

# Values in Consumer Choice: Do They Matter?



SALMAN AHMED SHAIKH

[ISLAMICECONOMICSPROJECT@GMAIL.COM](mailto:ISLAMICECONOMICSPROJECT@GMAIL.COM)

[WWW.ISLAMICECONOMICSPROJECT.WORDPRESS.COM](http://WWW.ISLAMICECONOMICSPROJECT.WORDPRESS.COM)

# Values in Consumer Choice: Do They Matter?



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# Overview of Presentation



- Introduction
- Research Methodology
- Data Analysis
- Values & Economics of Religion
- Conclusion

# Introduction



- In traditional mainstream neoclassical consumer theory, the consumer is supposed to maximize a utility function subject to some budget constraint.
- To conduct maximization analysis, certain axioms are imposed on the consumer choice set that enable mathematical tractability and optimization analysis.

# Introduction



- These axioms can be summarized into the following:
- Completeness
- Transitivity
- Convexity
- Continuity
- Monotonicity

# Introduction



- Apart from Economics, other social sciences are not always thrilled to restrict consumer behavior analysis within such a framework only for mathematical tractability.
- Mainstream economists opine that it is the empirical validity of predictions with observed behavior which gives the mainstream tools and methodology the credibility and wide acceptability.

# Introduction



- However, the relevance and validity of these axioms are not trivial to Gowdy & Mayumi (2001).
- They opine that if consumer behavior does not conform to the set of axioms adopted in neoclassical theory, then one cannot make the leap from maximizing utility to constructing welfare measures of consumer surplus using Hicksian or Marshallian demand curves.

# Introduction



- Thaler (1980) explains that since mainstream consumer behavior theory is based on a rational maximizing model, it describes how consumers *should* choose given the model and its assumptions; however, not necessarily describing how they *do* choose.
- Mainstream consumer behavior theory is normatively based and it only claims that it is also a descriptive theory.



# Introduction



- But, in many cases, the mainstream consumer theory fails to predict the economic choices either because of rigid axioms or simplistic preference structure.
- Sen (1977) explaining the shortcomings in the structure in neoclassical approach comments as follows:

*“A person is given one preference ordering, and as and when the need arises this is supposed to reflect his interests, represent his welfare, summarize his idea of what should be done, and describe his actual choices and behavior. Can one preference ordering do all these things? A person thus described may be “rational” in the limited sense of revealing no inconsistencies in his choice behavior, but if he has no use for these distinctions between quite different concepts, he must be a bit of a fool.”*

# Introduction



- Gowdy & Mayumi (2001) correctly argue that monotonicity axiom is irrelevant in environment goods where the balance and coherence matters more than abundance.
- Health goods also require a balance for their effectiveness. Same is true when consumption is analyzed with respect to health effects.
- Moreover, just like the consumer choice implicitly maintains or should maintain a balance that satisfy balancedness with regards to health effects of consumption, the mainstream consumer theory will be much better off by giving due importance to the balancedness with regards to the ecology, biodiversity and intergenerational equity.
- This may require incorporating the attribute of ‘commitment’ in consumer theory (Sen, 1977).

# Introduction



- Using an example from social choice, Sen (1977) states that even when individual voters have limited probability of affecting actions and when the costs of casting votes could be substantial in particular circumstances, people still take the pain to cast votes to document their true preferences.
- Sen argues that if this desire reflects a sense of commitment, then the behavior in question would be at variance with the view of man in traditional economic theory.

# Introduction



- Furthermore, ‘Ultimatum Game’ reflects the fact that people tend to look at their choice outcomes relatively.
- Prisoner’s Dilemma highlights the fact that choices by each player in a self-centric way are not necessarily going to be best for them either individually or collectively.

# Introduction



- On the other hand, there is another critique on the rational consumer theory that it is overly optimistic about the information processing capability of the consumer.
- On this, Simon (1957, p. 198) wrote:

*“The capacity of the human mind for formulating and solving complex problems is very small compared with the size of the problems whose solution is required for objectively rational behavior in the real world -- or even for a reasonable approximation to such objective rationality.”*

# Introduction



- Furthermore, recent evidence in behavioral finance and consumer psychology points to the fact that consumer information processing capabilities are limited and prone to error.
- Alias paradox (1953) and Ellsberg paradox (1961) are good examples of this phenomenon.

