Harassment bribery: an experimental approach to study the effects of academic Curriculum and Educational Institute Environment

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Introduction

Speed money is another name for bribes (as Abbink mentioned in his paper) which is used by citizens to get unauthorized benefits in contracts or services from governmental agencies and The provision of services to which people are entitled, such as admission to a public hospital or approval of a passport, is frequently exchanged for bribes. Kaushik Basu called these exchanges as harassment bribes, and he justified in a very simple way that if bribe-giving (but not bribe-taking) is made legal for those who give bribes will have an advantage to "blow the whistle" after giving bribes. Knowing this, those who accept bribes will be unwilling to do so. The Main purpose of this paper is that we should legalize paying bribes in asymmetric situations (called as harassment bribes), which will result in a dramatic decrease in the occurrence of bribery (emphasis added) but Others such as Dean have already questioned whether this proposal is morally acceptable or not. Not only does it support giving bribes, but it also depends on bribe-givers engaging in double corruption by both giving bribes and then assassinating the bribe-takers as they blow the whistle after the fact, so only asymmetric liability is not a drop-dead solution of bribery. The primary claim that legalizing bribery "would cause a sharp drop in the incidence of bribery" is false, which raises another issue with Basu's thesis, but this paper examines the impact of only asymmetric liability to combat the harassment bribes that's what Basu has demonstrated. The legal methods used to prevent bribery varies among different nations. The specified legal punishment for the bribe-giver is relatively light in China, Japan, and Russia (we call this as asymmetric liability) but in the United States, United Kingdom, France, Germany, and India, both the bribe-giver and bribe-taker are equally responsible and suffer penalties (we call this symmetric liability). Bribery and harassment are reportedly particularly prevalent in public services like In order to file police complaints, obtain land purchase documents, marriage certificates, electricity connections, or registration documents for home purchases, about half a billion rupees in bribes were paid, according to data gathered over a 21-month period from an Indian anti-graft website (www.ipaidabribe.com). Transparency International ranked India at 85 among 180 countries in its Corruption Perception Index report released on 2022 and finds that citizens pay bribes especially in dealing with health, tax sectors, real estate, legal courts and the police complaint. According to the corruption watchdog Transparency International 2020 (The report is based upon the survey which was conducted between June 17 and July 17, 2020 in India with a sample size of 2,000) found that 50% of citizens reporting bribes paying and while 32% of those who used personal connections said they would not receive the service if they don't pay the bribes. According to the survey, India has the largest incidence of bribery in the area (39%) and the largest number of people who use personal connections to gain public services (46%).**The current scenario of many countries which was featuring symmetric liability for both the bribe-giver and receiver, seemed to further aggravate this situation so** Basu (2011) come up with the idea of a punishment system with asymmetric liability to address this issue by only prosecuting and penalizing the public official (bribe-taker) and having no legal blame on the average citizen who requests the service (bribe-giver). He hypothesizes that providing legal impunity for a Citizen who reports wrongdoing, even if she has paid a bribe, can encourage more frequent reporting. This should thereafter deter authorities from requesting bribes in advance of the whistleblowing. Basu expects that there will be less harassment and bribery would be in equilibrium if we adopt the system of asymmetric liability. This paper uses experiments to examine the effectiveness of the

asymmetric liability mechanism in combating harassment bribes and we provide an alternative to conventional survey or field data analysis with our experimental technique. We present a typical harassment bribe scenario in a stylized game played by participants in an experiment, through this game we can discern the conditions under which the policy measures may or may not work and experiment will allow to observe those decisions empirically.

Literature Review

Harassment bribes is basically the payment made by citizen or common people to corrupt officer for the services they are entitled to, causing the problem of corruption in many countries. Different countries have different method of punishment for this form of corruption. while some country has made both bribe-taker and bribe-giver equally liable for crime whereas others punishes only bribe-taker and making bribe-giver being exempted from any sort of punishment and Basu (2011) called this as asymmetric liability to combat harassment bribes. Asymmetric liability is a mechanism where bribe-takers are culpable but bribe-givers have legal immunity (Abbink). The purpose of this paper is to examine the asymmetric policy is whether has the potential to significantly reduce corrupt practices or not. Although this has its own critics when it apply to real world problem (as per Jean Drèze)

"We find that the asymmetrical penalty structure can lower the incidence of bribery. The degree of decline, though, is dependent on how the players modify their tactics over time. The reduction in instances of bribery is less pronounced if the interacting members shift their strategies with a probability proportionate to the payoff of the alternate strategy option." **(Jean Dreze)** Our findings suggest that switching from a symmetric to an asymmetric penalty structure might not be enough to significantly reduce instances of harassing bribery.

Objective

The objective of this experimental design is to study Abbink's Harassment Bribery game amongst the participants and find the role of curriculum and environment that an institute provides to a student in limiting this social menace. The following are the exploratory questions which we will try to address through our experiment:

- **Question 1:** Does having liberal arts in the curriculum affect an individual's behavior to indulge in less bribery?
- **Question 2:** Does a liberal environment affect an individual's behaviour to indulge in less bribery?
- **Question 3:** Are females less susceptible to indulging in harassment bribery??
- **Question 4:** If one is assured of higher institutional support, do curriculum and environment change the responses of the individual significantly?

Hypothesis

Hypothesis 1: "Liberal arts curriculum inculcates socially desired behaviour of taking and giving less bribes when service/good in question a matter of right to the citizen is."

Liberal arts curriculum introduces students with social issues like corruption very deeply and they read many theories related with the issue during their coursework. This implies that, they must be knowing about the evil better than any other student who haven't studied these theories and are only studying quantitative and objective based paper.

Hypothesis 2: "A more liberal environment with heterodox views and intellectual debates and interactions among people from various disciplines inculcates socially desired behaviour of less indulgence in harassment bribery."

The educational institute apart from giving standard pedagogy, also provides a space to debate and indulge in discussions on issues of social problems like bribery and also spreads awareness regarding what are their rights and duties towards society and country. These debates and discussions affect the behaviour and choices of the people.

Hypothesis 3: "Females on an average will demand and offer lesser bribe than males."

Girls in our society are socialized differently than males in majority of households cutting across religion, caste and income groups. Our bureaucracy also has very little share of women and we would like to check whether making the ratio better is likely to reduce harassment bribery or not. Also, when women are made the service takers, are they going to offer lesser bribes or not.

Hypothesis 4: "Given better police system, speedy judiciary and more trustworthy institutions, people indulge less in harassment bribery being affected by their curriculum and environment they study in."

Many students may choose to indulge in harassment bribery thinking that even if they choose to report, chances of getting caught are slim and seldom officials are convicted of their offences. So, probability of getting caught is increased significantly when they report to catch the ethics better.

Sample and Participants

Students from **Liberal Arts of JNU** will comprise one subject pool. Students from **School of Engineering, JNU** will comprise another subject pool. Students from **IITs like Delhi** will comprise third subject pool. Applications will be sent to students through their official WhatsApp groups, posters and other forms of advertisements. **Samples from Liberal arts will be selected provided they have done their undergraduate studies in liberal arts and have spent two to three years in the campus**. In every subject pool, **80** participants **(Sample size = 80)** will be randomly selected from the applicants, out of which **40** will be randomly selected to be **official** and **40** will be **citizen** with efforts being made to balance them with respect to relevant attributes of our studies like gender, age and income. It will also be kept in mind to keep the groups balanced across three considered subject pools.

Experimental Design

There will be two groups within 3 subject pools. One group will play the role of public servant and other group will play the role of citizen. From a subject pool, participants will be randomly selected as public servants and citizens. Participants will be assigned a unique ID number and their private information acquired through survey and questionnaire will be kept confidential and will not be.

published anywhere or shared with anyone. All the disclaimers about confidentiality of the information and maintenance of privacy will be conveyed beforehand to the participants. They will also be briefed about the tasks at the beginning of the session.

The task of the public servants is to provide services to the citizens for which they are entitled to worth Rs. 500. But in order to provide these services, they can ask for the bribe from citizens (it must be noted that asking for the bribe is discretion of the public servant). Such bribes are called Harassment bribes. If the official decides to ask for the bribe, then he/she has to choose the amount of the bribe that he/she wants.[1] Citizens can respond to different amounts of bribery being asked from them. They can choose not to pay, pay quietly and get the services or pay and then report the rent seeking behaviour of the official with the concerned authority. Whether citizens report or not, the officials getting caught is probabilistic in nature (of course when citizen choose to pay and report the bribe, the chances of getting caught are higher).

