor their competitors can easily or inexpensively convey to consumers the inherent quality differences in their and their competitors' product offerings. With these variables in mind, we consider instances when an increase in competition will not increase quality (when one would expect it should) and when competition is inversely correlated with quality, and its increase would lead to quality degradation.

Importantly, we do not posit a normative argument: namely that consumers are choosing poor quality goods and services (e.g., reality television shows) when they should be demanding higher quality fare (e.g., investigative news programs). Nor do we posit a social welfare argument, namely competition involving status goods (where price may correlate more with conspicuous consumption than quality), which increases envy to the detriment of overall well-being. Our assumption is that while different customers have different desires and seek a range of quality, many customers for certain goods and services desire a similar specific dimension of quality. Our focus is on the ability of the competitive process to deliver that desired quality attribute.

I. The Significance, yet Illusive Nature of Quality

Quality forms a fundamental aspect of competition. Competition agencies acknowledge that it is a "key non-price consideration that determines whether consumers will purchase a product."¹ That significance was echoed by competition agencies that took part in the Organisation for Economic Co-operation and Development (OECD)'s 2013 roundtable on the role and measurement of quality. Participating jurisdictions agreed that quality drives innovation and economic growth and that a decrease in

¹ Organisation for Economic Co-operation and Development, The Role and Measurement of Quality in Competition Analysis 5 (Oct. 28, 2013) (Executive Summary), *available at* <http://www.oecd.org/competition/Quality-in-competition-analysis-2013.pdf> [hereinafter OECD Quality Report].

quality can be as harmful to consumers (if not more harmful given health and safety concerns) as a price increase.² Subsequently, maintaining and improving quality forms an important objective for competition policy.³

While important, quality forms a somewhat elusive target for competition agencies. Since quality is often multidimensional with both objective and subjective components,⁴ it can be a relative concept: what one person's desires another can dismiss or revile.

Identifying quality is therefore challenging. One metric is to divide quality components along vertical (where all consumers recognize that component as valuable) and horizontal (where consumers disagree over the component's desirability or value) dimensions.⁵ This too is inexact. Consumers may have different rankings of the vertical components (such as some preferring faster food delivery over perhaps taste). Thus, a "single exhaustive definition of quality is a challenging endeavor."⁶

Another problem concerns measuring the highly ranked vertical quality dimensions. Whereas price comparison (absent price shrouding) provides a transparent and consistent benchmark, quality assessment can be complex and subjective.⁷ At times, competition authorities can see how market participants "define, measure, and assess quality in the ordinary course of business" or see whether the academic and popular economics "reveal

² OECD Quality Report, *supra* note, at 5 (Executive Summary).

³ OECD Quality Report, *supra* note, at 43 (Australia), 77 & 83 ("The Horizontal Merger Guidelines expressly state that one of the effects to be analysed in merger control is the effect on quality, putting the competitive harm caused by a reduction of quality on an equal footing with an increase of prices, or a reduction of output, choice of goods and services.") (European Union), 89 (Japan).

⁴ Quality encompasses our senses of taste, smell (perfume or a pungent flower), touch (such as soft leather), sound (the acoustics of a recording), and visual aesthetic appeal. It encompasses "durability, reliability, location, [and] design." OECD Quality Report, *supra* note, at 6 (Executive Summary).

⁵ OECD Quality Report, *supra* note, at 6 (Executive Summary), 43 (Australia).

⁶ OECD Quality Report, *supra* note, at 6 (Executive Summary).

⁷ See, e.g., OECD Quality Report, *supra* note, at 78 (European Union) ("Making a precise definition of quality for a given product is a complex task in competition investigations given the many subjective features that may contribute to a perception of quality by customers, the multi-dimensional nature of quality, and the absence of measurable variables.").

useful measures of quality.”⁸ But for many products, quality attributes may be difficult to measure objectively.⁹ As the European Commission noted:

[E]ven if some quality-related features are measurable, the overall perception of the products’ quality is often based on a combination of several features. If one were to take cars as an example, the number of measurable variables at which customers may look when assessing the quality is immense and very complex, ranging from speed, acceleration, emissions, consumption to precise parameters of the individual components. The assessment of quality is thus often a complex and imprecise exercise in itself, and involves the balancing of evidence which is often of subjective nature such as different perception of customers.¹⁰

Identifying the highly ranked vertical dimensions of quality is inherently difficult. Even when many consumers rank a quality attribute highly along a vertical dimension, objectively assessing and measuring quality can be challenging and often imprecise. Thus, competition authorities typically avoid assessing for differentiated goods and services the impact that a restraint has on quality.¹¹ Nor do they typically assess consumers’ response to a small but significant non-transitory decrease in product quality (a “SSNDQ” test).¹² The enforcement challenge of accurately identifying and

⁸ OECD Quality Report, *supra* note, at 121 (US).

⁹ OECD Quality Report, *supra* note, at 121 (US); see also *id.* at 60 (Canada) (noting how “the components of product quality may be difficult to observe or measure in certain cases”); Kurt R. Brekke et al., *Price and Quality in Spatial Competition*, 40 REGIONAL SCIENCE & URBAN ECON. 471 (2010). Illustrative in this respect is the European Commission’s decision in *Intel* where the Commission noted the challenge and subjectivity involved in assessing the quality of high-tech products. Indeed, the Commission acknowledged the lack of a single parameter that defines the quality of a product, in particular when the product in question is complex. COMP/37.990 *Intel Corporation* OJ (2009) C 227/07 at [909] 1691.

¹⁰ OECD Quality Report, *supra* note, at 79 (European Union); see also *id.* at 60 (Canada) (noting that “even when a component of product quality is quantifiable, consumers may have varied tastes, and may not agree as to what features of a product constitute better or worse quality”).

¹¹ Thus few competition authorities, the OECD found, “have developed an effective means” by which to systematically identify the vertical dimensions of quality and objectively measure how a restraint would affect these quality dimensions OECD Quality Report, *supra* note, at 5 (Executive Summary).

¹² OECD Quality Report, *supra* note, at 9 (noting that SSNDQ test “in practice . . . is unworkable” given “the inherent difficulties of measuring quality alongside the existing complications of the applying the SSNIP test itself within real market situations”) and 164

measuring quality has led competition agencies to rely on two basic heuristics.

One heuristic is that “[m]ore competition will generally increase quality for a given price or reduce price for a given level of quality.”¹³ The Mexican competition authority, for example, noted:

Starting from less than perfect competition, more competition generally implies higher quality. Under strong competition, prices, quantities, quality, variety, costs, and innovation should be at their efficient levels, reflecting efficient tradeoffs. Market failure or a non-competitive market structure may imply that those parameters are not necessarily at their efficient levels. The strategic variables, and the ways firms react to each other in the industry will have an important effect on the observed market outcomes.¹⁴

This correlation suggests that a restraint, in substantially lessening competition, would cause quality to deviate below the levels that consumers would otherwise prefer. On that point, the US competition authorities observed how “[i]t has long been recognized under U.S. antitrust law that quality is among the attributes of a product or service that typically benefits from competition” and how the “Sherman Act reflects a legislative judgment that ultimately competition will produce not only lower prices, but also better goods and services.”¹⁵

(EU delegate expressing “the view that it would be rather challenging to replace the SSNIP test with a SSNDQ test, insofar as the latter relies heavily on market data that is inherently difficult to measure”).

¹³ OECD Quality Report, *supra* note, at 97 (Mexico); *see also id.* at 44 (Australia) (“Given the potential for competition to generate improvements in quality,” observed the Australian competition authority, “consideration should therefore be given to policy options that can enhance competition and ensure the efficient and optimal level of quality is supplied by a market.”); US Department of Justice, Antitrust Division, Antitrust Enforcement and the Consumer (2005), http://www.justice.gov/atr/public/div_stats/antitrust-enfor-consumer.pdf (“Free and open competition benefits consumers by ensuring lower prices and new and better products. In a freely competitive market, each competing business generally will try to attract consumers by cutting its prices and increasing the quality of its products or services. Competition and the profit opportunities it brings also stimulate businesses to find new, innovative, and more efficient methods of production.”).

¹⁴ OECD Quality Report, *supra* note, at 97 (Mexico).

¹⁵ OECD Quality Report, *supra* note, at 119 (United States) (quoting *National Society of Professional Engineers v. United States*, 435 U.S. 679, 695 (1978)).

A second rule of thumb is to assume that when prices and quality vary, consumers will weigh the offerings using an internal price-quality metric.¹⁶ Some consumers, for example, will weigh the price savings greater than the incremental quality gain—for example, the traveler willing to sacrifice the better quality food and service of first class travel for a cheaper airplane ticket.

While competition agencies may find it difficult to accurately identify and objectively measure widespread quality dimensions, they are well positioned to safeguard quality from being undermined, by relying on these two rules of thumb.

Accordingly, in many markets the agencies assume a positive correlation between competition and quality and a customer's ability to appraise quality. As the competitive pressure increases, agents are motivated, among other things, to enhance the quality of their products or service. On the other hand, reduced competitive pressure is likely to reduce product quality. To illustrate, note for example, *BAA v Competition Commission* where anemic competition was held to primarily harm quality of service rather than price.¹⁷ In that case the U.K.'s Competition Commission ordered the sale of an airport to stimulate service quality competition between airport operators in the London area.¹⁸

In the same vein, a reduction in competition via the increase in market power is often assumed to reduce quality. Indeed, in the area of merger control the US and EU competition authorities in their policy statements recognize that an increase in market power can yield higher prices and lower quality.¹⁹ Consistent with the policy announcements, recent

¹⁶ Where prices are both regulated and above marginal cost, another rule of thumb is that quality competition among firms increases. OECD Quality Report, *supra* note, at 7 (Executive Summary). The classic example is when airfares in the US were regulated, and flying was an enjoyable experience, with better food, more legroom, friendlier service, and overall a more enjoyable experience than flying in coach today on any legacy US airline.

¹⁷ *BAA v Competition Commission* [2012] CAT 3. The Competition Commission and Competition Appeals Tribunal make similar points in their 2009 case: *BAA v Competition Commission v Ryanair* [2009] CAT 35.

¹⁸ Decision upheld on appeal. *BAA v Competition Commission* [2012] CAT 3; [2012] EWCA Civ 1077 point 35.

¹⁹ US Dep't of Justice & Fed. Trade Comm'n, Horizontal Merger Guidelines § 1 (Aug. 19, 2010), <http://www.ftc.gov/sites/default/files/attachments/merger-review/100819hmg.pdf>

enforcement activity involving mergers recognized the importance of quality.²⁰ The competition authorities often focus on price competition, but occasionally analyze whether the merger may reduce quality.²¹ But even here, the competition authorities, when analyzing whether a merger may substantially lessen competition or tend to create a monopoly, focus on the merger's likely effect on prices in the short-term. In effect the agency applies the heuristic that the merger, in decreasing competition, will likely raise price and reduce the quality levels.

This heuristic, however, fails when the product or service has been traditionally offered for free, and many consumers are unwilling to pay for it. When the competition authority evaluates these free goods and services (often in two-sided markets), quality is typically the most important dimension of competition for consumers.²² One example is the free instant messaging, and voice and video calls that consumers use on their tablets,

(“[e]nhanced market power can also be manifested in non-price terms and conditions that adversely affect customers, including reduced product quality, reduced product variety, reduced service, or diminished innovation. Such non-price effects may coexist with price effects, or can arise in their absence. When the Agencies investigate whether a merger may lead to a substantial lessening of non-price competition, they employ an approach analogous to that used to evaluate price competition.”); EC Guidelines on the Assessment of Horizontal Mergers under the Council Regulation on the control of concentrations between undertakings, 2004/C 31/03, § 8 (likewise recognizing the importance of quality, noting that “[e]ffective competition brings benefits to consumers, such as low prices, high quality products, a wide selection of goods and services, and innovation,” and how firms can exercise market power by, among other things, “reducing the choice or quality of goods and services”).

