

IS THERE CONSUMER DEMAND FOR FAIR LABOR STANDARDS?

EVIDENCE FROM A FIELD EXPERIMENT

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ABSTRACT

A majority of consumers say they would be willing to pay extra for products made in workplaces with fair labor standards. But as yet there is no clear evidence that consumers would actually behave in this fashion and pay a substantial premium for ethically labeled goods. We provide new evidence on consumer behavior from a field experiment conducted in a major retail store in New York City. We find that a label providing information about fair labor standards in workplaces had a substantial positive effect on sales of labeled items. Sales of labeled brands rose by around 10% when the labels were applied; sales rose between 16-33% when the label was combined with price markups of 10-20%. The market shares of the brands rose by 20-41% when they were labeled and offered at a price premium.

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I. INTRODUCTION

A majority of consumers say they would prefer, and would be willing to pay extra for, products they could identify as being made in workplaces with fair labor standards rather than alternatives. There appears to a genuine concern about condoning unsafe and unfair “sweatshop” conditions in global supply chains, and a general desire to support firms that provide better standards. Consumers now have a variety of ways to act on similar types of impulses by buying products connected with ethical causes via certification and labeling programs. The prominent Fair Trade labeling program, for instance, offers a mechanism by which shoppers can help raise incomes among poor farmers in developing countries when purchasing coffee, tea, chocolate, and many other commodities. The Goodweave initiative allows consumers buying hand-woven rugs to help eliminate the worst forms of child labor in the rug industry. Other prominent certification and labeling programs, such as those managed by the Rainforest Alliance, the Forest Stewardship Council (FSC), and the Marine Stewardship Council (MSC), allow consumers to support environmental causes.

These various types of ethical product labels are now a common sight in cafes, stores, and supermarkets across the United States and Europe. They allow for a mainstream form of politicized consumption. Unlike consumer boycotts that are organized by activist groups and aimed at punishing businesses for unethical behavior of one form or another, ethical certification and labeling promotes an everyday form of politicized consumer behavior aimed at rewarding companies for doing good – that is, for supporting social and environmental causes that their customers care about. Ethical labeling initiatives, like Fair Trade, Goodweave, Rainforest Alliance, FSC and MSC, encourage citizen-consumers to vote with their shopping dollar to influence the behavior of firms and bring about political and social change.

The potential impact of this new type of politicized consumption, in terms of the size of the market and the associated effects on businesses and social and environmental outcomes, depends critically upon the strength of latent consumer demand for ethically labeled products. Though growing rapidly, sales of ethically labeled products still represent a small segment of the markets in which they have a presence and there is ongoing debate about the potential for continued growth. Ethical labeling has been dismissed by critics as a passing fad and a cheap public relations exercise for big-name brands, likely to disappear from the scene when fickle consumers lose interest (Vogel 2005, 2008). Advocates argue that labeling programs can have important long-term effects if the market for labeled products continues to grow at the current rate and if the survey responses offer any guide at all to consumer behavior (Elliott and Freeman 2003). At present it is difficult to resolve this debate with empirical analysis. In particular, it is difficult to assess the strength of latent consumer support for ethical labeling programs. There is no clear evidence that consumers will strongly support ethically labeled products when they are making real decisions about how to spend their own money.

We report new evidence on consumer demand for ethical certification and labeling from a field experiment conducted in a large retail store in New York City. We investigate consumer response to product labeling that contains information about fair labor standards in factories making candles and towels. We find that sales of labeled brands rose by around 10% when the items were labeled and prices were unchanged, but sales rose between 16-33% when the label was combined with price markups of 10-20%. The market shares of the labeled brands rose by 20-42% when they were labeled and offered at a price premium. The key finding from the experiment is that a label with information about fair labor standards in factories making manufactured goods appears to generate a substantial positive response to brands among

consumers in terms of actual sales at higher price points.

II. ETHICAL LABELING AND CONSUMER DEMAND FOR FAIR LABOR STANDARDS

All the major ethical product labeling initiatives, including the Fair Trade program, Goodweave, Rainforest Alliance, FSC and MSC, contain explicit provisions aimed to ensure that certain minimum acceptable labor standards are met in workplaces and on farms that produce the labeled items. The Fair Trade program, the largest and most prominent ethical certification and labeling initiative, also contains the strongest labor standards provisions.¹ Fair Trade certified farmers receive a guaranteed minimum price for their crops and a price premium (above the minimum or the current market price for the commodity, whichever is higher). Fair Trade certification prohibits forced and child labor and forms of discrimination, restricts the use of potentially hazardous chemicals, and requires that larger enterprises meet specific standards with respect to wages and working hours and facilitate collective bargaining by workers.² A group of non-profit Fairtrade Labelling Organizations (FLO) oversees Fair Trade certification and has developed standards for a range of agricultural products, including coffee, tea, cocoa, and cotton.

This type of ethical product labeling has some obvious attractions. It is a voluntary, market-based approach, so producers and retailers can opt in or out depending on whether they think it will benefit them and consumers can choose whether or not they wish to support the any

¹ The Rainforest, FSC, and MSC initiatives focus primarily on environmental sustainability standards, although each requires that certified producers meet national standards pertaining to minimum wages, working hours, and working age. The Goodweave program, formerly known as Rugmark, certifies that no children are employed in facilities manufacturing hand woven rugs in Indian and Nepal (fees from producers and importers are used to fund school programs in communities in which these facilities are located).

² The Fair Trade program concentrates primarily on small, family-owned farms and requires that these farmers organize into cooperatives that decide democratically how to distribute or invest the fair trade premium paid on each contract. Larger farms with permanent hired labor can also obtain certification in some commodity sectors (e.g. tea and bananas) providing that these enterprises satisfy national legal standards pertaining to wages and hours of work and that a democratic worker organization is established and meets with employers to approve all decisions about how to distribute the fair trade premium. See: http://www.fairtrade.net/generic_standards.html

particular program by buying the labeled products.³ It remains unclear, however, whether Fair Trade and similar ethical labeling initiatives can reach a market size large enough to have a substantial impact in developing nations. Total sales of Fair Trade goods in the United States in 2008 amounted to roughly \$1.1 billion. This represents only about one fortieth of the U.S. market for certified organic products and less than \$4 per person annually. For skeptics, this evidence fits with the view that ethical labeling is little more than a market niche or a fad, limited to a small segment of consumers and vulnerable to changing fashions (Vogel 2008, 16).