Subjects will be given two similar types of games to give their responses. First game is standard Abbink's game for which they have to give their choices. In the second game, there is one change from the initial game. The probability of getting caught when citizens choose to pay, and report is taken as 80% instead of 40% in the standard game. This is done to study the hypothesis in a more comprehensible manner by controlling for factors like low existing trust in police and delayed justice via judiciary. Subjects will be given sufficient time to think about their choices and respond. They will be required to give their choices for both the games in a single go, i.e., once they have responded to the standard game, their response sheet will be collected and simultaneously will be given the second game to respond. The group playing as official remains to be official and there is no reshuffling being done. After they have registered their choices, they will be given a short questionnaire to fill up. This will contain demographic information like their age, family wealth and income, background they belong to, i.e., urban or rural, whether they had any prior experiences with the bureaucracy for availing any services/goods for which they were entitled to, whether they had paid any bribery or rent for getting such services/goods, etc. As the participants for officials and citizens will be randomly selected from within a subject pool, and participants in the three subject pools will be of similar age group and coming from both rural and urban areas with different levels of family income and wealth, we expect individual factors like personal intellect or IQ, income, standard of living, etc., not to play a spoil sport in the experiment.

To study the first hypothesis, two subject pools will be compared, one with liberal arts as part of their curriculum and another with non-humanities subjects as part of their course-work. Control will be done for the educational institutions' environment in which they are studying. To study the second hypothesis, two subject pools from two different type of educational institution environment will be experimented upon, being controlled for their academic curriculum. To inquire about the third question, females clubbed from all the three subject pools will act as one subject pool and their responses will be compared from their male counterparts. To study the fourth and last hypothesis, there is a slight change in the game, where probability of getting caught in case citizen pays and reports the bribe is increased from original level of 40% to 80% to control for any type of governance related factors like belief in police and judiciary.

The payoff structure of the experiment is shown through the table attached below. There is not any flat payment for showing up. When official doesn't demand bribery, both citizen and official get Rs. 500 as payoff. When they demand, the payoff depends upon whether citizen chooses to refuse to pay, pay quietly or pay and report in addition to officials get caught or not.

Action	B=50	B=100	B=150	B=200
Refuse to pay bribe	450, 50	450, 50	450, 50	450, 50
Pay Quietly and not caught	500, 400	550, 350	600, 300	650, 250
Pay Quietly and caught	200, 450	200, 450	200, 450	200, 450
Pay and report but caught	200, 450	200, 450	200, 450	200, 450
Pay and Report but not caught	500, 400	550, 350	600, 300	650, 250

Limitations of the Experiment

No research project is without limitations, ours also suffers from some. First, our sample may not be a random sample in perfectness rather snowball convenience sampling as subjects are approached through words of mouth along with the methods mentioned in "sample and participants" head and not completely randomized voluntary participation among subjects. This limits our sample being extended to make real-world analysis in true sense in this domain of studying curriculum and environment effects. To limit this limitation, we will attach a post-experiment survey to make out if any correlation with respect to income or other individual factors exist.

Socialization and prior experience with availing government services can affect the studied behaviour in a very significant manner. This can cut across curriculum and environment. To weed them out, we will attach certain questions in the questionnaire. Social factors like caste, religion also impacts these behaviors. In institutes like IITs, there is already some kind of selection which has happened and people from lower caste and minorities are not represented as per their proportions. But despite this, efforts will be made to include them as much as we can in our sample.

This is a small step to study the hypothesis which we have formulated and it has the potential to pick up certain effects where we may be able to find out whether studying something as a part of the curriculum and more inclusive and liberal environment can make this society progress towards more socially desirable outcomes and by promoting gender equality, whether we can find a solution for such social problems. In future, this experiment can be extended to other institutes and more comprehensive experiment can be conducted to pick up these effects better.

Instructions Set-1

Detailed Instructions for official:

This is a harassment bribery game, which means, the citizen is entitled to the service which you're offering but you, being the official, can delay the delivery of service, thus, inflicting some harm to the citizen in the process and can demand bribe from him/her to deliver the service to the earliest.

In today's experiment, you are given the position of the Official. You must first choose whether to bribe the Citizen or not. If you choose not to indulge in Bribery, i.e., you don't demand bribe then you will receive Rs. 500, and the Citizen will receive Rs. 500.

If instead, you decide to demand a bribe, you have to decide how much to demand. You can demand any amount (B) between Rs. 50 and Rs. 200 in multiples of Rs. 50.

The Citizen, then, can choose one action from these three: whether to pay the bribe quietly, or, pay the bribe but also report it to the concerned authorities, or, choose not to pay the bribe at all. Reporting the Bribery affects the probabilities of you being penalized. (Note that citizen is not being penalized for giving bribery). You have a 5% chance of getting caught if the Citizen chooses to pay the bribe quietly. This probability rises to 40% if the Citizen pays and reports the bribe.

Following the Citizen's decision, if the institution fails to catch the bribery act, you will earn Rs. 450+Bribe you demanded. The Citizen receives Rs. 450 less the bribe s/he has paid to you. If you're caught indulging into bribery, regardless of citizen paying it quietly or paying and reporting (only thing which matters is you getting caught), you will be liable to return the bribe amount and pay a fine resulting in drastic fall in your payoff to Rs. 50. The citizen receives the bribe back; as a result, his/her payoff is Rs. 450.

As an Official, you just have two strategies, either to not demand bribe or to demand Bribe, given conditions for it.

Detailed Instructions for citizen

This is a harassment bribery game, which means, you, the citizen is entitled to the service which the official is offering but the official can delay the delivery of service, thus, inflicting some harm upon you in the process and can demand bribe from you to deliver the service to the earliest.

In this experiment, the Official will make the initial decision and you will respond to it. The official must first decide whether to demand a bribe. You receive Rs. 500 and the official receives Rs. 500 if they do not ask for a bribe.

If instead, the Official decides to ask for a bribe, you are told how much the Official asks for.

The following choices are available to you if the Official demands a bribe. The first strategy is to decline to pay the bribe. In this scenario, the game is over, and you receive Rs. 50 while the Official receives Rs. 450. You also have the option to report the Official's bribe demand if you choose to pay the bribe. Your choice to report will affect the probability that the Official will get a fine. If you pay the bribe quietly, there is a 5% chance of Official getting caught. If you disclose the bribe, the probability rises to 40%.

You get Rs. 450 less the bribe you paid out if official is not caught for bribery. Rs. 450 are given to the official in addition to the bribe you gave them. But if the agencies are able to catch the official for Bribery, (Note that catching the bribe brings only the official under fine and you are still free and not guilty), you will receive Rs. 450 which will be your payoff. The Official is fined; after this point, their payoff declines to Rs. 50.

As a Citizen, you make decisions in the second stage, after the Official decided on the bribe demand. The Official can either not demand a bribe, in which case you do not make a decision. If the Official demands a bribe, s/he can ask for four different amounts of bribe from 50 to 200 (in steps of 50). We ask you to make a decision for each bribe amount asked from you beforehand. Your decision sheet comprises a table with all four possible amounts. For each amount, you tick a box whether you want to refuse to pay the bribe, pay without reporting, or pay and report the bribe demand if the Official demands this amount. We will then collect the Official's decision sheets together with yours, and carry out the decision you specified for the amount the Official has chosen (if any)

Instructions Set-2

Detailed Instructions for official:

This is a harassment bribery game, which means, the citizen is entitled to the service which you're offering but you, being the official, can delay the delivery of service, thus, inflicting some harm to the citizen in the process and can demand bribe from him/her to deliver the service to the earliest.

In today's experiment, you are given the position of the Official. You must first choose whether to bribe the Citizen or not. If you choose not to indulge in Bribery, i.e., you don't demand bribe then you will receive Rs. 500, and the Citizen will receive Rs. 500.

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Following the Citizen's decision, if the institution fails to catch the bribery act, you will earn Rs. 450+Bribe you demanded. The Citizen receives Rs. 450 less the bribe s/he has paid to you. If

you're caught indulging into bribery, regardless of citizen paying it quietly or paying and reporting (only thing which matters is you getting caught), you will be liable to return the bribe amount and pay a fine resulting in drastic fall in your payoff to Rs. 50. The citizen receives the bribe back; as a result, his/her payoff is Rs. 450.

