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“ULTIMATUM GAME”  
*An Empirical Evidence*

Presented By:

SHAHID RAZZAQUE



# Difference Between Self-Interest, Preference & Social Preference

- “Preference” refers to the choices people make & particularly to tradeoffs between different collections of things they value-(food, money, time, prestige & so forth.)
- “Social Preference” refers to how people rank different allocations of material payoffs to themselves and others.
- “Self-Interest” refers to the behavior of individuals who care only about their own material payoffs



# Altruism & Reciprocity ?

- Reciprocity → refers to the reward friendly action (offers) & punish the hostile (unfair) offers.
- Altruism → refers to the unconditional kindness.



# Experimental Economics

- Study behaviour of (usually) human subjects in economically relevant situations
- Most frequently in laboratories under controlled conditions (also field, internet and brain scanners)
- Subjects are paid according to their performance



# Objectives of Experiments

- Study theoretical predictions
- Study underlying assumptions of theory
- Offer advice to theory (e.g. which of the different equilibria predicted by theory will occur)
- Show the way forward to theory (e.g. does gender matter? Do groups decide like individuals? Importance of institutions?)
- Compare competing theories
- Policy making
- Educational purposes

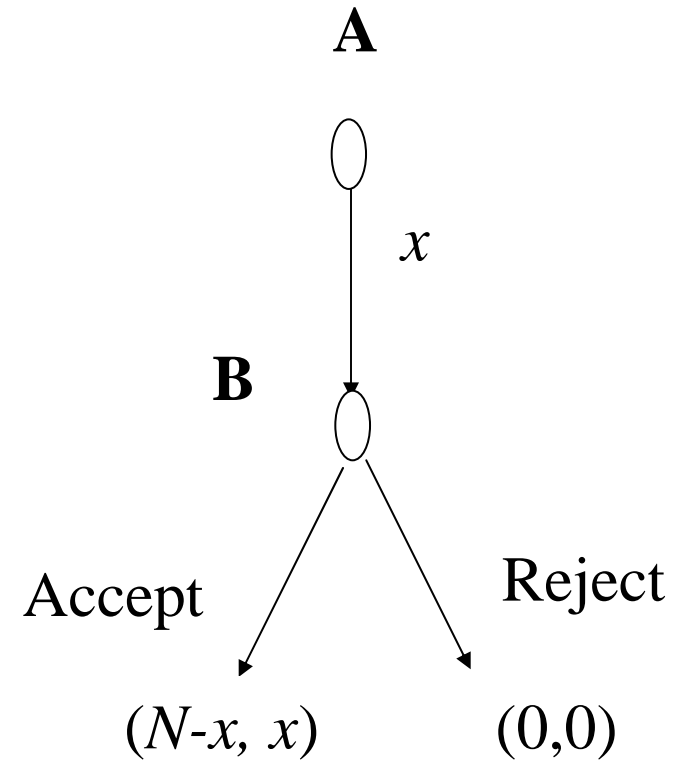


## What is The Ultimatum Game?

- Theory usually assumes (again for convenience and historical reasons) that people are selfish money maximizers (i.e. they only care for their money)! The UG tests this prediction
- A pair of subjects has to agree on the division of a fixed sum of money (e.g. Rs:100)
- The first mover, or **Proposer**, can make one proposal of how to divide the amount
- The second mover, or **Responder**, can accept or reject the proposed division
- If the responder rejects, both receive nothing; if he accepts, the proposal is implemented
- **Prediction:**
  - If people are selfish they will accept whatever the Proposer gives them
  - So the (selfish) Proposers will offer the minimum possible amount (e.g. Rs:1)
- In experiments, though, offers are usually around 40% of the fixed sum and low offers (i.e. less than 20%) are often rejected

# One-shot Ultimatum Game

- Two players A and B.
- Player A has endowment of  $N$ .
- Player A offers  $x \in [0, N]$  ( $N = 100$  in this study)
- Player B can either accept the offer or reject the offer.







## Most Probable Assumptions about The Ultimatum Game

- People apparently care about **fairness**.
- But why do Proposers offer high shares?
- Altruism or strategic thinking (avoiding rejections)?