A large market for ethically labeled products may not currently exist, but this does not by itself imply an absence of demand. Surveys indicate that a large majority of consumers say that they prefer, and are willing to pay substantially more for, products they can identify as being made in ethical ways. A survey conducted in 1999 by the Program on International Policy Attitudes, for example, found that 76% of respondents said they were willing to pay \$25 for a \$20 garment that was certified as not being made in a sweatshop (PIPA 2000). Another 1999 survey, conducted by the National Bureau of Economic Research, found that roughly 80% of surveyed individuals said they were willing to pay more for an item if assured it was made under good working conditions (Elliott and Freeman 2003, 29-35). Many recent survey studies have provided additional evidence of peoples' willingness to pay for ethical attributes of products and ethical behavior by firms (e.g., Auger et al. 2003, 2008; Dickson 2001; Mohr and Webb 2005; Loureiro and Lotade 2005; De Pelsmacker et al. 2005; Hertel et al. 2009).

³ As with other types of third-party certification and labeling, the Fair Trade program can be seen as a way to remove a market inefficiency that exists due to incomplete information on the part of consumers about the manner in which goods are produced (Elliott and Freeman 2003, 47-48). In the simplest models, lack of information about the ethical quality of goods leads to welfare losses as consumers who prefer goods with high ethical quality cannot identify (and thus adequately reward) high-quality producers, and the latter are driven from the market by low-quality producers who face lower costs Bonroy and Constantatos (2003, 2008). Fair Trade labeling has also been modeled as product differentiation that increases consumer welfare by introducing more variety (e.g., Becchetti and Solferino 2005).

The survey findings most likely reflect some degree of social desirability bias, of course, as respondents are being asked to state openly whether they support ethical causes in a context in which voicing support is costless and voicing opposition may be socially unpleasant. The preferences revealed by consumers in a real market setting may be very different from the stated preferences in surveys. What we need is direct evidence on how consumers actually behave when they encounter ethical labels while shopping and deciding how to spend their own money.

To date only a small number of empirical studies have examined relationships between observed sales and/or prices of goods and their ethical characteristics. A study by Teisl, Roe, and Hicks (2002) examined scanner data on U.S. retail sales of canned tuna and found that market share (relative to other canned seafood and meat) rose substantially after the introduction of the “dolphin-safe” label in April 1990. In another study, Galarraga and Markandya (2004) gathered data on retail prices of coffee sold in supermarkets in Britain and estimated that coffee with a “green” label (they combined Fair Trade, organic, and shade-grown labels in this category) earned an average premium of around 11% over alternatives. Elfenbein and McManus (2010) found a price premium for items sold in eBay’s “Giving Works” program, in which sellers direct a portion of the sale price to charity, compared with prices for similar items sold on eBay. While these studies are consistent with the claim that there is substantial consumer support for ethically labeled products, because the observed outcomes reflect pricing and distribution decisions by sellers as well as consumer behavior, it is difficult for this type of approach to provide clear inferences about consumer responses to the labels.

Two previous field experiments have addressed whether and how consumers alter their spending behavior when given the opportunity to distinguish ethically labeled products from alternatives. Arnot, Boxall, and Cash (2006) conducted tests with a university coffee vendor,

adjusting prices for a fresh-brewed Fair Trade certified coffee and a similar tasting alternative. Examining sales on different days, the researchers concluded that demand for Fair Trade coffee was less sensitive to price than was demand for the alternative coffee. In another study, Kimeldorf et al. (2004) placed two identical groups of athletic socks in a Michigan department store and labeled one group as being made under “Good Working Conditions.” The findings were mixed: when the two types of socks were sold at the same price, only 43% of customers bought the labeled socks; when the labeled socks were sold at prices higher than the non-labeled socks, about 25 percent of consumers bought the labeled type.

The field experiment we report below was designed to provide new evidence on how shoppers behave when encountering an ethical label referring to fair labor standards and making real spending decisions in a retail setting.

III. RESEARCH DESIGN

A. MODEL OF CONSUMER BEHAVIOR

To ground the empirical work in a theoretical model, we introduce a standard model of consumer behavior in which individuals may derive utility from a variety of characteristics of goods (Lancaster 1971; Gorman 1980). We assume consumers maximize their utility when choosing from of a set of alternative products (e.g., brands of towels) available in a particular market. Each consumer’s utility from buying a particular good depends on the observed product characteristics, which may include labeling that provides information about labor standards in the facilities that produced the item. In general notation, consumer i ’s utility from buying the j th good in market t is given by:

$$U_{ijt} = U(x_{jt}, \zeta_{jt}, v_{it}; \theta) \quad (1)$$

where x_{jt} is a vector of observed product characteristics, ξ_{jt} indicates product characteristics that are unobserved by the researchers, v_{it} are unobserved differences in consumer tastes, and θ is a vector of model parameters that includes how sensitive consumers are to each of the observed product characteristics.

Consumers may differ in how they evaluate the different product characteristics. Our test is designed to measure average responses among consumers when two key product characteristics – labeling about fair labor standards and price – are manipulated experimentally for specific products. We allow consumers to place different values on fair labor standards labels, and to be more, or less, sensitive to prices. We make no specific assumptions about the motives of consumers willing to pay more for fair labor standards labels. The simplest type of assumption is that these consumers derive a “warm glow” satisfaction from supporting a program that is helping workers – this type of assumption is adopted in existing models of markets for ethically labeled goods (e.g., Richardson and Stahler 2007; Baron 2009a). However, there are other motives that could generate a preference for purchasing ethically labeled products and our study is not designed to assess the relative importance of alternative motivations (see the discussion in Section V below).

It has become common to refer to the standards under which a good is made as “credence” attributes. These are distinct from other types of product characteristics in that they cannot be directly assessed by the consumer examining or using the item. Other product characteristics, such as price, size, and color, can be evaluated by consumers before they purchase the good and are known as “search” attributes. Still other characteristics, including product quality, durability, and taste, can be assessed by consumers after they have purchased the good and begun using it

and are commonly termed “experience” attributes.⁴ Although these experience attributes are not known to consumers at the point of purchase, they will be revealed to them by use of the product and firms can attempt to send credible signals about them by offering guarantees, for example, and by using advertising to establish brand reputations. The information asymmetry problem is mitigated because consumers can punish firms for poor quality by making no further purchases of their products (Akerlof 1970; Shapiro 1983; Palfrey and Romer, 1983). In the case of credence attributes, however, which are never directly observed by consumers before or after purchasing the product, firms find it much more difficult to make credible assurances. Firms that have incurred higher costs to produce goods with these characteristics can make claims about them to consumers, but competing firms can incur no additional costs and make similar claims.

This problem can be addressed via certification and labeling of specific credence attributes of goods (e.g., Fair Trade standards) by an independent third party (e.g., FLO), which effectively transforms the credence attributes into search attributes (Caswell and Mojduszka 1996). The value of these labels to firms and consumers will depend in part on the degree to which consumers regard the particular third party certifier as trustworthy. Our tests were not designed to assess the importance of third-party certification, however, or the trustworthiness of different types of certifiers and label authors in the eyes of consumers.