²⁰ Plaintiff's Post-Trial Proposed Findings of Fact, *United States v. Bazaarvoice, Inc.*, Case No. 3:13-cv-00133-WHO, ¶¶ 198-216 (N.D. Cal. filed Oct. 31, 2013) (discussing how transaction will reduce innovation and product variety); Second Amended Complaint, *United States v. AT&T, Inc.*, No 1:11-cv-01560-ESH, ¶ 3 (D.D.C. Sept. 30, 2011) (alleging that unless the acquisition is enjoined, “customers of mobile wireless telecommunications services likely will face higher prices, less product variety and innovation, and poorer quality services due to reduced incentives to invest than would exist absent the merger”).

²¹ OECD Quality Report, *supra* note, at 83 (European Union). For example, in the prohibition decision relating to the proposed takeover of Aer Lingus by the Irish low-cost carrier Ryanair in 2007, a reduction of service quality was one of the elements in the Commission's theory of harm. The Commission found that post-merger, Ryanair would not only have the ability to increase price, but that it could keep the current price levels and degrade quality of Aer Lingus' services, meaning that the price/quality ratio would be worsened for consumers. The two parameters – quality and price – were inherently linked.

²² European Commission Case No. Comp/M. 6281—*Microsoft/Skype*, Regulation (EC) No. 139/2004 Merger Procedure (Oct. 7, 2011); European Commission Case No. Comp/M. 5727—*Microsoft/Yahoo!* Search Business Regulation (EC) No. 139/2004 Merger Procedure (Feb. 18, 2010).

computers or smartphones.²³ Since the products are mainly offered for free, the European Commission found, consumers “pay more attention to other features” and quality “is therefore a significant parameter of competition.”²⁴ But even here the competition authorities infrequently seek to identify specific quality dimensions, assess the consumer response to a small but significant non-transitory decrease in quality (a SSNDQ) and measure how the merger will likely impact this dimension of quality.²⁵ Typically the authority--when assessing the merging parties’ incentives to degrade quality for the free product--assume that consumers could detect the degradation in quality and would want to switch to rival products or services.²⁶

That rationale is also evident when the competition authority analyzes exclusionary and predatory practices by a dominant undertaking. The competition authorities recognize that monopolies’ exclusionary behavior can adversely affect quality levels.²⁷ One example is the Commission’s Guidance Paper on the Application of Article 102 of the Treaty on the Functioning of the European Union (TFEU) to exclusionary abuse: in applying Article 102 TFEU “the Commission will focus on those types of conduct that are most harmful to consumers. Consumers benefit from competition through lower prices, better quality and a wider choice of new or improved goods and services. The Commission, therefore, will direct its enforcement to ensuring that markets function properly and that consumers benefit from the efficiency and productivity which result from effective

²³ *Microsoft/Skype*, *supra* note, at ¶¶ 66, 77, 81.

²⁴ *Microsoft/Skype*, *supra* note, at ¶ 81.

²⁵ Jurisdictions that have not attempted a SSNDQ test to define the relevant market include Canada (OECD Quality Report, *supra* note, at 60), Mexico (*id.* at 98), and the Ukraine (*id.* at 117). On the other hand, the United Kingdom, in its reviews of hospital mergers, used the framework of a “small but significant non-transitory decrease in quality” to define product markets. *Id.* at 109. The delegate from the U.K. “emphasised that, while the UK competition agencies may conduct SSNIP tests (and, implicitly, SSNDQ tests where quality is a relevant competition consideration), the information obtained from these assessments is simply one factor to be taken into account within a broader consideration of the functioning of competition within a sector.” *Id.* at 163.

²⁶ See, e.g., *Microsoft/Skype*, *supra* note, at ¶¶ 144-69.

²⁷ See, e.g., *Standard Oil Co. of N.J. v. United States*, 221 U.S. 1, 52 (1911) (“[T]he evils which led to the public outcry against monopolies and to the final denial of the power to make them [include] . . . [t]he danger of deterioration in quality of the monopolized article which it was deemed was the inevitable resultant of the monopolistic control over its production and sale.”).

competition between undertakings.”²⁸ The Commission adds that the aim of its enforcement activity “in relation to exclusionary conduct is to ensure that dominant undertakings do not impair effective competition by foreclosing their competitors in an anti-competitive way, thus having an adverse impact on consumer welfare, whether in the form of higher price levels than would have otherwise prevailed or in some other form such as limiting quality or reducing consumer choice.”²⁹

Lastly, it is worth noting the competition agencies’ hard line taken against horizontal agreements to limit quality: “[c]o-ordinated efforts between competitors to limit quality improvements or to degrade existing quality are generally most appropriately treated as equivalent to a cartel.”³⁰

Exceptions, such as industry standard-setting, product standardizations, and safety codes, exist. But competitors generally cannot justify their agreement to curtail competition along one important of dimension (namely quality), on the grounds that they still compete along other dimensions (such as price). The response, under the agency’s rule of thumb, is that consumers, not competitors, should make this price-quality trade-off.

In some instances, competition policy recognizes the possibility that some restriction of competition may facilitate investment in services and quality. In the context of vertical agreements, for example, some restrictions on distribution, selective and exclusive vertical agreements,³¹ or resale price

²⁸ Point 5, Guidance Paper on Article 102 TFEU - Guidance on the Commission’s enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings, [2009] OJ C 45/7.

²⁹ Point 19, Guidance Paper, *supra*.

³⁰ OECD Quality Report, *supra* note, at 8 (Executive Summary); *see also id.* at 77 (European Union) (“Agreements that limit the quality of products or services fall within the prohibition of anticompetitive agreements.”); *National Macaroni Manufacturers Association v. F.T.C.*, 345 F.2d 421 (7th Cir. 1965) (charging the National Macaroni Manufacturers Association, its officers and member manufacturers of macaroni and spaghetti products, with entering into and carrying “out agreements and understandings to fix and determine the quality of macaroni products to the end that durum millers would offer a blend of durum and other types of wheat rather than 100% Durum, and that the macaroni manufacturers would use this blend,” doing so “for the purpose of depressing the price of durum wheat and preventing its price from being established in the open market by free competition, the effect being to eliminate quality competition in macaroni products”); *F.T.C. v. Indiana Fed’n of Dentists*, 476 U.S. 447, 462-64 (1986).

³¹ C-439/09 *Pierre Fabre v Président de l’Autorité de la concurrence* [2011] 5 CMLR 31

maintenance,³² may prevent free-riding and may therefore be permitted.

II. CONSUMERS' ABILITY TO ASSESS QUALITY

Part I reviews how competition authorities generally treat quality considerations in their analysis. Competition agencies regard quality as a significant factor, but have difficulties measuring and appraising it. Subsequently, they often do not attempt to quantify how the challenged restraint will impact quality; instead, they rely on two heuristics.

In this Part we consider consumers' ability to appraise quality. We illustrate how, at times, the agencies' heuristics may not reflect market reality.

As the Australian competition authorities explained, in competitive markets with rational, well-informed consumers, price can signal quality differences and enable consumers to trade-off between higher price and higher quality.³³ In such markets, the heuristics work well: quality is positively correlated with competition, and well-informed rational consumers will choose from the offerings the closest match to their desired price/quality mix.

We begin with *rational consumers* with willpower and discuss several cases where this positive correlation between competition and quality breaks down. Critical in our analysis are industry characteristics. We identify two necessary conditions: first, it is prohibitively expensive or difficult to convey to consumers the inherent quality differences in the product offerings; and second, consumers' ability to accurately assess quality differences is limited.

Thus the problem is unlikely to arise with *search goods*, "whose quality

³² Marvel and McCafferty argue that consumers rely on retailers to assist them in determining whether products are of high or low quality. Howard P. Marvel & Stephen McCafferty, *Resale Price Maintenance and Quality Certification*, 15 No 3 RAND JOURNAL OF ECONOMICS 346, 346-359 (1984). They note that a "consumer's preferred environment is likely to depend on his ability to engage in self-certification of products and on the ability of manufacturers to convey product quality information independently of the dealers." *Id.* at 359; for the authors' economic model see *id.* at 349-358.

³³ OECD Quality Report, *supra* note, at 44 (Australia).

consumers can inspect and investigate before purchase.”³⁴ Rather the correlation between competition and quality is likelier to break down with *experience goods*, whose quality consumers may evaluate only after purchase and consumption, and *credence goods*, whose quality consumers generally cannot evaluate.³⁵ The correlation between price and quality relies, to a large extent, on the satisfactory functioning of the markets, which in turn, to a large extent, relies on an adequate flow of information from producers to consumers and between customers. Indeed, information flow has long been recognized as one of the pillars that support competitive markets and a valuable attribute of consumer welfare.³⁶

A. Advertising and Information Flow

It is generally expected that the flow of information through price and non-price advertising will assist consumers in making better choices in relation to the purchase of goods and services by identifying sellers, providing terms of sales, and information on products, their quality, characteristics and price. This freedom of choice facilitates competition by widening the range of known substitutes that consumers take into account, as well as their price sensitivity.

The flow of information increases market transparency and makes it easier for consumers to compare the quality and prices of advertised goods between outlets, thus making it harder for retailers to exercise market power by increasing the price or degrading the quality of the advertised goods. In this respect, advertising, being the most visible way through which companies communicate their products’ and services’ price and quality, can

³⁴ *Dr. Seuss Enterprises, L.P. v. Penguin Books USA, Inc.*, 924 F. Supp. 1559, 1573 (S.D. Cal. 1996), *aff’d*, 109 F.3d 1394 (9th Cir. 1997).

³⁵ Such as expert services, dietary supplements etc. See Denis W. Stearns, *On (Cr)edibility: Why Food in the United States May Never Be Safe*, 21 STAN. L. & POL’Y REV. 245, 248–249 (2010).

³⁶ George J. Stigler, *The Economics of Information*, 69 JOURNAL OF POLITICAL ECONOMY 213, 213–225 (1961); OECD, 2001; Dr Rainer Nitsche & Nils von Hinten-Reed, *Competitive Impacts of Information Exchange*, CHARLES RIVER ASSOCIATES 1, 1–31 (2004). For discussion on the importance of efficient information flows in healthcare markets, see William M. Sage & Peter J. Hammer, *Competing on Quality of Care: The Need to Develop a Competition Policy for Health Care Markets*, 32 U. MICH. J.L. REF. 1069, 1090 (1999).

make markets more competitive and efficient.³⁷

Deception³⁸ does not occur in perfectly competitive markets, which have transparent prices, highly elastic demand curves, easy entry and exit, and perfectly-informed, profit-maximizing buyers and sellers who are so numerous that each can act as a price-taker. Likewise, in a perfectly competitive marketplace of ideas, truth quickly and costlessly prevails through “the widest possible dissemination of information from diverse and antagonistic sources.”³⁹

In many markets, competition is imperfect to begin with. Market dynamics are less formidable. Buyers are unable to detect and punish the misleading firm; inaccuracies remain unexposed. At times, however, advertising might inaccurately depict the product characteristics and quality. It is worth noting that the common law does not recognize a claim for fraud where the defect is obvious to one’s senses.⁴⁰ Consumers can, at times, discover and swiftly punish such deceptive (illegal or legal) claims of quality.⁴¹ A web based selling platform provides a good illustration. Web and consumer forums may limit the one sided freedom of advertisers. When customers’ reviews are available online, the real quality of product or service is easier to determine. While information may be subjected to manipulation—by producers, sellers and competitors—a large volume of financially disinterested reviews may correct such anomalies. In other instances consumers may play a role in exposing the truth.