## Real Time Experimental Evidence with respect to Ultimatum game

- Results from the numerous experiments have shown that people don't behave in line with the prediction of conventional economics. Instead, offers typically average about 40% to 50% of the total, with the 50-50 split being the modal offer.
- Moreover, a substantial proportion of positive offers are rejected.
- Typically the real game offers are in between the range of 30-70.



Why a split of (90-10) is Typically Rejected?

Because it is an unjust offer and people do not like to be treated unfairly




# Why People don't Offer (90-10)?

There are two possible reasons

- Due to fear of rejection: *Strategic Thinking to avoid rejections and gain the maximum reward*
- Due to Preference for fairness

One more reason is that

- Due to Altruism



## Fairness & Fear ? Which is more dominant?

It is suspected fairness to be high for low amounts. It is cheap to be nice. But when the stakes will rise I expect fear to rise as well. When the amount is very high I expect this fear to be so high that the stake offered will be higher than in the medium scenario.

*(Fear of Rejection Is More Dominant Than The Fairness )*



# Pioneer Work In The Field Of ultimatum Game



## Experiments conducted by GSS (1983):-

- Güth, Schmittberger, Schwarze (1983)
  - **They did the first experimental study on this game.**
  - **The mean offer was 37% of the “pie”**
- Since then several other studies has been conducted to examine this gap between experiment and theory.
- Almost all show that humans disregard the rational solution in favor of some notion of fairness.
  - **The average offers are in the region of 40-50% of the pie**
  - **About half of the responders reject offers below 30%**



## Güth et.al. Experiments Overview

- A sample of 42 economics students was divided by two.
- By random one group was assigned to the role of player 1. The other took role of player 2
- P1's had to divide a pie  $C$  which was varied between DM4 and DM10
- A week later the subjects were invited to play the game again
- In the first experiment the mean offer was  $.37C$
- In the replication after a week, the offer were somewhat less generous, but still considerably greater than epsilon. Mean offer was  $.32 C$



# Experiment 1


Naive decision behavior in easy games.

Game	c account to be distributed (DM)	Demand of player 1 (DM)	Decision of player 2
A	10	6.00	1
B	9	8.00	1
C	8	4.00	1
D	4	2.00	1
E	5	3.50	1
F	6	3.00	1
G	7	3.50	1
H	10	5.00	1
I	10	5.00	1
J	9	5.00	1
K	9	5.55	1
L	8	4.35	1
M	8	5.00	1
N	7	5.00	1
O	7	5.85	1
P	6	4.00	1
Q	6	4.80	0
R	5	2.50	1
S	5	3.00	1
T	4	4.00	0
U	4	4.00	1

## Experiment 2

Experienced decision behavior in easy games.

Game	$c$ = amount to be distributed (DM)	Demand of player 1 (DM)	Decision of player 2
A	10	7.00	1
B	10	7.50	1
C	9	4.50	1
D	9	6.00	1
E	8	5.00	1
F	8	7.00	1
G	7	4.00	1
H	7	5.00	1
I	4	3.00	0
J	4	3.00	0
K	5	4.99	0
L	5	3.00	1
M	6	5.00	0
N	6	3.80	1
O	10	6.00	1
P	9	4.50	1
Q	8	6.50	1
R	7	4.00	0
S	6	3.00	1
T	5	4.00	0
U	4	3.00	1

- 
- When a responder rejects a positive offer, he signals that his utility function has non-monetary argument & he will not accept any offer which don't coincide with his utility preference or probably he might be punishing the proposer for his unjust offer.
  - When an allocator makes high offer it is either
    - A taste for fairness**
    - Fear of rejection**
    - Both**
  - Further experiments reveal that both explanations have some validity



## Conclusion: *From Past Studies*

- Fairness can play a very significant role in determining the outcomes of negotiations.
- But fairness can't prevent the other factors even the greed from affecting the behavior of players.
- Two behaviors are generally seen.
  - One group of people prefer more money to less.
  - people prefer more fair play & they treat other fairly, wanting to be treated fairly.
- If the risk of rejection is eliminated still people have “Soft” tendency to allocate 50-50 offers (*Dictator Game*).
- The behavior of the recipients is inconsistent with the economic models.
- At high stakes the behavior of players continuously changes and they become more intended towards fair offers.
- Females make more generous offers than males.