# Research Methodology



## ○ Nature of Data

- In this study, we collected primary data from 250 people.
- Data is collected through structured questionnaire.
- Questionnaire was filled by respondents in person and over internet.

# Research Methodology



## ○ Sampling Methodology

- For sampling, a mix of convenience and quota sampling is used. Sampling methodology is non-probabilistic.
- For this Survey, Faisalabad, Hyderabad, Sukkur, Lahore, Karachi and Islamabad are selected.



# Research Methodology



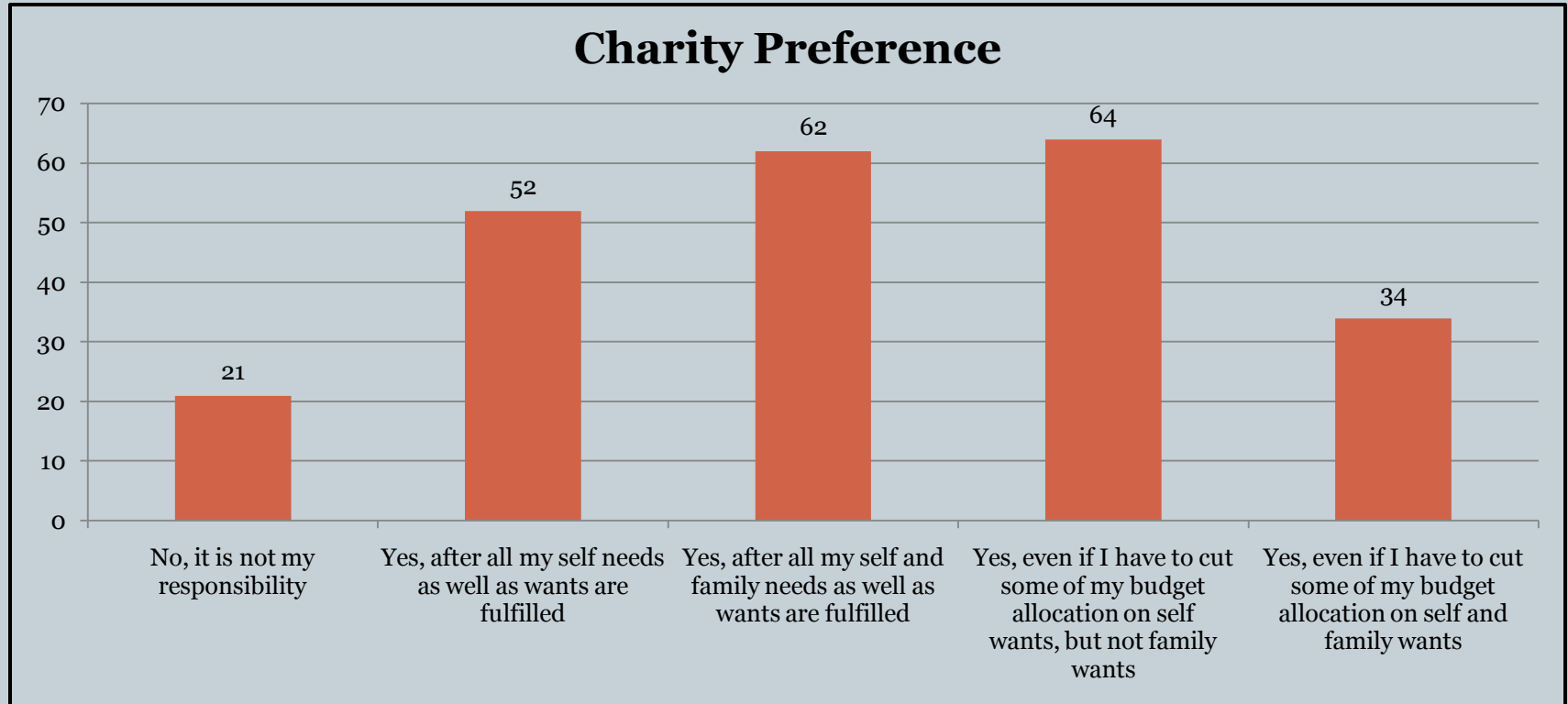
## ○ Methods

- For the analysis of data, mostly descriptive tools are used including non-parametric tests.
- Contingency tables are also used for cross tabulations to highlight possible relationships between different factors in the study.