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You get Rs. 450 less the bribe you paid out if official is not caught for bribery. Rs. 450 are given to the official in addition to the bribe you gave them. But if the agencies are able to catch the official for Bribery, (Note that catching the bribe brings only the official under fine and you are still free and not guilty), you will receive Rs. 450 which will be your payoff. The Official is fined; after this point, their payoff declines to Rs. 50.

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RESULTS

Hypothesis Testing

We will use **"test of two sample - proportions"** hypothesis testing to test our hypothesis. All the results are tested at **5% significance level**. **P1** is the proportion from group 1 and **P2** is the proportion from group 2.

Sample 1: Jung means Sample taken from JNU School of Engineering(BTECH)

Sample 2: JNU_LA means sample is taken from JNU humanities section – Philosophy, Sociology, Political Studies(MA 2nd year)

Sample 3: IIT_D means sample is taken from IIT Delhi (BTECH)

Hypothesis Testing of Two sample proportions

For a test for two proportions, we are interested in the difference between two groups. If the difference is zero, then they are not different (i.e., they are equal). Therefore, the null hypothesis will always be:

$$H_0: p_1 - p_2 = 0$$

Another way to look at it is $H_0: p_1 - p_2 = 0$.

The sampling distribution of both proportions, $\hat{p}_1$ and $\hat{p}_2$, will, under certain conditions, be approximately normal centered around p^*, with standard error $\sqrt{\frac{p^*(1-p^*)}{n_i}}$, for $i = 1,2$.

We take this into account by finding an estimate for this p^* using the two-sample proportions. We can calculate an estimate of p^* using the following formula:

$$\hat{p}^* = \frac{x_1 + x_2}{n_1 + n_2}$$

This value is the total number in the desired categories $(x_1 + x_2)$ from both samples over the total number of sampling units in the combined sample $(n_1 + n_2)$.

Putting everything together, if we assume $p_1 = p_2$, then the sampling distribution of $\hat{p}_1 - \hat{p}_2$ will be approximately normal with mean 0 and standard error of $\sqrt{p^*(1-p^*)(\frac{1}{n_1} + \frac{1}{n_2})}$, under certain conditions.

Therefore,

$$z^* = \frac{(\hat{p}_1 - \hat{p}_2) - 0}{\sqrt{\hat{p}^*(1-\hat{p}^*)(\frac{1}{n_1} + \frac{1}{n_2})}}$$

...will follow a standard normal distribution.

Finally, we can develop our hypothesis test for $p_1 - p_2$.

Hypothesis Testing for Two-Sample Proportions

Null:

$$H_0: p_1 - p_2 = 0$$

Conditions:

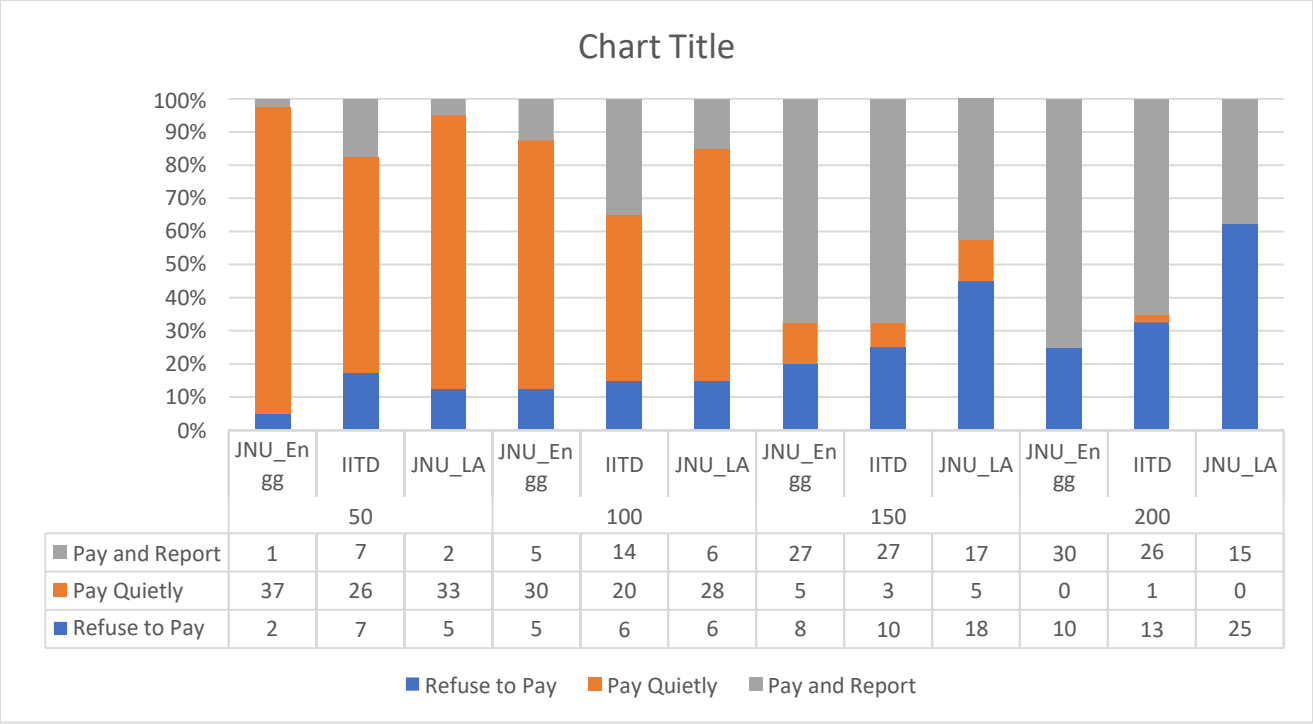
$n_1\hat{p}_1$, $n_1(1-\hat{p}_1)$, $n_2\hat{p}_2$, and $n_2(1-\hat{p}_2)$ are all greater than five.

Test Statistic:

$$z^* = \frac{\hat{p}_1 - \hat{p}_2 - 0}{\sqrt{\hat{p}^*(1-\hat{p}^*)(\frac{1}{n_1} + \frac{1}{n_2})}}$$

Where, $\hat{p}^* = \frac{x_1+x_2}{n_1+n_2}$

<u>Citizens</u>



	JNU_Engg	IITD	JNU_LA	JNU_Engg	IITD	JNU_LA	JNU_Engg	IITD	JNU_LA	JNU_Engg	IITD	JNU_LA
	50			100			150			200		
Pay and Report	1	7	2	5	14	6	27	27	17	30	26	15
Pay Quietly	37	26	33	30	20	28	5	3	5	0	1	0
Refuse to Pay	2	7	5	5	6	6	8	10	18	10	13	25

As bribery amount(B) asked from the citizens go up, they tend to report more often. When bribery amount asked from them is perceived by them to be very low, citizens from all the samples have resorted to pay quietly and get their services. When B = 50, which could be the least in our study, 92.5% citizens from Jung chose to pay quietly. Only single respondent chose to refuse to pay in this sample. Interestingly, 7 respondent out of 40, in sample IITD chose to refuse to pay when the amount asked was, B = 50.

Another interesting point is that when bribery amount asked was highest, i.e., B = 200, none of the respondent chose to pay quietly except one from IITD sample. At B = 200, almost double people chose to pay and report in JNU_Engg and IITD than JNU_LA. However, more people chose to refuse to pay in JNU_LA sample compared with any other sample.

IITD always numbers out JNU_LA when it comes to pay and report regardless the bribery amount asked. For B = 150 and 200, JNU_Engg also numbers out JNU_LA in pay and report.

Samples	JNU_Engg	IITD	JNU_LA
Refuse to Pay	15.63%	22.50%	33.75%
Pay Quietly	45%	31.25%	41.25%
Pay and Report	52.50%	46.25%	25%

Overall, the proportion of people refusing to pay is higher in JNU_LA sample than any other sample. Pay and report is observed highest in JNU_Engg sample. Pay quietly is also observed the maximum in JNU_Engg sample.

Hypothesis testing

Hypothesis 1: Academic curriculum effect

Here, group 1 is JNU_Engg and group 2 is JNU_LA. Group 1 is control group and liberal arts curriculum is taken as treatment variable. Sample size is 40 for each sample.