# Ultimatum Game & Gender Effect in Pakistan

*Experiments Conducted by Shahid Razzaque*

# Experiment # 01

A=Accepted Offer

Rs=100 ROUND#1 Unknown Gender

R=Rejected Offer

Serial No.	Proposer	Responder	Offers	Rejections	Payoff (Proposer)	Payoff (Responder)
1	M	F	40	A	60	40
2	M	F	30	R	0	0
6	M	M	50	A	50	50
8	M	M	45	A	55	45
9	M	F	30	R	0	0
3	F	M	30	R	0	0
4	F	M	50	A	50	50
5	F	F	50	A	50	50
7	F	F	35	R	0	0
10	F	M	50	A	50	50
Mean Male Results			39	0.2	33	27
Mean Female Results			43	0.6	30	30
Aggregate Mean Results			41	0.4	31.5	28.5
Standard Deviation						
			male		30.33150178	24.8997992
			female		27.38612788	27.38612788

Rs=100 ROUND#2 Unknown Gender

Serial No.	Proposer	Responder	Offers	Rejections	Payoff (Proposer)	Payoff (Responder)
3	M	M	60	A	40	60
4	M	M	55	A	45	55
5	M	M	45	A	55	45
7	M	M	50	A	50	50
10	M	M	50	A	50	50
1	F	F	50	A	50	50
2	F	F	50	A	50	50
6	F	F	30	R	0	0
8	F	F	50	A	50	50
9	F	F	25	R	0	0
Male	Male		52	0	48	52
Female	Female		41	0.4	30	30
Aggregate standard	Average		46.5	0.2	39	41
Deviation		male	5.7009		5.700877125	5.700877125
		female	12.45		27.38612788	27.38612788

Rs=100 ROUND#3 known Gender

Serial No.	Proposer	Responder	Offers	Rejections	Payoff (Proposer)	Payoff (Responder)
1	M	F	70	A	30	70
2	M	F	80	A	20	80
3	M	F	75	A	25	75
4	M	F	65	A	35	65
5	M	F	70	A	30	70
6	M	F	60	A	40	60
7	M	F	50	A	50	50
8	M	F	90	A	10	90
9	M	F	100	A	0	100
10	M	F	10	R	0	0
Aggregate Mean Results			67	0.1	24	66
standard deviation			24.631		16.63329993	27.26414006



Rs=100 ROUND#4 Known  
Gender

Serial No.	Proposer	Responder	Offers	Rejections	Payoff (Proposer)	Payoff (Responder)
1	F	M	30	R	0	0
2	F	M	45	R	0	0
3	F	M	50	A	50	50
4	F	M	40	R	0	0
5	F	M	50	A	50	50
6	F	M	50	A	50	50
7	F	M	40	R	0	0
8	F	M	40	R	0	0
9	F	M	50	A	50	50
10	F	M	50	A	50	50
Aggregate Mean Results			44.5	0.5	25	25
standard Deviation			6.8516		26.35231383	26.35231383

## Experiment # 2 (Cross Gender) Female

### Round# 1 Rs: 50 (HYPOTHICAL)

Serial No	Offer	Decision	Payoff (Proposer)	Payoff (Responder)
1	25	A	25	25
2	20	A	30	20
3	25	A	25	25
4	40	A	10	40
5	40	A	10	40
6	25	R	0	0
7	30	A	20	30
8	25	A	25	25
9	10	R	0	0
10	25	A	25	25
11	20	R	0	0
12	20	R	0	0
13	20	R	0	0
14	10	R	0	0
15	50	A	0	50
16	25	R	0	0
17	20	A	30	20
18	25	A	25	25
19	10	R	0	0
20	10	R	0	0
<b>Average</b>	<b>23.75</b>	<b>0.45</b>	<b>11.25</b>	<b>16.25</b>
<b>SD</b>	<b>10.49749344</b>		<b>12.55252124</b>	<b>16.61285172</b>

**Round# 2**  
**Rs: 50**  
**(HYPOTHICAL)**

Serial No	Offer	Decision	Payoff (Proposer)	Payoff (Responder)
1	25	R	0	0
2	20	A	30	20
3	20	A	30	20
4	20	A	30	20
5	30	R	0	0
6	25	R	0	0
7	28	R	0	0
8	25	R	0	0
9	30	A	20	30
10	25	A	25	25
11	30	A	20	30
12	30	R	0	0
13	25	A	25	25
14	25	A	25	25
15	25	A	25	25
16	25	A	25	25
17	30	A	20	30
18	30	A	20	30
19	25	A	25	25
20	25	A	25	25
<b>Average</b>	<b>25.9</b>	<b>0.3</b>	<b>17.25</b>	<b>17.75</b>
<b>SD</b>	<b>3.3857286</b>		<b>11.97310583</b>	<b>12.29837388</b>