B. THE SETTING

We examined consumer demand for fair labor standards by conducting an experiment in a large retail store in New York City, ABC Carpet and Home. ABC is a prominent Manhattan

⁴ For discussions of these different types of attributes, see Nelson (1970, 1974), Darby and Karni (1973), and Roe and Sheldon (2007). Familiar examples of credence attributes include Fair Trade standards for farmers, organic standards for production of food and fiber, exclusion of genetically modified organisms from foods, dolphin safe methods for catching tuna, humane treatment of animals on farms, and various forms of environmental management standards adopted by firms to help to sustain forests and fisheries, including FSC and MSC.

retailer of fashionable, high-quality home furnishings located at 888 Broadway, one block north of Union Square that attracts around 22,000 customers per week. The store has a reputation for supporting social and environmental causes through the ABC Home and Planet Foundation, and sells a variety of cause-related items, including a range of products aimed at benefiting marginalized groups in developing nations. Shoppers drawn to ABC are likely to be distinguishable from the typical American consumer in their ability to pay relatively high prices for home furnishings, and they may also be more aware and supportive of supportive of social causes. (We discuss the implications for external validity in Section V below.)

We conducted the test between June and October 2005. We focused on two types of products, candles and towels, which had a high volume of weekly sales and for which ABC carried comparable product lines made by alternative brands – one brand that we could label (the treatment) and one that could serve as an unlabeled (control) product. ABC sold comparable lines of candles produced by two brands, *Santa Fe* and *Way Out Wax*. These alternative brands were displayed together on adjacent shelves in one location in the store. The two collections were similar in terms of product lines and prices (see Appendix for complete lists). Prices ranged from \$5 for the smallest votive candles to around \$35 for the largest pillar candles. ABC obtained confirmation from these two American companies that the *Santa Fe* candles, manufactured at facilities in the United States (New Mexico) and in China, and the *Way Out Wax* candles, produced domestically (Vermont), were made in workplaces that met a basic definition of fair labor standards – specifically, that they met national legal standards for minimum wages, maximum hours, no discrimination (according to race, age, or gender), minimum health and safety protections, and prohibitions against forced and child labor, and in addition that

management were “committed to respecting the rights and dignity of workers” (the precise language here was ABC’s).⁵

ABC sold towels made by *Christy*, a British brand, and *Besana*, an Italian brand, and displayed the two collections together in one section of the store. Prices ranged from \$7 for hand towels to around \$60 for bath towels, with only minor differences in prices between the brands for standard items. Again, ABC obtained confirmation from these two companies that both the *Christy* towels, manufactured in facilities in the United Kingdom, and the *Besana* towels, manufactured in facilities in Italy, were made in workplaces meeting national legal standards regarding wages, working hours, discrimination, and so on, and that management in each case was committed to respecting the rights and dignity of workers.⁶

We arbitrarily chose the *Santa Fe* candles and the *Christy* towels to be the treatment products, with the *Way Out Wax* and *Besana* brands serving as the control products for the main tests. During a later stage of the test period we were able to implement a cross-over design in the towel section, labeling the *Besana* brand rather than the *Christy* towels.

C. THE LABEL

ABC designed a label to convey information about the fair labor standards under which treatment products were manufactured (see Figure 1). The label featured the logo “Fair and Square” on a rainbow background with a lotus symbol that ABC uses for promotions about social and environmental issues and for the ABC Home and Planet Foundation. Underneath this logo was the statement: “These candles [or towels] have been made under fair labor conditions,

⁵ Both companies sent letters to ABC attesting to this fact. *Santa Fe* was explicit in its assurance that candles produced in the facility in China were made under conditions consistent with the basic definition of fair labor standards.

⁶ Again both companies sent letters attesting to the fact that their factories met these standards. Note that *Christy* manufactured some lines of towels in Turkey, Egypt, India, and China, but the “Renaissance” collection sold at ABC was only manufactured in facilities in Britain.

in a safe and healthy working environment which is free of discrimination, and where management has committed to respecting the rights and dignity of workers.”

The label was placed on signs, approximately 10"x15" in size, positioned in front of and above the shelves displaying the treatment products. The two brands of candles were displayed in a center area on the first floor of the store, in cabinet shelving only five feet apart. The labeled sign was placed at eye level in front of the cabinet with the *Santa Fe* collection (see Figure 2). The two towel brands were displayed roughly 15 feet apart on opposite walls of one room on the third floor of the store, adjacent to the larger bath and bedding department. The labeled signs were placed along the length of the display holding the *Christy* collection (see Figure 3).

This label can be regarded as a rather weak form of treatment for two important reasons. First, the information about fair labor standards supplied by the label takes the form of a statement by the retailer, ABC, and is not verified or certified by an independent third party. To the extent, then, that customers are concerned about the company engaged in “fairwashing” or misrepresentation to promote sales, and discount the credibility of the claims made on the label, we should expect a weaker effect than would be the case if the label carried a seal of approval from an independent, non-profit humanitarian group, such as FLO, that had actually inspected the workplaces. Second, the information about fair labor standards is conveyed only on the display signs and is not supplied via labels or hangtags attached to each individual item as is typically the case, for example, with Fair Trade labeled products. To the extent that customers ignore the display signs, or forget them once they have picked up items and moved elsewhere in the store, we should expect a weaker effect than would occur if labels were actually attached to the products and more difficult for customers to miss when the items have been removed from the display and examined.

D. TREATMENT SCHEDULE AND DATA

ABC gave us roughly five months to conduct the test. We divided this period into a series of phases in which we manipulated the labeling and pricing of the test products. Besides applying the “Fair and Square” label to the treatment products, ABC gave us permission to raise prices of labeled products by up to 20% during the test period. We divided the schedule into phases of roughly equal duration:

- Baseline: recorded sales of towels and candles under pre-existing condition (no changes to the way the products were displayed or priced);
- Label only: applied the “Fair and Square” label to the *Christy* towels and *Santa Fe* candles (no changes to pre-existing prices);
- Label plus 10%: kept the label in place for the treatment products and raised the prices of those products by 10% above pre-existing levels;
- Label plus 20%: kept the label in place for the treatment products and raised the prices of those products by 20% above pre-existing levels;
- Return to baseline: removed our label and returned all prices to their baseline levels.

We extended the test in the towel section of the store with a brief additional sixth phase in which we applied the “Fair and Square” label to the *Besana* brand.

Each new test phase was timed to begin at store-opening on a Sunday morning and end at close-of-business on a Saturday. The sales tracking software used by ABC (called “Retail Ideas”) collected and summarized sales figures for all products sold in the store on a weekly basis (Sunday-to-Saturday). ABC staff provided us with weekly sales data for the products during the test, and subsequently provided additional historical data on sales of these products for up to 96 weeks prior to the tests.

Store managers and personnel at the stores were fully briefed about the tests. To ensure compliance with the test protocol, we monitored implementation of labeling and pricing at the beginning and end of each test phase and made additional visits to the store (approximately 4 per week) to check the label displays, prices, and whether there were any product stock-outs that might affect sales. At no time during the experiments were any of the four test brands singled out in any special promotional events or sales at the store.