H0: P1 – P2 = 0; or P1 = P2

HA: not H0

	Refuse to Pay	Pay Quietly	Pay and Report
z Value	-7.45	1.3549	10.53
p-value	0.00001	0.087725	0.00001
significance	significant	insignificant	significant

Results are significant for “refuse to pay” and “pay and report”. However, for refuse to pay, JNU_LA has more proportions than JNU_Engg. For pay quietly, the result is insignificant. For pay and report, result is highly significant in favor of JNU_Engg. This is as per our original hypothesis which states that studying liberal arts reduces the chances of giving bribes. However,

as liberal arts students are expected to be more aware of the evils of corruption and they should be reporting more often than science guys, the result which we are getting is opposite through our experiment. Engineering guys were found to be more concerned about reporting the bribe.

Hence curriculum effect is positively significant for "Refuse to pay" and negatively significant for "Pay and Report". For "Pay quietly", curriculum effect is negative.

Hypothesis 2: Institutional environment effect

Here, group 1 is JNU_Engg and group 2 is IITD. Group 2 is control group and institutional environment is taken as treatment variable. Sample size is 40 for each sample.

H0: P1 – P2 = 0; or P1 = P2

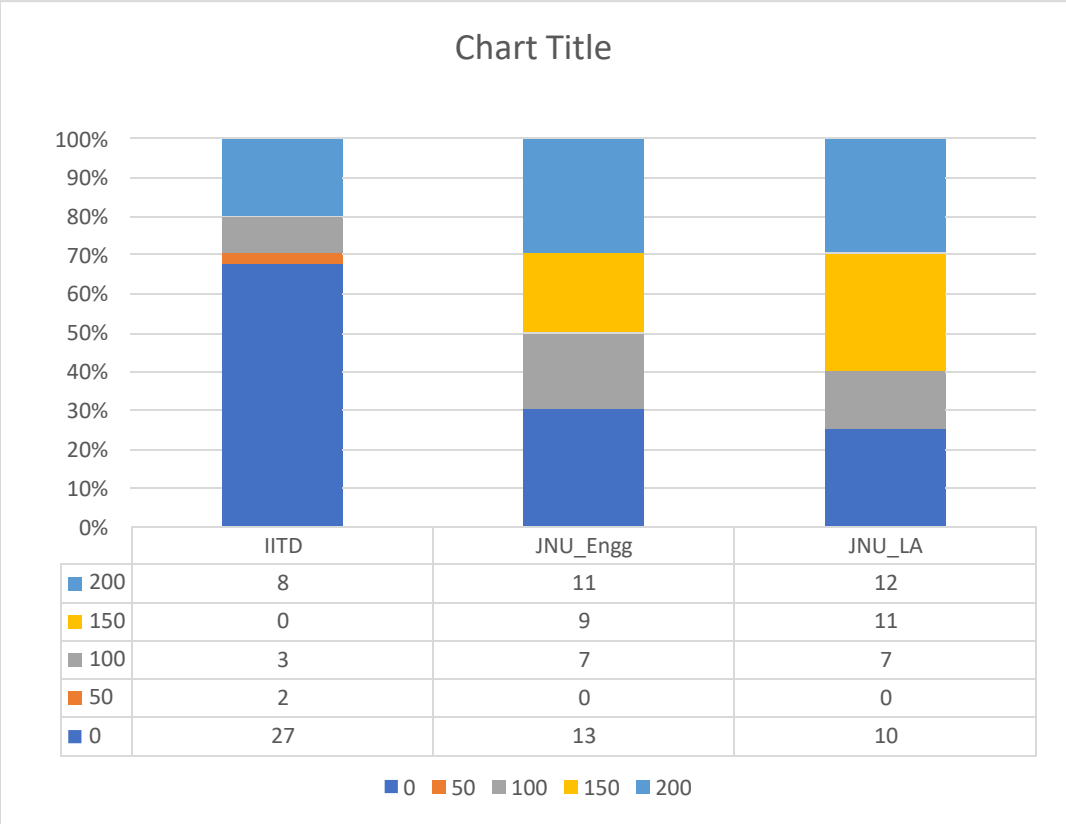
HA: not H0

	Refuse to Pay	Pay Quietly	Pay and Report
z Value	-2.5267	5.065	2.256
p-value	0.005757	0.00001	0.012
significance	significant	significant	significant

Our hypothesis, that is, liberal environment like JNU results in making citizens aware of the negative consequences of corruption and thus they will choose to pay lesser bribes than institutions like IIT where such environments are not there. In this comparison between JNU_Engg and IITD, results for all the actions are significant. For "Refuse to pay", results are significant in favor of IITD. This goes in opposite direction to our hypothesis. For "pay quietly" and "pay and report", results are significant in favor of JNU_Engg. For pay and report, it is as per our hypothesis, but for pay quietly, it is opposite to our hypothesis.

Thus, only for pay and report, the liberal environment is significant. In other cases, in fact, liberal environment is negatively related with the desired behavior.

For Official



	IITD	JNU_Engg	JNU_LA
200	8	11	12
150	0	9	11
100	3	7	7
50	2	0	0
0	27	13	10

Nearly 50% of the respondents from IITD chose not to ask for a bribe. This proportion is far lesser for other two samples. In fact, the other two samples are quite closer to each other in not asking for the bribe. Nobody from JNU_Engg and JNU_LA demanded bribe amount = 50. For rest of the values, JNU_LA sample respondents are almost equally distributed. Relatively less people are opting to demand highest amount possible, which is 200 in our study, as a bribe in IITD sample compared to samples from JNU across both the curriculum groups.

Hypothesis 1: Academic curriculum effect

Here, group 1 is JNU_Engg and group 2 is JNU_LA. Group 1 is control group and academic curriculum in the form of liberal arts is the treatment here. Sample size is 40 for each sample.

H0: P1 – P2 = 0; or P1 = P2

HA: not H0

	No Bribe
z-value	1.4822

p-value	0.694
Significance	Insignificant

We are getting insignificant results. This implies, across both the academic curriculum, the proportion of officials asking for bribe is quite similar and academic curriculum is playing no role.

Hypothesis 2: Institutional environment effect

Here, group 1 is JNU_Engg and group 2 is IITD. Group 2 is control group and institutional environment is the treatment variable. Sample size is 40 for each sample.

H0: P1 – P2 = 0; or P1 = P2

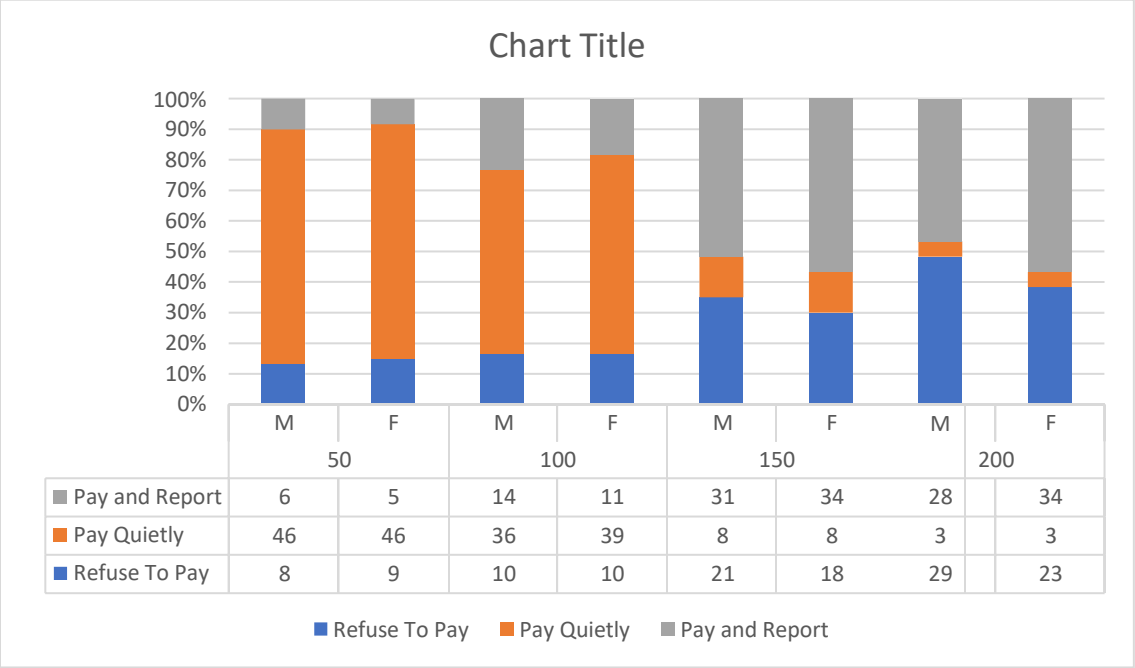
HA: not H0

	No Bribe
z-value	6.2511
p-value	0.00001
Significance	Significant

Results are significant here. It is significant even at 1% level. But the results are exactly opposite as compared to our hypothesis. Institutional environment is found to have negative relation with the proportion of people who are asking for the bribe.