**Rs: 50**  
**Round# 3**  
**REAL**

<b>Serial No</b>	<b>Offer</b>	<b>Decision</b>	<b>Payoff (Proposer)</b>	<b>Payoff (Responder)</b>
1	25	R	0	0
2	25	A	25	25
3	25	R	0	0
4	25	R	0	0
5	40	A	10	40
6	40	A	10	40
7	20	A	30	20
8	25	A	25	25
9	35	A	15	35
10	25	R	0	0
11	36	A	14	36
12	35	A	15	35
13	26	A	24	26
14	30	A	20	30
15	40	A	10	40
16	25	R	0	0
17	20	R	0	0
18	25	A	25	25
19	35	A	15	35
20	35	A	15	35
<b>Average</b>	<b>29.6</b>	<b>0.3</b>	<b>12.65</b>	<b>22.35</b>
<b>SD</b>	<b>6.6838375</b>		<b>10.12175874</b>	<b>15.98774201</b>

**Rs: 50**  
**Round# 4**  
**REAL**

<b>Serial No</b>	<b>Offer</b>	<b>Decision</b>	<b>Payoff (Proposer)</b>	<b>Payoff (Responder)</b>
1	25	R	0	0
2	25	R	0	0
3	30	A	20	30
4	30	A	20	30
5	40	A	10	40
6	35	A	15	35
7	18	R	0	0
8	25	A	25	25
9	25	A	25	25
10	25	R	0	0
11	30	A	20	30
12	35	A	15	35
13	28	A	22	28
14	30	A	20	30
15	30	A	20	30
16	35	A	15	35
17	30	A	20	30
18	35	A	15	35
19	25	A	25	25
20	40	A	10	40
<b>Average</b>	<b>29.8</b>	<b>0.2</b>	<b>14.85</b>	<b>25.15</b>
<b>SD</b>	<b>5.6063873</b>		<b>8.731521842</b>	<b>13.58898548</b>



## **OVERALL AVERAGE**

<b>Offers</b>	<b>27.2625</b>
<b>Rejections</b>	<b>0.3125</b>
<b>Payoffs(Proposers)</b>	<b>14</b>
<b>Payoff(Responder)</b>	<b>20.375</b>

Cross Gender: *Male*

**Round# 1**  
**Rs: 50**  
**(HYPOTHICAL)**

Serial No	Offer	Decision	Payoff (Proposer)	Payoff (Responder)
1	29	A	21	29
2	38	A	12	38
3	20	R	0	0
4	30	A	20	30
5	26	A	24	26
6	30	A	20	30
7	30	A	20	30
8	40	A	10	40
9	30	A	20	30
10	25	A	25	25
11	20	A	30	20
12	30	A	20	30
13	30	R	0	0
14	26	A	24	26
15	30	R	0	0
16	25	A	25	25
17	30	A	20	30
18	25	A	25	25
19	20	A	30	20
20	20	R	0	0
<b>Average</b>	<b>27.7</b>	<b>0.2</b>	<b>17.3</b>	<b>22.7</b>
<b>SD</b>	<b>5.4589376</b>		<b>10.06871131</b>	<b>12.57859502</b>

**Round# 2**  
**Rs: 50**  
**(HYPOTHICAL)**

<b>Serial No</b>	<b>Offer</b>	<b>Decision</b>	<b>Payoff (Proposer)</b>	<b>Payoff (Responder)</b>
1	21	A	29	21
2	36	A	14	36
3	40	R	0	0
4	25	A	25	25
5	27	A	23	27
6	20	A	30	20
7	35	A	15	35
8	34	A	16	34
9	35	A	15	35
10	30	A	20	30
11	30	A	20	30
12	35	A	15	35
13	35	A	15	35
14	28	A	22	28
15	42	A	8	42
16	26	A	24	26
17	30	A	20	30
18	26	A	24	26
19	20	A	30	20
20	20	R	0	0
<b>Average</b>	<b>29.75</b>	<b>0.1</b>	<b>18.25</b>	<b>26.75</b>
<b>SD</b>	<b>6.6718182</b>		<b>8.54015284</b>	<b>10.84762889</b>



