Consumer's Willingness to Pay a Price Premium for Living Wage Products

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### ABSTRACT

Consumer's currently pay price premiums for "Fair Trade' and "Organic" goods in the market place. Will they pay more to ensure employees in the local economy are paid a living wage? Consumer's willingness to pay a higher price for goods or services that supports a secure lifestyle for another person is a crucial part in whether a living wage ordinance is a viable option for our local economies. This paper seeks to measure consumer's willingness to pay a price premium on low price necessity items and expensive luxury items that are living wage certified. My research uses a survey that elicits willingness to pay and then analyzes how consumer's demographics (information, age, education, etc.), budget constraints, and preferences influence consumer's willingness to pay. This research provides insight into consumer's preferences for living wage products and whether the positive social externality will equate to a price premium for various items and price ranges.

# Introduction

According to the Economic Policy Institute, human labor is the fundamental activity in our culture and livelihoods. Work gives to the individual a purpose, to the family dignity, to the economy prosperity, and vibrancy to the community. It is the glue that holds our society together. For many families across the United States and in North Carolina, work does not fulfill this criterion. One-third of North Carolina's working families have low-wage jobs and the top five percent of families have average incomes that are 12 times higher than the poorest 20 percent of families. This makes North Carolina's growth in income inequality the 21<sup>st</sup> largest in the nation (EPI).

Because of the high income disparity and the insistent rates of poverty throughout the country, the living wage concept was introduced (NC Budget and Tax). North Carolina Budget and Tax Center (NCBT Center) developed a Living Income Standard, "a market-based approach for estimating how much income a working family with children needs to pay for basic

expenses" without public or private assistance. The Living Wage Standard is calculated based on location and family size, and therefore varies from depending on these variables. In Asheville, the living wage standard for a single person with no dependents needs to make \$11.35 an hour to be considered living wage certified. Using the same logic, a typical North Carolina family with two children in 2008 must have earned \$41,184 to cover their basic necessities; childcare, transportation, health care, food, housing, etc. That amounts to an individual earning a minimum of, "\$19.80 per hour, for every working hour of every week of the year" (NC Budget and Tax). In comparison, North Carolina's current minimum wage just recently rose from \$6.55 to \$7.25 an hour for all employees (NCDOL). Instead of earning a livable wage of \$41,184 a year, many families make less than half of the threshold, at \$15,080 at the current minimum wage (NCDOL). A study done by the NCBT Center finds that 37 percent of the families surveyed fall below the living wage income standard: despite the fact that 60 percent of the adults surveyed work full-time. Research by Villarejo (1997) has shown that a living wage could help alleviate some of the burden of poverty that has been placed on workers. Businesses have resisted the movement due to the burden of increased costs and concern for a loss in competitiveness. The AFL-CIO calculated that a 5 cent price increase could increase workers' wages by 40% (Villarejo, D., 1997). Without wage increases we are accepting the long term condition of poverty in the US. The living wage program hopes to remedy this situation using both voluntary and regulatory solutions that will impact business and ultimately consumers. The question becomes whether consumers are willing to pay the 5 cent increase noted above or the higher amount that is needed to increase the minimum wage to a living wage?

The introduction of a living wage standard translates into increased costs for business owners. However research by Bernstein (2003) found that even with a living wage ordinance, the costs to most firms would be less than two percent of their total production costs. Bernstein also reports that the existing wage policies tend to affect only a small share of the workforce and firms tend to absorb the higher costs through efficiency gains (Bernstein, 2003). However there will be increased costs for consumers due to the price premium, and therefore consumer's consumptive behavior plays a vital role in every society. Citizens can make consumptive decisions based on the information provided by the market that correlates with their values. According to Allen and Howard, 2006, labeling schemes are the most practical method for producers to communicate information about product characteristics that are not immediately apparent or explicit to the consumer. Living wage certification is one of the labels being associated with commodities, under the umbrella of ethical consumption (Allen, 2006).