# Data Analysis



- Question: If you come across a community welfare program you can trust and find it credible with appropriate checks and balances, will you be willing to contribute your monthly budget on it?**



# Data Analysis



- Response to the above question indicates that less than 10% people in the sample feel that they are not responsible for helping people with lesser resources.
- As much as 90% people in the sample are willing to spend in charity if they come across a credible charitable project.

# Data Analysis



- This shows that problem may not be with consumer preferences or axioms like monotonicity when it comes to finding ways of community welfare, the problem may very well be with institutions and their quality that carry out the community welfare programs.
- Almost 50% people in the sample are willing to spend in charity even if they have to cut on their self and/or family wants.

# Data Analysis



- First, it shows that people distinguish between needs and wants when it comes to consumer choices.
- The traditional neoclassical theory does not find the need for this distinction.
- Amartya Sen in his famous research on famine in Bengal showed that scarcity is not a valid assumption or viewpoint with regards to basic needs.
- While people may regard some luxuries or comfort goods to be a need, there will be hardly any difference on what constitute the basic physiological need for survival. The non-trivial nature of scarcity assumption can further be explained through an experiment.

# Data Analysis



Consider 50 students are sitting in a class room. Then, one student starts to distribute handouts.

Behavior of students will be significantly different when they think that the handouts are not sufficient for the class size as compared to when they think that the handouts are sufficient in number so that every student could have one.

If they think that resources are scarce and handouts are distributed from first rows to the last rows, then those at back (future generations) may not get much resources (handouts) from those in front (present generations) especially in the absence of a teacher (government, regulator or belief in accountability beyond codified law which does not cover all ethics).

# Data Analysis



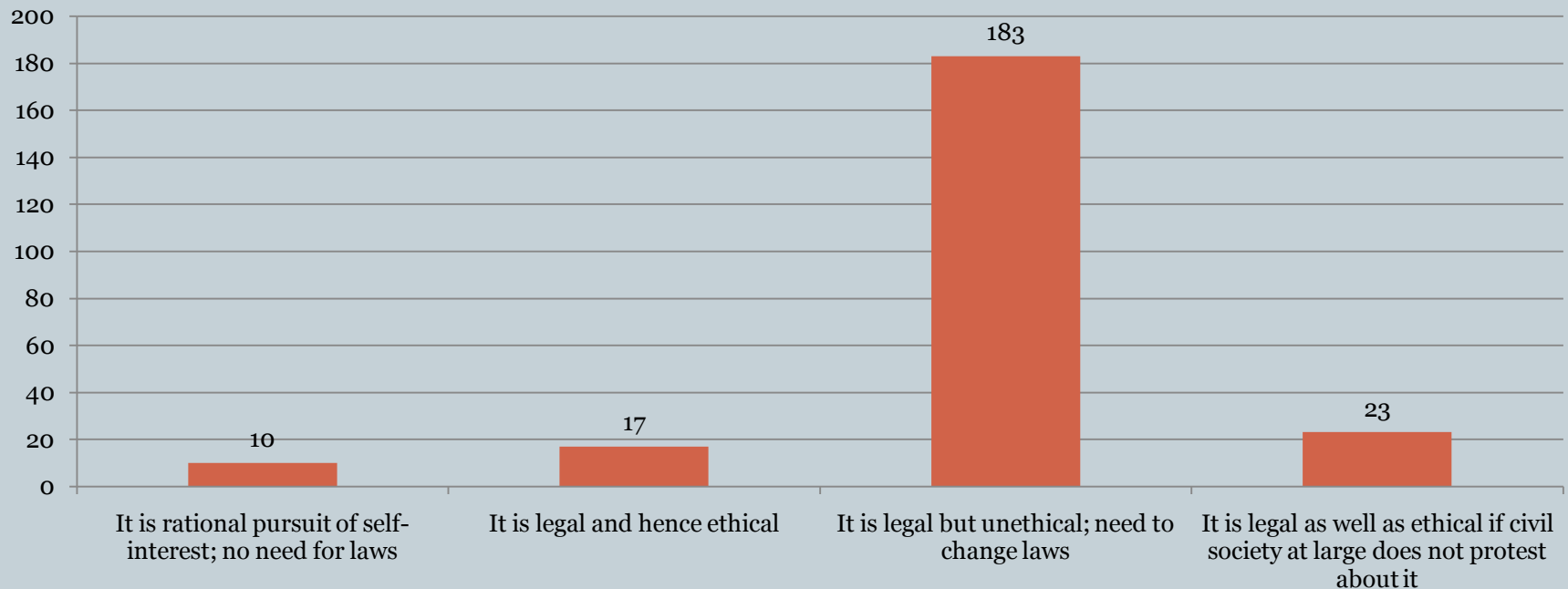
- Secondly, the reported evidence to this question indicates that people in the sample are willing to amend their preferences and appear to have dynamic preferences than the closely defined and self-centric axioms of consumer theory.

