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The role of behavioural economics in curbing healthcare, education, and finance sector problems

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Abstract
This paper emphasizes on possible ways in which behavior economics can help 3 major sectors of an economy including healthcare, education, and finance. It covers status quo problems in the sectors mentioned above and provides creative solutions on how to tackle them. It does so by making use of the principles of behavioral economics, and realizing them into feasible programs. Furthermore, we also provide the framework of designing development programs and policies in ways that are in cognizant with human psychology.

Keywords: economics, healthcare, education, finance

1. Introduction
Currently, most of the Govt policies are evaluated based on careful technical and statistical analysis; however majority of the policies overlook one crucial aspect of policy making, which is the public themselves. The lack of behavioral analysis on policies has led to several problems, which has resulted in suboptimal outcome; particularly in the sectors of agricultural, healthcare, and education. The reason for such a deprecating growth in these sectors can be traced back to how public responds to certain policies. It is not absolute that the public response to a policy will always be favorable, and to assume the response of the public to proposed policies will always be a rational one is naïve comprehension.
The inception of this idea is not a new development, according to The Greater Fool it is common with public to define a good or a service by their pre-established beliefs (endowment effect), rather than its true value in the market.
This is where behavior economics (BE) comes in. Over the past decade or so this discipline has seen immense growth with volumes of research being published on it, with many influential books and conferences held to subsequently raise awareness about the BE's findings and to combine their opinions with traditional or neo-classical branch of economics. In recent era, governments have started to recognize the importance of BE, and therefore established major behavioral think tanks to advise them on policy making as well as implementation. BE or Behavioral Welfare Economics as it is recently being known, has proved to be very successful in increasing the efficiency of various developmental policies across the world.
So, what is BE? Some of the most appropriate definition of BE has been given by Thaler and Mullainathan entry in the International Encyclopedia of the Social and Behavioral Sciences:
"*Behavioral Economics is the combination of psychology and economics that investigates what happens in markets in which some of the agents display human limitations and complications.*"
However, our interpretation of Behavioral Economics is a comprehensive approach towards assimilation of people and the choices they make with respect to their environment, by including insights from various fields of social sciences such as psychology, history, sociology and of course politics. It helps us to unravel, how people truly interact with public policy, and record their behavior rather than shape it based on wild assumptions. Our implication is not stating that all human beings are irrational by nature, rather we argue along the lines of human being are not well described by rational agent model.

2. Principles of Behavioral Economics
We would further like to emphasize on certain fundamentals of BE that are being employed extensively in the policy measures suggested herein:
1. The Endowment Effect: It is the hypothesis that people ascribe more value to things merely because they own them, also known as Status Quo Bias. It was popularized by Richard Thaler.
For e.g. On September 1, 2016, the Indian Railway Catering and Tourism Corporation introduced an optional travel insurance scheme on train e-tickets booked through its website for a mere 92 paise per passenger, with a payout promise of up to Rs 10 lakhs. But even after 3 months only 35% of the passengers who booked e-tickets opted for the scheme. It shows that even after having the right information and minimal financial constraint people tend to remain at their initial position.

2. The Prospect Theory: People like gains but they hate losses much more, from prospect theory. The below given value functions reinstate the fact that perceived losses have greater impact on human decisions in comparison to perceived gains:
For example: A risk adverse individual is being provided with

two situations:

a. He is offered 100 rupees.
b. He is offered 200 rupees and then loses 100 rupees.

In both of these situations the amount of utility gained must be equal but still many people prefer the option (a) in comparison to (b). This behavior of individuals does not coincide with classical principles of economics.

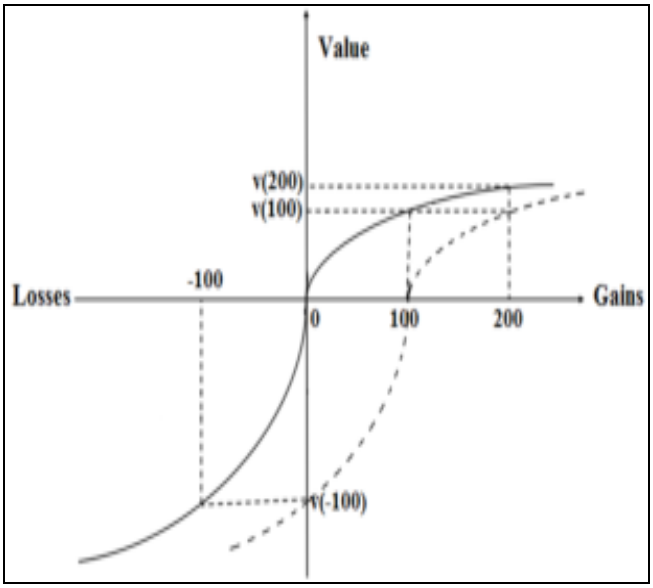

Fig 1: The Value Function

3. Mental Accounting: An economic concept according to which people divide their current and future assets into separate, non-transferable options and thus defying the very concept of fungibility of money.

4. The scarcity of self-control: Regarded as a non-existent problem while examining the'rational' economic models, self-control is indeed a powerful phenomenon that influences every human being in making decisions.