But in many markets, it is time-consuming and costly to verify (if one could) every material statement’s trustworthiness independently. The marketplace of ideas, even in industries with marketing-savvy competitors,

³⁷ Note, in particular, the UK retailer Marks and Spencer’s effective advertising to promote its investments in food safety and quality. Denis W. Stearns, *On (C)redibility: Why Food in the United States May Never Be Safe*, 21 STAN. L. & POL’Y REV. 245, 254–256 (2010).

³⁸ BLACK’S LAW DICTIONARY 406 (6th ed. 1990) (defining deception as “[k]nowingly and willfully making a false statement or representation, express or implied, pertaining to a present or past existing fact”); RESTATEMENT (SECOND) OF TORTS § 551(2)(e) (1977) (deception includes knowingly withholding “facts basic to a transaction”).

³⁹ *Associated Press v. United States*, 326 U.S. 1, 20 (1945).

⁴⁰ REST. (SECOND) TORTS § 541 (the recipient of a fraudulent misrepresentation is not justified in relying upon its truth if he knows that it is false, or its falsity is obvious to him).

⁴¹ See, for example, sites such as www.ripoffreport.com

does not always expose deception.⁴² Consequently, deceptive and misleading advertising requires two important deviations from the competitive ideal: (1) falsity is not quickly exposed in the marketplace of ideas, and (2) competition is not effectively based on the merits.

In some markets, the enforcement agency can detect some breaches. One example is Intel's deception that caused the public to believe its competitor's sluggish performance was due to poor quality (rather than Intel's mischief). The FTC alleged that Intel introduced compiler features that "effectively slowed the performance of software written using Intel's compilers" on competing non-Intel central processing units (CPUs). Intel's deception, the FTC alleged, caused "the unknowing public, [original equipment manufacturers] OEMs, and software vendors" to believe that "the slower performance of non-Intel-based computers when running certain software applications" was attributable to "the performance of non-Intel CPUs."⁴³ Intel, the FTC alleged, "intentionally misrepresented the cause of the performance differences and whether it could be solved."⁴⁴ Not only did Intel help maintain its monopoly through its deception, but its deception "distorted the competitive dynamic and harmed consumers."⁴⁵

⁴² *Coca-Cola*, 822 F.2d at 31 (rejecting the claim that "the advertising industry is a self-policing industry that considers claims of misrepresentations of quality").

⁴³ Federal Register Notice: Intel Corporation; Analysis of Proposed Consent Order (August 10, 2010).

⁴⁴ Federal Register Notice: Intel Corporation; Analysis of Proposed Consent Order (August 10, 2010). As the FTC alleged:

Intel's deceptive disclosures related to its compiler redesign were compounded by the adoption of industry standard benchmarks that included software compiled using Intel's compiler. Benchmarks are performance tests that compare attributes of competing CPUs. Industry standard benchmarks are used by OEMs and consumers to judge performance of competing CPUs. Intel failed to disclose to benchmarking organizations the effects of its compiler redesign on non-Intel CPUs. Several benchmarking organizations adopted benchmarks that measured performance of CPUs by running software programs compiled using the Intel compiler. The software compiled using Intel's compiler skewed the performance results in Intel's favor. Intel promoted its systems' performance under such benchmarks as realistic measures of typical or "real world" computer performance. The benchmarks were not accurate or realistic measures of typical computer performance and they overstated the performance of Intel's products as compared to non-Intel products.

⁴⁵ *Id.* ("Among the harms to consumers caused by Intel's deceptive conduct was the harm to the credibility and reliability of industry benchmarks. Industry benchmarks are important tools for consumers to make informed purchasing choices. Informed consumer choice is a basic building block of competition.").

However, at times, communications while still portraying an inaccurate image of a product and its quality may fall below the illegal ‘deception’ threshold. One example is the variety of misleading food-labeling standards in the United States. Consumers rely on labels such as “organic” and “USDA inspected and passed” to indicate that food is safe, when these labels do not guarantee food safety.⁴⁶ Similarly, investors rely on credit rating agencies to assess the risk of financial products, but an issuer of financial products will only advertise the most favorable risk assessment. “Thus, the market may see an opinion that is scrupulously honest but is still an outlier.”⁴⁷

At times, the natural exercise of market powers may ‘correct’ such distorted flow of information. Such may be the case when other competitors engage in counter advertising or lobbying campaigns and expose the truth about the product or service. For example, Texas-based rival H.E.B. exposed US retailer Wal-Mart’s deceptive cost-saving claims.⁴⁸

However, absent clear benchmarks for quality, advertising and marketing may promote an illusion of quality. Asymmetric information as to various products’ and services’ true quality provides an easy forum for inaccurate signals, which are difficult for customers to decipher when comparing and contrasting quality with price. With significant informational asymmetries, misleading and deceptive advertising can distort competition. Consumers cannot easily and accurately assess quality and price. Their search costs in choosing quality products increase. The transaction costs for honest sellers increase in seeking to differentiate their higher quality products and to reap the financial, reputation-related rewards associated with their products. Other strategies may raise rivals’ costs (in having to respond to a competitor’s deceptive statements), create market distortions, and impose a deadweight welfare loss as consumers forgo or minimize purchases of better quality products that absent the deceptive

⁴⁶ Stearns, *supra* note, at 260, 271–272.

⁴⁷ Rosa M. Abrantes-Metz, *Is there Misdiagnosis and Mistreatment in the Market for Credit Ratings?*, 12(2) CPI ANTITRUST CHRONICLE 1, 7 (2013).

⁴⁸ H.E. Butt proposed that the basis for such claims was a faulty study commissioned by the company. Vicki Vaughan, *H-E-B Beats Wal-Mart on Advertised Claim of Big Savings: H-E-B Beats Wal-Mart in Court in Ad Case*, SAN ANTONIO EXPRESS-NEWS, June 24, 2009, <http://www.chron.com/business/article/H-E-B-beats-Wal-Mart-on-advertised-claim-of-big-1614157.php>.

practices they would have purchased. In addition, the exploitation of network effects, the increase of entry barriers for new products (whose qualities and risks cannot be quickly assessed) and the foreclosure of markets to new services,⁴⁹ may undermine competition on quality.

Consequently, competition authorities should exercise caution when applying their two heuristics in markets characterized with false advertising claims. When consumers act with incomplete knowledge, and it is prohibitively expensive or difficult to convey to consumers the products' inherent quality differences, then one cannot assume that more competition will necessarily improve the price-quality mix.

B. Reassuringly Expensive

Many products and services are differentiated by price and quality. Absent other readily available information on quality, consumers will often rely on a product's or service's price as a proxy for quality. Consumers basically rely on the heuristic, "You get what you pay for."⁵⁰ In assuming that quality is positively correlated with price, consumers believe that market forces generally will expose inferior products at inflated prices. Thus as the Australian competition authority explained, in competitive markets with rational, well-informed consumers, price can signal quality differences and enable consumers to trade-off between price and higher quality.⁵¹

⁴⁹ By, for example, creating "lemon" markets where dishonest dealers for goods or services drive out honest dealers, thereby inhibiting innovation in these markets. Maurice E. Stucke, *How Do (And Should) Competition Authorities Treat A Dominant Firm's Deception?*, 63 SMU L. REV. 1069, 1073-74 (2010).

⁵⁰ Likewise courts apply the heuristic when evaluating the reasonableness of attorney's fees. See, e.g., *Helfrich v. Carle Clinic Ass'n., P.C.*, 328 F.3d 915, 919 (7th Cir. 2003); *In re Checking Account Overdraft Litig.*, 830 F. Supp. 2d 1330, 1363 (S.D. Fla. 2011) ("As with most things, you get what you pay for, and the Settlement Class received a truly impressive amount and quality of legal services. In the private marketplace, as pointed out by several of Plaintiffs' experts, counsel of exceptional skill commands a significant premium."); *S.E.C. v. Mut. Benefits Corp.*, 04-60573CIV, 2009 WL 4640654 (S.D. Fla. Dec. 7, 2009) ("Few would disagree that, in complex matters, you get what you pay for."); *Bockman v. Lucky Stores, Inc.*, CIV S 83-039 RAR, 1986 WL 425 (E.D. Cal. Nov. 20, 1986) ("The Court strongly believes that you get what you pay for. Although reasonable minds will differ as to what the going rate should be, the Court takes into consideration the training and expertise of plaintiffs' counsel.").

⁵¹ OECD Quality Report, *supra* note, at 44 (Australia).

At times price accurately reflects quality. One indeed gets what one pays for. Sometimes, however, the correlation is weaker.⁵² When quality is subjective or difficult to assess, consumers may believe that price positively relates to quality, even when it does not. As the European Commission recognized,

In some cases, the (perceived) quality correlates with price positioning of a given product or service. The more customers perceive the products as being of high quality (by way of its proper characteristics or by marketing), the more they are willing to pay for it and the more the observed prices of the given products differ. Such vertical differentiation may help to define a group of products which are positioned at a similar level and which compete against each other, and which customers still regard as substitutes. For example, price levels can be indicative of the (perceived) quality positioning of brands (in the watches example, luxury watches are several times more expensive than technically comparable ‘regular’ watch brands).⁵³

This is further complicated if consumers subjectively believe that the higher priced good is indeed better. The higher price affects the experience

⁵² Sage & Hammer, *supra* note, at 1078-88 (noting that courts in antitrust cases often follow simpler models of competition based on price and output, either ignoring quality as a competitive dimension or assuming that it will occur in tandem with price competition); OFT Report, *supra* note, at § 3.113:

When prices become flexible, the consumer’s decision problem becomes more complex. They now have to examine two bits of information: past track records about quality and price. It turns out that the vast majority of consumers simply focus on price. This leads to Bertrand-style competition and very low prices but also to poorer average quality of products traded. Prices fall to such a low level that high-quality production becomes hardly sustainable for firms and low quality almost acceptable for consumers. In other words, there is both, a push and a pull, towards lower quality and, thus, total welfare is lower in the presence of price competition than under a (comparatively high) regulated price.