**Round# 3**  
**REAL**  
**Rs: 50**

Serial No	Offer	Decision	Payoff (Proposer)	Payoff (Responder)
1	19	A	31	19
2	32	A	18	32
3	50	A	0	50
4	50	A	0	50
5	36	A	14	36
6	30	A	20	30
7	50	A	0	50
8	40	A	10	40
9	38	A	12	38
10	35	A	15	35
11	45	A	5	45
12	40	A	10	40
13	35	A	15	35
14	36	A	14	36
15	35	A	15	35
16	23	A	27	23
17	36	A	14	36
18	26	R	0	0
19	20	R	0	0
20	36	A	14	36
<b>Average</b>	<b>35.6</b>	<b>0.1</b>	<b>11.7</b>	<b>33.3</b>
<b>SD</b>	<b>9.09250704</b>		<b>8.897663797</b>	<b>13.88713907</b>

**Round# 4**  
**REAL**  
**Rs: 50**

<b>Serial No</b>	<b>Offer</b>	<b>Decision</b>	<b>Payoff (Proposer)</b>	<b>Payoff (Responder)</b>
1	20	R	0	0
2	30	A	20	30
3	40	A	10	40
4	45	A	5	45
5	35	A	15	35
6	30	A	20	30
7	40	A	10	40
8	40	A	10	40
9	35	A	15	35
10	35	A	15	35
11	40	A	10	40
12	40	A	10	40
13	33	A	17	33
14	35	A	15	35
15	25	A	25	25
16	40	A	10	40
17	25	A	25	25
18	30	A	20	30
19	25	A	25	25
20	30	A	20	30
<b>Average</b>	<b>33.65</b>	<b>0.05</b>	<b>14.85</b>	<b>32.65</b>
<b>SD</b>	<b>6.6591844</b>		<b>6.7999613</b>	<b>9.647879505</b>



## **OVERALL AVERAGE**

<b>Offers</b>	<b>31.675</b>
<b>Rejections</b>	<b>0.1125</b>
<b>Payoffs(Proposers)</b>	<b>15.525</b>
<b>Payoff(Responder)</b>	<b>28.85</b>

# Experiment #03. Nawabshah

Mean Results		Offers	Rejection	Payoff (Proposer)	Payoff Responder	SD
Round 1	Male	39.27	0.13	31.73	41.6	8.27
Unknown Gender	Female	43	0.13	43	57	6.43
Round 2	Male	39.38	0.33	29.36	37.11	7.72
Unknown Gender	Female	43.33	0	43.33	56.67	3.78
Round 3	Male Proposer	48.12	0	51.88	48.12	4.14
Round 4	Female Proposer	44.5	0.2	39.59	37.06	4.9



## Experiment #03: Contd. Percentage Offers

<b>Offers Range</b>	<b>0 to 10</b>	<b>11 to 20</b>	<b>21 to 30</b>	<b>31 to 40</b>	<b>41 to 50</b>	<b>51 to 60</b>	<b>61 to 70</b>	<b>71 to 80</b>	<b>81 to 90</b>	<b>91 to 100</b>	<b>Sum %</b>
<b>ROUND # 1</b>	<b>0</b>	<b>0</b>	<b>0.13</b>	<b>0.33</b>	<b>0.43</b>	<b>0.1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.0</b>
<b>ROUND # 2</b>	<b>0</b>	<b>0</b>	<b>0.1</b>	<b>0.27</b>	<b>0.63</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.0</b>
<b>ROUND # 3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.77</b>	<b>0.23</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.0</b>
<b>ROUND # 4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.13</b>	<b>0.77</b>	<b>0.1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.0</b>

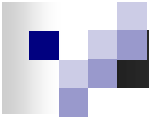


## Experiment #03: Contd. Percentage Rejections

<b>Offer Range</b>	<b>0-10</b>	<b>11- 20</b>	<b>21- 30</b>	<b>31-40</b>	<b>41-50</b>	<b>51-60</b>	<b>61- 70</b>	<b>71- 80</b>	<b>81- 90</b>	<b>91-100</b>	<b>Sum %</b>
<b>ROUND # 1</b>	<b>0</b>	<b>0</b>	<b>0.13</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.13</b>
<b>ROUND # 2</b>	<b>0</b>	<b>0</b>	<b>0.1</b>	<b>0.07</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.17</b>
<b>ROUND # 3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>ROUND # 4</b>	<b>0</b>	<b>0</b>	<b>0.03</b>	<b>0.1</b>	<b>0.1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.23</b>

