ANDERSON ECONOMIC GROUP

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From: Patrick Anderson, Principal & CEO
Margarita Bashelvaci, Consultant

Re: *Consumer Damages in Product Misrepresentation Cases: Examples from Beer, Cars, and Burritos*

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Abstract

Sellers of goods to consumers in the United States have numerous statutory and common-law obligations to represent accurately key characteristics of their products. However, they operate in an environment of rampant commercialism, recurring hyperbole, and near omnipresent "puffery" regarding the alleged superiority of these same products.

At some point, deliberate misrepresentation becomes a cause for damages to consumers, which can be claimed under both state and federal laws. Cases such as these raise recurring issues of interest to forensic economists, such as:

- What is misrepresentation, and what is "mere puffery"?
- How is a consumer damaged by consuming a usable product that fails to meet just one of numerous claimed product attributes?
- How are damages calculated for a class of consumers, and how are those proved by expert testimony?

Examples of actual cases involving misrepresentation of German and Japanese beer, Mexican food, and crashworthiness and performance of American, Japanese, and German cars will be presented. Cases to be discussed include Becks and Kirin (in beer) and General Motors (in cars); as well as the ongoing issues involving Volkswagen diesel-engine vehicles and "non-GMO" claims for Mexican food. The presenters were involved in preparing expert testimony in at least one of the cases presented. Based on their experience, they offer guidance for forensic economists charged with estimating damages to consumer in future cases.

Table of Contents

A. Introduction

Legal Bases for Consumer Damages

Numerous state and federal statutes allow for consumers to recoup damages from sellers of products and services that have been demonstrated as failing to fulfill the promises of their seller.

Among these are the following:

1. Federal Trade Commission Act

   Section 5(a) of the FTC Act provides that "unfair or deceptive acts or practices in or affecting commerce...are...declared unlawful."

   "Unfair" practices are defined as those that "cause[] or [are] likely to cause substantial injury to consumers which is not reasonably avoidable by consumers themselves and not outweighed by countervailing benefits to consumers or to competition."[1] However, the Act does not provide a private cause of action in this section.[2]

2. Federal Truth in Lending Act

   Section 1640 of the Federal Truth in Lending Act establishes civil liability for violations of the 1968 act. The consumer can be awarded "actual damages" from creditors that violate the act. In some cases, twice the finance charge in connection with the transaction.[3]

3. Federal Fair Credit Reporting Act

   Section 1681n of the act provide for "actual damages" of net less than $100 or more than $1,000.

4. Older federal laws, such as the Panama Canal Act of 1979.

   This act, enacted after the 1977 treaty, requires the Panama Canal Commission to pay actual damages to the crew, vessel, and other parties (including costs of repairs and other expenses) that are injured as a result of an accident in the Canal.[4]

5. State Unfair and Deceptive Acts and Practices ("UDAP") statutes

   All states and the district of Columbia have laws establishing deceptive trade practices. Among these are:

   - Florida Deceptive and Unfair Trade Practices Act ("FDUTPA")
   - Illinois Consumer Fraud and Deceptive Business Practices Act ("ICFDBPA")

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1. FTC Act, 15 U.S.C. Sec. 45(n). Citations to all laws are in the Reference section. This interpretation is also asserted on the FTC website; see FTC, "A Brief Overview," 2008.
2. Laeffer (1980) provides legal argument and case law to support this, starting with *Carlson v Coca Cola,* 483 F2d 297, 280 (9th Circuit, 1973). The detailed statement on the FTC's web site (FTC "A Brief Overview" 2008) implicitly adopts this stance by failing to list any private right of action under the FTC Act, even in the Appendices.
3. See Myers (2006) for a discussion.
4. 22 USC section 3773. This law is cited primarily to underscore the long-standing reliance on the principle of actual damages to compensate consumers and workers, who could be injured parties from shipping mishaps in the Panama Canal as elsewhere.

- New York General Business Law section 349
- Michigan Consumer Protection Act
- Texas Deceptive Trade Practices Act ("DTPA")

6. Warranty Claims under the Uniform Commercial Code

   Article 2 of the model Uniform Commercial Code, which has been adopted by nearly every state, creates an express warranty for promises, description, and affirmation by the seller.[5] The remedy for goods that are warranted to perform but fail to do so is stated in the model Code as "the difference at the time and place of acceptance between the value of the goods accepted and the value they would have had if they had been as warranted."[6] Of course, other state laws (and federal law) also govern warranties, but the inclusion of this "difference in value" remedy in the model UCC is a powerful principle that underlies many statutes, as well as case law.[7]

In our experience, the majority of cases involving consumer damages, and where expert testimony by forensic economists is required, arise under state unfair and deceptive practices acts. Legal scholars often invoke the relative weak remedies offered to consumers under early-20th century federal laws (notably the FTC Act, passed in 1914), as the prime motivation for the rise of state unfair and deceptive trade and practices acts.[8]

Actual Damages Due to Products That Fail to Perform

A recurring theme in state unfair practices acts is the recovery of injured consumers of "actual damages." For example, the Michigan Consumer Protection Act states:

> Sec. 11. A person who suffers loss as a result of a violation of this act may bring a class action on behalf of persons residing or injured in this state for the actual damages caused by any of the following:
> (a) A method, act, or practice in trade or commerce defined as unlawful under section 3.

Section 3 of the same Act defines unlawful acts in an extensive list, including:

> (a) Causing a probability of confusion or misunderstanding as to the source, sponsorship, approval, or certification of goods or services.
> ...
> (d) Representing that goods are new if they are deteriorated, altered, reconditioned, used, or secondhand.

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5. "Any affirmation of fact or promise made by the seller to the buyer which relates to the goods and becomes part of the basis of the bargain creates an express warranty that the goods shall conform to the affirmation or promise." *Uniform Commercial Code* (2002), Art. 2, section 2-313.
6. Uniform Commercial Code (2002), Art. 2, section 2-714.
7. Article 1, section 1-305 of the *Uniform Commercial Code* (2001) also includes a general statement of remedies that is consistent with the "making whole" principle: "The remedies provided by [the Uniform Commercial Code] must be liberally administered to the end that the aggrieved party may be put in as good a position as if the other party had fully performed but neither consequential or special damages nor penal damages may be had except as specifically provided in [the Uniform Commercial Code] or by other rule of law."
8. See in particular Leaffer & Lipson (1980), and Morgan & Miller (2015).