The living wage attribute adds value to a product due to the inherent private and social benefits of labor that is incorporated in the good. The social benefit of labor becomes internalized when a living wage standard is introduced into the market. Product labeling is a useful method for businesses because the inherent characteristics of a product have the potential for producing a price premium. The price premium encourages producers to invest in and produce ethical products while maintaining their economic practicality, even with increased competition from multinational corporations. In order for local businesses to remain viable, the price premium consumers are willing to pay must be greater than the additional cost incurred by businesses to pay the same amount of employees at a higher price.

There is already evidence that consumers are willing to pay a higher price for ethical consumption, including fair trade and eco-label products. In previous research by Loureiro and

Lotade (2005), they found that consumer's were willing to pay 15% more for fair trade coffee and 30% more for organic, compared to the price of regular coffee.

Consumers will ultimately decide whether a living wage is obtainable in North Carolina and across the United States. Consumer's willingness to pay a higher price for services or goods that supports a secure lifestyle for another person is a crucial piece to whether a living wage will ever be a viable option in our local economies.

# **Previous Studies**

Producers and businesses are constantly interested in "adding value" to their products by differentiating their products. Business owners are interested in both production costs and consumer demand for the new product or service. The use of labels is one technique for differentiating products for consumers (Hudson, 2004). According to Loureiro and McCluskey (2003), "the use of these labels allows firms to signal quality or the presence of specific desirable attributes, and in so doing to create the potential for premiums based on this signal."

Consumer's have an ideological connection to labels within the market. Focusing on labels and product differentiation, there are very few articles in the economic literature that address willingness to pay a price premium for living wage products. However, there is an abundance of research on willingness to pay for various product labeling schemes and all sorts of labels that differentiate products and therefore signal a quality change; including organic, local, environmental, and fair trade.

Caswell and Mojduszka (1996) and Kim et al (2000) found that consumers prefer environmentally sound products, and many consumers are willing to pay a price premium for these products. Loureiro and Lotade (2005) extended previous research by comparing consumer preferences for ethical and environmental labeling programs in coffee. Their research found that consumers are willing to pay the highest premium for fair trade products by 21.64 cents/lb over the original price for fair trade coffee. This is compared to the premiums of 20.02 and 16.25 cents/lb, respectively, for shade grown and organic labels (Loureiro, 2005). Another study by Loureiro et al (2002) had results consistent with previous research, but their study focused on consumer's preferences for eco-labeled apples. Overall their study obtained a positive but smaller<sup>1</sup> willingness to pay a premium for eco-labeled apples. They also found that when consumers ranked important characteristics for purchasing apples, "fair and safe working conditions" was one of the highest ranking characteristics, along with taste, quality, and freshness (Loureiro, 2003). Allen and Howard (2008) used a discrete choice response survey for a pint of strawberries. Their research indicated, confirming previous studies on coffee and apples, that consumer's in the United States were willing to pay a higher price for strawberries that embodied fair and safe working conditions than strawberries that did not (Allen, 2008).

Studies specific to environmental and ethical labeling indicate that most consumers prefer these attributes associated with these products and many consumers are willing to pay a price premium due to labeling. This price premium is summarized by Allen and Howard (2008). They suggest that consumers are more willing to pay higher prices for luxury and perishable food items, such as apples, coffee, and strawberries that may be less price sensitive because they are not staple food items or are small fraction of the overall budget, which yields low price elasticity (Allen, 2008). Although there is evidence, it is limited due to this characteristic of the products used in the studies. This project extends previous research by studying willingness to pay a premium for living wage labels using a range of items and price: low price necessity items to expensive higher price elastic items.

<sup>&</sup>lt;sup>1</sup> Loureiro et al (2002) found that consumer's would pay a premium of only 5 percent more per pound of eco-labeled apples, as compared to 10 percent price premium.