# Experiment#04.Ghizer

Mean Results		Offers	Rejections	Payoff (Proposer)	Payoff (Responder)	Standard Deviation
Round 1 Unknown Gender	Male	40.76	0.20	40.76	59.24	2.70
	Female	36.13	0.27	22.07	31.27	6.63
Round 2 Unknown Gender	Male	40.47	0.20	45.53	34.47	7.37
	Female	37.93	0.40	34.27	25.73	7.93
Round 3 Known Gender	Male Proposer	48.68	0.07	45.17	44.83	7.23
Round 4 Known Gender	Female Proposer	41.80	0.2	46.97	36.37	5.09



## Experiment#04.Contd. Percentage Offers

<b>Offers Range</b>	<b>0-10</b>	<b>11-20</b>	<b>21- 30</b>	<b>31-40</b>	<b>41-50</b>	<b>51-60</b>	<b>61- 70</b>	<b>71-8 0</b>	<b>81- 90</b>	<b>91-100</b>	<b>Sum %</b>
<b>ROUND # 1</b>	<b>0</b>	<b>0</b>	<b>0.17</b>	<b>0.4</b>	<b>0.43</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.0</b>
<b>ROUND # 2</b>	<b>0</b>	<b>0</b>	<b>0.27</b>	<b>0.30</b>	<b>0.43</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.0</b>
<b>ROUND # 3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.07</b>	<b>0.60</b>	<b>0.27</b>	<b>0.07</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.0</b>
<b>ROUND # 4</b>	<b>0</b>	<b>0</b>	<b>0.03</b>	<b>0.30</b>	<b>0.67</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.0</b>





## Experiment#04.Contd.Percentage Rejections

<b>Offers Range</b>	<b>0-10</b>	<b>11-20</b>	<b>21- 30</b>	<b>31-40</b>	<b>41-50</b>	<b>51-60</b>	<b>61- 70</b>	<b>71-8 0</b>	<b>81- 90</b>	<b>91-100</b>	<b>Sum %</b>
<b>ROUND # 1</b>	<b>0</b>	<b>0</b>	<b>0.16</b>	<b>0.07</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.23</b>
<b>ROUND # 2</b>	<b>0</b>	<b>0</b>	<b>0.27</b>	<b>0.03</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.30</b>
<b>ROUND # 3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.07</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.07</b>
<b>ROUND # 4</b>	<b>0</b>	<b>0</b>	<b>0.03</b>	<b>0.17</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.20</b>

## Experiment#05. Rawlakot

Mean Results		Offers	Rejections	Payoff (Proposer)	Payoff (Responder)	Standard Deviation
Round 1 Unknown Gender	Male	40.76	0.20	40.76	59.24	2.70
	Female	34	0.27	22.07	31.27	9.47
Round 2 Unknown Gender	Male	40.47	0.20	45.53	34.47	7.37
	Female	35.80	0.40	34.27	25.73	11.61
Round 3 Known Gender	Male Proposer	41.67	0.10	46.17	43.83	7.03
Round 4 Known Gender	Female Proposer	42.83	0.17	46.17	35.67	6.11



## Experiment#05.Contd. Percentage Offers

<b>Offers Range</b>	<b>0-10</b>	<b>11-20</b>	<b>21- 30</b>	<b>31-40</b>	<b>41-50</b>	<b>51-60</b>	<b>61- 70</b>	<b>71-8 0</b>	<b>81- 90</b>	<b>91-100</b>	<b>Sum %</b>
<b>ROUND # 1</b>	<b>0</b>	<b>0.07</b>	<b>0.13</b>	<b>0.37</b>	<b>0.43</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.0</b>
<b>ROUND # 2</b>	<b>0.03</b>	<b>0.03</b>	<b>0.20</b>	<b>0.30</b>	<b>0.43</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.0</b>
<b>ROUND # 3</b>	<b>0</b>	<b>0</b>	<b>0.03</b>	<b>0.13</b>	<b>0.7</b>	<b>0.10</b>	<b>0.03</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.0</b>
<b>ROUND # 4</b>	<b>0</b>	<b>0</b>	<b>0.07</b>	<b>0.37</b>	<b>0.57</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.0</b>