IV. RESULTS

A. CANDLES

A.1. SUMMARY STATISTICS

Table 1 reports average weekly dollar sales figures for *Santa Fe* and *Way Out Wax* brands of candles during each test phase. The variance between periods in the raw sales figures for each brand partly reflects time-varying effects related to trends, seasonality, and events that impact sales for the store as a whole or sales of candles specifically. To control for such effects here, and try to isolate the impact of the “Fair and Square” label and the price alterations, we focus first on the share of total sales of candles accounted for by the (treated) *Santa Fe* brand. Labeling the *Santa Fe* candles in phase 2 raised the share of weekly sales of the *Santa Fe* line from 0.529 to 0.54, a modest 2.2% increase. Raising prices of the labeled *Santa Fe* collection by 10% in phase 3 appears to have accentuated the initial label effect, lifting the market share to 0.572 – an increase of 5.8%. When we raised prices by a further 10% in phase 3, setting them 20% above baseline levels, the brand’s market share rose again, this time by an additional 6.8%. When we removed the “Fair and Square” label from the *Santa Fe* brand and returned prices to baseline

levels in phase 5, market share fell by 15.7%, returning to a level (0.515) slightly below the level evident in the baseline period.

Another way to control for potentially confounding time-varying effects when examining the impact of the label and price manipulations is to use a difference-in-difference approach. The final column in Table 1 reports the difference between the brands in each test phase in terms of the percentage change in average weekly sales with respect to the baseline period. The advantage of this approach is that it uses the baseline period as the common reference point for examining sales in each later period and compares the difference between the treatment and control brands in each period in their rates of sales growth. Assuming that, besides the test manipulations themselves, all other time-varying factors that might affect sales are common trends or shocks for both brands, this provides a simple way to assess the effects of the label and the price adjustments. By this measure, labeling the *Santa Fe* brand as “Fair and Square” improved sales of the collection by almost 7% compared with growth in sales of the alternative brand since the baseline. The positive effects of labeling were even larger however, when the label was combined with a price premium over regular prices: combining the label with prices set 10% higher increased sales of the brand by 13.5%; combining the label with a 20% price mark-up lifted sales by 40%.

Figure 4 charts the share of total candle sales for the *Santa Fe* brand, and the differences between brands in the percentage change in sales from baseline, for each phase of the test. The aggregate results indicate that ABC shoppers responded favorably to the “Fair and Square” label and that this label effect was much stronger when the labeled brand was sold at a premium over regular prices. One simple interpretation for the latter result is that shoppers reasoned that candles made under superior labor standards *should* be priced higher than alternatives, and

regarded the label as more credible at higher prices. An alternative possibility is that customers may have associated the higher prices with some other type of unobserved product characteristic such as product quality (Bagwell and Riordan 1991).⁷ Unfortunately, since we were not able to raise prices of unlabeled candles, we cannot compare the effects on sales in this scenario with the results reported above and discern whether a quality signaling effect dominated the label effect. But it is worth noting two reasons why one might anticipate weak quality signaling effects in this setting. First, the two brands of candles were well known and had been sold in ABC for over a year before the test, so it is likely that the baseline prices charged for the candles already reflected all relevant experience attributes of the products and associated brand reputations. Second, the *Santa Fe* brand was already priced slightly higher than the *Way Out Wax* brand at baseline, making it the obvious choice for any shoppers using price as a signal of quality.⁸ Later price alterations may have widened the initial price gap between the brands, but did not affect their ranking in terms of the price-quality signal.

A.2. ESTIMATIONS

To get a clearer sense of the size and statistical significance of the label and price effects highlighted above, we can examine a larger set of historical data on weekly sales for each brand of candles extending for almost a year prior to the test. This approach also allows us to control more effectively for potential confounding factors. The analysis above rests on the assumption that, apart from the experimental treatments themselves, all relevant time-varying factors that may affect sales of candles are common trends or shocks that have equivalent impacts for both

⁷ There is evidence that price serves as a signal for unobserved quality even when consumers are actually able to assess quality directly via consumption of the good (see Plassman et al. 2008).

⁸ *Santa Fe* votive candles were priced at \$5 compared to \$3 for the *Way Out Wax* alternative, for example, and small pillar candles were price at \$15 and \$12 respectively (see Appendix for full price lists).

brands. Here we can relax that assumption and examine the label and price effects for each candle brand allowing for brand-specific temporal trends and shocks.

We first examine the share of weekly candle sales accounted for by the *Santa Fe* brand over time, estimating the following equation:⁹

$$\text{Log (share of sales)}_t = \alpha + \tau_d D_{t,d} + \varphi T_t + \delta_k + u_t \quad (2)$$

where $t = \{1, \dots, N\}$ indexes the weeks, T_t is the time variable (sales week number) that allows for a linear trend of φ , $k = \{1, 2, 3\}$ indexes the non-winter seasons (quarters), δ_k are season fixed effects, and u_t is a stochastic error term. $D_{t,d}$ is a set of indicators that take the value of 1 for weeks in which the particular label and price treatment indexed by $d = \{1, 2, 3\}$ is applied, and 0 in weeks when the treatment was not applied, and τ_d identifies the particular treatment effects accordingly. We have just over a year of observations of weekly sales for the two candle brands ($N = 55$), beginning when the two brands were introduced in the store in 2004 and including all phases of the tests. ABC did not alter prices of the candles during these 55 weeks or conduct any special promotions or advertising campaigns related to either brand.

The results are reported in Table 2. Column 1 shows the estimated effects of each label-price combination on the share of candle sales accounted for by *Santa Fe*. The impact of the label alone on the brand's market share was positive, although the effect is not estimated with precision. The application of the label combined with a 10% price premium increased market share by almost 21% and this effect is significant at conventional levels ($p < .05$). When combined with a 20% price premium, the label increased the *Santa Fe* brand's market share by 24% ($p < .03$).

⁹ An estimation equation of this form can be derived from equation (1) above by solving for the mean utility of consumers in the market as a function of observed market shares, assuming idiosyncratic tastes are independent and identically distributed across consumers: see Berry (1994), Akerberg et al. (2007), and Nevo (2010).

The label and price treatments may have increased the market share of sales for the *Santa Fe* brand by boosting sales of that brand, by reducing sales of the unlabeled *Way Out Wax* brand, or some combination of both effects. We need to dig a little deeper here and examine the effects on each brand separately and the impact on total sales of candles in the store. Perhaps the “Fair and Square” label was so appealing that it induced ABC shoppers to buy more candles in total than they otherwise would have purchased. But it is also possible that the labeling reduced aggregate sales of candles by making shoppers concerned about the conditions under which the candles were manufactured (particularly the *Way Out Wax* candles that were not labeled as “Fair and Square”). We examine the sales of each brand of candle and total candle sales over time by estimating a modified version of equation (2):

$$\text{Log (sales)}_t = \alpha + \tau_d D_{t,d} + \varphi T_t + \delta_k + u_t \quad (3)$$

Estimating this model separately for each candle brand allows us to account for brand-specific trends and seasonal shocks when assessing the impact of the label.