# Social Benefits of a Living Wage: A Theoretical Model

Consumer's willingness to pay for a good or service is derived from individuals maximizing their utility within a given budget constraint. When consumers buy living wage certified goods they are signaling to the producer that they are willing to pay a higher price in order to give another person a secure wage. Consumers often purchase products based upon specific attributes. For example eco or ethical labeling informs the consumer of a specific characteristic that differentiates the product from other 'typical' products in the product class. Therefore a consumer is left to choose the typical product or the one product with the specific attribute, e.g. environmentally friendly or providing living wages and good working conditions for the employees behind the product. Essentially when consumers choose these products they are showing a preference for and are revealing a demand for a particular input class (socially or environmentally responsible production methods and inputs). Consumers show they are willing to pay for the social benefits that result from these production methods. Social benefits and community values are incorporated in consumer's consumptive behaviors in order to maximize their utility. Consumer's utility functions map consumer preferences. These consumptive decisions adjust to incorporate the products that increase utility due to the values inherent within these products. Equation one illustrates a consumer's choice (Hudson).

### Equation 1.

Maximize Utility Function = f(X, x, Z; y)Subject to: Y= PZ\*Z + x\*Px + X\*PX

Where:

X= quantity of standard good x= quantity of same good with Living Wage attribute Z= quantity of all other goods Given Y= income PZ= market price of Z PX= market price of X Px= market price x

When a label is added to a product, and assuming consumers have faith in labels and full information, the quality of that product rises. The value a consumer places on quality improvement, or the value that is added due to labeling can be derived by determining the magnitude of willingness to pay (WTP), which is embedded in the market price of x, Px. Equation 2 measures the value the consumer places on a product's attributes. The value a consumer places on a living wage product is given by how much they are willing to pay for a living wage good. The decrease in overall income by paying more for the same good at a higher price decreases consumers overall purchasing power, such that the following equality holds.

Equation 2.  $V_1(Z_1, x; PX, PZ, Y - WTP) = V_0(Z_0, X; PZ, PX, Y)$ 

In the above equation, the utility from consuming a bundle of LW products with a price premium is equivalent to a bundle of non-LW goods at a lower price. Equation 3 shows the relationship between marginal utility (MU) and price between the two good types, LW and non-LW. When a consumer purchases a basket of several goods, equilibrium occurs when the marginal utility per dollar spent is equal for each good. In the case of two identical goods, but one is produced with living wage labor and the other without, the price differential is the willingness to pay, as noted above. Consumers showing preference in the market by purchasing living wage goods in their basket of goods are equating the good's MU per dollar spent with all other goods. Equation 3 illustrates this point.

Equation 3. 
$$\frac{MUx}{PX + WTP} > \frac{MUX}{PX}$$
 or  $\frac{MUx}{MUX} > \frac{PX + WTP}{PX}$ 

If consumers have no preference for the living wage attribute, then MUx = MUX and WTP = 0

Figure 1 models consumer's preference given a budget constraint. When a living wage good (good x) becomes a substitute for a typical good (good X), the consumer's bundle of all other goods (good Z) changes, due to the increase of price with good x. Without the presence of a living wage good, and given the price of good X and Z, the consumer falls on B<sub>1</sub>, and the optimum bundle quantity falls at Z<sub>0</sub> and X. When the living wage attribute is introduced, the quantity of bundles Z and X will change depending on the consumer's tastes and preferences. The budget line shifts to the left (B<sub>2</sub>) because the price increase of good x causes the consumer's purchasing power to decrease. Therefore the quantity of each bundle depends on the consumer's taste and preferences and will change with the introduction of living wage goods. If the consumer chooses to stay at quantity X, but with an increase in price due to the living wage attribute, the consumer will have to decrease the amount of Z and will end up on  $Z_1$ . Therefore the difference between  $Z_0$  and  $Z_1$  is the consumer's WTP a price premium for LW social benefits to the community, given typical goods and all other goods in the market. The consumer could also decide to decrease the amount of good X and keep all other goods (good Z) the same, and would fall on  $x_1$  and  $Z_0$ . Therefore their willingness to pay is measured by the difference between  $x_0$  and  $x_1$  in Figure 1.