⁵³ OECD Quality Report, *supra* note, at 79 (European Union). Likewise, consumers may perceive Clorox bleach better quality since it costs more than the chemically indistinguishable, but cheaper private label bleach. *FTC v. Procter & Gamble Co.*, 386 U.S. 568 (1967). Clorox invested millions of dollars in promoting its brand of bleach, and often charged a higher price for its bleach. One would think that a market, where one company sells a fungible chemically indistinguishable product at a price premium, would be attractive for potential entrants. But Procter & Gamble sought to purchase Clorox rather than enter the liquid bleach market independently. For the intersection of brands and competition policy, see Deven R. Desai & Spencer Weber Waller, *Brands, Competition and the Law*, 2010 BRIGHAM YOUNG U. L. REV. 1425 (2010).

the consumers feel from the otherwise regular product. Several behavioral experiments revealed the power of higher prices.⁵⁴ In one experiment, nearly all the participants reported less pain after taking a placebo priced at \$2.50 per dose; when the placebo was discounted to \$0.10 per dose, only half of the participants experienced less pain.⁵⁵ Similarly, MIT students who paid regular price for the “SoBe Adrenaline Rush” beverage reported less fatigue than the students who paid one-third of regular price for the same drink.⁵⁶ SoBe Adrenaline Rush beverage was next promoted as energy for the students’ mind; students, after drinking the placebo, had to solve as many word puzzles as possible within thirty minutes. Students who paid regular price for the drink got on average nine correct responses. Students who paid a discounted price for the same drink got on average 6.5 questions right.⁵⁷

Similarly, according to researchers at the Stanford Graduate School of Business and the California Institute of Technology:

[I]f a person is told he or she is tasting two different wines—and that one costs \$5 and the other \$45 when they are, in fact, the same wine—the part of the brain that experiences pleasure will become more active when the drinker thinks he or she is enjoying the more expensive vintage.⁵⁸

⁵⁴ DAN ARIELY, *PREDICTABLY IRRATIONAL: THE HIDDEN FORCES THAT SHAPE OUR DECISIONS* 181-86 (HarperCollins 2008).

⁵⁵ *Id.* at 182-83.

⁵⁶ *Id.* at 184-85.

⁵⁷ *Id.* at 185-86.

⁵⁸ News Release, Stanford Univ. News Serv., Price Tag Can Change the Way People Experience Win, Study Shows (Jan. 15, 2008), available at <http://news-service.stanford.edu/pr/2008/pr-wine-011608.html>. As the study found,

Because perceptions of quality are known to be positively correlated with price, the individual is likely to believe that a more expensive wine will probably taste better. Our hypothesis goes beyond this by stipulating that higher taste expectations would lead to higher activity in the medial orbitofrontal cortex (mOFC), an area of the brain that is widely thought to encode for actual experienced pleasantness. The results described below are consistent with this hypothesis. We found that the reported price of wines markedly affected reported EP and, more importantly, also modulated the blood-oxygen-level-dependent (BOLD) signal in mOFC.

Hilke Plassmann, John O'Doherty, Baba Shiv, and Antonio Rangel, *Marketing Actions Can Modulate Neural Representations of Experienced Pleasantness*, *PNAS* 2008 105 (3) 1050-1054; published ahead of print January 14, 2008, doi:10.1073/pnas.0706929105; *see also*

Here too we see in these markets the two necessary conditions: consumers act with incomplete knowledge, and it is prohibitively expensive or difficult to convey to consumers the products' inherent quality differences.

Companies recognize that neither they nor their competitors can easily or inexpensively convey to consumers the inherent quality differences in their and their competitors' product offerings. The producers also recognize that consumers may rely on price as a proxy of quality (i.e., you get what you pay for) and cannot independently assess differences in the products' quality. Thus, companies may charge a higher price to signal superior quality that their product may or may not necessarily have. A drug manufacturer may not want its drug priced lower than other pills (which might signal inferior quality). Customers may report a better experience due to higher prices (rather than the pill's superior attributes) thus incentivising producers to charge higher prices. Indeed, quality will not necessarily correlate with competition. This is not deception per se, but the producers' manipulating a consumer heuristic of associating price with quality.

* * *

As Part I discusses, the agencies' two heuristics assume that rational consumers with willpower will understand price to signal quality differences and will tradeoff between lower priced, lower quality goods and higher quality, higher priced goods. But this Part provides two scenarios that illustrate that even with rational consumers with willpower, price will not necessarily positively correlate with quality. The link between price and quality is therefore more complex than one might expect. Quality and price at times are positively correlated, whereby higher price signals better quality. But informational asymmetries can limit the consumer's ability to determine the level of quality based on price and thereby limit quality competition. The above discussion highlights that consumers may not always respond as the agencies expect them to -- not because of an

Jonathan D. Glater & Alan Finder, *In Tuition Game, Popularity Rises With Price*, N.Y. TIMES, Dec. 12, 2006, at A1 (discussing how Ursinus College, believing it was losing applicants because of its low tuition, raised its tuition and fees 17.6% in 2000 (but offered more financial aid) and received nearly 200 more applications the following year).

unforeseen bias or heuristic but rather because of the information landscape in which consumers operate and their ability to analyze and decode that information. As hinted above, this vagueness affects not only consumers' but also the competition agencies' ability to examine in detail and balance quality and consumer welfare. In the next Part we flip the coin to consider how market realities affect the producer's or service provider's incentive to invest in quality, especially when consumers' biases, heuristics and imperfect willpower hinder their ability to assess quality.

III. PRODUCERS' LIMITED INVESTMENT IN QUALITY

This Part considers the ways in which market reality may affect the producer's or service provider's incentive to invest in quality. Again we see in these markets the two necessary, but not sufficient, conditions—consumers acting with incomplete knowledge, and producers finding it unprofitable or difficult to convey to consumers the products' inherent quality differences.

In these markets, we consider how information difficulties, externalities, market conditions or collusion may undermine firms' incentive to invest in quality. Interestingly, in some cases firms may underinvest in quality despite seemingly competitive market conditions or price competition.

A. *Communication Imperfections*

Part II.A considers instances where through marketing, advertising, and other promotions, consumers cannot easily and accurately differentiate between products and services according to actual quality dimensions. Naturally, these limitations affect not only consumers but also the producers' and service providers' incentive to invest in quality.

A disincentive to invest in quality may emerge where the quality information is inherently difficult to convey and the consumer's ability to determine the level of quality is limited. This will especially be the case when important vertical quality dimensions are not readily quantifiable, and firms cannot afford, due to significant competitive pressure, to invest in educating consumers of their products' quality improvement.

When customers lack the knowledge and expertise to assess product quality accurately, firms may not be rewarded for improving quality. As competition authorities recognize, “higher quality does not attract consumers under the conditions of significant information asymmetry between the seller and the buyer in respect of consumer properties of the goods.”⁵⁹ The UK’s competition authorities observed:

Buyers may not know, for example, how quality varies across brands. Markets where customers may be unsure about quality include those for professional services, used goods and complex mechanical or electronic products. When, as a result of information asymmetries, customers are unable to form an accurate assessment of product quality (eg if they consistently underestimate the probability of product failure), a market may operate inefficiently. Imperfect information about quality can be a particularly severe problem for infrequently purchased goods or goods the quality of which cannot be verified even after purchase—so-called ‘credence’ goods.⁶⁰

We can return to our *Intel* example. In its decision, the European Commission observed in the market for central processing units (CPUs) how “[a]ccording to a recent market survey, price is by far the most important factor when choosing a computer at retail level... Quality and therefore also CPU awareness play a secondary role, in particular because consumers tend to lack the respective technical knowledge to develop a preference for Intel or [its competitor’s] CPUs.”⁶¹ David Evans discussed how this phenomenon, sometimes known as the ‘lemons problem,’ caused the US videogame market to collapse:

Consumers could not distinguish low quality from high quality games before buying them. Producers therefore had incentives to create cheaper low quality games that drove the high quality games out of the market. But consumers did not want to buy video game consoles to run low quality games.⁶²

⁵⁹ OECD Quality Report, *supra* note, at 115 (Ukraine).

⁶⁰ OECD Quality Report, *supra* note, at 113 (United Kingdom).

⁶¹ Footnote 1919, COMP/37.990 *Intel Corporation* [2009] OJ C 227/07 at n [1919].

⁶² David S. Evans, *Governing Bad Behavior by Users of Multi-Sided Platforms*, 27 BERKELEY TECH. L.J. 1201, 1215 (2012). For an application of the lemons problem to food markets, see Stearns, *supra* note, at 266 (“In other words, if everyone in an industry pays to the same extent when unsafe or poor quality goods are sold, a greater profit can be made by

Consequently, more competition may not yield greater quality when firms have difficulty explaining the quality improvement to the consumer, rivals can confuse consumers with similar claims, consumers cannot readily identify the better quality products, and as a result the innovator's sales and profits do not increase.⁶³ In those instances the cost of quality improvement outweighs the likely gain.

B. Two-Sided Markets

In some two-sided markets, a firm offers a product or service for free to consumers and in turn sells to advertisers the ability to access these consumers. As discussed earlier, when the product or service is offered for free, the primary dimension of competition is quality. But when the producer primarily earns its profits from one side of the market (such as advertising), its incentive to degrade quality (below levels that consumers prefer) on the other side of the market can increase.

The European Commission discussed this scenario in the internet search/search advertising markets.⁶⁴ A search engine is a matchmaker between advertisers and consumers searching for products, services or information. The search engine provides "organic (or algorithmic) and advertising (or sponsored) results."⁶⁵ Search engines therefore compete for consumers by providing quality (more relevant and quicker) search

competing on price rather than quality, so long as the consumer cannot tell the difference.").

⁶³ Indeed trademark law is based on preventing this result. See Stacey L. Dogan & Mark A. Lemley, *The Merchandising Right: Fragile Theory or Fait Accompli?*, 54 EMORY L.J. 461, 466 (2005):

A brand-based assurance of quality would mean nothing if imitators could apply it to their own products and pass them off as having come from the trademark holder. The result would be higher search costs for consumers and a disincentive to firms to invest in goodwill and quality products and services. Trademark law evolved specifically to avoid this result. Doctrinally, trademark law prevents interlopers from appropriating trademark holders' goodwill by using their marks in a way that suggests some association, affiliation, or sponsorship between the parties or their products. Economically, trademark law reduces consumer search costs and facilitates investment in goodwill by protecting the accuracy of trademark-related investments in advertising and product quality.

⁶⁴ *Microsoft/Yahoo! Search*, *supra* note, at ¶¶ 202-04. The Commission left open whether internet search constituted a separate market. *Id.* ¶¶ 85-86.

⁶⁵ *Microsoft/Yahoo! Search*, *supra* note, at ¶ 100.

results.⁶⁶ But as the European Commission found, a search engine provider can also have the incentive to degrade the quality of its search results: the more relevant “organic” results the search engine provides, the less likely that consumers will click on the sponsored results, and the less potential advertising revenue the search engine generates.⁶⁷ Thus, the search engine can have the incentive to promote—and rank higher—its sponsored results and provide fewer—and rank lower—the organic results.⁶⁸ A firm is likelier to degrade its search results, the European Commission noted, when the competing search engines provide different organic results and “it is inherently difficult for the user to assess whether the platform engages in this behavior.”⁶⁹

The European Commission did not believe that the Microsoft/Yahoo! transaction would cause the parties to degrade the quality of its search engine results, given Google’s presence.⁷⁰ But the Commission currently is investigating Google in part for degrading the quality of its search results. As part of its preliminary conclusions, the Commission found Google to abuse its dominant position, by inter alia, promoting its own search services over rivals’ services for specific categories of information, like hotels and restaurants. Consumers, the Commission observed, “are not aware of the promotion of Google’s services within the search results,” and are harmed when Google marginalizes equally relevant (or potentially more relevant) competing search services.⁷¹

Google is dominant in the search engine market, but this quality degradation can also occur in other, more competitive two-sided markets. For example, newspapers may compete vigorously in their news coverage, but may skew their news coverage through self-censorship to avoid offending an important category of advertisers. Radio stations can skew playlists to music companies that pay them for airing their songs.⁷²

⁶⁶ *Microsoft/Yahoo! Search*, *supra* note, at ¶ 101.

⁶⁷ *Microsoft/Yahoo! Search*, *supra* note, at ¶ 204.