> (e) Representing that goods or services are of a particular standard, quality, or grade, or that goods are of a particular style or model, if they are of another.

The actual damages are normally understood as economic damages related to the deficient product, and are intended to compensate the injured party for his or her loss. Some statutes allow for additional damages for "pain and suffering" or "mental anguish," as well as allow for double or treble damages for certain unlawful acts. Many statutes establish minimum amounts of damages that can be claimed; some have maximums for certain claims.

A Note on Mere Puffery

These statutes often read very strictly, meaning that any specification or claim of performance or origin can be considered to be legally enforceable by the consumer, subject to the limits and requirements in the law. However, there is also a long-standing doctrine of ignoring marketing statements that are obviously exaggerated or inherently subjective. This doctrine is known by the phrase "mere puffery," and is repeatedly invoked by defendants in cases where consumer claim the products fail to perform as advertised.

Forensic economists cannot escape assessing this sometimes ticklish question, and we provide both examples and methodological advice regarding it below.

Methodology Question: What Are "Actual Damages" For Deficient Consumer Products?

There is a long history of estimating economic damages for business purposes. Legal authors point to *Hadley v. Boxendale* (1854) as the leading case involving damages to a business from a breach of contract in the English law tradition.[9] At least one economist points much farther back, to the *Law of Hummarabi* (circa 1700 BC), for similar guidance.[10]

Now consider consumer goods, whose vast reach includes everything from french fries to French cologne. What are the "actual damages" for consumer goods that perform some, but not all, of functions claimed by their seller?

This is a much more difficult question that the remedy for a product that completely fails, or is rejected at the time of delivery. A car that won't start; a glass that is broken; food that is spoiled; these are usually repaired or replaced completely. Even comedy underlines the fairness of this principle for complete failures; the classic 1969 "dead parrot" skit of Monty Python provides nearly modest intellectual basis.[11] Apparently, a similar joke was also told 1,600 years ago.[12]

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9. The ruling, memorized by generations of lawyers, includes the following reasoning:
   Now we think the proper rule in such a case as the present is this: Where two parties have made a contract which one of them has broken, the damages which the other party ought to receive in respect of such breach of contract should be such as may fairly and reasonably be considered either arising naturally, i.e., according to the usual course of things, from such breach of contract itself, or such as may reasonably be supposed to have been in the contemplation of both parties, at the time they made the contract, as the probable result of the breach of it.
10. See Anderson (2013), and also the article by the same author in Gaughan (2005). While "an eye for an eye" is the most remembered of these "laws," they also covered compensatory damages for such injuries as the flooding of a field or the killing of a cow, both of which were mighty offenses in an agricultural society.

Example Questions to an Expert on Consumer Damages

Here are a simple set of questions that illustrate the challenge of estimating "actual damages" for consumer goods that are less than perfect, but not complete failures:

- What are the damages to a consumer that purchased a new car advertised as "sleek" and "powerful," who later decides it is neither sleek nor powerful? Powerful but not sleek? Which advertising statements are obviously "mere puffery," and what are not?
- What are the damages to a consumer that thought she bought a newly-introduced GMO-free, "natural" burrito, when in fact she bought nearly the same burrito as the company sold the year before?
- What are the damages to consumers that bought a Cadillac that fully performed its driving tasks, but for which one of the disclosures regarding safety in the event of a crash were incorrect?
- How can we compensate beer drinkers that bought specific German or Japanese beers—only to discover to their later shock that these were actually produced in industrial facilities in the US?
- Can adherence to a 1516 Bavarian beer purity law[13] be considered proof today of "German" beer that is actually brewed in the USA? Is the answer the same if neither Germany nor the United States existed in 1516?
- What are the damages to three drivers of the same model car, each of which drives different amounts, for fuel economy claims that were overstated by the manufacturer?
- What are the damages to the former owner of a car, for whom it performed flawlessly, but who sold it around the time of widespread publicity surrounding an alleged improper claim by the manufacturer?
- What are the damages to an owner of a VW diesel-engined car that achieves better fuel economy but worse emissions than was claimed?

These types of questions are the focus of our methodology discussion. Several underlie methodological challenges in the Chipotle burrito, Cadillac car, Beck's beer cases described here, as well as the VW diesel emissions and Toyota unintended acceleration cases.

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11. The classic 1969 sketch, also known as the "Pet Shop Sketch," performed in *Monty Python's Flying Circus,* involved a Norwegian Blue parrot that was dead. The salesman, however, insisted, among other things, that the bird has beautiful blue plumage, and that it is "resting!...Probably pining for the fjords." Apparently, the sketch was voted as Britain's favorite Monty Python skit in 2014. (See John Lockett's remembrance in *Vanity Fair,* 2014, or any of numerous online versions.)
12. Adams, Stephen, 2008. "Dead Parrot sketch is 1,600 years old," *The Telegraph,* 13 Nov 2008; he cites work by American classicist William Berg, who translated *Philegos,* reputed by some to be the oldest existing collection of jokes. Of course, the jokes in ancient Greece, like those of today, involve stereotypes and subtle forms of rebellion against social structures, so one should avoid reading too much into any modern translation.
13. The "law," known as *Reinheitsgebot*, originated in Munich and was adopted by Bavaria in 1516. It limits the ingredients in beer, and has a storied history and continuing role in establishing authenticity among certain beer consumers.
    Compliance with the 1516 law was an argument made by the brewer in the *Beck's* case discussed here. The importance of this law in the industry was covered in a working paper presented a decade earlier at a NAFE International Conference ("Countries, Tastes, and the Value of a Beer Franchise," Anderson [2004]), a copy of which was attached to the expert report that was an exhibit to the settlement approved by the Court.

B. Methods of Estimating Damages

There are a few methods of estimating the damages incurred by a class of consumers affected by the misrepresentation of a product by its seller.

1. Price Premium Approach

The price premium approach implies estimating the additional price paid by consumers for the attribute of the product that was defective or misrepresented.

This method is explicitly contemplated in some statutes. For example, the Florida statute (which was the basis for the recovery to consumers in the Cadillac window sticker case, has a provision making the price premium an appropriate measure of damages.