The price premium consumers are willing to pay has important implications for business owners. Businesses interested in social sustainability may want to pay living wages but do not know the premium the market will bear. The price premium has an impact on firms whose values align with the living wage movement and also have to remain competitive within their market. If a consumer is willing to pay a higher price for a living wage good, we can assume that a living wage bundle produces more utility than a typical good bundle. The social benefits inherent within living wage goods and services benefits consumers; therefore living wage products provide more utility per unit. If the altruism of improving living standards for others is a factor in consumer's buying behavior, we expect that consumers will be willing to pay a higher price for living wage produced goods.

### Labor Market Theory

Figure 2 illustrates the traditional labor market theory when a wage floor is introduced. Point A shows the quantity of labor and wages the market will bear, given the current supply and demand for labor (lines  $Q_{LE1}$  and  $W_E$ ). When a wage floor is implemented there is movement along the demand curve from point A to point B, because producers are not able to afford the increased price of labor. The demand for labor is the product of the price of a living wage good (Px) and the Marginal Product of Labor MP<sub>L</sub>, which is equal to the Marginal Revenue Product (Px\*MP<sub>L</sub>). Firms will hire another employee as long as the MRP, or the Marginal Benefit of labor (MB<sub>L</sub>), is greater than or equal to the marginal cost of labor W<sub>L</sub>. Therefore the minimum wage causes the quantity of labor to decrease from  $Q_{LE1}$  to  $Q_{LE2}$  and unemployment increases by that same amount. The difference between the quantity of labor  $Q_{LE1}$  and  $Q_{LE2}$  is the amount of new unemployment in this market. This model is a static model and does not take into account certain dynamics such as the externality





If consumer's willingness to pay is greater than zero for a living wage good (Px > PX), then the labor demand curve for LW goods is to the right of  $D_{L1}$ , shown as  $D_{L2}$ . The higher labor demand allows for employers to pay their current employees a higher wage (or the ability to hire more employees) and meet the wage floor. We move from point B to point C because  $D_{L2}$ encompasses the social benefits of increasing employment and wages. Therefore the difference between  $Q_{LE3}$  and  $Q_{LE1}$  is the amount of new employment within the economy and for each job attained the Marginal Social Product (MSP) is now internalized for businesses through the price premium. Understanding the price premium consumers are willing to pay for these social benefits provides the information needed in the marketplace to internalize this external benefit. Therefore if consumers are willing to pay a price premium, the true equilibrium is point C because society values social sustainability and livable wages in the economy.





# Study Methods and Survey Design

A consumer survey was designed and implemented during the winter of 2008, the fall of 2009, and the spring of 2011. The various dates of survey collections is important to note because the financial crisis had just begun to hit the economy during the winter of 2008 and the financial crisis was fully affecting the economy and households during the fall of 2009. Surveys were collected by surveyors approaching random respondents in downtown business areas, and the respondents filled out a three page survey independently.

The three page survey solicited information regarding respondents' perceptions and knowledge of living wage and minimum wage, importance of certain employment characteristics, and their willingness to pay a price premium for goods with the living wage attribute. Socio-demographic information was collected in the last section of the survey. In order to provide each respondent with the same level of knowledge, a short paragraph, meant to describe and inform on the issue of living wage, was inserted before the valuation question.

The valuation question had two different versions that were used in order to gain an unbiased sample of data and reflected the true willingness to pay. The original version of the survey was designed taking into account ease of surveying for respondents and data analysis. However, the valuation question was altered in 2011, due to flaws in the survey design that influenced respondents willingness to pay and may have biased the results. The original version was the only version used during 2008 and 2009<sup>2</sup>, and had four contingent valuation questions in one single survey. The survey design listed the different possible items (low cost necessity items to high price occasional purchases) and their price ranges (5, 20, 75, or 500 dollars) in one column and the various ranges of price premiums in another column. The price premiums given began with 0% willingness to pay and increased incrementally until the premium reached 50% of the cost of the item. The valuation question was worded, "Considering the range of prices and example items below and *your monthly budget*, circle the one that best applies to you, or fill in another level that you would pay."