⁶⁸ *Microsoft/Yahoo! Search*, *supra* note, at ¶ 204.

⁶⁹ *Microsoft/Yahoo! Search*, *supra* note, at ¶ 204.

⁷⁰ *Microsoft/Yahoo! Search*, *supra* note, at ¶ 212.

⁷¹ European Commission, Press Release, Antitrust: Commission Obtains from Google Comparable Display of Specialised Search Rivals (Feb. 5, 2014).

⁷² After a series of scandals where music companies paid radio stations to play certain songs, the FCC promulgated “payola” rules where the broadcaster must disclose such

Consequently, in two-sided markets, producers may degrade the quality of the free product, when doing so maximizes revenue from the other side of the market, such as advertising revenue. Here again we see this is likelier when first, consumers cannot discern the degradation in quality, because they lack objective benchmarks, and second, it is prohibitively expensive or difficult for rivals to convey to consumers the inherent quality differences in the product offerings.

C. Exploiting Consumer Biases and Imperfect Willpower

Firms will also have a disincentive to invest in quality when debiasing consumers and improving their willpower are costly and unprofitable. In competitive markets, one expects firms to provide products and services that help address issues for consumers. One problem is that consumers, on account of their overconfidence, general optimism, or failure to appreciate the full extent of their imperfect willpower, may feel they do not need a given product or service. When the cost of educating the customer cannot be recovered or when the investment is exposed to free-riding, companies may underinvest in quality products.

For example, financial products can be tailored to help consumers reduce the risk of default and increase savings. But consumers can be overoptimistic on their ability and willpower to pay the credit card purchases timely. They underestimate the costs of their future borrowings. So the optimistic consumers would ordinarily choose credit cards with lower annual fees (but higher financing fees and penalties) over better suited products (e.g., credit cards with higher annual fees but lower interest rates and late payment penalties).

In principle, competition can promote this quality dimension in several respects: first the quality of services to help debias consumers, second, the quality of the financial product (in reducing risk and addressing the consumers' needs), and third the quality of service in forewarning consumers of competitors' attempt to exploit them. However, firms, facing intense competition, may find that it makes more sense to unilaterally offer similar lower-quality products that exploit consumer biases, rather than

payments. <http://www.fcc.gov/guides/payola-rules>.

incurring the costs to provide quality informational services to help consumers debias.

Suppose it is expensive for a credit card issuer to educate consumers of the likely total costs of using the credit card, their bounded willpower, and their overconfidence. The credit card issuer will not invest in debiasing consumers if other competitors can successfully free-ride on the company's educational efforts and quickly offer similar credit cards with lower fees. Alternatively, the credit card company will not invest if the debiased consumers do not remain with the helpful credit card company. The debiased consumers switch to the remaining exploiting credit card issuers, where they, along with the other sophisticated customers, benefit from the exploitation (such as getting airline miles for their purchases, while not incurring any late fees). Under either scenario, debiasing reduces the credit card company's profits, without offering any lasting competitive advantage. Consequently, the industry profits more in exploiting consumers' biases, heuristics, and imperfect willpower. Naïve consumers will not demand better-suited products. Firms have little financial incentive to help naïve consumers choose better products. Market supply skews toward products and services that exploit or reinforce consumers' bounded willpower and rationality.

At times consumers consider the short-term immediate price rather than the long-term cost from the use of the product. Consumers, for example, purchase a lower quality, less expensive washing machine, when they could save more money over the long term by purchasing a higher quality, more efficient machine. The Indonesian competition authority explained how consumer biases and imperfect willpower can adversely affect the supply of higher-quality goods that improve consumers' welfare:

A market dominated by short-term oriented consumers is actually unfavorable for the market leader because it will be difficult for the market leader to improve the loyalty of consumers. The consumers are easily tempted by offers, advertisement/gimmick, or discounts from the competitor. As a result, the action often taken by the business actors as the solution is by reducing the price of the product. The consumers are not very much aware of a deterioration of quality of a product as long as

the price is affordable.⁷³

Nor is competition the solution. Entry and greater competition, as one recent survey found, can worsen, rather than improve, the situation:

The most striking result of the literature so far is that increasing competition through fostering entry of more firms may not on its own always improve outcomes for consumers. Indeed competition may not help when there are at least some consumers who do not search properly or have difficulties judging quality and prices...In the presence of such consumers it is no longer clear that firms necessarily have an incentive to compete by offering better deals. Rather, they can focus on exploiting biased consumers who are very likely to purchase from them regardless of price and quality. These effects can be made worse through firms' deliberate attempts to make price comparisons and search harder (through complex pricing, shrouding, etc) and obscure product quality. The incentives to engage in such activities become more intense when there are more competitors.⁷⁴

Here too we see in these markets the two necessary, but not sufficient, conditions, but with a slight twist. First, consumers act with incomplete knowledge. They misjudge not only the product's quality,⁷⁵ but also the degree of their own biases and willpower. The consumers desire certain objectives (such as increasing savings, less risk) but misjudge their future behavior. Consumers may overestimate their frequency to go to the gym, and thereby select an annual membership when a per visit membership would be cheaper.⁷⁶

Second, in these markets firms cannot attain a competitive advantage in building trust and reputation by debiasing consumers or not exploiting their biases and imperfect willpower. In these markets, it is prohibitively expensive or difficult to debias, or doing so does not secure additional

⁷³ OECD Quality Report, *supra* note, at 86 (Indonesia).

⁷⁴ OFT Report, *supra* note, at § 6.2.

⁷⁵ OFT Report, *supra* note, at § 1.10 ("Likewise, consumers that have difficulties judging quality can mistake inferior goods for superior goods. In these situations firms can focus on exploiting biased consumers who are likely to purchase from them regardless of price and quality. Under these conditions increased competition does not help because consumers do not improve their decision making.").

⁷⁶ DellaVigna, *supra* note, at 320.

business from the debiased consumer (who can benefit from the behavioral exploitation of others by choosing the credit card that offers customers perks).

These outcomes not only affect the producers' incentive to invest in quality, they may also enable it to exploit an information bias. Such may be the case, as illustrated in Part II, when information and communications are inaccurate or misleading.

D. Exploiting the Imperfect Market

Competition authorities rely on the heuristic that when prices and quality vary, consumers will weigh the offerings using an internal price-quality metric. Thus if products have multiple dimensions of quality, one can imagine a dizzying array of products, with different prices, touting different attributes. So one perceived benefit of competition is its providing consumers with more choices of goods and services.⁷⁷ The economic theories underlying competition law presume that increasing variety to meet consumer demand increases well-being, as consumers can more easily select the option that best meets their needs and wants (i.e., the more options I have, the likelier I will find the product that closely matches my internal price-quality preference).

As the number of product attributes increase, the information regarding each differentiated option increases as well; the required attention and burden on deliberative, System 2 thinking to process the information increase as consumers trade-off the options' relative benefits and disadvantages.⁷⁸

Enter choice overload, which consumers at times suffer when trying to decide among many (often complex) options.⁷⁹ As product attributes

⁷⁷ *Addis v. Holy Cross Health Sys. Corp.*, 3:94 CV 118 AS, 1995 WL 914278 (N.D. Ind. July 6, 1995) (recognizing the benefits of competition include higher quality and greater choice); *Swarthmore Radiation Oncology, Inc. v. Lapes*, CIV. A. 92-3055, 1993 WL 517722 (E.D. Pa. Dec. 1, 1993); *Police Jury Ass'n of La., Inc. v. State*, 36 So. 3d 942, 947 (La. App. 1 Cir. 2010).

⁷⁸ Ellen Peters et al., *More Is Not Always Better: Intuitions About Public Policy Can Lead to Unintended Health Consequences*, 7 SOCIAL ISSUES & POLICY REV. 114, 117-18 (2013).

⁷⁹ Adi Ayal, *Harmful Freedom of Choice: Lessons from the Cellphone Market*, 74 LAW

increase in complexity, one cannot expect consumers to invest extensive time and energy into understanding all the available options, in searching for and comparing price and quality, and choosing the product that closely matches their preferences, all at the expense of other mental pursuits.⁸⁰ At times consumers lack clear preferences, and simply stick with the default option.⁸¹ At times when confronted by many options, people simply avoid choosing, even when any choice is preferable to not choosing.⁸² As a result, they forgo potentially superior options and maintain the status quo to their detriment.⁸³ At other times, cognitive overload reduces consumers' self-control, leading them to ignore product attributes which they value, and accept simple or default options.⁸⁴ Interestingly, the need to evaluate a number of different options may itself harm welfare. Although consumers generally appreciate choice, "the tendency to search long and hard reduces enjoyment from the end result."⁸⁵

One issue is when companies take advantage of consumers' difficulty in processing many complex options. Producers, by creating complex

AND CONTEMPORARY PROBLEMS 91, 94 (2011).

⁸⁰ *Id.* See also Lisbet Berg & Åse Gornitzka, *The Consumer Attention Deficit Syndrome: Consumer Choices in Complex Markets*, 55 ACTA SOCIOLOGICA 159, 171-72 (2012).

⁸¹ RICHARD H. THALER & CASS R. SUNSTEIN, *NUDGE: IMPROVING DECISIONS ABOUT HEALTH, WEALTH, AND HAPPINESS* (Yale Univ. Press 2008).

⁸² Gerri Spassova & Alice M. Isen, *Positive Affect Moderates the Impact of Assortment Size on Choice Satisfaction*, 89 J. RETAILING 397, 398 (2013); Marianne Bertrand et al., *What's Advertising Content Worth? Evidence from a Consumer Credit Marketing Field Experiment*, 125 Q. J. ECON. 263, 268 (2010).

⁸³ Simona Botti & Sheena S. Iyengar, *The Dark Side of Choice: When Choice Impairs Social Welfare*, 25 J. PUBLIC POLICY & MARKETING 24, 28 (2006); Chris M. Wilson & Catherine Waddams Price, *Do Consumers Switch to the Best Supplier?*, 62 OXFORD ECONOMIC PAPERS, 98, 98-131 (2011). ("A fascinating study examining the relationship between the number of funds from which employees could choose and their actual choice showed a clear tendency to avoid choosing altogether (and thus implicitly choose none) as the number of alternatives increased."). Choice overload is not ubiquitous, nor are all of its preconditions well understood. Consumers do not always regret their choice from a large selection. Benjamin Scheibehenne et al., *Can There Ever Be Too Many Options? A Meta-Analytic Review of Choice Overload*, 37 J. CONSUMER RESEARCH 409, 412, 416 (2010) (finding mixed results on choice overload from meta-analysis of 50 experiments); but see Alexander Chernev et al., *Commentary on Scheibehenne, Greifeneder, and Todd, Choice Overload: Is There Anything to It?*, 37 J. CONSUMER RESEARCH 426, 427 (2010) (noting that some experiments are designed to identify choice overload and then test factors that may mitigate it, so that counting the number of experiments and combining their results are not informative).

⁸⁴ Ayal, *supra* note, at 95, 97-98, 103.

⁸⁵ *Id.* at 103.

price/quality parameters, may facilitate consumer error or bias, to their advantage. Here firms add options and increase their products' complexity to manipulate consumer demand by making it difficult to appraise quality and compare products.⁸⁶ Firms increase the consumers' search and evaluation costs, thus driving consumers to rely on basic signaling that benefits the firms. One example is rankings. Consumers may ignore complex attributes and focus on one simple parameter (such as basing their judgment on ranking rather than continuous quality scores).⁸⁷ Knowing this, firms (like US law schools⁸⁸) can be ingenious in finding ways to game the ranking system without necessarily improving quality. Finally, firms increase the complexity of their contracts to increase their customers' switching costs and to more effectively price discriminate.⁸⁹ In short, firms increase complexity to render market conditions less susceptible to effective competition.