Hypothesis 3: Gender Effect

Citizen



As the bribery amount asked increases from 50 to 100, the instances of paying and reporting goes up by both male and female citizens. The instances of paying quietly drastically reduces as bribery amount asked goes up. In fact, they are almost equal in numbers in paying quietly. Men are more prone to refusing to pay while females are more prone to reporting the bribe when bribery asked is huge. For lesser amounts, males are more choosing to report as compared to females. For bigger amounts they are simply choosing to "refuse to pay".

Hypothesis

There are two groups. Group 1 is "female" and group 2 are "male". Sample size is 60.

H0: P1 – P2 = 0; or P1 = P2

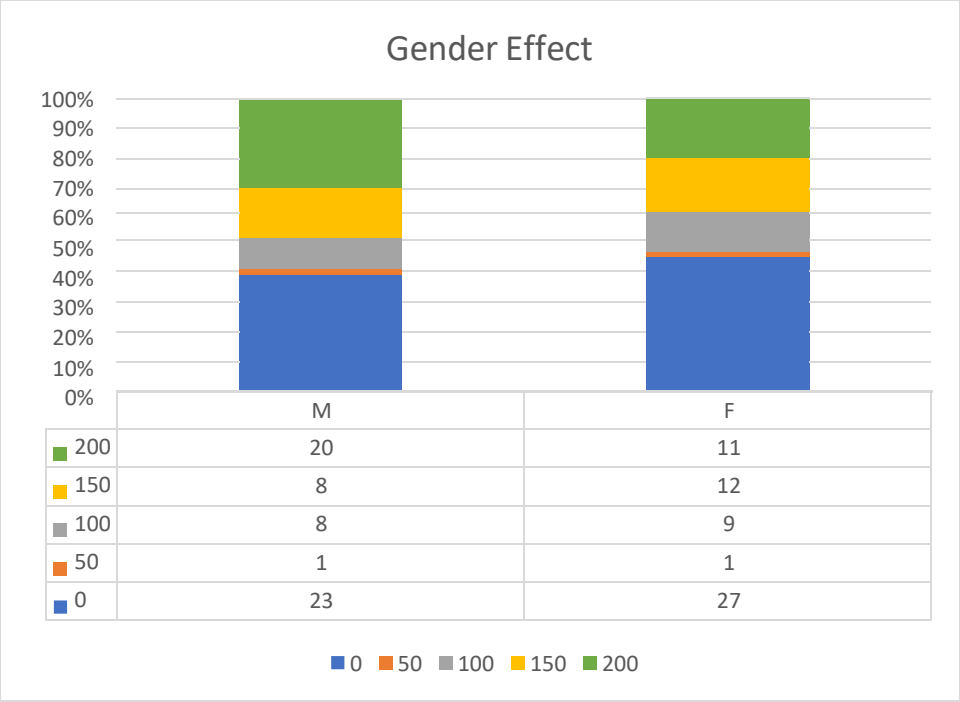
HA: not H0

	Refuse to Pay	Pay Quietly	Pay and Report
z-value	0.85166	-0.55903	-0.95985
p-value	0.197	0.288	0.168
Significance	Insignificant	Insignificant	Insignificant

For all the three responses, we are getting insignificant results. This implies that there is no gender effect when it comes to choosing to pay bribe or not. On an average, females are choosing to report more than the males. Hence our null hypothesis is accepted that average proportions of people giving the bribes are similar in both the groups. On an average, female respondents have chosen to pay quietly more than the males.

Officials

There are two groups. Group 1 is “female” and group 2 are “male”. Sample size is 60.



	M	F
200	20	11
150	8	12
100	8	9
50	1	1
0	23	27

The male officials ask high bribe amount than female officials which can be seen at a bribe amount of 200 other than that there is no significant difference in number of officials asking different bribe amounts with respect to gender.

Hypothesis

H0: P1 – P2 = 0; or P1 = P2

HA: not H0

	NO Bribe
z-value	1.482
p-value	0.06917
Significance	Insignificant

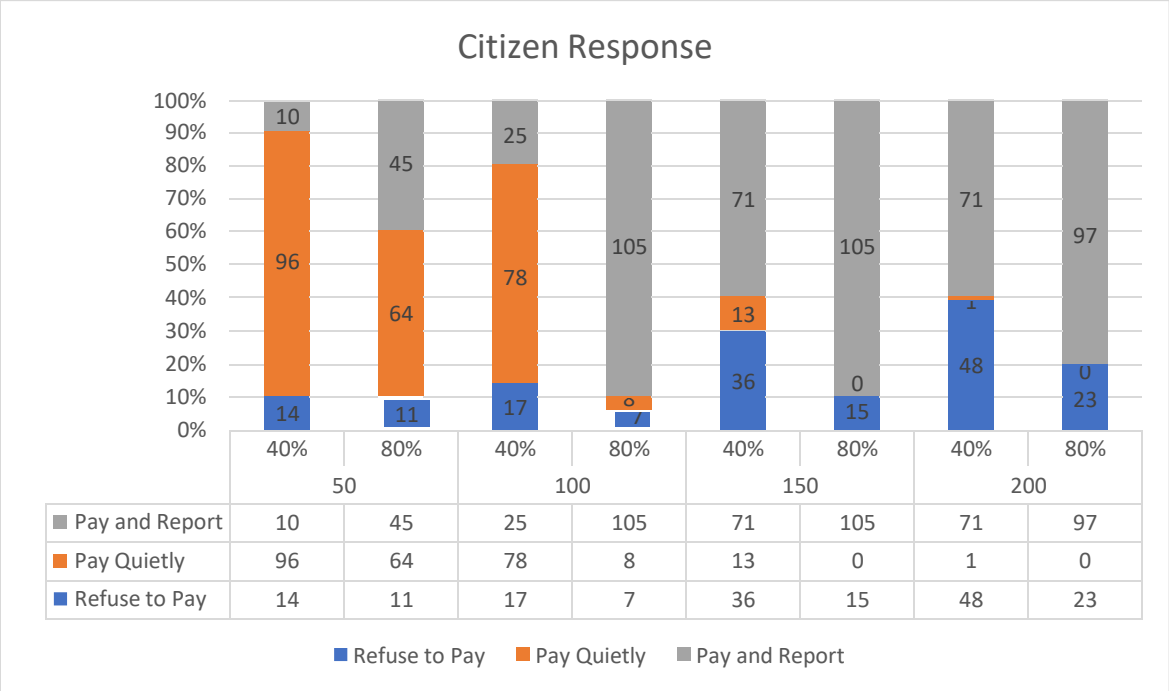
Again, the result is insignificant. However, the average proportion of females asking for bribes are lesser as compared to proportion of male respondents. Females on an average choose to demand “no bribe” in more numbers than male respondents.

Hence, we do not find any gender effect across our sample for both different streams of academics and institutional environment for both type of players, i.e., officials and citizens.

Hypothesis 4: Institutional effect

In this hypothesis, we test whether increasing chances of getting caught and being penalized reduces the chances of giving or taking bribes or not.

Citizens



When probability of getting caught rises from 40% to 80%, the proportion of citizens choosing to refuse to pay the bribe and reporting the incidences of bribery, shoots up. Another pattern that is visible is that citizens shift from refusing to pay the bribe to paying and reporting the bribe. This shows us that when the government is able to improve the system and administration, citizens choose to exercise their rights and trust builds up between citizens and government and then citizens can choose desired actions with lot more confidence.

Hypothesis testing

There are two groups. Group 1 is "probability of getting caught is 40%" and group 2 are "probability of getting caught is 80%". Sample size is 120.