All other surveys used a single discrete choice question followed by an open-ended question to elicit willingness to pay. This format, which involves a yes or no answer to a defined amount, more closely resembles the type of decisions consumer's make in the market place than the previous versions. The open ended question measures the maximum price premium the respondent is willing to pay. The question was worded, "Consider a low cost necessity purchase, such as food or personal care item, that cost  $\underline{A}$ . Would you be willing to pay a price premium of  $\underline{X}$ ? What would be the maximum price premium you would pay for this item?" The type of item

 $<sup>^{2}</sup>$  In 2011a variation of the original version was used, in order to have consistency and check survey methods. The survey had the same format (incremental price premiums from 0% to 50%) but only used the \$5.00 item, of low cost necessity purchases. The same valuation question was used to elicit respondents willingness to pay.

and price, *A*, and the amount, *X*, varied depending on the version of the survey. Of the new survey data collected, 33.5 percent of the surveys were \$5.00 low cost necessity items, 31.5 percent were \$20.00 medium cost regular purchases, and 35 percent were occasional very expensive purchases of \$500.00.

The percentage of overall new surveys for each starting point premium given in the valuation question, by price level, is shown in Table 1. Of all the valuation questions that asked respondents to consider \$5.00 items, 34 percent of those were asked if they would pay a price premium of 10 percent (\$0.50) of \$5.00. 36 percent were asked to pay 25 percent premium on a \$5.00 product, and 30 percent were asked if they would pay 50 percent (\$2.50).

	Price Level (Percent of Total Surveys)			
Starting Point Premium (%)	<b>\$5.00</b> (33.5%)	<b>\$20.00</b> (31.5%)	<b>\$500.00</b> (35%)	
10	34	33.3	36	
25	36	33.3	32	
<b>50</b> 30		33.3	32	

 Table 1. Percentage of New Survey Data Collected according to Valuation Question

### Results

165 surveys were collected in the downtown area of Asheville, NC by both Warren Wilson College students and University of North Carolina at Asheville students in 2008 and 2009. In the spring of 2011, 155 surveys were randomly collected from Asheville, Sylva, Hendersonville, and Black Mountain, NC. This diverse sampling of rural, suburban and urban areas ensures that there is sufficient variation in the data set among incomes, education, preferences, information, and age in order to make the data better correlate with the nation and North Carolina's overall demographics as shown in the tables below. All surveys were collected both during the week and the weekend, and between the hours of 10am and 7pm. In total, 320 surveys were collected with a response rate of 48%<sup>3</sup>. The demographics of the survey respondents are presented in Table 2 in comparison to 2008 U.S. Census data. Approximately one third of the respondents were 18 to 30 years old, made less than \$30,000 a year, and had a High School Degree or more. Compared to the 2008 U.S. Census data, our sample over-represents younger ages, lower incomes, and graduate students while under-representing other ages and higher income individuals. For a question that asked what level of importance certain employment characteristics were to the respondent, on a scale ranging from not important (0) to extremely important (4), all of the means were between 2 and 3, or considered an important characteristic to respondents.

Table 2. Summory Statistics of Sacia Damagraphics compand with US and North Carolina Congregationates