One study found that as competition in US telecommunication markets increased, telecommunication providers offered more complicated, bad-value price plans.⁹⁰ The increased competition caused "cellphone providers to focus on raising profitability through creating confusion and gaining from consumer mistakes," rather than from charging monopoly prices.⁹¹ One criticism of the mobile phone industry is its deliberately increasing

⁸⁶ See, e.g., Xavier Gabaix & David Laibson, *Shrouded Attributes, Consumer Myopia, and Information Suppression in Competitive Markets*, 121 Q.J. ECON. 505, 505-08 (2006); Oren Bar-Gill & Elizabeth Warren, *Making Credit Safer*, 157 U. PA. L. REV. 1, 27-28 (2008); SIMON JOHNSON & JAMES KWAK, 13 BANKERS: THE WALL STREET TAKEOVER AND THE NEXT FINANCIAL MELTDOWN 81, 108 (Pantheon 2010).

⁸⁷ DelleVigna, *supra* note 351 (discussing studies of the response of consumers to published rankings of hospitals and colleges where the company constructs "a continuous quality score from 0 to 100 largely based on reputation scores, and then creates rankings based on this score" and while both the scores and the rankings are published in the yearly report, the focus is on rank rather than score).

⁸⁸ Alex Wellen, *The \$8.78 Million Maneuver*, N.Y. TIMES, July 31, 2005, <http://www.nytimes.com/2005/07/31/education/edlife/wellen31.html?pagewanted=print&r=0>, Ashby Jones, *Here It Is: The 2009 U.S. News Law-School Ranking*, WALL ST. J., Apr 22, 2009, <http://blogs.wsj.com/law/2009/04/22/here-it-is-the-2009-us-news-law-school-ranking/>.

⁸⁹ Ayal, *supra* note, at 118 ("Contractual complexity thus acts to raise switching costs, which allows for raising prices to existing customers while hiding the existence of discrimination among customers paying different prices for similar consumption.")

⁹⁰ See Eugenio J. Miravete, *The Doubtful Profitability of Foggy Pricing* 2-3 (NET Inst., Working Paper No. 04-07, 2004), available at <http://ssrn.com/abstract=618465>.

⁹¹ Ayal, *supra* note, at 124.

choice complexity to exploit consumers:

Too much and too complex information have made it difficult for all but the most technologically savvy to choose the product best suited to their needs. Customers unable to choose based on attribute preferences appeared to make their choices based on price, only to later find out that the product did not meet their needs. This tendency is further complicated by a lack of comprehension. When provided with multiple options, consumers are only able to choose the least expensive about 65% of the time. When faced with the complex options of base service fees, additional features and cost for usage overages, customers tend to choose plans that greatly exceed their requirements, significantly overpaying each month rather than risking the chance of occasional overage costs. Problems navigating the telecommunications industry are not limited to older adults, although they may be particularly vulnerable.⁹²

Similarly, another recent study found that a greater variety of price plans in UK electricity markets led more consumers to choose sub-optimally, harming their welfare.⁹³ Ultimately, companies can design the number and types of options they offer to exploit consumers' cognitive overload.

Another approach includes firms selectively investing in quality. In markets where customer feedback and reviews facilitate information flows, the producer may identify areas where dimensions of quality are less transparent and forms the point of least resistance. Accordingly, producers will invest in the known dimensions of quality, which are subject to scrutiny, but underinvest in the other quality dimensions. Food companies, for example, may focus on visible aspects of quality such as taste and appearance, ignoring features less visible to consumers, such as safety and hygiene.⁹⁴

⁹² Peters et al., *supra* note, at 122.

⁹³ Wilson & Price, *supra* note, at 6–14; *see also* Ayal, *supra* note, at 121. For discussion of the anticompetitive implications of product differentiation in US healthcare markets, *see* Sage & Hammer, *supra* note, at 1073, 1082.

⁹⁴ Stearns, *supra* note, at 257.

Here again we see the two necessary, but not sufficient, conditions, but again with a twist. First consumers act with incomplete knowledge regarding the product's overall quality. But this is caused in part by consumer preference in having more choices. Consumers might feel regret if they purchase a simpler product with fewer attributes—believing that they will need the attributes far more than they actually will.⁹⁵ Naïve consumers may overestimate the quality benefits of particular attributes, thereby skewing supply to products with one great feature but lower overall quality—to the detriment of sophisticated purchasers.⁹⁶

Second, in these markets, firms cannot attain a competitive advantage by simplifying the choice architecture. One reason, as discussed with behavioral exploitation, is that may be more profitable to increase complexity and thereby soften competition. Another reason is that firm in some industries may face a collective action problem.⁹⁷

⁹⁵ OFT Report, *supra* note, at § 2.9.

⁹⁶ OFT Report, *supra* note, at § 3.129-3.130 (discussing a model where the firm can use “single-attribute advertising which only highlights one attribute of the product to manipulate the way consumers value the product. In particular, naïve consumers who are not knowledgeable enough will thus overvalue the importance of the advertised attribute but undervalue the importance of the unadvertised one.” As a result, “the product designed for naïve consumers has a too high quality in the advertised dimension and a too low quality in the unadvertised dimension, while that designed for sophisticated consumers is distorted in the opposite way. The outcome is that naïve consumers will end up consuming a product that scores extremely well on an attribute but has a mediocre overall performance, while sophisticated consumers cannot find the product they most want, which reflects the negative externality imposed by the presence of naïve consumers.”).

⁹⁷ Suppose, as some studies find, that a supermarket's product assortment “positively relates to consumers' perceptions of the value of the store as a whole” and store satisfaction. Ian Clarke et al., *Consumer Satisfaction with Local Retail Diversity in the UK: Effects of Supermarket Access, Brand Variety, and Social Deprivation*, 44 ENVIRONMENT & PLANNING A 1896, 1897, 1899 (2012). Consumers value having a greater variety, like the 550 varieties of television sets one US retailer offers online and hundreds offered in some stores, and perceive them to be of higher quality. But suppose television manufacturers and retailers recognize that offering so many varieties of television sets, while attracting consumers to their websites and stores, also increases the likelihood of choice overload and regret. Claudia Townsend & Barbara Kahn, “*The Visual Preference Heuristic*”: *The Influence of Visual Versus Verbal Depiction on Assortment Processing, Perceived Variety, and Choice Overload*, 40 JOURNAL OF CONSUMER RESEARCH 993 (2014). Suppose the TV manufacturers and retailers recognize that if they offered fewer TV sets, sales and profits would likely increase without adversely affecting consumer welfare. Spassova & Isen, *supra* note, at 397 (noting that “managers often find that the better part of their sales is accounted for only a small fraction of the offerings in their portfolio,” but many firms pursue a strategy of product proliferation to satisfy a wide range of consumer tastes, deter entry, be perceived as being higher quality, and keep customers from switching to competitors). No retailer would want to unilaterally limit its assortment

IV. THE UNIQUE CASE OF QUALITY DEGRADATION BY PRODUCERS

Part III considers how firms will under-invest in quality, despite the presence of competitive pressure, due to communications imperfections and consumer biases.

This Part pushes further to consider unique circumstances where faced with intense competition and downward pressure on price, sellers will actively erode their products' quality. This sub-group is fascinating. The positive correlation between competition and quality not only breaks down, but gives way to negative correlation and clear welfare loss.

A. *Conditions and Outcomes*

A producer may choose unilaterally to degrade quality as this may be the least resistant path to successfully absorb the pressures of fierce competition. Not surprisingly, such phenomenon is limited to where the product characteristics enable producers to disguise their reducing the product's quality and consumers do not detect the quality erosion. This may be the case with complex products and components and when customers lack clear parameters for assessing quality or the requisite knowledge or sophistication.

Evidently, quality erosion creates a business risk for the producer or service provider. One would therefore expect quality erosion when consumers are locked in, where producers can externalize the risk, or alternatively, as a last resort—when no other legitimate actions enable the company to remain in the market.

to 10 TV sets, when it risks devaluing its image relative to its competitors. Thus, each firm might want to limit the number of TV sets, but not if it would reduce foot traffic and sales of other products. So retailers offer more choices than optimal, to avoid being at a competitive disadvantage to competitors. If the competitors, to resolve the collective action problem, agreed to limit the selection of TV sets, they likely would exercise market power in significantly changing the mix of the variety that would otherwise arise from competition. Accordingly, if one key policy objective "is to insure that the freedom of choice of consumers of goods and services is not restricted by conduct that is anticompetitive," then the retailers would be liable. *Blue Cross of Washington & Alaska v. Kitsap Physicians Serv.*, C81-918V, 1981 WL 2198 (W.D. Wash. Oct. 28, 1981).

To illustrate, imagine a competitive upstream production market, which supplies a concentrated midstream market with buyer power. Such market conditions often result in downward pressure on price, to the benefit of consumers. Indeed, outside the monopsony model, where both the seller's price and quality of its products can be depressed,⁹⁸ it is assumed that the powerful buyers will pass part of the cost benefit to consumers.

Now, consider the following scenario while focusing on the quality variant. Imagine an upstream producer of private label pasta sauce which deals with a leading supermarket chain. The powerful buyer wants to lower its retail prices, and thereby seeks a cost reduction for its pasta sauce. The pasta sauce producer needs to be in the leading supermarket chain. Accordingly the pasta sauce producer lowers its bid for the subsequent year. This enables it to win the contract for an additional year against fierce horizontal competition from the other sauce producers. Having won the contract, and faced with a fixed price, the pasta sauce producer remains exposed to market changes, for example increases in the price of raw materials, e.g., tomatoes, labor, etc. To the extent possible, the private label supplier's point of least resistance—when face with costs fluctuations—is quality.

To the extent that the sophisticated supermarket and its customers are unable to detect changes to the product's quality and 'punish' the private label pasta producer—quality can gradually erode. Importantly, that process takes place alongside visible price reductions, perceived welfare gain and healthy and efficient competition. Granted some consumers may place a greater emphasis on lower prices than higher quality. But note that even they pay more than what they would have, had they known about the

⁹⁸ *W. Penn Allegheny Health Sys., Inc. v. UPMC*, 627 F.3d 85, 104 (3d Cir. 2010) (noting that monopsony in depressing reimbursement rates “tends to diminish the quality and availability of hospital services”); accord Warren S. Grimes, *The Sherman Act's Unintended Bias Against Lilliputians: Small Players' Collective Action as a Counter to Relational Market Power*, 69 ANTITRUST L.J. 195, 210 (2001) (“The very nature of monopsony or oligopsony power is that it tends to suppress output and reduce quality or choice.”); Press Release, U.S. DOJ, Blue Cross Blue Shield of Michigan and Physicians Health Plan of Mid-Michigan Abandon Merger Plans 1 (Mar. 8, 2010), *available at* http://www.justice.gov/atr/public/press_releases/2010/256259.pdf (alleging that Blue Care Networks of Michigan's plan to acquire Physicians Health Plan of Mid-Michigan “would have given Blue Cross-Michigan the ability to control physician reimbursement rates in a manner that could harm the quality of health care delivered to consumers”).

inferior quality. In other words, the customer receives less than what they bargained for.