The methodology for estimating price premiums can involve specific, if not ticklish, questions for the forensic economist. What is the price premium for a product for which there are many substitutes? For prospective purchasers of cars, beer, burritos—not to mention perfume, hamburgers, and clothing—there exists a veritable riot of choices, prices, and vendors. How much is the non-GMO pledge, the nicer styling, or the German beer cachet really worth?

Consider the ruling in the Cadillac window sticker case discussed further under "Cars: Cadillac and Safety Claim" on page 14. In that case, the Court of Appeals was explicit in its ruling that a consumer was paying a market premium for a 5-star-rated car compared to other cars, even if the consumer did not explicitly ask for such a vehicle or find that attribute important. The Court—correctly, from the point of view of economics—observed that prices set in the marketplace take into account all these attributes. To coin a metaphor from these facts, a person buying a Cadillac expected to pay a Cadillac price.

Thus, market price premiums are the obvious choice as a primary indication of damages—if such a premium is available in the market. For Cadillac buyers, whomever, there was no market price for a no-star-rated vehicle, just a 5-star-rated vehicle. This illustrates the fact that estimating market price premiums often requires serious effort.

We provide a representative calculation of a price premium, based on survey data for the premium and publicly-available financial data on the company, in Exhibit 4, "Representative Calculation of Consumer Damages Due to Non-GMO Claim: Price Premium Method." See also "Beer: Beck's and Kirin and Country of Origin" on page 13.

The steps necessary to acquire the data, and estimate damages for consumers in an entire state, are described in an exhibit to the expert report in that case that is publicly available. It is reprinted in Exhibit 1, "Sales Volume Method Discussion from AEG Declaration on Damages to Consumers in Beck's Country of Origin Matter."

2. Discounted Cash Flow (Lost Income) Approach

The discounted cash flow method involves estimating expenses and revenues related to the purchased goods, and estimating the lost income arising from the defect in the product. It is the obvious companion to the familiar DCF method in valuing businesses. The problems inherent in the traditional

DCF model—particularly its ignorance of management flexibility—are now well known, even though the model remains the workhorse of applied forensic economics and valuation work.[14]

Applying the method to consumer purchases is often very difficult, and in general is only available for long-lived products.[15] For example, consider the income loss from a vehicle that had been incorrectly described on a window sticker that was removed at delivery. One could conjecture that, for a majority of buyers, there was *no* tangible monetary loss from having the wrong sticker applied to a window for the first hour of ownership. For a small number, discovery of the defective representation could cause them to re-sell the car immediately, or drive it less frequently, both of which are likely to result in lost income.

Moreover, the cash flow approach assumes a well-known path of ownership and use. For tangible goods, some buyers rarely use their products; some use them all the time; many eventually sell them. A person buying an expensive article of clothing may, or may not, wear it all the time. A Cadillac buyer can decide to sell, store, or drive into the ground his or her purchase. The cash flow schedule for each of these is quite different.

For this reason, in both commercial and consumer damages involving long-lived products or businesses, we recommend that forensic economists consider the importance of the "real options" available to managers and consumers. We discuss methods that allow this below, and an illustration is provided in Exhibit 6, "Comparison Between Income and Value Methods."

3. Disgorged Profits Approach

The "disgorged profits" method is an alternative manner of estimating damages, and is available under some statutes. In many cases, it is an indirect measure of those damages that arise from consumer overpayments from misrepresented goods, as these profits must arise from selling something that a consumer desired. However, the profits (or even profits allocated to those goods) of the seller of the goods are usually *not* the same as the related overpayment of the customers.

Although it is only an indirect measure of damages, it can provide a useful indication of those actual damages to consumers, as well as provide the basis for a check on the reasonableness of a direct method.

We provide a representative calculation of disgorged profits, again using only publicly-available data and assuming liability, for a restaurant chain in Exhibit 5, "Representative Calculation of Disgorged Profits Due to Non-GMO Claim."

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14. The problem of ignoring management flexibility (including their "real options") in the DCF method is covered in a series of articles collected in Schwartz & Trigeorgis (2001). On the inherent problems with the DCF method when applied to commercial damages, see, e.g., "New Developments in Business Valuation," in *Developments in Litigation Economics,* (Patrick A. Gaughan & Robert J. Thornton, editors), New York, Elsevier, 2005, and Anderson (2013).
15. For consumer products that are consumed immediately, such as food, there are no future benefits or costs. Conversely, there are also few or no real options. However, for long-lived consumer products (particularly cars, which have a ready used market), the option to re-sell can account for half or more of the value of the car.

4. Lost Value Approach

The lost value approach involves estimating the value of the product with, and without, the defective or misrepresented attribute. The value to an investor of a stake in a business depends on both the expected earnings in the future from passive ownership of that stake, as well as the ability of the investor to control the entity, sell the interest, buy an additional stake, and other opportunities.

Recently, the "recursive" or "value functional" approach has been developed that allows the explicit estimation of such value. It is documented in Anderson (2013) and was described also in Anderson (2014).[16] Its use is illustrated in a case study excerpted here in Exhibit 6, "Comparison Between Income and Value Methods."

5. Real Option Approach

The real option approach involves estimating the lost income using a traditional DCF model, and then estimating separately the loss or gain arising from the consumer's real option to sell (or buy, or repair, or substitute) the product. As noted above, the DCF method has serious shortcomings for estimating business value when an investor has multiple real options, such as the ability to sell, buy, change direction, etc.

There are a number of real options methods that have been identified for these situations, which are more the rule than the exception. These are described in, among other references, the volume edited by Schwartz & Trigeorgis (2001).[17] The recursive method, described above, can often natively incorporate real options.

6. Adoption of an Arbitrary Schedule

This method involves having some person establish a schedule of damages to be paid to injured parties. Although this method has the least economic reasoning, it may be the most common method in large-scale consumer damage suits.