Table 2. Summary Statistics of Socio-Demographics compared with US and North Caronna Census Estimates					
Variable Name (n)	Description	Percent of	2008 National U.S.		
		Total Sample	<b>Census Data</b>		
		( <b>SD</b> )	(North Carolina)		
Age (296)	Age (Years)	(15.78)			
Young	18-30	37.16	<b>23.4</b> (25.1)		
Mid Age	30- 50	30.74	<b>38.2</b> (35.3)		
Higher Age	> 50	32.10	<b>38.4</b> (39.6)		
Gender (312)		(.50)			
	Men	51	<b>49</b> (49)		
	Female	49	<b>51</b> (51)		
<b>Income (299)</b>		(1.40)			
Low Income	< \$30K	40.80	<b>28.6</b> (32.5)		
Middle Income	\$30K - \$70K	32.78	<b>34.0</b> (36.5)		
High Income	<b>\$70K</b> +	26.42	<b>37.5</b> (31)		
Education (313)		(2.64)			
	High School or more	43.13	<b>65.2</b> (66.2)		
	College Degree	30.03	<b>24.7</b> (25.3)		
	Graduate School	26.84	<b>10.1</b> (8.5)		
Importance of	[Lickert Scale from 0 (Not Important)				
<b>Employment Benefits</b>	Living Wage Deid	[Means]			
(317)	Living wage Palu	2.95 (1.08)			

<sup>3</sup> Non-response data was collected while conducting the survey for each time period. The 2008 and 2009 non-response data was insufficient; therefore the 48% response rate reflects the 2011 survey dates.

(318)	Health Benefits	<b>2.83</b> (1.11)	
(316)	Sick Leave	<b>2.59</b> (1.17)	
(312)	Vacation Days	<b>2.19</b> (1.25)	
(315)	Overtime	<b>2.74</b> (1.19)	
(314)	Pension	<b>2.11</b> (1.35)	

http://factfinder.census.gov/

### How much will Consumers Pay for Living Wage Goods?

Table 3 reports respondents willingness to pay a percentage price premium given different product prices. Due to the survey design of the original valuation question, there were multiple responses (four valuation questions) embedded in one survey. There were 709 responses to the valuation question overall.

Product Price Level						
Percent WTP Premium	\$5.00	\$20.00	\$75.00	\$500.00	Total Respondents	Total Percent
0%	16	18	12	27	73	9.4%
0.01 - 3.0%	18	17	24	34	93	12.2%
5%	35	25	36	47	143	18.4%
10%	72	62	56	5	240	30.8%
15%	0	8	0	4	12	1.6%
20%	8	1	0	10	19	2.4%
25%	36	47	21	19	123	15.8%
30+%	31	22	8	12	71	9.3%

 Table 3. Number of Respondents Percent Willingness to Pay given different Product Prices (n= 709)

 Product Price Level

Overall, 9.4% of the respondents surveyed were not willing to pay any price premium on goods that had the living wage characteristic. 30.8% of respondents were willing to pay 10 percent more for living wage goods in the market. 18.4% and 15.8% of respondents were willing

to pay a percentage price premium of 5% and 25%, respectively. 9.3% of respondents were willing to pay over 30% extra on goods labeled living wage certified. Therefore 90.6% of all respondents surveyed would pay a percent price premium on goods labeled living wage. 78.4% of the survey population would pay 5 percent or more, and 60% of the population would pay a 10 percent price premium on goods living wage certified.

The results in percentage willingness to pay highlight an outlier in the findings that may be due to a starting point bias in the new survey data. The data shows that the total number of respondents willing to pay a price premium increases until 10 percent, and then decreases dramatically at 15 and 20 percent, then spikes again at 25 percent. This abrupt increase at 25 percent signals a bias within the data set, due to the high starting point in the survey design of the valuation question. When testing for a starting point bias in the new data, the 25 percent data was shown to be significant at the 95 percent significance level. Therefore the data that was collected at starting at the 25 percent premium level is bad data, and has been taken out of all other data tables to correct for survey design and starting point bias.

Overall, respondents mean percent willingness to pay for all living wage goods, at various price levels is 12.1%, above the original price. For low cost necessity items that are approximately \$5.00, the mean percent willingness to pay was 14.5%. The mean willingness to pay a percentage price premium for \$20.00 medium priced items and \$75.00 higher priced items was 13.6% and 10.8%, respectively. For occasional expensive items that cost \$500.00, respondent's mean percent willingness to pay was 9.5%.