The results are shown in Table 2, columns 2-4, and confirm the general assessments made above based on aggregate data. The “Fair and Square” label had a positive impact on sales of *Santa Fe* candles by itself, but the effects were larger (and statistically significant) when the label was combined with a price markup: when combined with a 10% price premium the label lifted brand sales by around 16% ($p < .04$); when combined with a 20% markup, sales rose 26% ($p < .01$). There also appears to have been a strong substitution effect, as the labeling of the *Santa Fe* brand reduced sales of the *Way Out Wax* candles by 14-20% when the *Santa Fe* brand was labeled and sold at a premium, although these effects are not precisely estimated. Overall, the application of the label-price treatments appears to have had only minor and statistically insignificant effects on total sales.

B. TOWELS

B.1. SUMMARY STATISTICS

Table 3 shows average weekly sales for *Christy* and *Besana* towels during each phase of the test in the towels section of the store. The aggregate results here are quite similar to those found in the test using candles. Focusing first on the share of towel sales accounted for by the (treated) *Christy* brand, we see that labeling the *Christy* towels in phase 2 raised their market share from 0.287 to 0.303, an increase of 5.9%. Raising prices of the labeled *Christy* collection by 10% in phase 3 had a dramatic effect: the market share for *Christy* products rose to 0.422 – an increase of 39%. When we raised prices by an additional 10% in phase 3 the brand’s market share rose again, this time by an additional 9.6%. When we removed the label in phase 5, and returned prices to baseline levels, the sales share for the *Christy* collection fell by 33.6% to 0.307. In an additional sixth phase of the test that lasted only two weeks, we were permitted to place the “Fair and Square” label on the *Besana* towels instead of the *Christy* towels, and the share of sales for the *Christy* brand fell to 0.29, equal to the original baseline share.

Adopting a difference-in-difference approach we see a similar pattern. The final column in Table 2 reports the difference between the brands in each test phase in terms of the percentage change in average weekly sales from baseline levels. Labeling the *Christy* towels improved sales of that brand by 6.4% compared with growth in sales for the *Besana* brand since the baseline. The effects were much larger when the label was combined with a price premium over regular prices: when prices of the labeled collection were raised by 10% sales were up by 43.3%; when the labeled items were marked up by 20%, sales were improved by 42.1%.

These aggregate results, shown graphically in Figure 5, are similar to the findings from the test conducted in the candles section of the store. Overall they suggest that the “Fair and Square” label generated a positive response among ABC shoppers, especially when the label was combined with a price markup. As was the case with the test using the candles, here we cannot rule out the possibility that the improvements in sales that resulted from combining the label with price markups were due in part to customers interpreting the higher prices as signals of better product quality, and were not simply due to the higher prices making the label more credible. Again, however, the two brands used in the test were well-known, established brands that had been sold in ABC for over a year before the test, making it less likely that price alterations – in the absence of a label providing some new justification for the prices – would have large effects on customer perceptions of brand quality.¹⁰

Although we were able to implement a cross-over test in the final phase here, switching the label to the *Besana* band after having removed it from the *Christy* collection, the results were inconclusive. The switch did result in a substantial reduction in the market share of the *Christy* brand (i.e. comparatively higher sales of the labeled *Besana* towels) than in the preceding period when neither collection was labeled, but this share was no lower than it had been during the initial baseline period. Part of the issue here is that we were only permitted two weeks for this additional test and the data are thus limited. It also seems likely that the results include carry-over effects as returning ABC shoppers may have been confused as to why the “Fair and Square” label had been moved from the *Christy* collection to the *Besana* towels and may assumed that the label had been misplaced and still applied to the *Christy* line.

¹⁰ Note that *Christy* items were priced higher than some of the alternative *Besana* items at baseline, but significantly lower than other *Besana* items (the brand’s luxury lines). The price markups during the test did not make the ranking of the collections in terms of the price-quality signal any clearer. *Christy* hand towels were priced at \$14.99, for example, compared to \$11.00 and for one line of *Besana* hand towels and \$35.00 for another (see Appendix).

B.2. ESTIMATIONS

We can again make use of weekly sales data for each brand over a longer period of time to estimate the effects of the label more precisely and account for potentially confounding brand-specific temporal trends and shocks. We first estimate a version of equation (2) using the historical data on sales of *Christy* and *Besana* collections in the ABC store. In this case, the set of treatment indicators $D_{t,d}$ also includes an indicator for the phase 5 cross-over treatment in which the “Fair and Square” label was applied to the *Besana* brand, so that $d = \{1, 2, 3, 4\}$. For the towel brands we have almost two years of observations of weekly sales ($N = 96$). Again, ABC confirmed that prices of the brands had not been altered during this period and they had not run any special promotions for either of the towel brands.

The results from the analysis of the data on weekly sales of towels are reported in Table 4. We first examine the effects of each label-price combination on the market share of the *Christy* brand. The application of the label by itself had a positive effect on the brand’s share of sales, although the effect is not statistically significant at conventional levels. Combining the label with a 10% price markup for the *Christy* towels increased the brand’s market share by 32% ($p < .02$). When the label was combined with a 20% price markup, market share rose by 41% ($p < .01$).

We also examine the effects of the label-price treatments on sales of each brand separately and the impact on total sales of towels, estimating a version of equation (3) using the data on sales of towels. Columns 2-4 of Table 4 report the results. Here we can see that the application of the label boosted sales of *Christy* towels. When the label was put in place at regular prices, sales of the *Christy* collection rose by around 11%, although this effect is not precisely estimated.

Combining the label with price markups of 10% and 20% generated much larger impacts, lifting sales of the brand by 34% ($p < .005$) and 32% ($p < .01$), respectively. Again we see strong substitution effects, with sales of the *Besana* brand reduced by around 25% ($p < .01$) when the *Christy* collection was labeled and sold at a premium. The overall estimated effect of the labeling on total sales of towels in the store appears to have been mostly negative, but again these aggregate effects are not statistically significant.

V. DISCUSSION

Most consumers, when asked in surveys, say they would be willing to pay extra for products they could identify as being made in workplaces with fair labor standards rather than alternatives. Firms are now offering consumers a growing variety of ways to advance similar types of ethical and political causes when they are shopping. They can make purchases that support research on particular diseases, supply clean water for poor communities in developing countries, promote sustainable management of fisheries and forests, and help to improve livelihoods for farmers in the developing world. A growing theoretical literature has sought to address this phenomenon and explain why more firms are voluntarily adopting socially responsible practices, including ethical and environmental product certifications and labeling (see Baron 2003; 2009b; Baron and Diermeier 2007; Besley and Ghatak 2007). The potential long-term importance of the phenomenon hinges on the strength of latent consumer demand for ethically certified and other cause-related products, however, and on this we lack clear evidence.