Unfortunately, the record behind the establishment of these schedules is often murky. It is frequently not clear whether the settlement or compensation amounts y were based on expert testimony, from political bargains, from judicial fiat, or some combination of the above. For example, consider the enormous Toyota sudden acceleration settlement, required payments of $1.6 billion and was intended to provide compensation for 22 million class members.[18] The Final Order, the Proposed Order, and numerous other documents refer to a "Plan of Allocation." The Plan of Allocation cites another

16. Anderson, Patrick L., 2013. *The Economics of Business Valuation: Towards a Value Functional Approach,* Stanford University Press.
    Anderson, Patrick L., 2014. "Policy Cost Uncertainty and Persistent Unemployment," *Business Economics,* Vol. 49, No. 1, pp. 2-20; Spring 2014.
17. Schwartz, Eduardo S. and Lenos Trigeorgis, 2001. *Real Options and Investment under Uncertainty*, MIT Press.
18. In re: Toyota Motor Corp. Unintended Acceleration Marketing, Sales Practices, and Products Liability Litigation, US district court, Central District of California, Judge James B. Selna, Final Order, July 2013

document, the "Manuel Declaration." Such declaration was not readily located, and was conspicuously absent from multiple related filings that were publicly available.[19]

The Final Order of Judge Selna in the case is explicit about the fact that no proof had been accepted, and no ruling had been made on the expert testimony underlying the settlement:

> Significantly, despite the volumes of expert reports developed by the parties, and despite repeated inspections and testing, Plaintiffs' experts have been unable to replicate the phenomenon of SUA [sudden unintended acceleration]. The significance of this fact cannot be overemphasized. Additionally, the proposed settlement was reached prior to the Court's ruling on a number of motions to exclude Plaintiffs' expert testimony. The uncertainty of whether those reports would ultimately be found to be admissible further contributes to the risk of continued litigation. [references omitted]

A second example may result from a settlement in the Cadillac window sticker case, discussed "Cars: Cadillac and Safety Claim" on page 14.

C. Cautions on Certain Methods

The list of methods above can appear deceptively simple, especially to a practitioner who typically has access to reference guides and data on wages, occupations, sales, stock returns, and other metrics and statistics common to forensic economics work involving lost wages and commercial damages.

We can identify a set of methods that have specific risks, about which we provide caution in advance.

1. Avoid Naive Use of Survey Data

Product attributes are often in the eye of the beholder. Frequently, market prices are not available for specific product attributes, and survey data can be used as the basis for a price premium estimate. Such data must be used with caution, and some cases, should be completely discarded.

The critical problem with survey data is that it represents, even in the best case, a stated preference. Economists have a long history of preferring actual willingness to pay, demonstrated by actual purchases, to any stated preference. The methodological record of what has been called "contingent valuation" is replete with grossly exaggerated estimates of damages, loss, and value that can be attributed directly to these errors.

That does not mean survey data is meaningless; indeed, it can be quite useful if used properly. Look for survey data that is as close to the actual consumer decision as possible, and for which respondents have a real understanding of the topic. For example, the question "how much would you pay to protect the Grand Canyon" provides the respondent with an opportunity to signal his or her political views, but not to actually buy the Grand Canyon. Any responses should be considered accordingly, and probably simply rejected. However, the question "how much would you pay for a larger meal," when asked of consumers who already purchased a meal at the same restaurant, would probably provide data of good quality.

19. Numerous documents are available at: http://www.toyotaelsettlement.com. [Excerpted documents retrieved Dec. 2016.]

We use survey data in Exhibit 4, "Representative Calculation of Consumer Damages Due to Non-GMO Claim: Price Premium Method." Although not discussed further here, the price premium used in that calculation reflects extensive use of professional judgement, and is substantially less than premiums that are implied by some survey data.

2. Avoid One-Scenario, One-Size-Fits-All Damages

We note the existence of real options for consumers, as with businesses and investors. Always take into account the options consumers have when estimating the benefits, costs, and value to them of goods and services.

The auto cases provide straightforward examples. Any auto owner has the option to sell the auto well before he or she incurs the future costs of ownership, including costs related to claims about mileage, safety, warranty coverage, reliability, etc. Purchasers of other consumer goods have similar options.

The difference between a naive, one-scenario income model and a "recursive" model that calculates value to the consumer while natively considering the options retained by the consumer can be large. McManus (in Anderson, Johnson, McManus, 2015) illustrated this in a case study presented at the 2015 NAFE sessions, and excerpted here in Exhibit 6, "Comparison Between Income and Value Methods." He calculated that the actual loss to consumers from a significant misstatement in fuel economy, if known to consumers who could act upon that knowledge, would be 40% less than what would be calculated under the naive assumption that their driving behavior was completely unchanged by the knowledge.

Particularly when you use a DCF (income) method, and schedule out the future costs and benefits, be sure to consider the options available to consumers. It is often better to use a method that natively considers them, such as the Lost Value method and the Real Option method, than one that relies on a single scenario.

3. Use Corroborating Data from the Market When Possible

Our experience underlies the importance of this. As evidenced by the work in the *Beck's* case, in a surprising number of cases the estimates that arise from one set of data are quite different from those arising from other data. This can be the case for a large number of reasons, including strategic misinformation (or outright concealment) by one of the parties, as well as general business difficulties in sorting out what products were sold to whom, during what time frame, at what price.

In one of the exhibits, we include a recapitulation of an actual calculation in the *Beck's* case, which was not based on confidential information and was not redacted by the Court. It shows calculations relying upon demographic and industry data, and illustrates the difference between the two even when prepared by knowledgable practitioners with extensive industry knowledge.

D. Example Cases

Beer: Beck's and Kirin and Country of Origin

Anheuser-Busch ("A-B") began brewing some of its import beers, like Beck's, Bass, and Kirin, for the U.S. market in its brewery in St. Louis, Missouri. Nevertheless, the beer giant continued to misrepresent Beck's as a German beer, Bass as a beer from UK, and Kirin as a Japanese one. Moreover, A-B continued to charge consumers the same price as when it was an imported beer.

Many of these beer brands became subject of class-action lawsuits filed by the consumers who were confused about the origin of these beers.

