

How to make more profit? Can donations improve your margin?

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1 Objective

In this study we tried to replicate a field experiment which was done at an amusement park in the United States of America. In this study they tried to different pricing models first is pay what you want (PWYW) including zero, and second is Fixed pricing model which is normally followed. We tried to see if the same results replicate in the Indian Context.

The project's main aim is to study and compare the differences between fixed pricing and PWYW pricing strategies and how including the option to donate to charities impacts the two pricing strategies. We also check if belief in charities has an effect on the amount the individual is willing to pay in these two different strategies.

2 Definitions

2.1 Pay What You Want(PWYW)

This is a mode of pricing which dates back to ancient history. However, there are so many economic theories today which talk about Supply demand. Sophisticated algorithms to price products so it's not too expensive to customers and the companies can make profit. However another method of pricing is called pay what you want where the price is determined by the consumer themselves they need not be consistent different people pay different amount.

2.2 Fixed Pricing Model

This is the standard model of how things are priced. A price is fixed for a product and the consumer can buy it only for that price.

3 Literature Review

Corporate Social Responsibility (CSR) is a business model in which a company is socially accountable to its stakeholders, the public, and itself. Companies that engage in this business model are conscious of their impact on society's social, economic, and environmental aspects and hence make an effort to contribute to the community positively. The goal of the company while engaging in CSR goes beyond short-term profitability. CSR is one of the dimensions that make up a company's corporate identity, the other being corporate expertise [PD05]. One of the main benefits of implementing CSR is that customers are more likely to buy from such companies as they feel they are also contributing toward the positive enhancement of society.

However, it is often seen that CSR-related costs outweigh their commercial benefits [Sen02]. Few studies have found that the effectiveness of CSR activities depends on how the public perceives the motivation behind these activities and can sometimes lead to negative perceptions about the company [Ell06]. This may occur as the general public is skeptical of why a profit-focused business would engage in activities that lead to no direct profits. And when consumers are suspicious, the goodwill behind CSR activities comes off as customer manipulation[MF94].

Another reason why CSR fails is that purchasing CSR goods (i.e., products labeled "ethically sourced" or "cruelty-free," etc.) are not a strong indicator of the buyer's "social intentions" [GA10].

For example, if a customer buys chocolate made from ethically sourced cocoa, what part of the purchase reflects their social consciousness, and what part reflects simply liking chocolates? So there is no measurable indicator for "social intentions."

In an effort to specifically engage the social preferences of consumers, Gneezy et al. [GA10] proposed the concept of Shared Social Responsibility, where if the corporation participates in social activities, it should go beyond the firm's intentions and instead should express the preferences of the customers.

A strategy used in Shared Social responsibility is Pay What You Want (PWYW) pricing, where the customer is free to pay any amount for the good or service, including 0\$. If people cared only about money, everyone should pay the lowest price possible, i.e., zero, but it is observed that people frequently pay more [GA10] [PAG10][TR09].

In the PWYW pricing, as the buyer can now pay whatever they want, it helps mitigate any suspicions of customer manipulation they might have, and since every dollar spent enhances their identification with the social cause, the PWYW pricing strategy removes the two shortcomings of CSR discussed before.

4 Experiment

4.1 Methodology

The original study happened as a field experiment. We didn't have enough time and resources to replicate it exactly with real money rather we did it online using google forms where we asked people how would they react and how much are they paying in PWYW. Including these details we tried to find how much they believed in corporate donations reaching to people in need trying to find if they are correlated or not.

4.2 Experimental Design

The experiment follows a between-subjects design, where the participants are divided into four groups. Each group is given a survey corresponding to one of the four conditions described below, followed by another common survey for all the groups. As all the surveys are short and can be filled by the participant in less than five minutes, the issue of participant fatigue is ruled out.

4.3 Surveys

Four surveys corresponding to the following conditions: (Please note that in the results section we follow the same naming for each group to identify.)

1. Fixed price
2. Fixed price, and 50% of it is donated to charity
3. PWYW
4. PWYW, and 50% of it is donated to charity

These four surveys are randomly allotted to the four groups. Then, all the participants fill out a common second survey that measures the participant's belief in charity. All the surveys were created using google forms. Links to all the surveys are included in the appendix. After asking the questions related to will they buy or not and if they buy for how much will they buy in PWYW scheme we have short questionnaire asking about how much they trust the donations made by businesses as we try to look at if there is any correlation if at all. The questions asked are as follows:

- Would you buy the product if is/is not donated to charity (Here we ask the complementary of what was asked before if charity was involved before then we remove it or else we add it.)
- How often do you Donate to Charity.
- On a 5 point Likert scale how much they trust donations made by businesses to charities.

4.4 Hypotheses

- If the charity is involved more people pay, or people pay more money in respective cases.
- People pay more if PWYW compared to the fixed price in normal situations.
- If the belief in corporate donations is more, more money is donated.

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***Required**

Would you buy the picture if 50% of the proceeds is not donated to a charity? *

☐ Yes
 ☐ No

How often do you donate to charity in a year(Approximate is fine) *

Your answer _____

When businesses (including big and small), and corporates claim that they are donating money to charity, Do you think that the money will go to the people in Need : *

1 2 3 4 5
 Strongly Disagree ☐ ☐ ☐ ☐ ☐ Strongly Agree

You are at a local amusement park. At the highest point of the ride right before going down beautiful portrait photos of you and your neighbors at the ride are taken (Like the image below), after getting down a seller approaches you to sell the portraits which were taken during the ride, they are standard photos of fixed dimensions (400x267). They also have a digital copy which they will share along with the image.