To investigate underlying consumer demand for fair labor standards, specifically, we have examined new evidence on consumer behavior from an experiment conducted in a retail store setting. We find that a label providing information about fair labor standards in workplaces had a

substantial positive effect on sales and market share for the labeled brands. The key finding from the tests is that a label with information about fair labor standards in factories making manufactured goods appears to generate a substantial positive response to the brand among consumers in terms of actual sales at higher price points.

The study is limited in a number of ways we must discuss. In terms of the design of the tests, as noted above, we were not able to alter prices of unlabeled items. This makes it impossible for us to provide a conclusive interpretation as to why the impact of the “Fair and Square” label was so much stronger when the labeled brand was sold at a price premium over regular prices. Without being able to observe the effects of price markups on unlabeled candles and towels we are unable to determine conclusively whether the effects we measured were related to the credibility of the label and its association with higher prices or resulted instead from a simple quality signaling mechanism unrelated to the labels. We do outline reasons why one might expect weak quality signaling effects in this setting and for the particular brands used in the tests.

Another limitation of the design is that, while we applied the “Fair and Square” label about labor standards to the treatment brands of candles and towels and compared the effects on sales of these brands with outcomes for unlabeled alternatives, we did not compare the effects with those generated by other types of labels. Perhaps *any* equally attractive label, conveying information unrelated to workplace standards, might have generated equally large, or even larger, effects. Past research has suggested that even seemingly meaningless forms of differentiation in marketing messages can affect consumer choices (Carpenter, Glazer, and Nakamoto, 1994). We have provided no way to benchmark the measured effect of the “Fair and Square” label and its message about labor standards against a generic label effect or the average effect of some set of relevant alternative types of labels focusing on, say, product quality and

style. We thus cannot conclusively attribute the full measured effect of the label to its specific content and how this relates to motivations among consumers to support improved labor standards. This is an important limitation that could be addressed in future tests by comparing the effects of ethical labels with a variety of (non-ethical) alternative labels. For now we can only assess the impact of the labor standards label by comparison with outcomes for unlabeled brands and note that the findings are consistent with the notion that consumers are willing to support fair labor standards by altering their shopping behavior.

We conducted the experiments in only one New York City retail store, ABC Carpet and Home, known for, among other things, relatively high prices and support for social causes. ABC shoppers may thus tend to have higher incomes and more interest in social causes than the average American consumer and may be distinct in other relevant ways. It is obviously difficult to generalize from our results to other settings and other sets of consumers, and we do not claim that the shoppers at ABC are representative of the universe of shoppers in terms of their preferences and sensitivity to prices. But the overall direction of the potential bias is not obvious. It may be common to imagine that individuals with higher incomes are more likely than others to donate money to help people in need, since they have additional resources, less anxiety about their own economic circumstances, and may feel some sense of “noblesse oblige.” But a wealth of evidence indicates that lower income individuals give proportionally more of their incomes to charity than do higher income counterparts (see Frank 1996; Andreoni 2001).¹¹ When it comes to politicized consumption, specifically, existing survey studies either find no clear connection with income levels or indicate that individuals with higher incomes are less likely to report being

¹¹ Studies indicate that lower income individuals are more cognizant of problems faced by others in dire economic circumstances, more dependent on others for assistance in their own lives, and more socially engaged with others in general, all of which may lead them to be more charitable (e.g., Batson and Moran 1999; Goetz et al. 2010). Piff et al. (2010) provide experimental evidence that individuals from lower socioeconomic classes are more generous, charitable, trusting, and helpful towards others compared with upper class counterparts, and trace the effects to a greater commitment to egalitarian values and feelings of compassion among such individuals.

supportive and participating than others (e.g., Stolle et al. 2005; Goul Andersen and Tobiasen 2003; Dickson 2001; De Pelsmacker et al. 2005). It is not readily apparent, then, whether findings from a study of a relatively high-income sample of consumers would tend to overestimate or underestimate the strength of demand for ethically-labeled goods among the broader population.

The study does not directly examine the motivations of consumers who responded to the “Fair and Square” label. Ethical consumers may be driven by an intrinsic motivation that reflects satisfaction from contributing to the well-being of others, but one may distinguish usefully between satisfaction derived from specific outcomes (e.g., the overall benefits provided for others) and the “warm glow” satisfaction derived simply from giving to a cause (Andreoni 1989, 1990). The existing models of markets for ethically labeled goods typically assume a simple “warm glow” motivation for consumers favoring labeled goods (e.g., Richardson and Stahler 2007; Baron 2009a). Becchetti and Rosati (2005) assume instead that ethical consumption is motivated by a general aversion to inequality, as theorized by Fehr and Schmidt (1999), between rich country consumers and poor country workers.¹² Alternatively, individuals seeking approval and esteem from others may give to a cause in order to demonstrate their virtue in a public way (see Hollaender 1990; Willer 2009).¹³ It is also possible that consumers attracted to ethically labeled goods may be motivated by a desire for product quality, and interpret ethical production standards as a signal that brand will not skimp on quality (Fisman et al. 2006; Siegal and Vitaliano 2007; Elfenbein et al. 2010). Additional experimental studies could examine the

¹² Empirical research on these specific types of motivations is limited. However, one set of findings consistent with pure altruism is from a survey experiment examining consumer’s stated willingness to pay for Fair Trade certified items (Hicks 2007) which showed that the amount individuals were prepared to pay rose when they were provided with information about the positive impact of the program (specifically, information about the percentage of farmers participating and their revenues from Fair Trade sales).

¹³ A growing body of evidence from experimental studies indicates that people are more likely to act in pro-social ways in public settings than in private settings (see Andreoni and Petrie 2007; Ariely, Bracha, and Meier 2009; Rege and Telle 2004).

relative importance of these various types of motivations by manipulating the informational context in relevant ways.

Finally, our study does not examine individual-level variation in ethical consumption and support for fair labor standards. Existing research on determinants of support for ethically labeled products is based on survey data and the findings are mixed or inconclusive as to whether and how such support is associated with age, education, social status, and income (e.g., Stolle et al. 2005; De Pelsmacker et al. 2005; Loureiro and Lotade 2005). The most robust finding to date seems to be that women are more likely to report supporting and participating in politicized consumption than men (Stolle and Micheletti 2005; Micheletti 2003; Goul Andersen and Tobiasen 2003). Defining the market for ethically certified products more clearly in terms of socio-demographic segments is something that could be pursued in future tests designed to capture individual-level data on purchasing behavior.