The matter of *Marty v. Anheuser-Busch* involved misrepresentation of the origin of Beck's. The beer originated and was brewed in Germany from 1873 until 2012 when A-B began brewing this beer in St. Louis, Missouri. The plaintiffs are consumers of Beck's who purchased this beer brand "in reliance on the representations contained on their packaging and Beck's history of being an imported beer from Germany."[20]

The plaintiffs alleged that A-B made misrepresentations about Beck's origin which caused confusion among consumers: "Consumers believe they are purchasing German beer, imported from Germany, brewed using German requirements and with German ingredients, when in fact, they are purchasing beer brewed in St. Louis, Missouri, brewed with ingredients from the United States."[21] The plaintiffs claimed that "based on Defendant's misrepresentations and deceptive conduct, [they] purchased beer that had less value than what [they] had paid, and [they] ha[ve] accordingly suffered legally cognizable damages proximately caused by Defendant's misconduct."[22]

The plaintiffs argued that "as a result of these unfair and deceptive practices, Defendant has collected millions of dollars from the sale of Beck's Beer that it would not have otherwise earned. Plaintiff and class members paid money for a product that is not what it claims to be or what they bargained for. They paid a premium for Beck's Beer when they could have instead bought other, less expensive, domestic beer, and consumers have lost the opportunity to purchase and consume other, truly imported beer."[23]

Accordingly, the plaintiffs further allege, they were "willing to pay a premium for Beck's Beer because of these representations and omissions, and would not have purchased, would not have paid as much for the products, or would have purchased alternative products in absence of these representations and omissions."[24]

20. Amended Complaint, *Marty v. Anheuser-Busch,* paragraphs 22, 24, 26.
21. Amended Complaint, *Marty v. Anheuser-Busch,* paragraph 15.
22. Amended Complaint, *Marty v. Anheuser-Busch,* paragraphs 22, 24, 26.
23. Amended Complaint, *Marty v. Anheuser-Busch,* paragraphs 18, 21.
24. Amended Complaint, *Marty v. Anheuser-Busch,* paragraphs 23, 25, 27.

Estimating Damages for Consumers

Anderson Economic Group was retained to serve as a damages expert in the matter of *Marty v. Anheuser-Busch* involving misrepresentation of the origin of Beck's.[25] We used a price premium approach and sales volume method to estimate consumer damages.

- See Exhibit 1, "Sales Volume Method Discussion from AEG Declaration on Damages to Consumers in Beck's Country of Origin Matter."
- See Exhibit 2, "Exhibit from AEG Declaration on Damages to Consumers in Beck's Country of Origin Matter."
- See Exhibit 3, "Summary Table from AEG Declaration on Damages to Consumers in Beck's Country of Origin Matter."

Disposition of the Case

The Court certified the class of plaintiffs, after considering expert testimony including the exhibits we cited above, as well as other expert testimony based on confidential data. (As with the other case presented above, we do not disclose any confidential data here.)

After this ruling, A-B agreed to settle this class action lawsuit. The settlement agreement, which was based on estimates of damages arising partially from the exhibits cited above, was approved by the court. As noted in the exhibits, the available compensation to plaintiffs exceeded $20 million. Class Members received a partial refund for prior purchases of Beck's Beer. Under the terms of the settlement agreement, Class Members could receive $0.10 for an individual bottle or can to $1.75 for a 20-pack of bottles. In total, they could receive up to $50 per household if they have receipts, and $12 if they do not.[26]

Cars: Cadillac and Safety Claim

General Motors sold its 2014 Cadillac CTS vehicle with a window sticker that displayed inaccurate safety information. In the matter of *Carriuolo v. General Motors*, the court summarized the facts as following:

> In November 2013, Bracchi purchased a new 2014 Cadillac CTS sedan in Brentwood, Tennessee. In December 2013, Carriuolo purchased the same model in Sunrise, Florida. As it turns out, when these vehicles were sold, General Motors had provided -- in the standardized "Monroney" window stickers that appear on new vehicles -- inaccurate safety information. […] Monroney stickers for certain 2014 Cadillac CTS sedans represented that each vehicle had received perfect five-star ratings in three [out of six] categories […].

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25. One of the exhibits to the report that was included in the court's decision was AEG paper on *Countries, Tastes, and the Value of Beer Franchises in the United States,* presented at NAFE conference in Edinburgh, Scotland on June 25, 2004.
26. *Marty v. Anheuser-Busch,* Settlement Agreement and Release.See also the website for the settlement: https://www.becksbeersettlement.com/Home.aspx.

> In fact, the NHTSA had not assigned any safety ratings to the 2014 Cadillac CTS at the time of sale to class members.[27]

The plaintiffs claimed that they lost money buying 2014 Cadillac CTS with stickers falsely indicating the five-star safety ratings when the vehicles were not rated at all. This misrepresentation allowed the manufacturer to command a price premium and overcharge buyers. "As long as a reasonable customer will pay more for a vehicle with perfect safety ratings, the dealer can hold out for a higher price than he would otherwise accept for a vehicle with no safety ratings. [...] Because a vehicle with three perfect safety ratings may be able to attract greater market demand than a vehicle with no safety ratings, the misleading sticker arguably was the direct cause of actual damages for the certified class even if members individually valuer safety ratings differently."[28]

The plaintiffs argued that "by inaccurately communicating that the 2014 Cadillac CTS had attained three perfect safety ratings, General Motors plainly obtained enhanced negotiating leverage that allowed it to command a price premium. The size of that premium — "the difference in the market value of the [vehicle] in the condition in which it was delivered and its market value in the condition in which it should have been delivered," Rollins, 454 So. 2d at 585 — represents the damages attributable to that theory of liability."[29]

Estimating Damages for Consumers

The Court of Appeals for the Ninth Circuit, in a ruling notably for its quite clear economic reasoning, stated that the state law required an explicit compensation for the lost value of the product—not any number calculated on the basis of an individual purchaser's implied preferences. It concluded:

> Thus, the proper question is not how much the erroneous sticker may have reduced the vehicle's perceived value for any individual purchaser or lessee. Rather, damages should reflect the difference between the market value of a 2014 Cadillac CTS with perfect safety ratings for three standardized categories and the market value of a 2014 Cadillac CTS with no safety ratings.[30]

Following this (quite recent) decision, the trial court has yet to approve a settlement. It appears that, as of December, 2016 as this article goes to press, one of the parties has proposed a settlement of $1,000 per vehicle in the State of Florida. Although no description of this was available as of the date of this article, it certainly appears to be an arbitrary number.

Burritos: Chipotle and Its "Non-GMO" Pledge

Beginning April 2015, Chipotle began representing the majority of its products as "Non-GMO."[31] A significant amount of market research available to the restaurant industry confirmed that contemporary customers desired foods that were "natural," and that some (but not all) consumers preferred foods that

27. Appeal, *Carriuolo v. General Motors Company,* pages 3-4.
28. Appeal, *Carriuolo v. General Motors Company,* page 15.
29. Appeal, *Carriuolo v. General Motors Company,* page 19.
30. *Carriuolo v. General Motors Company,* Court of Appeals ruling, May 2016, p. 13. The Court here also cites *Rollins v. Heller,* (1984) on FDUTPA damages being the "difference in market value of the product or service in the condition in which it was delivered and its market value in the condition it should have been delivered according to the contract of the parties."

were not genetically modified ("non-GMO"). The attraction to the restaurant industry of pledging to sell "natural" and "non-GMO" foods is obvious.