H0: P1 – P2 = 0; or P1 = P2

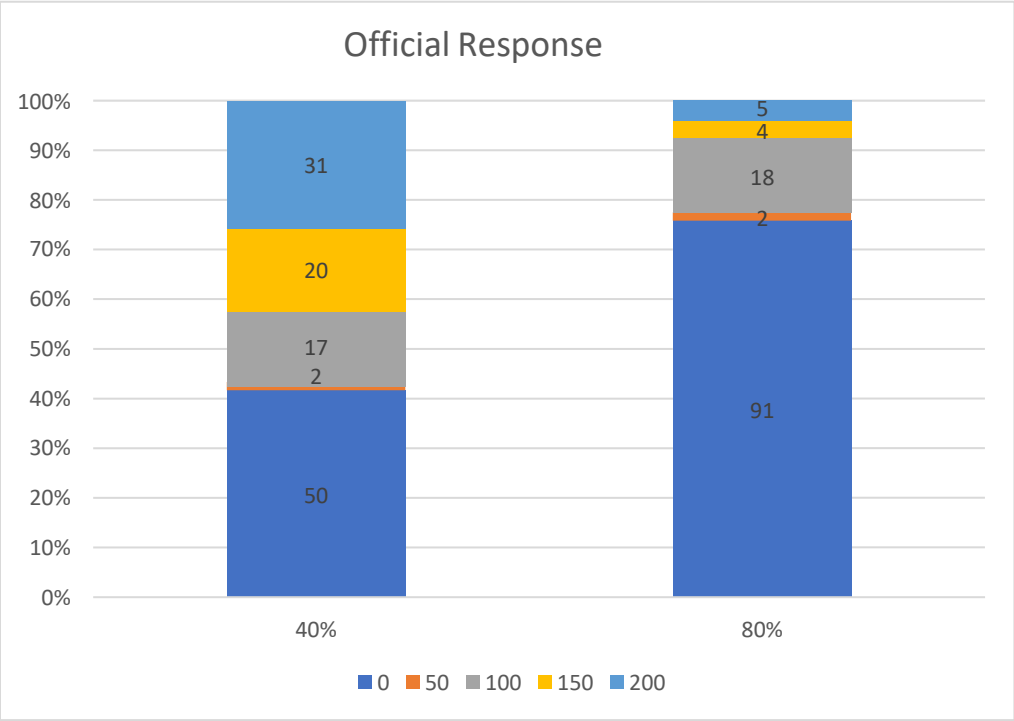
HA: not H0

	Refuse to Pay	Pay Quietly	Pay and Report
z-value	9.977002	16.84088	-22.7013
p-value	0.00001	0.00001	0.00001
Significance	Significant	Significant	Significant

We are getting significant results in all the possible responses. Citizens significantly shift from refuse to pay and pay quietly to pay and report when probability of getting caught is doubled. This

shows that the responses of citizens to accept the bribe was significantly due to the fact that government on its part has been unable to catch the corrupt officials in the system.

Officials



The proportion of officials opting to demand no bribe goes up by 80% when the chances of getting caught doubles. Not only this but the proportion of officials demanding large bribe amounts also reduces significantly. It has gone down by 6 times in our study. Officials if asking for bribe in case of 80%, rely on the fact that if they ask smaller amounts of bribe, then chances are less that citizens will go and report them because still there are certain costs attached with reporting.

Hypothesis testing

There are two groups. Group 1 is "probability of getting caught is 40%" and group 2 are "probability of getting caught is 80%". Sample size is 120.

H0: P1 – P2 = 0; or P1 = P2

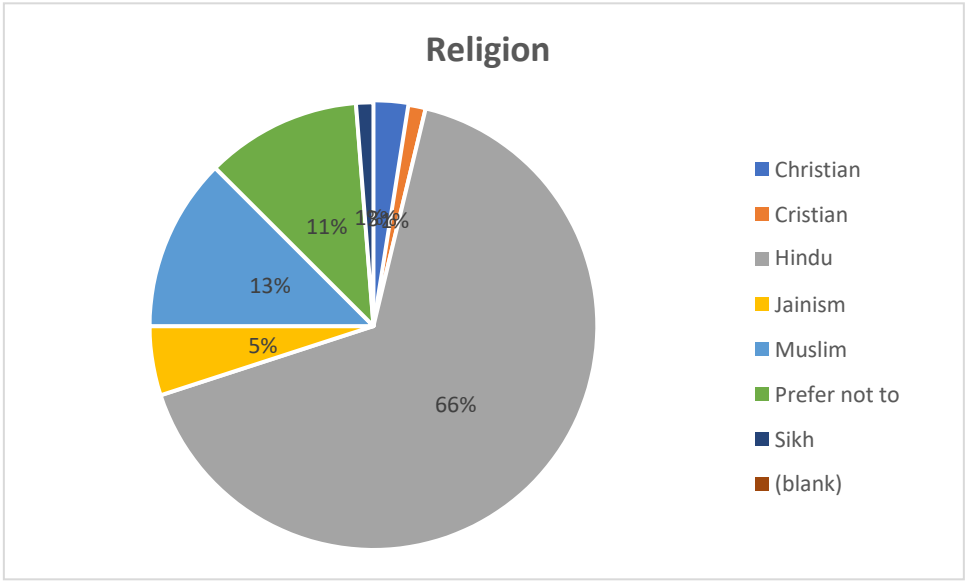
HA: not H0

Column1	No Bribe
z Value	-10.7781
p-value	0.00001
significance	Significant

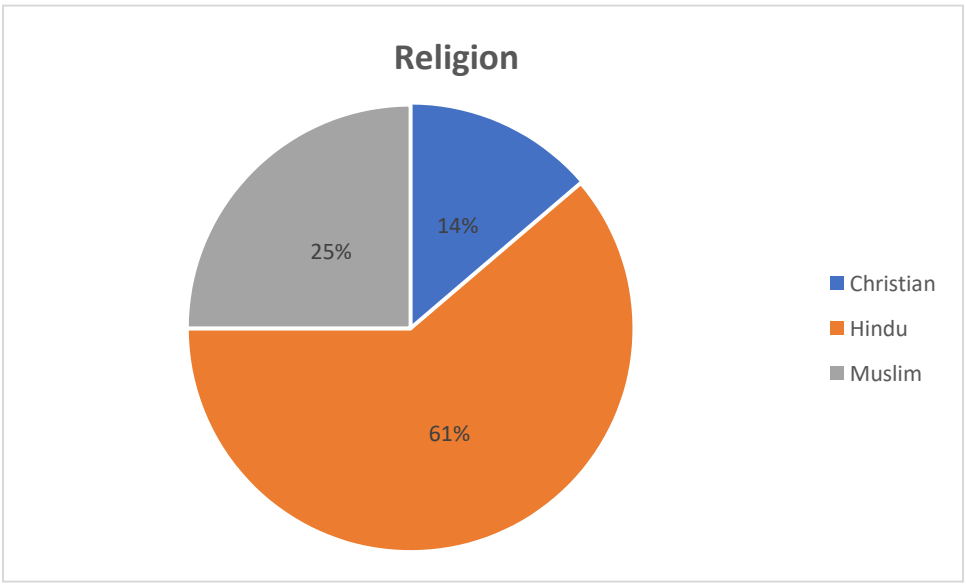
As stated earlier and as expected, we are getting significant results in our favor of the hypothesis that increasing the probability of getting caught will significantly reduce the cases of demand of bribery by the officials.