#### Table 4: Respondents Mean Percent Willingness to Pay a Price Premium (Standard Error of the Mean)

All Price Levels	\$5.00	\$20.00	\$75.00	\$500.00
12.1%	14.5%	13.6%	10.8%	9.5%
(0.05)	(0.01)	(0.01)	(0.01)	(0.01)
(n = 629)				

The results reported are logical and consistent with consumer behaviors. The higher the price of the product the less likely a consumer is willing to pay a higher price premium because the premium and product price will equate to a higher percentage of their overall income. Lower priced items make up a smaller percentage of a consumers budget, and therefore a 25 percent price premium seems more affordable to respondents on a \$5.00 item instead of a \$500.00 good. Thus respondents are more willing to pay a higher price premium for lower cost items.

### Characteristics of Willingness to Pay

A regression model was used to understand what influences willingness to pay a price premium. The regression equation was created using the conditions of demand, shown in Equation 4. Substituting the survey data into the conditions for demand, created the variables used in the regression equation. The regression equation is shown in Equation 5. Table 5 shows the coefficients for the variables used to predict the relationship between willingness to pay and various characteristics in the survey.

#### **Equation 4: Conditions of Demand**

Quantity = f (Price of Good: P, Price of Other Goods: PG, Taste and Preferences: TP, Income: I, and Expectations: E)

Price of Good = Product Price Price of Other Goods = No Variable Taste and Preferences = Importance of Living Wage, Female, Willing to Pay Higher Prices Income = Education Category Expectations = Year of Survey

# %WTP = f (Product Price, Living Wage, Higher Prices, Education Category, Female, Year of Survey, Starting Point, Survey Design)

**Equation 5: Regression Equation** 

 $WTP = a + b_1 + b_2 + b_3 \dots b_n$ 

#### Table 5: Coefficients of Variables

Variables	Original Survey Data	New Survey Data	Combined Survey Data
	Equation 1	Equation 2	Equation 3
Constant	0.14*	0.19	0.21*
Importance of Living	0.015*	0.01	0.015*
Wage			
Willing to Pay	0.06*	0.09**	0.06*
Higher Prices			
<b>Education Category</b>	-0.013*	-0.007	-0.011*
Female	0.027*	0.052	0.03*
Year of Survey	-0.002	-	0.013
<b>Product Price</b>	-0.0001*	-0.0004*	-0.0001*
Survey Design Type	-	-	-0.10*
Starting Point	-	0.09**	0.0003
$\mathbf{R}^2$	12.2	10.8	13.8
(P-value)	(0.00)	(0.095)	(0.00)
Standard Error	0.12	0.26	0.15
Estimate			

\*= Significant at the 95% significance level

\*\*= Significant at the 90% significance level

Three equations were used to explain the regression model. The new survey data equation two was the least effective of predicting what influenced willingness to pay, with an R-squared of 10.8 percent and the standard error estimate being 0.26. The original survey and cumulative data had similar results and was the better model to use to predict willingness to pay. The regression model states that some variables influenced willingness to pay positively and others negatively. Income and age were used in the regression, but were omitted because they were highly correlated to other variables and were ultimately bad predictors. All data types specified that the higher the category of education and product price, the lower the willingness to pay. The pay by 1.3 percent in the first equation and 1.1 percent in the third equation. For every one dollar increase in the product price there is a 0.01 percent decrease for both equations 1 and 3. The level of importance of a living wage characteristic, willingness to pay higher prices, and being a female were significant and all increased the willingness to pay in both equations 1 and 3. The time period that the survey was conducted was insignificant in all equations, while the design of the survey was significant in the third equation. The survey design characteristic signifies that there was a bias in the surveys, because the regression models states that the original survey lowered the willingness to pay by 10 percent compared to the new surveys. This points to a starting point bias in the new survey design, and needs to be addressed by collecting more data with a lower starting point or omitting the biased data. This regression model is not a good predictor because the R-squared is low and can only explain a small portion of the data.