# Data Analysis



- **Question: If a producer creates a negative externality (pollutes air, spills oil in river etc.) in society from its production process and is able to satisfy law in the jurisdiction where it operates, how will you analyze it?**

**Values About Externality**





# Data Analysis



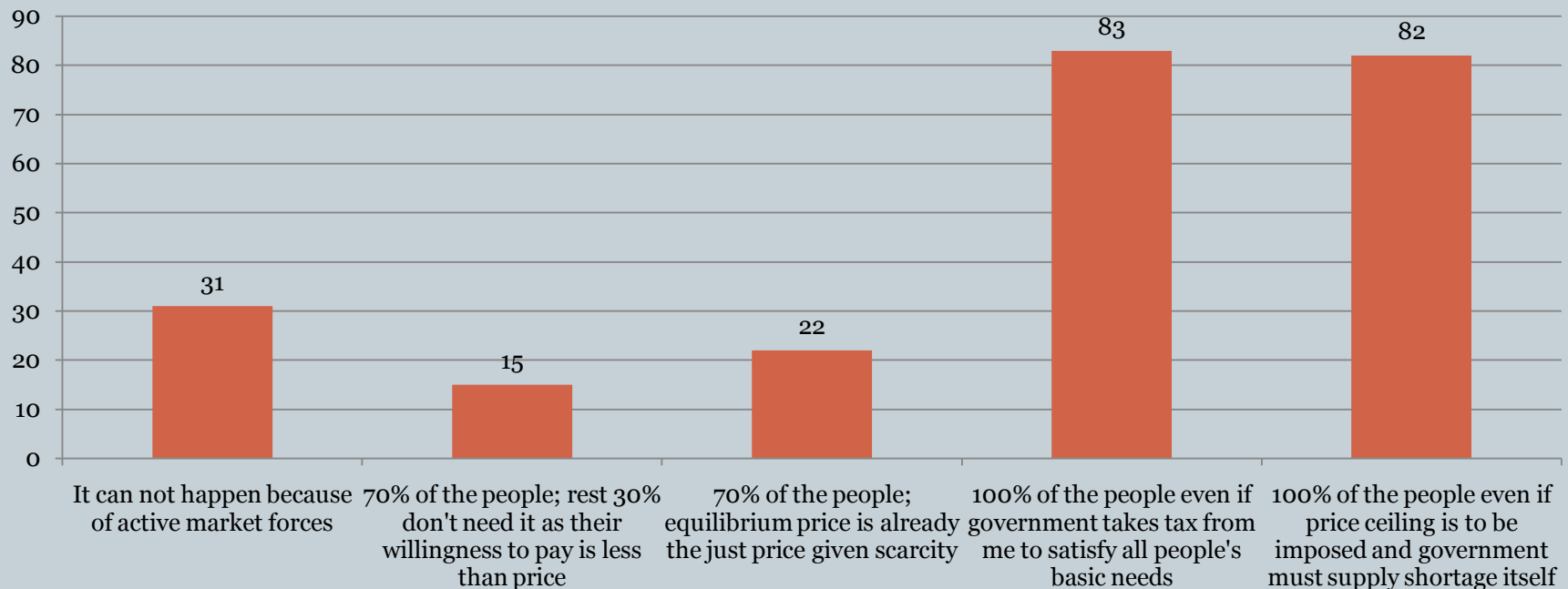
- Response to the above question clearly indicates that all things legal are not necessarily ethical in the perceptions and views of the respondents in the sample.
- Almost 80% of the people think that creating negative externality is unethical.
- This also indicates that the values of the respondents are not just restricted to self-centric framework.
- Even when an externality creates social disharmony, people feel negative about it even if they are not directly affected by it. Since this is a cross-sectional study, the responses cannot be attributed to risk aversion in a Rawlsian framework.