CONTROLS

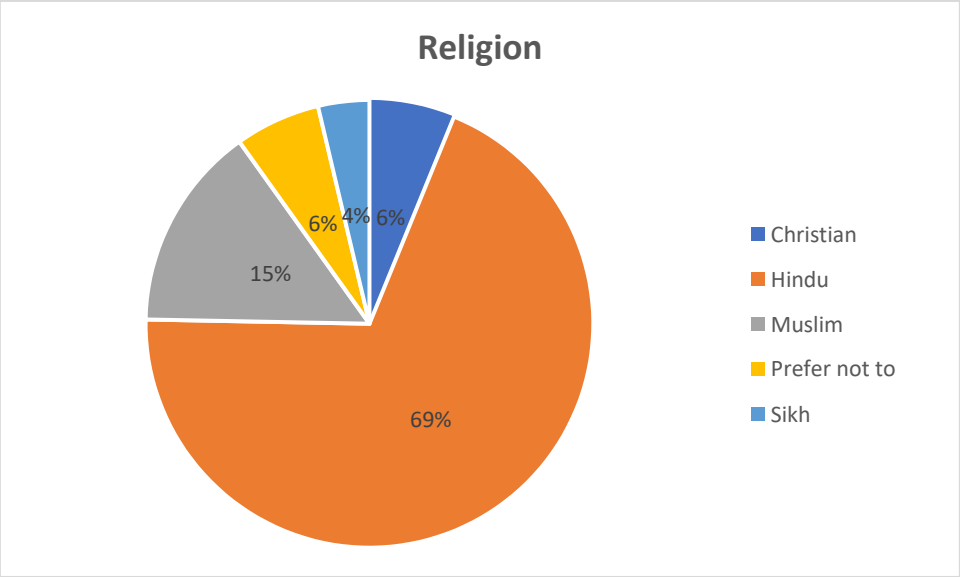
RELIGION



Sample: JNU_Engg



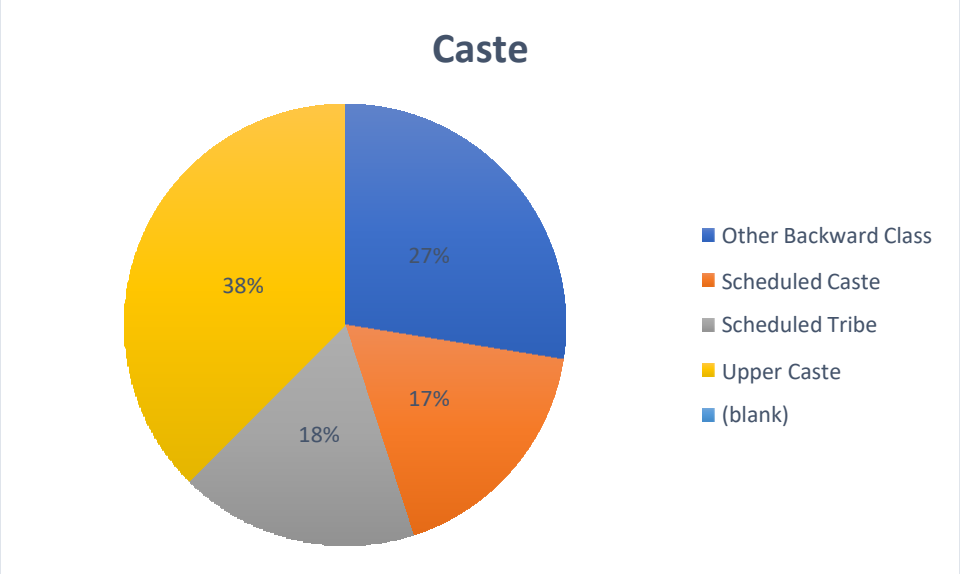
Sample: JNU_LA



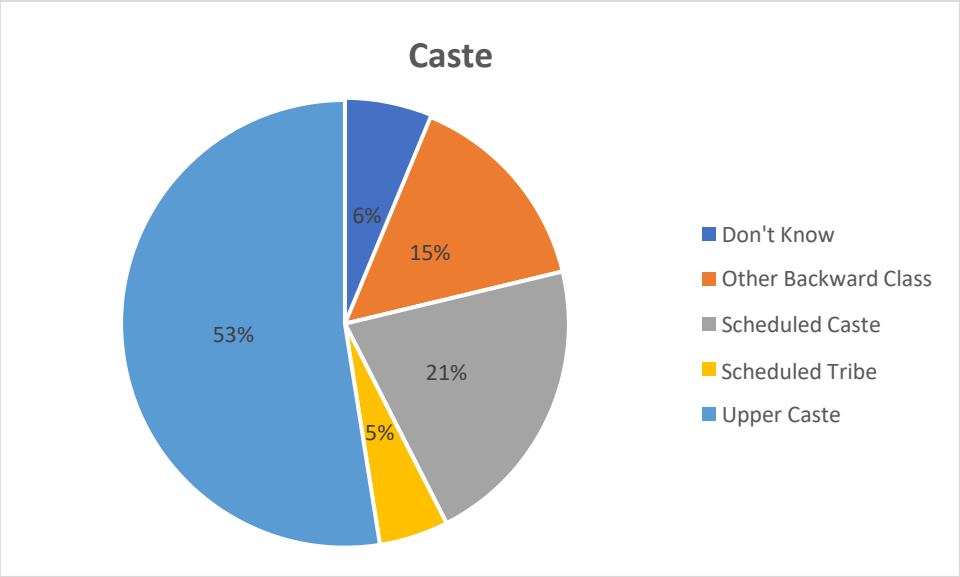
Sample: IITD

Most responses were from the Hindu religion in all three samples and the second most prominent religion is Muslim so there is no religious biases in all three samples on the basis of religion.