In addition, quality erosion may lead to a competitive race to the bottom. The price achieved through quality erosion is often below optimal levels and forces other, as efficient, sellers to lower their bids below prevailing cost levels and engage in similar practices. Absent adequate regulation, consumer awareness or quality control, the outcome may be detrimental. This race-to-the bottom is not limited solely to product quality. Producers may further externalize costs by degrading labor and environmental safety practices.⁹⁹

In addition to unilateral quality degradation, one should also note the possibility for collusive quality degradation. Here, competitors agree to limit quality competition. As the Ukrainian competition authority observed:

[G]iven a high degree of market transparency and a highly competitive market, the manufacturers tend to use parallel decrease of product quality as a way of decreasing their costs, thereby increasing their competitiveness. If direct evidence that a parallel decrease of quality is the result of business entities' concerted actions is available, competition authorities have to react. In other cases of a parallel reduction of quality in competitive markets it is more appropriate, in our view, to use of tools of technical regulation.¹⁰⁰

When powerful buyers depress prices to levels that undermine the

⁹⁹ The downward pressure on the sellers' price increases the risks of negative externalities. To reduce their costs, more farmers, for example, dispense waste without the necessary precautions. See OLIVIER DE SCHUTTER, BRIEFING NOTE 3, ADDRESSING CONCENTRATION IN FOOD SUPPLY CHAINS: THE ROLE OF COMPETITION LAW IN TACKLING THE ABUSE OF BUYER POWER 2 (2010). Sustainability and environmental concerns of increased soil erosion, reduced biodiversity, deforestation, and water, soil, and air pollution arise. See Duncan Green, Oxfam, Conspiracy of Silence: Old and New Directions on Commodities (June 2005) (unpublished manuscript at tbl.2), available at <http://policy-practice.oxfam.org.uk/publications/conspiracy-of-silence-old-and-new-directions-on-commodities-112554>; see also Nicolas Petit, *Ethiopia's Coffee Sector: A Bitter or Better Future?*, 7 J. AGRARIAN CHANGE 225, 253 (2007); Declaration of the European Parliament on Investigating and Remediating Abuse of Power by Large Supermarkets Operating in the European Union, Eur. Parliament (Feb. 19, 2008), http://www.europarl.europa.eu/sides/getDoc.do?reference=P6_TA%282008%290054&language=EN (declaring that powerful retailers' buyer power has "negative knock-on effects on both quality of employment and environmental protection").

¹⁰⁰ OECD Quality Report, *supra* note, at 116 (Ukraine).

producer's present or future profitability and business viability, quality erosion, although risky, provides a way out. The best route to restore profitability may be to reduce surreptitiously the product's quality or otherwise externalize costs (such as polluting). Accordingly, as the powerful buyer reduces its supplier's price, the supplier -- to retain profits at its pre-discount levels -- will reduce quality further.¹⁰¹ Interestingly, competition pushes the producer to focus on short term gain; under this competitive pressure, the producer does not have the benefit of longevity to consider long term outcomes which may well be relevant in repeated interaction with buyers and consumers.

One competition authority stated that if the product is "purchased infrequently, a firm may be better able to decrease quality, particularly if product quality is also difficult to discern prior to purchase."¹⁰² But the opposite is also true. A firm may be better able to decrease quality incrementally if the product is purchased frequently, as the taste of tomato sauce is degraded slightly each month. Whichever is true for that industry, this quality degradation occurs when consumers cannot detect and respond to the quality erosion.

This problem of quality degradation, of course, can arise under oligopolies or monopolies. But a monopoly will offer quality innovations when it provides additional profits (or helps maintain its monopoly). The monopoly is likelier to recapture its investment in informing consumers of the quality benefits.

Both categories illustrate how at times, the correlation between quality and competition is imperfect. At times, competitive pressure, even intense pressure, will reduce, rather than safeguard, consumer welfare.

This phenomenon may be more common in daily life than one would expect. We illustrate its manifestation in three distinct areas.

¹⁰¹ A Ezrachi & K De Jong, *Buyer Power, Private Labels and the Welfare Consequences of Quality Erosion*, 33 ECLR 257, 258-259 (2012).

¹⁰² OECD Quality Report, *supra* note, at 62 (Canada).

B. Private Labels

The production of private (own) labels may provide opportunities for quality erosion where the buyer lacks the sophistication to identify quality degradation. As the private label producer does not own the brand, it is often less exposed to the risks of quality erosion.¹⁰³ Such erosion may affect the quality of food products, personal care products, cleaning products and more.¹⁰⁴

Take for example reports in Europe concerning the budget private label “Euro Shopper”—used by a few major European retailers. Some of Euro Shopper’s sauces and products were found to contain water as the main ingredient, leading to the retailers terminating their supply agreements.¹⁰⁵ Similarly, in the UK, three of the larger retailers withdrew from their shelves fish products sold under their own label which were found to be adulterated.¹⁰⁶ Beef and chicken product were also subjected to similar practices.¹⁰⁷ A similar practice of adding water to fish products was exposed in Germany, leading to a removal of the Edka private label King Prawns from shelves.¹⁰⁸ These are not isolated cases.¹⁰⁹ Other practices may concern the chemical composition and active ingredients in detergents and

¹⁰³ It is important to stress that we do not suggest that quality erosion is a characteristic of private label production, but the following examples are illustrative of the potential for such erosion. In fact they concern instances in which an attempt to erode quality was eventually exposed.

¹⁰⁴ Ezrachi & De Jong, *supra* note, at 258–259.

¹⁰⁵ Koen De Jong, ‘Too Lidl Too Late’ (2013) 29 Food Personality; See also <<http://www.volkskrant.nl/vk/nl/2664/Nieuws/article/detail/3423361/2013/04/10/AH-haalt-budgetlijn-Euro-Shopper-uit-schappen.dhtml>>.

¹⁰⁶ ‘Three UK Retailers Nix Pangasius’ Seafood International (September 2011) 19

¹⁰⁷ See ---, ‘Water-injected meat: the UK’s latest food scandal?’ (19 July 2004) <http://www.foodproductiondaily.com/Supply-Chain/Water-injected-meat-the-UK-s-latest-food-scandal>. ; F Lawrence, ‘Scandal of beef waste in chicken’ (The Guardian, 21 May 2003) <<http://www.theguardian.com/society/2003/may/21/food.foodanddrink>>

¹⁰⁸ See <<http://www.hannover-zeitung.net/aktuell/vermischtes/47214382-fisch-skandal-supermaerkte-machen-fische-mit-zusatzstoffen-schwerer-edeka-nimmt-erstes-produkt-aus-dem-handel>>; <http://www.fischmagazin.de/newsartikel-seriennummer-2618-Markt+am+Montag+thematisiert+zusaetzliches+Wasser+im+Fisch.htm>; <<http://www.news.at/a/lebensmittelskandal-gepanschter-fisch-supermarkt>>.

¹⁰⁹ Stearns, *supra* note, at 247 (discussing why “it is precisely the lack of (cr)edibility in the market—i.e., the absence of reliable quality signals, the lack of traceability, the high degree of anonymity, and the destruction of trust—that creates the structural impediments and powerful disincentive for improving the edibility of food”).

care products.¹¹⁰

Externalities may also be found in products having long supply chains that detach the source of the product from the end consumer. Illustrative is the horsemeat scandal which dominated the media in Europe in 2013. Following investigation by the Irish Food Standards Agency, many prepared meals across the EU were found to contain horse meat despite their packaging, which advertised the meat as 100% beef.¹¹¹ Likewise, McDonald's sales in Asia dropped after the discovery of its supplier was accused of repackaging old meat as new.¹¹² These scandals highlight the complexity of distribution channels and their susceptibility to fraud.¹¹³ Interestingly, fraudulent labeling may also occur at the retailer level. In Sweden, for example, a conspiracy to repackage of out-of-date meat was exposed and led to a criminal investigation into four stores in the Swedish ICA supermarket chain.¹¹⁴

C. Locked in Customers – Care Homes and Hospitals

Quality erosion can also occur when the customer is locked in with no outside option and is not the one choosing the provider or paying for its

¹¹⁰ A Ezrachi and K De Jong, 'Private Labels and the Welfare Consequences of Quality Erosion' (2012) 33 ECLR 257.

¹¹¹ See <<http://globalretailmag.com/index.php/never-compromise-quality/#sthash.1GsPmw6s.dpbs>>.

¹¹² Julie Jargon, *McDonald's Growth Suffers in U.S., China, Global Sales Fell 2.5% in July, Far Worse Than Expected*, WALL ST. J., Aug. 8, 2014; *McDonald's Pulls Meat from China Restaurants*, BLOOMBERG NEWS, July 28, 2014, <http://www.bloomberg.com/news/2014-07-28/mcdonald-s-supplier-recalls-meat-in-expired-food-scandal.html>.

¹¹³ See <http://ec.europa.eu/food/food/horsemeat/>; Michael Ollinger, Danna Moore, & Ram Chandran, *Meat and Poultry Plants' Food Safety Investments Survey Findings*, United States Department of Agriculture, Economic Research Service, Technical Bulletin Number 1911, at 4 (May 2004) (noting the "even if consumers contract foodborne illnesses from contaminated food products, they may not know the quality of the food that caused it because there often is no direct linkage between a sickness and the meat or poultry producer" as "(1) A buyer may be unable to identify an illness as being due to foodborne pathogens. (2) Even if a buyer knows that sickness is due to a foodborne pathogen, it may be difficult to determine the specific food that caused it, partly because the evidence has already been consumed. (3) Although the food may be identified, the place of purchase/consumption may be unknown. (4) If the place of purchase/consumption is known, the producer of the specific food may be unknown because the store may have bought meat or poultry products from many suppliers, obscuring the producer's identity.").

¹¹⁴ See <http://en.wikipedia.org/wiki/ICA_meat_repackaging_controversy>.

services.¹¹⁵ Some areas of public procurement exhibit these characteristics. In these instances it is indeed interesting to ask whether focusing primarily on price and cost truly delivers greater value or in fact results in lower value, albeit unquantifiable, as quality is eroded.

Take for example the provision of care homes in the UK. Their quality erosion made the headlines in 2011. Interestingly, the quality erosion was reported by the provider and tacitly accepted by the buyer—the National Health Service (NHS). Arguably, the NHS did not fully internalize the cost of the erosion and was incentivized to increase pressure on price on account of the patients.¹¹⁶ In that instance a large number of care homes, which provided services for the NHS, argued that the NHS had been systematically reducing its payments, thereby undermining the quality of service. They argued that the NHS used “its dominant purchasing power in a way that involved ‘coercion not competition and is giving precedence to price over other necessary considerations,’ which included the cost of providing care and the impact on patients.”¹¹⁷

More generally, with respect to the health sector, it is interesting to note that generally, a positive correlation exists between competition and quality of the services.¹¹⁸ However, some studies suggest that “market competition might be a blunt instrument and it may not be the most suitable policy tool to drive hospital quality-improvement effects.”¹¹⁹

¹¹⁵ Additionally, some argue that markets in which customers are locked into technical platforms are not susceptible to quality-based competition. See e.g. Paul A. David, *Clio and the Economics of QWERTY*, 75 AM. ECON. REV. 332 (1985). However, these arguments are controversial in theory, and their empirical support is debated. See Stan J. Liebowitz and Stephen E. Margolis, *The Troubled Path of the Lock-In Movement*, 9 JOURNAL OF COMPETITION LAW AND ECONOMICS 125, 151 (2012) (concluding “after more than twenty years, there is scant evidence to support harmful path dependence as a significant problem, at least in market outcomes”).