#### Discussion

The results in this study were consistent with previous research, including research by Allen and Howard (2008). This study and previous research found that females were more likely to have a higher willingness to pay than males, and those respondents with higher education levels were less willing to pay a price premium than others. Although the correlation between education level and willingness to pay is consistent with other living wage and fair trade research, the finding is opposite for environmental and organic goods. Research focusing consumers' willingness to pay for organic and environmental goods has shown that there is a correlation between higher incomes and higher price premiums. The difference between the two types of goods may be that organic goods are a type of health product that benefits the individual, and environmental sustainability is more important to those with higher incomes. Using the cumulative regression data, for every level of higher education a respondent earns their willingness to pay decreases by 1.1 percent. This goes against conventional wisdom, because education and income are highly correlated. It is reasonable to say that as the level of education increases so does the level of income, and if a respondent has a larger budget we would expect them to be able to pay a higher price premium because they are less price sensitive than a lower income worker. The correlation between unwillingness to pay higher premiums and level of education may be due to class separation between those with lower incomes and/or fewer years of education. The high income disparity in the United States is perpetuating class separation and polarization, creating status differences that produce social distance and insensitivity towards other classes.

This study also found that the majority of consumer's are willing to pay a higher price premium for ethical products that support others livelihoods. An average price premium of 12.1 percent for products was observed for products that had ethical and sustainable characteristics. Furthermore respondents were willing to pay a 9.5 percent price premium for high priced elastic items, and 14.5 percent for low priced necessity items. The results found in this study are consistent with previous research done on similar topics and has expanded the research to include willingness to pay at various price ranges.

The "attitude behavior gap" is one limitation in willingness to pay research and in this study. The attitude behavior gap is a term used to describe respondents purchasing behaviors that do not correspond to their actual behaviors and stated intentions (Vermeier). Therefore the results in this study may report a higher willingness to pay than actually occurs, because consumer's stated willingness to pay is lower than their behavior in the market. However, even a

small proportion of consumers who are willing to pay high price premiums create the potential for profitable niche markets that cater towards ethical products.

Another limitation of this study is in the survey design. The data collected using the new version of the valuation question was identified as having a starting point bias when isolated from the data set. According to Boyle, Bishop and Welsh (1985), the "starting point bias arises in the iterative bidding framework when the initial bid (posited by the interviewer) influences respondent's final bids" (Boyle). Ideally, the starting point in a survey is merely a tool for initiating the valuation question and bidding, but should not affect respondent's final bids. When comparing the new data set with the old, there was a higher overall willingness to pay using the new data, indicating a starting point bias. When the cumulative data (including new and old survey data) was analyzed, the starting point bias was insignificant, but the survey version was statistically significant. In our data analysis the 25 percent starting point was removed to correct for starting bid bias. After removing the biased data, the survey design still resulted in our analysis being unclear of whether the different time periods of data collection or the survey design was affecting the differences in willingness to pay. This was a flaw in the design of the survey and further research needs to be conducted to separate the time period from survey design in the model. More surveys with a lower starting bids need to be collected in order to correct for the presence of a starting point bias in the new survey versions.

#### **Conclusions**

Studies like the present provide consumer information that is currently missing. This study is able to analyze policy implications of the living wage in consumer demand and prices. It

is important to note that the results reported in this study should be interpreted with caution due to the gap between attitudes and actual behavior.

However, this research highlights the potential for financial viability in terms of consumer's willingness to pay a higher price for ethical products that creates a social benefit by improving the living standards of others. The results of this study show that the majority of consumers are willing to pay higher price premiums on living wage goods. This study emphasizes the existence of niche markets available to differentiated products and labeling that carry ethical and sustainable practices. Businesses interested in social sustainability can use this research to justify increased product prices in order to internalize the social benefit of improving their employee's living standards and remaining competitive in the market. Further research is needed to understand what labeling schemes are most effective in marketing the living wage characteristic and better prediction models of what type of consumer is more willing to pay higher prices.

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