However, the question of what "non-GMO" actually means, and what the effect of a non-GMO pledge is to consumers, became the subject of a lawsuit filed by consumers under the Florida unfair practices act.

In the matter of *Reilly v. Chipotle Mexican Grill*, the plaintiffs claimed that:

> Chipotle unfairly advertises and markets that its food products are made with non-GMO ingredients, even though it knows that its meat and dairy products come from animals that consume GMO feed. Meat and dairy products that come from animals that consume GMO feed are in fact GMO products, and not GMO-free as advertised and marketed by Chipotle.[32]

According to the plaintiff, "Chipotle claims to use ingredients that are GMO-free in order to capture health and environmentally conscious consumers who will pay premium prices for food products that are healthier and/or more environmentally-friendly."[33]

The plaintiff also claimed that she and

> the class members paid a premium price for their Chipotle food products, relying on Chipotle's claim that the food products did not contain Gums. Plaintiff and the Class have been damaged by Chipotle's deceptive and unfair conduct in that they purchased a misbranded and worthless product or paid prices they otherwise would not have paid had Chipotle not misrepresented the ingredients in the food products.[34]

Chipotle, in its answer, responded that the "non-GMO" pledge had been fulfilled, partially by noting on its website and in some materials that its beef and dairy ingredients come from animals that are fed GMO-enhanced feed. Chipotle also contested whether the consumers were damaged:

> "Plaintiff cannot establish that the reasonable consumer would believe that meat and dairy ingredients sourced from animals that have consumed GMO feed are, or contain, GMOs," the restaurant chain said. "Accordingly, plaintiff cannot demonstrate that Chipotle has violated the [Florida Deceptive and Unfair Trade Practices Act] by making representations allegedly inconsistent with that belief."[35]

Moreover, Reilly "cannot establish that any allegedly deceptive practice caused her harm or led to Chipotle's being unjustly enriched

Estimating Damages for Consumers

Anderson Economic Group was retained as a damages expert for the plaintiffs in the matter of *Reilly v. Chipotle Mexican Grill*. For this task, we used a set of methods to estimate damages for a class of consumers in the state of Florida. Both publicly-available data (including data on the restaurant

31. The Chipotle marketing campaign, including the tag line "Farewell to GMOs," involved paid ads as well as in-store collateral materials. As of December 2016, the company's website continues to include a prominent statement regarding their pledge, available here: https://chipotle.com/gmo.
32. Class Action Complaint, *Leslie Reilly v. Chipotle Mexican Grill, Inc.*, at ¶ 12.
33. Class Action Complaint, *Leslie Reilly v. Chipotle Mexican Grill, Inc.,* at ¶ 15.
34. Class Action Complaint, *Leslie Reilly v. Chipotle Mexican Grill, Inc.,* at ¶¶ 22, 23.
35. See, e.g., Milano, Ashley (2015)."Chipotle Tries Again to Dodge Non-GMO Class Action Lawsuit," found at: https://topclassactions.com/lawsuit-settlements/lawsuit-news/338348-chipotle-tries-dodge-non-gmo-class-action-lawsuit (July 21, 2016).

industry, and on Chipotle and its competitors), and private data were used. (Private data were obtained under a protective order, and no such private data or information covered by the protective order are disclosed here.)

Using only publicly-available data, we provide representative calculations of consumer damages due to an alleged misrepresentation of restaurant food similar to what occurred in the *Chipotle* case, using two methods: price premium and disgorged profits.

- See Exhibit 4, "Representative Calculation of Consumer Damages Due to Non-GMO Claim: Price Premium Method."
- See Exhibit 5, "Representative Calculation of Disgorged Profits Due to Non-GMO Claim."

Two Cautions on These Representative Calculations

We provide these representative calculations along with two cautions:

1. First, this article and this example are intended as methodological instruction. The estimates we made in a specific case that were informed by confidential data are different.
2. Furthermore, as damages experts we were not charged with determining liability, and note that the question of whether Chipotle's "non-GMO" claim violated the state law was hotly disputed.

Disposition of the Case

As of November, 2016, the US District Court for Southern Florida dismissed the plaintiff's motion to certify a class of consumers under the Florida statute. The plaintiffs have appealed.

E. Conclusion: Advice on Estimating Damages

Based on our experience in these cases, we offer the following advice to forensic economists engaged in estimating damages to consumers from products that are defective or misrepresented by their sellers:

1. **Think carefully about the *actual* loss to *actual* consumers.**
   This may be harder than you think. Ask a group of consumers, where the individuals are of varying ages, occupations, and role in life. You might be surprised to see the variation in how they view a misrepresentation or defect.

   Some attributes may indeed be "mere puffery," but others have meaning to consumers. Wherever possible, let consumers decide what they value.
2. **Consider the value of *all* product attributes purchased by a consumer, including convenience, luxury, status, signaling, style, and taste.**
   Remember that the consumers that repeatedly purchase a product are those that *like* that product. If you do not repeatedly purchase the product, it is essential to understand the motivation of those that do.

   For luxury goods, for example, status may be as important as any other attribute for some buyers, while performance really matters for others. The country of origin may matter to some consumers, for example those who value German or Japanese cars, or "made in America"

clothing. For "statement" goods, such as those that signal the buyer's political or social leanings, the notion of authenticity may be crucial, while another person may consider the same attribute trivial.