## Experiment#05.Contd. Percentage Rejections

<b>Offers Range</b>	<b>0-10</b>	<b>11-20</b>	<b>21- 30</b>	<b>31-40</b>	<b>41-50</b>	<b>51-60</b>	<b>61- 70</b>	<b>71-8 0</b>	<b>81- 90</b>	<b>91-100</b>	<b>Sum %</b>
<b>ROUND # 1</b>	<b>0</b>	<b>0.07</b>	<b>0.13</b>	<b>0.03</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.24</b>
<b>ROUND # 2</b>	<b>0.03</b>	<b>0.03</b>	<b>0.2</b>	<b>0.03</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.30</b>
<b>ROUND # 3</b>	<b>0</b>	<b>0</b>	<b>0.03</b>	<b>0.07</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.1</b>
<b>ROUND # 4</b>	<b>0</b>	<b>0</b>	<b>0.07</b>	<b>0.13</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.20</b>

## Experiment#06. Kharan

Mean Results		Offers	Rejections	Payoff (Proposer)	Payoff (Responder)	Standard Deviation
Round 1 Unknown Gender	Male	41.44	0.20	40.76	59.24	2.81
	Female	35.11	0.27	22.07	31.27	8.27
Round 2 Unknown Gender	Male	41.33	0.20	44.67	35.33	7.43
	Female	36.67	0.40	34.33	25.67	9.76
Round 3 Known Gender	Male Proposer	48	0.1	45.33	44.67	8.05
Round 4 Known Gender	Female Proposer	39.99	0.37	35.51	26.23	6.70



## Experiment#06.Contd. Percentage Offers

<b>Offers Range</b>	<b>0-10</b>	<b>11-20</b>	<b>21- 30</b>	<b>31-40</b>	<b>41-50</b>	<b>51-60</b>	<b>61- 70</b>	<b>71-80</b>	<b>81- 90</b>	<b>91-100</b>	<b>Sum %</b>
<b>ROUND # 1</b>	<b>0</b>	<b>0</b>	<b>0.2</b>	<b>0.27</b>	<b>0.53</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.0</b>
<b>ROUND # 2</b>	<b>0</b>	<b>0.03</b>	<b>0.24</b>	<b>0.4</b>	<b>0.33</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.0</b>
<b>ROUND # 3</b>	<b>0</b>	<b>0</b>	<b>0.03</b>	<b>0.23</b>	<b>0.44</b>	<b>0.3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.0</b>
<b>ROUND # 4</b>	<b>0</b>	<b>0</b>	<b>0.13</b>	<b>0.5</b>	<b>0.37</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.0</b>



## Experiment#06.Contd. Percentage Rejections

<b>Offers Range</b>	<b>0-10</b>	<b>11-20</b>	<b>21- 30</b>	<b>31-40</b>	<b>41-50</b>	<b>51-60</b>	<b>61- 70</b>	<b>71-8 0</b>	<b>81- 90</b>	<b>91-100</b>	<b>Sum %</b>
<b>ROUND # 1</b>	<b>0</b>	<b>0</b>	<b>0.2</b>	<b>0.03</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.23</b>
<b>ROUND # 2</b>	<b>0</b>	<b>0.03</b>	<b>0.24</b>	<b>0.03</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.3</b>
<b>ROUND # 3</b>	<b>0</b>	<b>0</b>	<b>0.03</b>	<b>0.07</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.1</b>
<b>ROUND # 4</b>	<b>0</b>	<b>0</b>	<b>0.13</b>	<b>0.23</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.37</b>



## Conclusion

- Male players are comparatively more altruistic in making their offers to female players but in the most of previous studies the female players are more generous towards male.
- Everybody either male or female likes to be treated fairly.
- Learning through repeated games.
- Female players are tough competitors as compared to male players when gender is unknown.
- Male players are tough competitors when gender is known.
- Economic theory is totally rejected that *SOMETHING IS BETTER THAN NOTHING* means that majority of the offers made are nearly fair i.e. close to 50-50 range.





*THANK YOU*