APPENDIX: PRODUCT LISTS

Table A.1: *Christy Renaissance Towels*

Item	Prices:		
	Baseline	+10%	+20%
BATH RUG	\$34.99	\$38.99	\$41.99
BATH SHEET 35X65	\$39.99	\$43.99	\$47.99
BATH TOWEL	\$19.99	\$21.99	\$23.99
HAND TOWEL 16X30	\$14.99	\$16.99	\$17.99
TUB MAT	\$24.99	\$27.99	\$29.99
WASH CLOTH 13X13	\$6.99	\$7.99	\$7.99

Note: Each *Christy Renaissance* line listed had 14 to 16 individual colors.

Table A.2: *Besana Towels*

Item	Prices
700 GM B SHEET 40X72	\$38.00
700 GM B SHEET LINEN 40X72	\$45.00
700 GM B TOWEL 25.6x54	\$22.00
700 GM H TOWEL 21.6x31.4	\$11.00
700 GM H TOWEL LINEN 21.6x31.4	\$12.00
700 GM T MAT 20X32	\$19.00
700 GMS B SHEET 40X72	\$50.00
700 GMS B TOWEL 25x54	\$25.00
700 GMS H TOWEL 21x31	\$15.00
700 GMS T MAT 20X32	\$26.00
700 GMS W CLOTH 13X13	\$8.00
DUKE HAND	\$35.00
FYBER BEACH TOWEL	\$85.00
FYBER B-MAT#925	\$34.00
FYBER B-SHEET#833	\$90.00
FYBER B-SHEET#925	\$64.00
FYBER B-TOWEL#630	\$50.00
FYBER G-TOWEL#399	\$20.00
FYBER G-TOWEL#630	\$14.00
FYBER H-TWL#527	\$40.00
FYBER W-CLOTH#925	\$9.00
GLICINE B-TOWEL	\$49.00
LUXOR B-MAT	\$55.00
LUXOR B-SHEET 39.4X63	\$68.00
LUXOR B-SHEET WHITE 39.4X63	\$105.00
LUXOR W-CLOTH	\$16.00
VENDOME BEACH TOWEL	\$125.00
ZIA BICE GUEST TOWEL	\$7.00
ZIA COCCA CROC H-TWL	\$17.00

Note: Each *Besana* line listed has 7 to 14 individual colors.

Table A.3: *Santa Fe* Candles

Item	Prices:		
	Baseline	+10%	+20%
DIPPED TAPERS,PERSIMMON 12"	\$8.00	\$9.00	\$10.00
SOLID CAST PILLAR CELADON 3X3	\$15.00	\$17.00	\$18.00
SOLID PILLAR, 8X2 RND	\$18.00	\$20.00	\$22.00
SOLID PILLAR, 8X3 FLT	\$35.00	\$39.00	\$42.00
TEA LIGHT, BOX OF 12	\$10.00	\$11.00	\$12.00
VOTIVE 2"	\$5.00	\$6.00	\$6.00

Note: Each *Santa Fe* line listed above has 3 to 7 individual colors.

Table A.4: *Way Out Wax* Candles

Item	Prices
CEDARWOOD VOTIVE	\$3.00
CEDARWOOD SMALL SKINNY PILLAR	\$10.00
PATCHOULI MINI ROUND PILLAR	\$12.00

Note: Each *Way Out Wax* line listed above has 7 individual colors.

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Figure 1: The Label

fair & square

These candles have been made under fair labor conditions, in a safe and healthy working environment which is free of discrimination, and where management has committed to respecting the rights and dignity of workers.



Figure 2: The Candles Display



Figure 3: The Towels Display



Table 1: Summary Statistics – Candles

Test Phase	Weeks	Sales (\$) per week:		Sales of SF vs. WW:		Diff in % change vs. Baseline (SF-WW)
		<i>Santa Fe</i>	<i>Way Out Wax</i>	Share	% Change	
Baseline	1-4	162.09	144.56	0.529		0.00
<i>Santa Fe</i> labeled	5-8	247.00	210.23	0.540	2.20	6.95
<i>Santa Fe</i> labeled; prices +10%	9-12	137.22	102.80	0.572	5.83	13.54
<i>Santa Fe</i> labeled; prices +20%	13-16	214.25	136.50	0.612	6.84	37.76
Return to baseline	17-20	210.05	197.70	0.515	-15.67	-7.17