3. **Look for market price comparisons that imply premiums for relevant product attributes.**
   Such premiums are often implied by competing products, or by consumer prices in related markets. Actual market prices are preferred to stated preferences and other indirect indications of value.
4. **Consider the value of "real options" available to consumers, including the ability to re-sell, substitute, and re-purpose products.**
   Don't fall prey to the one-size-fits-all mentality for product usage. For products that are intended for extended usage, there could be many possible usage paths, and if so, consumers have probably taken that into account in their purchase decision. The actual losses to consumers will include any gain or loss of real options as well as relevant product attributes.
5. **Consider all available methods for estimating damages, including: market price premiums; lost income; lost value; real options; and arbitrary schedule.**
   Select the one that works the best, given the underlying situation of the consumer and the available data. Don't fall prey to the "I've already got a spreadsheet" syndrome.
6. **If market prices are available that reflect all relevant product attributes, these prices should be the dominant indication of consumer losses.**
   Survey data, discounted cash flow models based on idealized use cases, and preferences of people that are not consumers of the product should be given less weight.
7. **Disgorged profits, if calculated, are not the same as damages to consumers. However, they can provide a useful methodological device.**
   Whether required by the relevant statute or not, calculating these provides a corroborating estimate of value to consumers of the relevant products and their attributes, as well as the motivation of the seller to represent (or misrepresent) the product's attributes or otherwise fail to expend the moneys necessary to deliver a product consistent with its stated specifications.
8. **Where available, use market-wide data on the industry, as well as seller-specific data, on both sales volume and sales prices.**
   Experience reveals that seller-specific data, often obtained through discovery, is often bedeviled by errors, missing units, and possible reporting biases.

Exhibits

Exhibit 1

POTENTIAL RECOVERY: SALES VOLUME METHOD

The Sales Volume Method estimates the potential recovery by using volume sales data provided by ABI and potential refund amounts proposed in the Settlement for each package type to calculate a maximum recovery amount. The data provided by ABI was monthly sales data reported in barrels and broken down into type of beer, the wholesale packaging it was sold in, and the place of production. See Exhibit 5, "ABI Sales Data."

We determined the total maximum recovery amount in the following manner:

- Converting the sales data provided by ABI (in barrels), into the equivalent retail package in which the Beck's beer was sold.
- Selecting out the products that were produced outside of North America.[4] Sales of German-produced products presumably reflected inventory and product in transit when ABI first began production in the U.S. The share of these non-North American products was much smaller after the initial year of the class period.
- Applying the recovery payments to the packages sold during the class period.
- Applying an allowance for refunds that exceeded the cap amount. This is discussed further below.

This type of analysis was performed across the approximate four-year time period in question. Although shown in the yearly analysis, the cap applied to the entire class period, which extended over 4 years plus a month and some days.

Comparison with Alternate Data Source on Sales Volume. We compared the volume information on specific packages during the specific claim period with volume information on the same brand from another source. This other source, cited in the June 26, 2014 AEG report, indicated that ABI sold 6.9 million case equivalents of all package types in 2012. We reconciled the volume information of these two sources in Exhibit 8, "Potential Recovery: Sales Volume Method." There is a small unexplained discrepancy between the two sources, which is expected given the less-precise nature of the one-year estimate of sales volume from the alternate source.

Truncation Due to Cap on Maximum Recovery per Household. We also used a conservative assumption that about 20% of the potential recovery would be reduced due to the $50 rebate limit in the settlement. This is due to

4. See "Exhibit 6, Extract of Tentative Settlement Agreement." The definition of "Beck's Beer" is limited to products "brewed and sold in the United States."

Exhibit 1

the disproportionate share of alcoholic beverages that are purchased by a small share of the population. We base this on a detailed analysis of the data available on this distribution of consumption, recognizing the difficulties associated with survey data on alcohol use. We also provide example calculations illustrating households that would reach the cap before receiving payment for all products purchased. For these, see " Exhibit 9. Distribution of Alcoholic Beverage Consumption" in the Appendix of Exhibits.

For a summary of these calculations see Table 4 on page 17. For more detailed calculations on a year-by-year basis, see Exhibit 7 in the Appendix of Exhibits.

Exhibit 7.1 Potential Recovery: Demographic Method

	One-year Period	Four-year Class Period	Memo	Source
U.S. Households with Adults	110,287,184	121,315,902	*Allowance for changing behavior over 4-year period*	U.S. Census Bureau for 2012; AEG allowance
Share: Beer Drinker HHs/All Adult Households	0.51	0.5355	*Allowance for changing behavior over class period*	Anderson Economic Group assumption; see Exhibit 9.
Share: Beck's Drinkers /Beer Drinkers	0.025	0.02625	*Includes allowance for regular, occasional, and infrequent users of Beck's*	AEG assumption; note Beck's share of imported beer sales
Households Consuming Beck's	**1,206,698**	**1,705,322**		
Max Payoff, Assuming No Documentation		$12.00		
Total Potential Recovery		**$ 20,463,870**		

Sources: US Census; Anderson Economic Group; Sources on Alcholic Beverage Consumption listed in Exhibit 9; Settlement Agreement

Exhibit 3

TABLE 6. Summary: Demographic Method and Sales Volume Method

	Demographic Method[a]	Sales Volume Method[b]
Primary Method of Analysis	Demographic and Market Share Data	Volume Sales Data
Documentation of Purchases Assumed	No	Yes
Max Payoff Amount per Household	$12.00	$50.00
Estimated Maximum Potential Recovery	$20,463,870	$28,885,420

Analysis: Anderson Economic Group, LLC

a. See Exhibit 7.1 for calculation.

b. See Exhibit 8.1 for calculation.

Exhibit 4. Representative Calculation of Consumer Damages Due to Non-GMO Claim: Price Premium Method

	2015
Total Revenue, US	$ 4,501,223,000
Florida Share Based on the Share of Stores	5.8%
Total Revenue, Florida	$259,772,073.63
Estimated Share of Meat and Dairy Sales	60.0%
Net Sales of Covered Meat and Dairy Items in Florida	$ 155,863,244
Non-GMO Premium	6.6%
Damages: Non-GMO Price Premium Paid by Consumers on Covered Items in Florida	**$ 10,286,974**

No information presented here was obtained from confidential discovery data. Estimates contained in the expert report based on the confidential data may be different.

Sources: Chipotle 10-K; Survey Data; Anderson Economic Group professional judgement
Analysis: Anderson Economic Group

Exhibit 5. Representative Calculation of Disgorged Profits Due to Non-GMO Claim

	Actual			Incremental
	2014	2015	*Average Share of Revenue*	2015 over 2014
Revenue	$4,108,269,000	$4,501,223,000		**$ 392,954,000**
Food, Beverage, and Packaging Costs	1,420,994,000	1,503,835,000	*34.0%*	133,600,640
Gross Profit				**259,353,360**
Costs associated with incremental revenue:				
Labor Costs			*22.6%*	88,898,671
Occupancy Costs			*5.7%*	22,495,411
Portion of other operating costs			*5.5%*	21,622,797
Total Directly Associated Costs				133,016,879
Incremental Profits, All US 2015				**$ 126,336,482**
Florida Share Based on the Share of Stores				5.8%
Incremental Profits, Florida				**$ 7,291,061**

No information presented here was obtained from confidential discovery data. Estimates contained in the expert report based on the confidential data may be different.