# Data Analysis



- **Question: If in a country, each of 200 million people require 250 grams of wheat daily, but only 70% of them are able to afford it at equilibrium market prices, for whom should the wheat shall be produced?**

## Values About Allocation



# Data Analysis



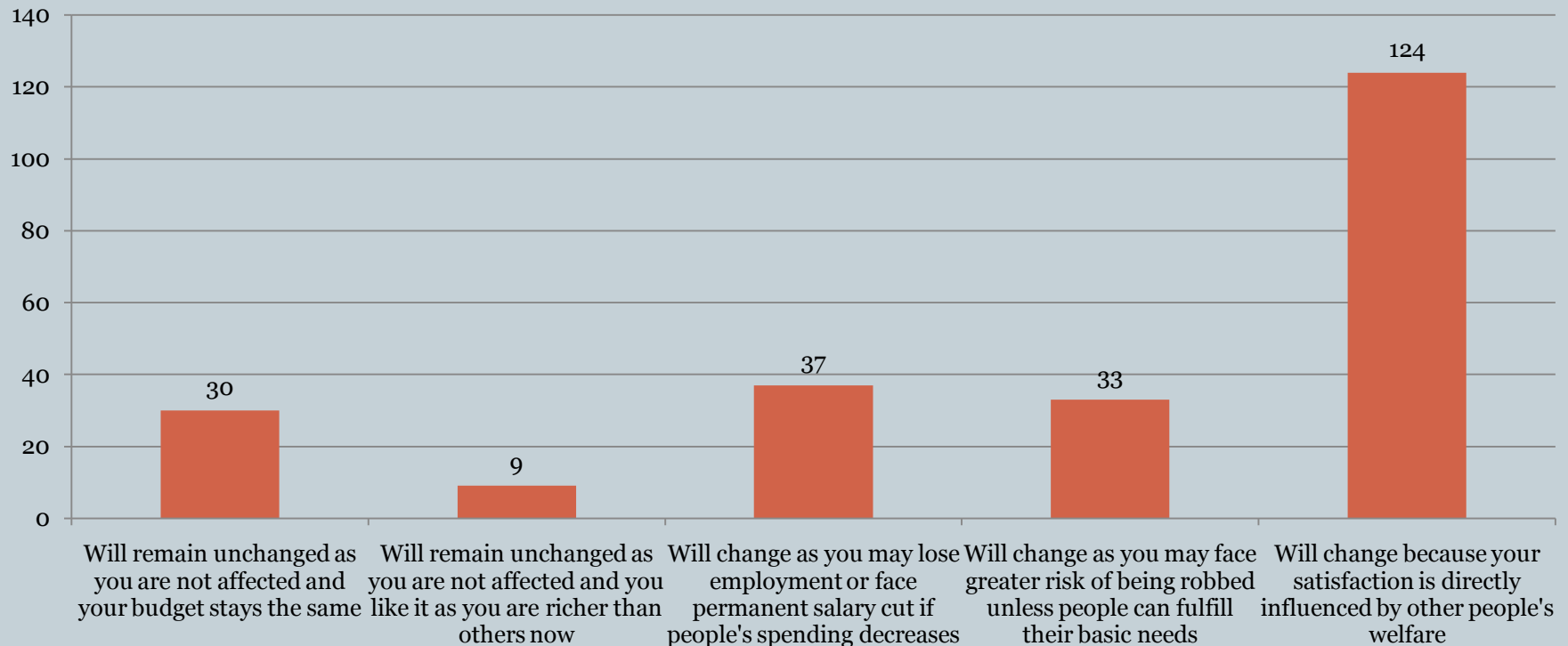
- Response to the above question reveals that 70% of the people in the sample think that provision of basic necessities is a bigger value than maintaining a certain kind of private property rights system.
- Not only people are sensitive about egalitarian objectives, rather they are willing to sacrifice their self-purchasing power by willing to pay taxes.
- Only 12% people think that such a situation as described in the question is not possible in a market economy.
- Only 30% of the people in the sample think that either this situation is not possible in an economy and/or this cannot be solved with interventions like price fixing or taxes.