Figure 4: Aggregate Sales of Candles

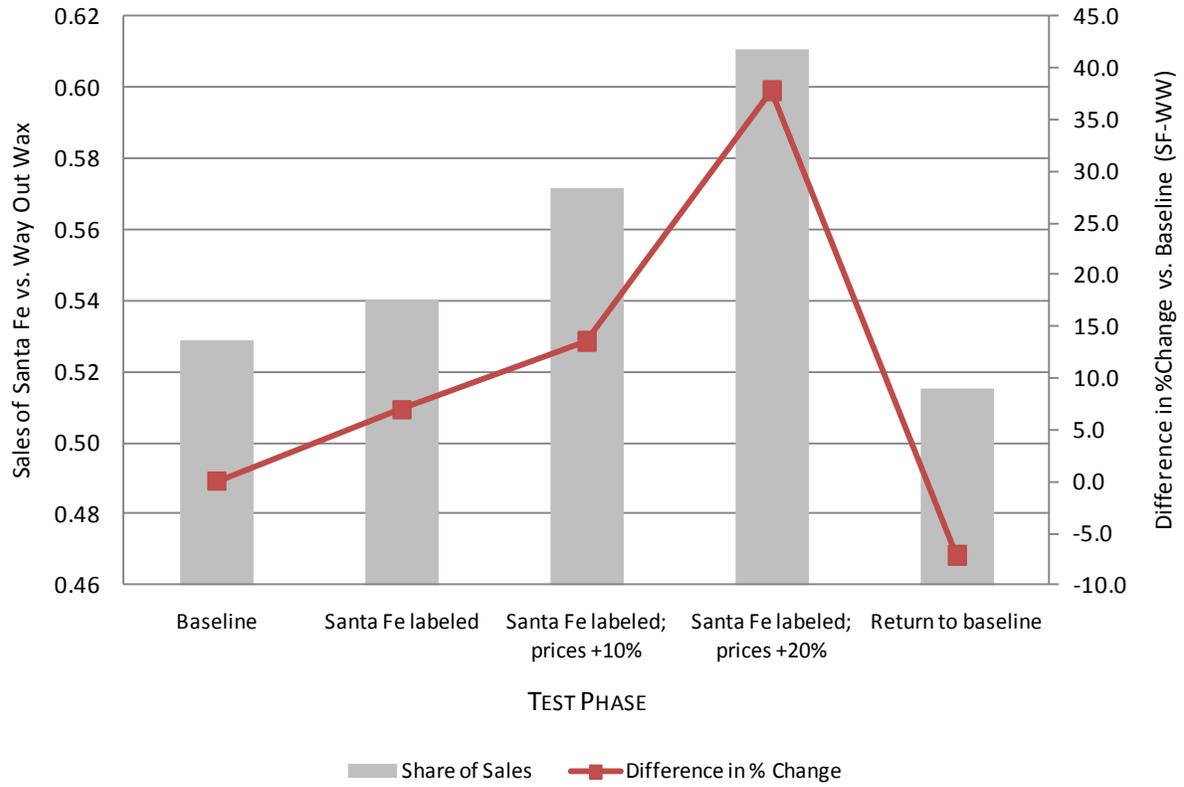


Table 2: Estimations – Candles

Model	1	2	3	4
Dependent Variable	Log(share) <i>Santa Fe</i>	Log(sales) <i>Santa Fe</i>	Log(sales) <i>Way Out Wax</i>	Log(sales) Total
Mean	-0.414	2.015	2.228	2.314
Std Dev	0.201	0.368	0.223	0.397
<i>Santa Fe</i> labeled (only)	0.112 (0.116)	0.094 (0.102)	-0.015 (0.134)	0.023 (0.112)
<i>Santa Fe</i> labeled; prices +10%	0.206 (0.102)	0.165 (0.084)	-0.197 (0.114)	-0.089 (0.115)
<i>Santa Fe</i> labeled; prices +20%	0.242 (0.102)	0.259 (0.107)	-0.140 (0.081)	0.054 (0.097)
Constant	-0.494 (0.052)	2.071 (0.081)	2.382 (0.549)	2.565 (0.100)
Observations	55	55	55	55
R-squared	0.202	0.222	0.299	0.186

Note: Regression coefficients are shown with standard errors in parentheses below. Each model includes a time trend variable and dummy variables for spring, summer, and fall quarters.

Table 3: Summary Statistics – Towels

Test Phase	Weeks	Sales (\$) per week:		Sales of C vs. B:		Diff in % change vs. Baseline (C-B)
		<i>Christy</i>	<i>Besana</i>	Share	% Change	
Baseline	1-4	608.85	1515.98	0.287		0.00
<i>Christy</i> labeled	5-8	499.55	1146.67	0.303	5.90	6.41
<i>Christy</i> labeled & prices +10%	9-12	586.73	804.00	0.422	39.03	43.33
<i>Christy</i> labeled & prices +20%	13-16	480.77	559.28	0.462	9.57	42.07
Return to baseline	17-20	499.24	1126.25	0.307	-33.56	7.71
<i>Besana</i> labeled	21-22	725.33	1779.15	0.290	-5.70	1.77

Figure 5: Aggregate Sales of Towels

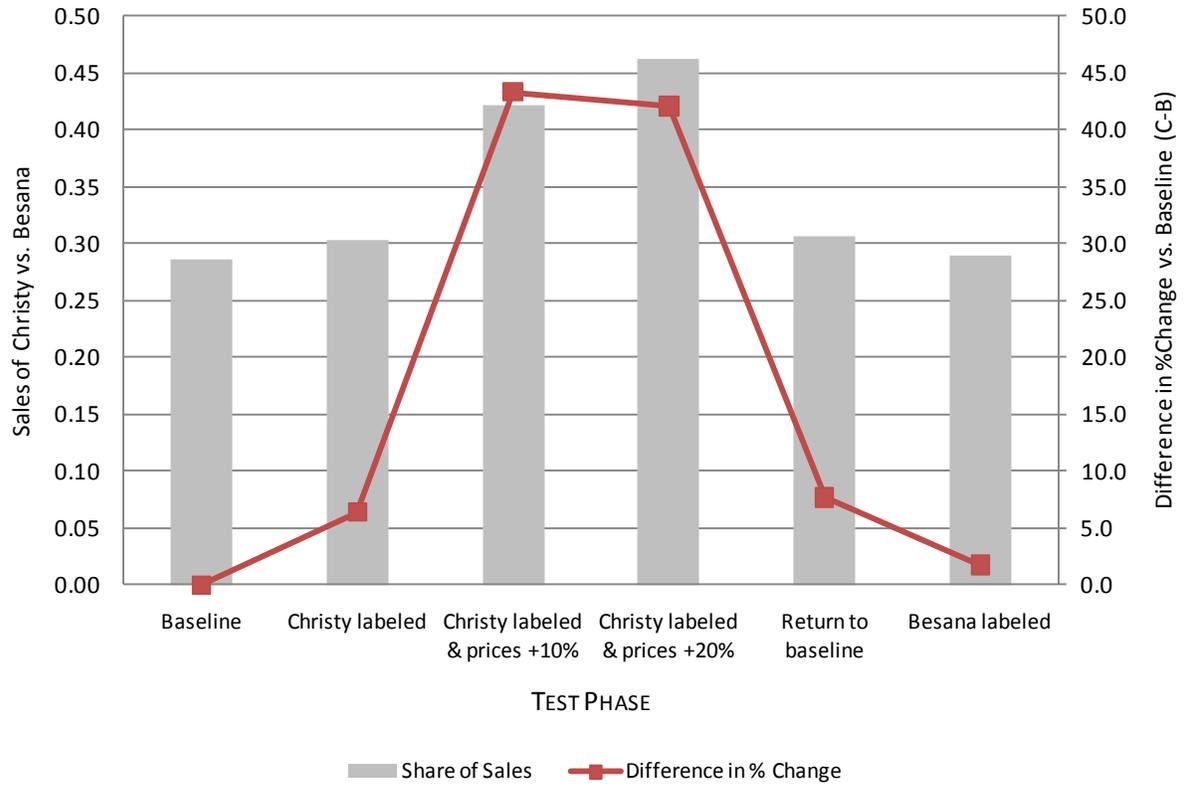


Table 4: Estimations – Towels

Model	1	2	3	4
Dependent Variable	Log(share) <i>Christy</i>	Log(sales) <i>Christy</i>	Log(sales) <i>Besana</i>	Log(sales) Total
Mean	-0.669	2.688	3.217	3.356
Std Dev	0.290	0.248	0.357	0.256
<i>Christy</i> labeled (only)	0.064 (0.041)	0.113 (0.089)	-0.065 (0.102)	0.032 (0.114)
<i>Christy</i> labeled; prices +10%	0.315 (0.132)	0.339 (0.115)	-0.242 (0.113)	-0.019 (0.074)
<i>Christy</i> labeled; prices +20%	0.405 (0.151)	0.322 (0.121)	-0.253 (0.107)	-0.021 (0.077)
<i>Besana</i> labeled	-0.003 (0.204)	-0.002 (0.183)	0.027 (0.137)	0.001 (0.144)
Constant	-0.761 (0.058)	2.672 0.067	3.338 0.066	3.575 0.055
Observations	96	96	96	96
R-squared	0.172	0.157	0.358	0.381

Note: Regression coefficients are shown with standard errors in parentheses below. Each model includes a time trend variable and dummy variables for spring, summer, and fall quarters.