Sources: Chipotle 10-K; Anderson Economic Group professional judgement
Analysis: Anderson Economic Group

Exhibit 6: Comparison Between Income and Value Methods

This exhibit illustrates the results of two approaches of estimating the loss to a consumer. In this example, the loss arises from purchasing a new vehicle for which the manufacturer overstated the fuel economy. The two methods are:
(a) a traditional income method that relies upon a single scenario for the future, in which the owner drives an expected amount of miles; and
(b) a recursive model of lost value, in which the options available to the owner include driving less and selling the vehicle.

Panel A:
Traditional Income (Discounted Cash Flow) Method

Table 1: Traditional Approach to Measuring the Value of Fuel Economy

Common Factors and Assumptions					Total Fuel Cost if MPG = 30			Total Fuel Cost if MPG = 24		
Age of Vehicle	Vehicle Survival Probability	Vehicle Miles Driven	Expected Price of Fuel per Gallon	Discount Factor*	Fuel Cost per Mile	Annual Fuel Cost	Discounted Fuel Cost of Surviving Vehicle**	Fuel Cost per Mile	Annual Fuel Cost	Discounted Fuel Cost of Surviving Vehicle**
0	1.00	15,000	$3.50	1.00	$0.12	$1,750	$1,750	$0.15	$2,188	$2,188
1	0.98	15,000	$3.50	0.97	$0.12	$1,750	$1,665	$0.15	$2,188	$2,081
2	0.97	15,000	$3.50	0.94	$0.12	$1,750	$1,600	$0.15	$2,188	$2,000
3	0.96	15,000	$3.50	0.92	$0.12	$1,750	$1,537	$0.15	$2,188	$1,922
4	0.94	15,000	$3.50	0.89	$0.12	$1,750	$1,462	$0.15	$2,188	$1,827
5	0.92	15,000	$3.50	0.86	$0.12	$1,750	$1,389	$0.15	$2,188	$1,736
					Total Present Value		**$9,403**	**Total Present Value**		**$11,754**
								Difference 24 O/(U) 30		**$2,351**

* Discount factor = (1/(1+r)^age; where r = 3%.
** Discounted Fuel Cost of Surviving Vehicle combines effects of both vehicle survival and discounting.

Table 6 has three panels: Common Factors and Assumptions, Total Fuel Cost if MPG = 30, and Total Fuel Cost if MPG = 24. Survival probabilities primarily reflect the impact of vehicular crashes that result in a total loss. Additional assumptions are that the average vehicle is driven 15,000 miles per year, that the price of fuel is $3.50 per gallon, and that the real interest rate is 3 percent. These assumptions produce $1,750 in annual fuel costs if fuel economy is 30 MPG and $2,188 in annual fuel costs if fuel economy is 25 MPG. Annual fuel costs are then discounted to present value (age 0) and summed across the 6 years. The total present value of fuel costs is $9,403 if MPG = 30 and $11,754 if MPG = 24. The difference of $2,351 is the traditional estimate of the value of 30 MPG over 24 MPG.

Excerpted from: Using Recursive Methods for Estimating Commercial Damages: Three Case Studies, *Patrick L. Anderson, Walter McManus, Jeffrey Johnson, Anderson Economic Group working paper 2015-1 presented at National Association of Forensic Economics sessions, ASSA conference, Boston MA, January 2015. [References omitted in this excerpt.]*

Panel B:
Value (Recursive) Method

Table 9: Median-Holding Period under Actual and Misstated Fuel Economy

Year to Year Survival & Holding Period if MPG = 30

Age of Vehicle	Fraction on the Road at Beginning of Period	Remaining Fraction Drive if Vehicle Survives	Vehicle Survival Probability	Remaining Fraction on the Road (End of Period)	Median Holding Period (Age at Disposal)	Memo: Probability of Choosing Drive
1	100%	100%	98%	98%		All choose Drive
2	98%	100%	97%	97%		All choose Drive
3	97%	100%	96%	96%		All choose Drive
4	96%	99%	94%	93%		1 - P(4.5)
5	93%	22%	92%	20%	4.59	P(2.5) + P(3.0)

Year to Year Survival & Holding Period if MPG = 24

Age of Vehicle	Fraction on the Road at Beginning of Period	Remaining Fraction Drive if Vehicle Survives	Vehicle Survival Probability	Remaining Fraction on the Road (End of Period)	Median Holding Period (Age at Disposal)	Memo: Probability of Choosing Drive
1	100%	78%	98%	77%		1 - P(4.0) - P(4.5)
2	77%	78%	97%	76%		1 - P(4.0) - P(4.5)
3	76%	22%	96%	21%	2.47	P(2.5) + P(3.0)
4	21%	22%	94%	20%		P(2.5) + P(3.0)
5	20%	0%	92%	0%		All choose Sell

Results

The value of 30 MPG over 24 MPG in this model is $1,367. This is measured by the difference in value at the start of a vehicle with 30 MPG compared to a vehicle with 24 MPG, facing all the same possible future states in the model. This is $984 or 42% below the $2,351 value of fuel economy found in the traditional approach.

A large portion of the difference in the traditional and the recursive valuations results from the ability of the driver in the recursive model to change mileage and even sell the vehicle. Table 9 shows the computation of the median holding period in the recursive model. If fuel economy is 30 MPG, then the median holding period is 4.59 years. If fuel economy is 24 MPG, then the median holding period is 2.47 years. The traditional approach locks the driver into a six-year holding period, whether the fuel economy is 24 or 30 MPG.

Excerpted from: Using Recursive Methods for Estimating Commercial Damages: Three Case Studies, *Patrick L. Anderson, Walter McManus, Jeffrey Johnson, Anderson Economic Group working paper 2015-1 presented at National Association of Forensic Economics sessions, ASSA conference, Boston MA, January 2015. [References omitted in this excerpt; Table 9 has been re-titled by this author.]*

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