What's your age

Your answer

The Seller approaches you and sells you the picture for 50 rupees and 50% of the proceedings will be donated to a charity. Would you buy it? *

☐ Yes

☐ No

5 Results

5.1 Overview of Details

Group	Revenue made per participant	Profit per participant	Average belief in charity
1	27.77777778	2.777777778	2.55
2	37.5	6.25	2.124
3	88.75	46	3.1
4	135.4545455	110.4545455	2.27

We assumed that it costs 25 rupees to make an image based on that we have calculated the profit made per participant and the results are similar to that of the original paper however we have to check the statistical validity of these results and check each hypothesis.

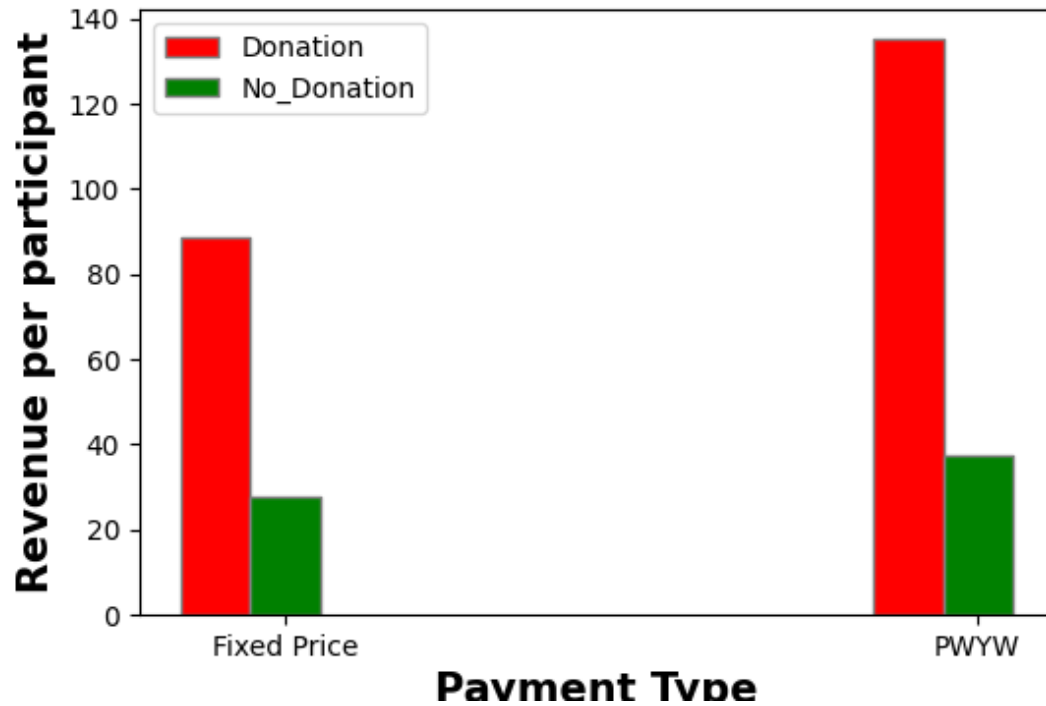
1. Hypothesis 1: We can see the difference on an average however to check it's validity independent T-test is performed between the groups and the difference was significant with a p-value of 0.00002.
2. Hypothesis 2: People did pay more in PWYW compared to normal pricing on an average however when measured for the statistical difference using independent T-test and the difference was significant so we can accept this hypothesis and reject the null hypothesis. (p-value 0.03)
3. If belief in charity is more then more money is donated when performed T-test the p-value came out to be 0.32 which is > 0.05 hence the hypothesis can be dropped and null hypothesis is accepted. One possible explanation could be money is not same for everyone 50 rupees might be low for some high for others we didn't take this factor into account which caused the issue.

5.2 Other Observations

In the questionnaire we have flipped the question and now asked the participants would they buy if charity is involved or not involved. Changing this also flipped opinions too which are as follows.

Group	Number of Yes to No flips	Number of No to Yes flips
1	0	1
2	0	0
3	3	0
4	8	0

It's interesting to see how if charity is involved when it's removed people changed their answers from yes to no and when it's included they changed their answer from no to yes. However in PWYW the effect is more pronounced.



6 Limitations

- The main problem with this experiment is that the experiment is a simulated version, whereas the original is an on-field experiment. The difference will be significant as typing a number and taking out and giving that money are two different things.
- If in the original study the payments were anonymous and there was no way to trace money back to the original sender would people spend the same money that is if someone in front of you pays 20 \$ for PWYW scheme that will influence you. If you are blind to all transactions would you pay more or less. One can conduct this experiment using some crypto currency and see how much people are paying.
- In this experiment the product which is being sold is a personal product that is no one else will buy your pictures so paying more in PWYW seems better but if same thing is being sold to everyone would everyone pay the same price?.
- In this study we weren't able to prove how the extra money paid for pictures are not being cannibalized by other sources of income as the authors of the original paper did.
- In this experiment we talk little about how this model is scalable and it has so many uncertainties those are the mood of the participants, the way the seller talks and many more.

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