¹¹⁶ See Ezrachi & De Jong, *supra* note, at 261-262.

¹¹⁷ Nicholas Timmins, *Care Homes say NHS driving down prices*, FINANCIAL TIMES, June 10, 2011.

¹¹⁸ OECD, *supra* note, at paras 73-88 (addressing the correlation between competition in the hospital services sector and the quality of the services offered; however, the studies cited provide for inconclusive results, though on the whole they seem to support that competition contributes to improved quality); Brekke et al., *supra* note, at 472 (noting that while the picture is “mixed,” the majority of studies find a positive relationship between competition and quality in the health care sector).

¹¹⁹ OECD, *supra* note, at para 83; J Maeda & A LoSasso, *Effect of Market Competition on Hospital Performance for Heart Failure*, 17 AMERICAN JOURNAL OF MANAGED CARE 816,

D. Airlines

Interestingly, quality erosion may also be detected in well-regulated industries. Here such degradation of service and quality may exist within the margins allowed for by the relevant regulation. It may allow the provider to offer attractive prices, while reducing less transparent areas of service.

The proliferation of budget airlines has increased the pressure on airlines to provide services at lower costs. Some of the price reductions are accompanied with transparent changes to quality of service. Others, however, may involve disguised variants. Indeed, intense competition may induce airlines to exploit consumers' behavioural biases, involving less salient factors of quality.

Take for example the possible impact on safety and air delays. According to figures published by the Civil Aviation Authority, pilots had to make 28 emergency landings because of fuel shortages at British airports between 2010 and 2012. In addition, 224 aircrafts flying into British airports or operated by UK-based airlines have reported low fuel incidents over the past four years despite the strict rules regulating the fuel intake within the EU.¹²⁰ Reportedly, pilots can be under pressure from airlines in light of the industry's needs to minimise costs.¹²¹ As reported by one pilot: "I'm constantly under pressure to carry less fuel than I'm comfortable with... Sometimes if you carry just enough fuel and you hit thunderstorms or delays, then suddenly you're running out of gas and you have to go to an alternate airport."¹²² According to the regulatory framework, airlines should

821 (2011).

¹²⁰ See D Milward, *Pilots forced to make emergency landings because of fuel shortages*, THE TELEGRAPH, August 20, 2012, <<http://www.telegraph.co.uk/news/aviation/9488249/Pilots-forced-to-make-emergency-landings-because-of-fuel-shortages.html>>; D Milward, *Airlines declare more than 200 low fuel emergency landings in four years*, THE TELEGRAPH, March 11, 2013 <<http://www.telegraph.co.uk/news/aviation/9922161/Airlines-declare-more-than-200-low-fuel-emergency-landings-in-four-years.html>> .

¹²¹ *Id.* See also K Perry, *Airline pilots reveal commercial pressure to carry less fuel*, EXARO, August 20, 2012, <<http://www.exarone.com/articles/4562/airline-pilots-reveal-commercial-pressure-to-carry-less-fuel>>.

¹²² ---, 'Airline Pilot Secrets' (Travel, 2 September 2013) <

not be allowed to take off without enough fuel to reach their destination and without accounting for alternative airports in their flight plan together with an additional 30 minutes flying and a final approach before landing.¹²³ Usually, low fuel incidents take place in the event of bad weather, where flights are inclined to spend more time in the air than originally planned.¹²⁴

Apart from the above-mentioned instances of low fuel emergency landings, the airline sector provides further examples of possible quality erosion. Intense competition in the airline sector drove Qantas' decision to open a new operator in Asia, where the associated costs are much lower. This decision would amount to 1,000 job cuts and the Transport Workers Union alleged that it would result in a rapid decline in standards, though Qantas rebutted this allegation. Irrespective of the actual truth of statements of this sort, the fact remains that the decision was driven by excess competition and could possibly result in a lowering of operating standards.¹²⁵

<http://www.telegraph.co.uk/travel/travelnews/10280316/Airline-pilot-secrets.html>>.

¹²³ Milward, *Airlines declare more than 200 low fuel emergency landings in four years*, *supra* note.

¹²⁴ *Id.* One example is the Virgin Atlantic flight from Florida to the UK in January 2012 that had to take an emergency landing due to fuel shortage, since the flight duration was longer than usual because of the severe weather conditions in the Gatwick area. Similar incidents took place in July 2012 with Ryanair flights in Spain. The Spanish consumer association accused Ryanair for putting passengers' security at risk and called for a €4.5 million fine together with a three year suspension of its operating license should the investigation confirm any wrongdoing. Ryanair has been ordered to 'review' the amount of fuel it carries, but strictly speaking did not violate the rules, as the watchdogs accepted that all three Ryanair planes left for Madrid "with fuel in excess of Flight plan requirements" and also with fuel "in excess of the minimum diversion fuel" required, so remained strictly within the rules. R Wilsher, K Perry, S Cooke and A Winward, *How Virgin Flight from Florida Run Low on Fuel After Diversion*, EXARO, August 18, 2012, <http://www.exarone.com/articles/4546/how-virgin-flight-from-florida-ran-low-on-fuel-after-diversion>; K Perry, *Spain probes Ryanair over three flights in low fuel 'may-days'*, EXARO, August 18, 2012, <http://www.exarone.com/articles/4560/spain-probes-ryanair-over-three-flights-in-low-fuel-maydays>; R Massey, *Ryanair ordered to 'review' fuel policy after making three emergency landings because planes almost ran out*, Mail online, September 20, 2012, <http://www.dailymail.co.uk/news/article-2206322/Ryanair-ordered-review-fuel-policy-making-THREE-emergency-landings-planes-ran-out.html>; K Perry, *Airline pilots reveal commercial pressure to carry less fuel*, EXARO, August 20, 2012, <http://www.exarone.com/articles/4562/airline-pilots-reveal-commercial-pressure-to-carry-less-fuel>; *Airline Pilot Secrets*, TRAVEL, September 2, 2013, <http://www.telegraph.co.uk/travel/travelnews/10280316/Airline-pilot-secrets.html>.

¹²⁵ ---, *"Darkest Day" as Qantas plans Asian Move*, ABC News, The World Today, 16 August 2011,

Another illustrative example concerns air-quality in airplanes.¹²⁶ Other, less sensitive areas in which quality erosion may be detected concern the airlines' practice of unbundling the charges for checked bags in airline travel,¹²⁷ changes to flight schedule, carry-on baggage policies, leg room, quality of onboard meal and drink service, quality of frequent flyer programs and other ancillary services.¹²⁸

CONCLUSION

No one disagrees that quality is a fundamental aspect of competition. As we point out, quality will be especially important in two-sided markets where a product or service is offered for free. Nor do we fundamentally disagree with two heuristics upon which the competition authorities rely. We accept that at times quality and competition are positively correlated, i.e., more competition will generally increase quality for a given price or reduce price for a given level of quality. We also accept that when prices and quality vary, consumers at times will weigh the offerings using an internal price-quality metric.

We aim here to identify several scenarios where these heuristics break down, when competition and quality are not positively correlated, and when an increase in competition can actually reduce consumer welfare. We also aim to identify two necessary, but not sufficient, conditions, that are common to all of these scenarios. The first relates to the consumers' limited ability to accurately assess quality differences. This may be

<http://wayback.archive.org/web/20110820043211/http://www.abc.net.au/news/2011-08-16/unions-slam-qantas-over-job-cuts/2841954>.

¹²⁶ S McCartney, *Why Air Quality on Planes Can Seem Stagnant?*, WALL ST. JOURNAL, July 16, 2009, http://online.wsj.com/article/SB10001424052970204261704574275980659583434.html?mod=WSJ_article_comments#articleTabs%3Darticle. In the US, experts have undertaken studies and concluded that the air quality is overall satisfactory but there is room for improvement. In the same vein, flight attendant unions have expressed concerns about illnesses that may have resulted from poor air quality exposure aboard airplanes. Therefore, the unions had been pushing for a tougher air-circulation requirement, but were overall pleased with the findings of the report.

¹²⁷ See M Huffman, *Marrying Neo-Chicago with Behavioral Antitrust*, 78 ANTITRUST L.J. 105 (2012).

¹²⁸ Amended Compl. ¶¶ 33, 80, *United States v. US Airways Group, Inc.*, Case 1:13-cv-01236-CKK (D.D.C. filed 09/05/13).

attributable to external factors (such as deceptive claims) or dispositional factors (such as consumer biases or imperfect willpower). The second concerns imperfect information flows that make it difficult or costly to convey to consumers the products' or services' inherent quality differences. Companies recognize that neither they nor their competitors can easily or inexpensively convey to consumers the inherent quality differences in their and their competitors' product offerings. With these two conditions in mind, we provided instances when an increase in competition will not increase quality (when one would expect it should) and when competition is inversely correlated with quality, and its increase would lead to quality degradation.

A sophisticated company is likely to identify instances in which quality forms the point of least resistance. We note that in a repeated game one would assume a cost and risk which the producer will attribute when engaging in limited or underinvestment in quality. We show, however, that under certain market conditions, the rational and profit maximizing strategy would involve quality manipulation, despite competitive pressure. In other instances, it is the alternative cost of being forced out of the market which may lead an undertaking to engage in quality manipulation.

So should competition authorities continue to rely on their two heuristics? Yes, but very cautiously in markets characterized by the two conditions we identify. If they apply their heuristics uncritically in these markets, there is a greater risk that they will reach the wrong conclusion or fail to appreciate the degradation in quality.

This paper lays out the risk. More inquiry is required on the additional steps the competition authorities can and should take in these markets. Granted competition authorities will at times have difficulties in directly assessing and measuring quality. Other policy constraints may also cause the agencies to rely on their two heuristics. But the competition agency must carefully consider the possibility for negative or no correlation between competitive pressure and quality. In those instances, when possible, the competition authority must try to measure more directly the challenged merger's or restraint's impact on quality.

Another implication of our analysis concerns the benefit of competition. First, we provide instances where competition fails to improve quality and consumer welfare, when one ordinarily assumes it should. Second, we note that more competition is not always the elixir in imperfect markets. For example, new entry may increase, rather than ameliorate, firms' exploiting consumer bias and information asymmetries.¹²⁹

So what is the alternative? These limitations of the competitive process and of *ex-post* competition enforcement draw attention to other enforcement mechanisms. One alternative involves *ex-ante* enforcement, in the form of sector inquiries and market studies aimed at identifying market failures. Such measures may result in monitoring tools, discussion forums, and industry codes.¹³⁰ Another approach involves industry regulation designed with the producers' incentive and disincentives in mind. The regulatory aim here is to prevent a competitive race to the bottom and its attendant health and safety risks. Regulation may target informational asymmetries or focus on the supply of goods and service.

We do not attempt to explore these enforcement avenues in this paper. Rather we simply want to show that you don't always get what you pay for, even when competition is fierce.

¹²⁹ See Rosa M. Abrantes-Metz, *Is there Misdiagnosis and Mistreatment in the Market for Credit Ratings?*, 12 CPI ANTITRUST CHRONICLE 1 (2013) (arguing that competition would only exacerbate information problems in rating financial products).

¹³⁰ See for example the EU market study on food supply *The impact of private labels on the competitiveness of the European food supply chain*, PUBLICATIONS OFFICE OF THE EUROPEAN UNION, ENTERPRISE AND INDUSTRY MAGAZINE 1-202 (2011)