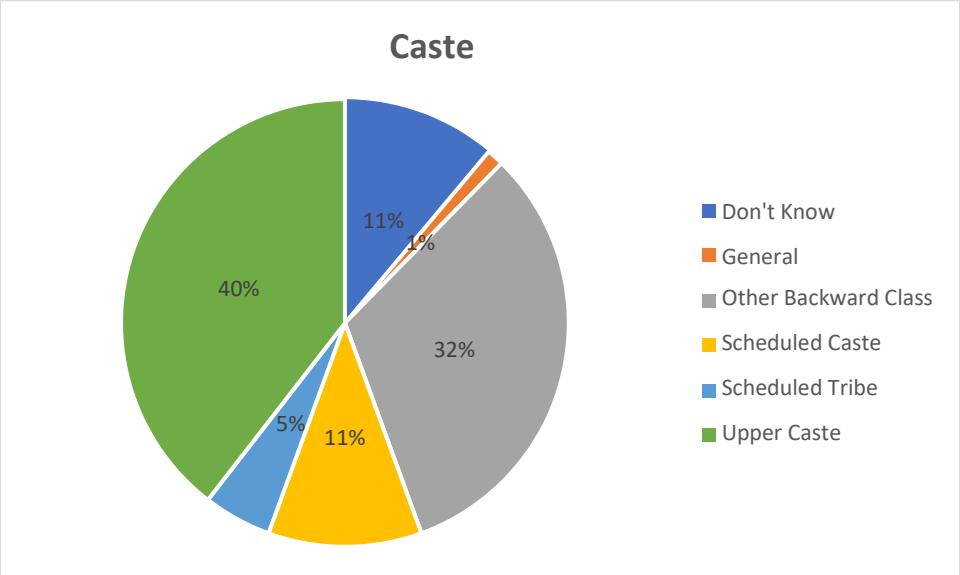
Caste



Sample: JNU_Engg



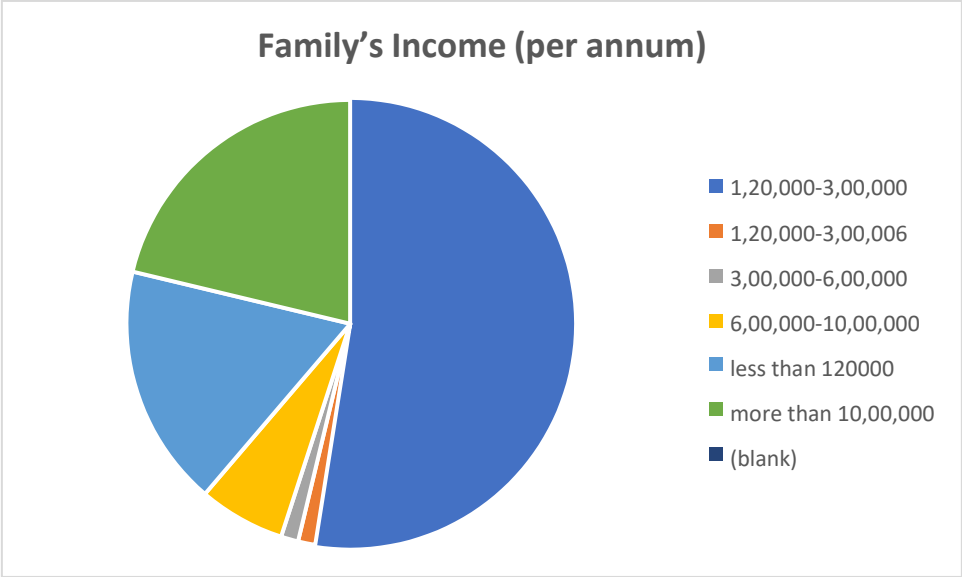
Sample: JNU_LA



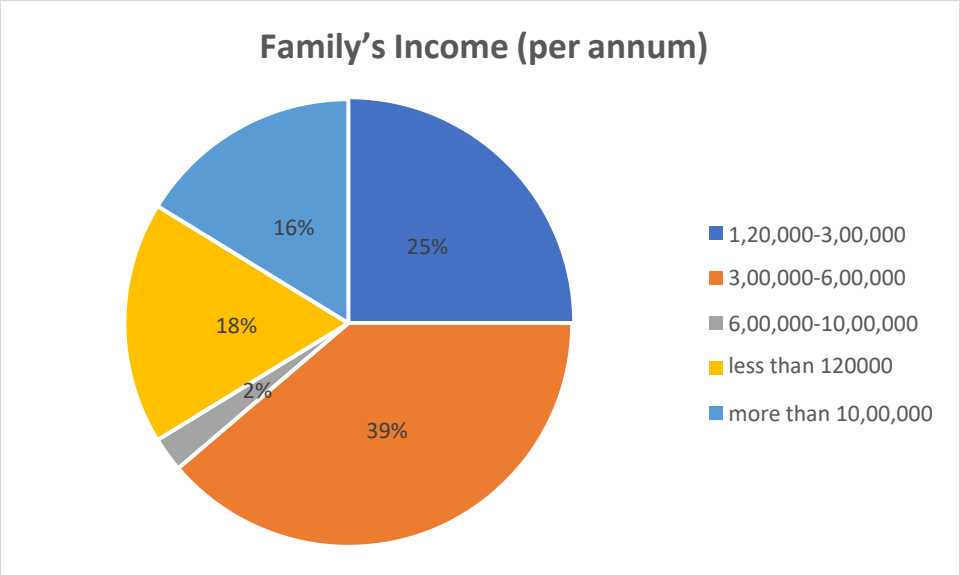
Sample: IITD

Students from all the castes are equally represented in all three samples with the most prominent caste as the upper caste and the second most prominent caste as OBC in JNU Engg and IIT Delhi samples and Scheduled caste in JNU_LA. Overall there is no bias in our data on the basis of Caste in all three samples.

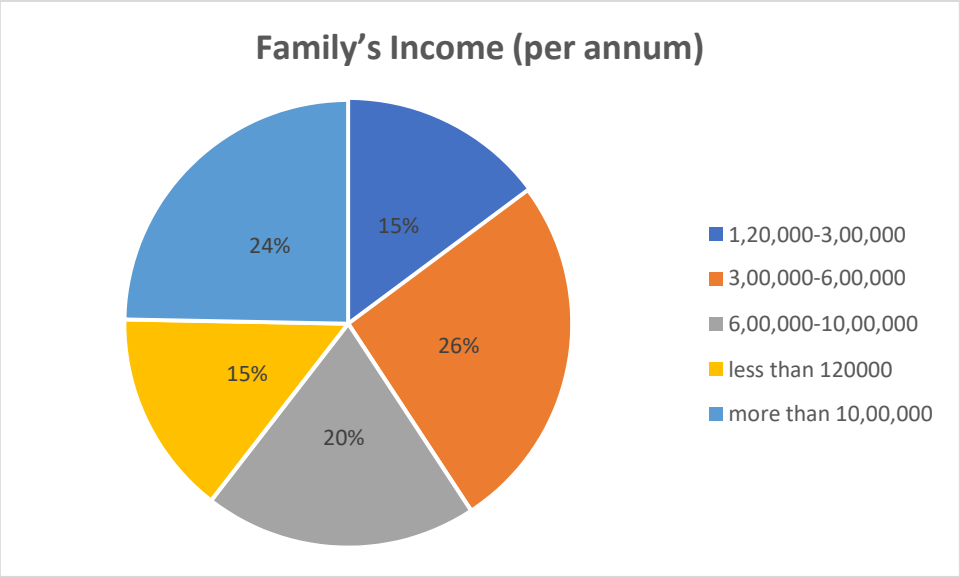
Family Income (per annum)



Sample: JNU_Engg



Source: JNU_LA



Source: IITD

Students from all the income groups are presented in all the sample groups in our data which depicts there is no bias based on family income.

Conclusion

On the basis of the data collected after testing all the hypothesis for both citizens and officials to test the significance level we found that for citizens for pay and report both the academic curriculum effect and the institutional effect and the institutional environmental effect are significant and gender effect is insignificant. For the official academic curriculum effect and the gender effect is insignificant and the institutional effect and the institutional environment effect is significant.

Questionnaire

Your Unique ID ?

Your answer

What is your age ? (Year/Month)

Your answer

What is your gender ?

Male
Female
Other

What is your religion ?

Hindu
Muslim
Christian
Sikh
Prefer not to say
Other:

What is your Caste ?

Upper Caste
Scheduled Tribe
Scheduled Caste
Other Backward Class
Don't Know
Other:

What is your program of study at the University or Institute?

B.A
Btech
M.A
M.Phi
l.
MTec
h
PHD
Other:

What is your year of Study ?

1st
2nd
3rd
4th
5th

What is your field of study (specialization) in the program?

Your answer

How much work experience do you have?

None
Other:

What is your family's income (per annum) ?

less than 120000
1,20,000-3,00,000
3,00,000-6,00,000
6,00,000-10,00,000
more than 10,00,000

How do you most hear about corrupt behaviour?

Through personal experience
Through the experiences of family or friends
By reading magazines or the newspaper
By listening to the news on TV or radio
Through an academic course
Other:

What type of corruption have you personally faced or witnessed the most in your daily life?

Bribery for accessing public services
Corruption in the allocation of government contracts
Election fraud
Embezzlement of public funds by politicians and bureaucrats
Influence peddling(lobbying for political or financial advantage)
Other:

In which contexts have you ever given a bribe? (Mark all that apply)

To get household services such as electricity, water or telephone connection
To get services in a bank, post office, insurance company or transport office
To get educational services at a school, college or for a scholarship
I have never given a bribe
Other:

Which of the following best describes the anti-corruption law in India?

If caught, both the bribe-giver and taker are committing an illegal act
If caught, the bribe-taker is committing an illegal act, but the bribe-giver is not responsible
If caught, the bribe-giver is committing an illegal act, but the bribe-taker is not responsible
If caught, neither the bribe-giver nor taker are committing an illegal act
I don't know anything about the anti-corruption law in India

Do you think that it is useful to have a system where there is a way to get what you want even if you have to bribe?

Don't Know
Yes
No

Have you witnessed any negative consequences of paying bribes, either for the individual giving the bribe or for society as a whole?

Yes
No
Don't Know

Have you seen efforts by government or other organizations to curb bribery and corruption?

Yes
No
Don't Know

If yes, have they been effective ?

Yes
No

Do you believe that it's ever acceptable to pay a bribe in certain situation, or is it always unethical?

Sometimes acceptable

Always Unethical

Likert Scale

I believe that corruption is a major problem in our society

Strongly disagree

Disagree
Neutral
Agree

Strongly agree

I have personally witnessed instances of corruption in my community.
Strongly disagree

Disagree
Neutral
Agree
Strongly agree

I think it is acceptable to pay bribes in certain situations.
Strongly disagree

Disagree
Neutral
Agree
Strongly agree

I believe that government efforts to combat corruption are effective.

Strongly disagree
Disagree
Neutral
Agree
Strongly agree

I think that corruption negatively impacts the economy and the well-being of the general population.

Strongly disagree
Disagree
Neutral
Agree
Strongly agree

I think that individuals have a responsibility to report instances of corruption they witness.

Strongly disagree
Disagree
Neutral
Agree
Strongly agree

I believe that the penalties for corruption should be severe and strictly enforced.

Strongly disagree
Disagree
Neutral
Agree

Strongly agree

I think that education and awareness about corruption can play a role in reducing its occurrence.

Strongly disagree
Disagree
Neutral
Agree
Strongly agree

I think that political leaders and government officials are often involved in corruption.

Strongly disagree
Disagree
Neutral
Agree
Strongly agree

I believe that ordinary citizens can make a difference in the fight against corruption.

Strongly disagree
Disagree
Neutral
Agree
Strongly agree

Reporting instances of corruption is important, even if it means putting oneself at risk.

Strongly disagree

Disagree
Neutral
Agree
Strongly Agree

I am confident that if I report an instance of corruption, the authorities would take appropriate action.

Strongly disagree
Disagree
Neutral
Agree
Strongly agree

The media does a good job of reporting on instances of corruption.

Strongly disagree
Disagree
Neutral
Agree

Strongly Agree

The punishment for those found guilty of corruption is severe enough to deter others from engaging in corrupt behavior.

Strongly disagree
Disagree
Neutral
Agree
Strongly Agree

The prevalence of corruption has increased in recent years.

Strongly disagree
Disagree
Neutral
Agree
Strongly Agree

The judiciary is impartial in its treatment of cases related to corruption.

Strongly disagree
Disagree
Neutral
Agree
Strongly agree

The general public is well informed about the issue of corruption and its effects.

Strongly disagree
Disagree
Neutral
Agree
Strongly Agree

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