# Data Analysis



- **Question: If your budget remains unchanged and a disaster affects people near you and decreases their budget, your preferences:**

## Are Preferences Amenable?



# Data Analysis



- Response to the above question clearly indicates that preferences are amenable.
- More than 85% of the respondents state that their preferences will change given an exogenous event which even though does not affect their income/budget.
- This also shows that people's choices in the sample are responsive of interpersonal utility functions. Hence, the usual procedure of computing consumer welfare from individual utility functions that disregard interpersonal relationships is a questionable approach (Gowdy & Mayumi, 2001).

# Cross Tabulations



- In cross tabulations, we give response to the above questions in high income and low income groups of respondents.
- We also give response to the above questions in mature age and immature age respondents.
- The values in percentage terms show that what percent of the people from low income or high income group and from mature age or immature age group choose a particular response.
- Hence, these values are adjusted for the size of each group. Chi-square test of independence shows that both variables have no association in each of the cases. We fail to reject null hypothesis of independence between the two variables at 5% level of significance.

# Cross Tabulations



- It indicates that people's values are not a function of their income and material possessions. Hence, economic growth even at the micro level alone is insufficient to influence or determine people's values.
- However, values are inbuilt in preferences. The earlier evidence suggests that preferences are amenable not because of income and material possessions, but because of value prioritization in different circumstances.

# Cross Tabulations



- What may be needed for broadbased development is not necessarily income growth, but strengthening of values so that resource distribution reaches egalitarian standards not because of active or clever policy intervention, but through consumers' own choices.
- That represents true freedom when the consumer is able to amend preferences and overcome base desires to choose what is better for the society.



# Cross Tabulations



- Charity Preference & Income Cross Tabulation**

	High Income	
Charity Preference	< Rs 50,000	> Rs 50,000
No, it is not my responsibility	8%	11%
Yes, after all myself needs as well as wants are fulfilled	23%	20%
Yes, after all myself and family needs as well as wants are fulfilled	26%	27%
Yes, even if I have to cut some of my budget allocation on self wants, but not family wants	27%	27%
Yes, even if I have to cut some of my budget allocation on self and family wants	15%	14%

# Cross Tabulations



- Charity Preference & Age Cross Tabulation**

Charity Preference	Mature Age	
	< 30 Years	> 30 Years
No, it is not my responsibility	9%	9%
Yes, after all myself needs as well as wants are fulfilled	23%	21%
Yes, after all myself and family needs as well as wants are fulfilled	27%	26%
Yes, even if I have to cut some of my budget allocation on self wants, but not family wants	27%	28%
Yes, even if I have to cut some of my budget allocation on self and family wants	14%	16%

# Cross Tabulations



- Values about Externalities & Income Cross Tabulation**

	High Income	
Ethical Values & Externalities	< Rs 50,000	> Rs 50,000
It is rational pursuit of self-interest; no need for laws	7%	0%
It is legal and hence ethical	8%	6%
It is legal but unethical; need to change laws	77%	81%
It is legal as well as ethical if civil society at large does not protest about it	8%	13%

# Cross Tabulations



- **Values about Externalities & Age Cross Tabulation**

Ethical Values & Externalities	Mature Age	
	< 30 Years	> 30 Years
It is rational pursuit of self-interest; no need for laws	5%	1%
It is legal and hence ethical	5%	12%
It is legal but unethical; need to change laws	81%	72%
It is legal as well as ethical if civil society at large does not protest about it	8%	15%

# Cross Tabulations



- **Values about Resource Allocation & Income Cross Tabulation**

Ethical Values & Resource Allocation	High Income	
	< Rs 50,000	> Rs 50,000
It cannot happen because of active market forces	13%	13%
70% of the people; rest 30% don't need it as their willingness to pay is less than price	9%	2%
70% of the people; equilibrium price is already the just price given scarcity	7%	14%
100% of the people even if government takes tax from me to satisfy all people's basic needs	34%	39%
100% of the people even if price ceiling is to be imposed and government must supply shortage itself	38%	31%

# Cross Tabulations



- Values about Resource Allocation & Age Cross Tabulation**

Ethical Values & Resource Allocation	Mature Age	
	< 30 Years	> 30 Years
It cannot happen because of active market forces	14%	12%
70% of the people; rest 30% don't need it as their willingness to pay is less than price	6%	7%
70% of the people; equilibrium price is already the just price given scarcity	9%	10%
100% of the people even if government takes tax from me to satisfy all people's basic needs	34%	40%
100% of the people even if price ceiling is to be imposed and government must supply shortage itself	37%	31%

# Cross Tabulations



- Preference Endogeneity & Income Cross Tabulation**

	High Income	
Preference Endogeneity	< Rs 50,000	> Rs 50,000
Will remain unchanged as you are not affected and your budget stays the same	12%	14%
Will remain unchanged as you are not affected and you like it as you are richer than others now	4%	4%
Will change as you may lose employment or face permanent salary cut if people's spending decreases	15%	18%
Will change as you may face greater risk of being robbed unless people can fulfill their basic needs	17%	10%
Will change because your satisfaction is directly influenced by other people's welfare	52%	55%

# Cross Tabulations



- Preference Endogeneity Allocation & Age Cross Tabulation**

	Mature Age	
Preference Endogeneity	< 30 Years	> 30 Years
Will remain unchanged as you are not affected and your budget stays the same	11%	18%
Will remain unchanged as you are not affected and you like it as you are richer than others now	4%	4%
Will change as you may lose employment or face permanent salary cut if people's spending decreases	15%	18%
Will change as you may face greater risk of being robbed unless people can fulfill their basic needs	16%	9%
Will change because your satisfaction is directly influenced by other people's welfare	54%	51%



# Values & Economics of Religion



- Sen (1977) highlighted the importance of commitment which comes from values and that influence preference and even choices. Hence, to influence choices, influencing the commitment or strengthening it in useful direction is a challenge.
- In Economics of Religion, there are following two strands of research.
  - Religion in Rational Choice Framework
  - Religion as Institutions

# Values & Economics of Religion



- **Religion in Rational Choice Framework**

First set of studies take religion or religious activities as an object of choice in a rational framework and looking at it in the labor-leisure choice, inter temporal consumption choices and differences in product choice set between religious and non-religious people.

Here, the link between economics and religion is created by arguing that time is money and when time is allocated on religious activities too, these activities can also be analyzed within an economics framework.

# Values & Economics of Religion



- **Religion as Institutions**

The second set of studies takes religion as institution. For instance, Confucius thought has bearing on one's outlook about work and consumption habits.

East Asian people generally tend to work harder, longer and their labor force participation rates are higher.

Hence, as per LCH-PIH, Higher the number of working age people in a society, higher will be the propensity to save.

We know that savings is the most central variable affecting growth with and without other macro and institutional variables. Hence, this strand of research studies religion as institutions.

# Values & Economics of Religion



- Both strands of research do not study religious principles as a policy or behavioral guide in thoughtful choices; rather, they study the effects of religious choices on economic outcomes at micro and macro level.
- Another shortcoming of these two research strands is the neglect of the religious worldview.
- Next, we explain how the religious worldview of Islam can influence commitment by influencing values in a believer and that can influence consumer choice without government intervention in policy or in markets.

# Concept of Human Development in Islam



- Mathematical Presentation
- $W_h = f(\alpha W_t, \alpha^m W_e)$

Where

$W_h$  is total human welfare in both aspects of human life.

$W_t$  is human welfare in worldly life.

$W_e$  is human welfare in eternal life hereafter.

# Concept of Human Development in Islam



- Mathematical Presentation: Continued
- $W_h = f(\alpha W_t, \alpha^m W_e)$

$$W_t = f(Z_t)$$

Where  $Z_t$  is a vector of variables which belong to the category of ‘individual specific positive utility gaining choices’.

# Concept of Human Development in Islam



- Mathematical Presentation: Continued

$$W_t = f(Z_t)$$

## Constraint Sets

$$C_S = \{ C_{\text{worship}} \} \cup \{ C_{\text{self}} \} \cup \{ C_{\text{society}} \} \cup \{ C_{\text{people}} \}$$

$$C_{\text{worship}} = \{\text{Sala't, Ramzan fasting, obligatory charity, hajj pilgrimage once}\}$$

$$C_{\text{self}} = \{\text{Acts which harm a person's own ethical and spiritual existence}\}$$

$$C_{\text{society}} = \{\text{Acts which harm society and its institutions}\}$$

$$C_{\text{people}} = \{\text{Acts which harm other people, their rights, freedom or property}\}$$

# Concept of Human Development in Islam



- Mathematical Presentation: Continued
- $W_h = f(\alpha W_t, \alpha^m W_e)$

$$W_e = f(Z_e)$$

Where  $Z_e$  is a vector of variables which belong to the category of 'following Allah's commands which will bring non-decreasing positive utility gain in life hereafter'.



# Concept of Human Development in Islam



- Mathematical Presentation: Continued
- $W_h = f(\alpha W_t, \alpha^m W_e)$

$$W_e = f(Z_e)$$

Where  $Z_e$  is a vector of variables which belong to the category of 'following Allah's commands which will bring non-decreasing positive utility gain in life hereafter'.

# Concept of Human Development in Islam



- **Tradeoffs & Incentives for Ethical Conduct**

In tradeoff between  $W_t$  and  $W_e$ , the trial is to choose the right path ordained by Allah so as to achieve the maximum human welfare in the eternal life.

Things that we enjoy in this world will be replaced by similar things in afterlife, but they will provide much more utility.

The difference between the utility of same bundles traded off in this life for afterlife will be given by the positive multiplier in the exponent of parameter ' $\alpha$ ' that is part of eternal life function.

# Concept of Human Development in Islam



- **Functional Mathematical Presentation**
  - Leontief Perfect Compliments
  - Second Party Preferences
  - Family or Relational Utility
  - Lexicographic Utility

# Concept of Human Development in Islam



- **Functional Mathematical Presentation**

- Leontief Perfect Compliments

$$U(x,y) = \min (\alpha X, \beta Y)$$

Here, 'x' may represent 'material consumption bundles' and 'y' may represent 'socially desirable choices'.

# Concept of Human Development in Islam



- **Functional Mathematical Presentation**

- Second Party Preferences

$$U = U_i(x_i, y_i, U_j)$$

Here, person 'i' and 'j' are different.

Even if scarcity in material resources is a problem to cope up with, one way is to selfishly choose consumption bundles to the extent of seeking exclusivity and satisfying self-esteem with Veblen goods.

The other way is to cope up with scarcity in a shared and socially responsible way.

# Concept of Human Development in Islam



- **Functional Mathematical Presentation**

- Family or Relational Utility

$$U = U_i(x_i, y_i) + \sum_{j=1}^n r_j U_j$$

Here again, person 'i' and 'j' are different.

'r<sub>j</sub>' measures closeness of relation.

This closeness will depend upon relational, emotional, social and communal closeness between person 'i' and 'j'.

Islamic principle of brotherhood and equality can further boost the value of 'r' beyond just family relations.

# Concept of Human Development in Islam



- **Functional Mathematical Presentation**
  - Lexicographic Utility (Proposed by Dr. Asad Zaman)
- Every bundle of goods  $x$ , is evaluated using two functions  $(U(x), V(x))$ .
- Given bundles of goods  $x$  and  $y$ , comparison between them is done first on the basis of  $U(x)$  and  $U(y)$ .
- If  $U(x) > U(y)$ , then  $x$  is preferred to  $y$ . If  $U(x) = U(y)$  then comparison is done by looking at the second component of the utility function, with  $x$  being preferred to  $y$  if  $V(x) > V(y)$ .
- An allocation  $(x_1, x_2, \dots, x_n)$  of commodity bundles to individuals with utility functions  $(U_i, V_i)$  for  $i=1, 2, \dots, n$  is socially preferable to an alternative allocation  $(y_1, y_2, \dots, y_n)$  if either (a)  $U_i(x_i) > U_i(y_i)$  for all  $i$ , with strict inequality for at least one  $i$ , or (b)  $U_i(x_i) = U_i(y_i)$  for all  $i$ , and  $V_i(x_i) > V_i(y_i)$  for all  $i$  with strict inequality for at least one  $i$ .

# Conclusion



- We had discussed that mathematical elegance has taken precedence over realism in the traditional consumer theory.
- The neoclassical analytical framework is mathematically elegant, logically consistent, but it is often simplistic to explain economic choices in environment goods, public goods and social choice.
- In this study, we collected primary data from 250 respondents to investigate whether preferences are amenable in a predictable pattern and whether preferences take account of effects on others.
- The evidence supports that preferences are indeed amenable among the respondents in the sample and that relational utility models are realistic as compared to self-centric utility models. Using non-parametric tests, we also establish that the values of respondents' are independent of income and age.



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# For Feedback & Comments



Salman Ahmed Shaikh

[islamic\\_economicsproject@gmail.com](mailto:islamic_economicsproject@gmail.com)

[www.islamic\\_economicsproject.wordpress.com](http://www.islamic_economicsproject.wordpress.com)