3. Exploring problems through a behavioral lens

3.1 Educational Sector

- Except a few islands of excellence at the graduation and post-graduation level the overall quality of educational institutions in India falls short, when compared to global standards. Furthermore, higher education in India is suffering from a significant decline in number of high quality institutions; the deteriorating level of private medical colleges in India is one of the prime examples of the current dilemma. This lackluster in quality of education has resulted in rise of many problems, one of which is absenteeism in government schools. The World Bank estimates that 25 percent of Indian school teachers are absent from school on a given day.
- According to the gross enrollment data of 2014-15, in the enrollment of primary to senior secondary level of education (12th Grade), there is a reduction of 46% in the enrollment ratio. The causes of such a drastic change in the ratio can be directly linked to the behavioral aspect of the public. There is a major bias against low income families not realizing the long- term gains of education, but this is rather presumptuous. One of the main reasons behind neglect of education by the economically poor sections of society can be explained by what psychologist term as cognitive overload. According to this principle, poverty affects the ability to think of an individual, thus restricting him to evaluate his options in an ideal manner. Considering the psychological pressure faced by a BPL family, where the parents are forced to employ their children at an early age, to maintain a minimum subsistence level. Hence, they are not able to reap the education benefits.
- Another major problem that has cropped up the Indian education sector in the last decade has been the "No-Detention Policy ".This situation can be explained with 'Lack of Self Control'. The students trap themselves in a comfort zone with a predetermined prejudice, that they will secure their position in the next grade. This creates a bias in their mind and hampers learning through their failure. Therefore the students get stuck in a situation that can be termed as' Status Quo Trap', failing to realize their true potential. For instance, the number of detained students as a percentage of total students enrolled in Class 9 rose from 2.8% in 2010 to 13.4% in 2014 in Delhi.
- Although the government is deliberating to remove this policy, one could argue that the ill-effects of this policy will last for a certain period of time.

3.2 Health care sector

- In the healthcare policy, it is clearly mentioned that the primary aim of the National Health Policy of 2016-17, is to inform, clarify, strengthen and prioritize the role of the Government in shaping health systems in all its dimensions- investments in health, organization of healthcare services, prevention of diseases and promotion of good health through cross sectoral actions, access to

technologies, developing human resources, encouraging medical pluralism, building knowledge base, developing better financial protection strategies, strengthening regulation and health assurance.

- Yet over the years, apart from the lower maternal and child mortality rates, there is a disparaging lack of basic amnesties in Govt hospitals in the areas of sanitation, hygiene, and infrastructure. Another destitution faced in this sector is of child immunization rates that are amongst the lowest in the world. For e.g. the rate of immunization in district of Mewat, Haryana is just 13% because of a rumor that the vaccines that are being administered will have a sterilizing effect on children, which proves the existence of stereotypical beliefs embedded in the minds of people.

3.3. Financial sector and the issue of financial inclusion

A survey conducted by Standard & Poor's Financial Services, found that 76% of India's adult population do not even understand the basic financial concepts. Financial inclusion provides a platform for the people of an economy to channelize their saving in a more efficient manner; this could particularly benefit the poorer sections of the society which do not have a saving account. Government and Reserve Bank of India have launched several programs on financial education; however, research indicates that traditional financial literacy methods are insufficient in providing people with practical skills.

Some of the challenges that need to be confronted are:

- Extortion of farmers and peasants by non-institutional moneylenders. A study has revealed that the share non-institutional moneylenders in Indian Banking Sector have grown to 29.6% as of 2013. It has raised an important question regarding people's response to interest rates, because the institutional lenders are offering credit at much lower rates in comparison to exorbitant rates charged by non-institutional lenders.
- People who have knowledge of banking facilities are reluctant to use it, because of undesired paperwork and formalities of banking. Thus favoring non-institutional money lenders.

  Need for organizing workshops to foster e-learning.

4. Solutions to These Problems

4.1. Education

- The problem of teacher absenteeism can be addressed with the help of prospect theory. They can be awarded their salary in advance and then if their attendance is not sufficient, some penalty should be deducted from their account. It will help in reducing the problem.
- Other measures include sending personal reminders to children about their children missing the school on a day, incentivizing the students who regularly attend classes through fee waivers, book grants, etc.
- A major criticism levelled against the lower income families is that the children are not willing to study i.e. they lack the willingness to enjoy the benefits of education. A unique initiative taken up by the Shiv Nadar Foundation known as 'The Shiksha Experiment' challenges this bias prevalent in the society. The aim of this initiative was to develop an interactive, systematic and enriched state board syllabus thus fostering digital literacy and offering better understanding through interactive content. To address this bias we have analyzed U-DISE database on school education in India. The data below shows a strong degree of positive correlation between states with availability of computer and electricity facilities their respective literacy rates, thus proving the need to provide and facilitate interactive learning.

Table 1

Sates	A Computer acilities provided (in %)	B Electricity Connection Available (in %)	C Literacy Rates (in %)	D Correlation of A & C	E Correlation of B & C
1. Kerala	94.50	97	93.91	0.98	0.87
2. Tamil Nadu	57.62	99.45	80.33		
3.Uttar Pradesh	13.31	54.20	69.72		
4. Bihar	9.37	37.78	63.82		
5. Delhi	83.89	100	86.34		
6.Madhya Pradesh	15.17	28.80	70.63		

4.2. Health Care

- A new approach that could be followed is a simple technique of Behavioral Economics known as "active choice" in which personalized text messages can be sent to the parents of children to alert of the coming immunization dates for their children and asking them to confirm their presence on that date.
- Another solution that can be implemented is attaching a few incentives to influence the outcome of people. Such as providing food subsidy coupons or minimum wage for a day if parents get their child immunized can improve the outcome. Specific targeting should be implemented in states like Gujarat, Bihar and Uttar Pradesh where the rates have been dismally low.
- BE theories can also be used in improving the sanitation facilities in rural areas as depicted in Karnataka. Arghyam is an organization which has made use of certain behavioral techniques in order to build community toilets. One of such interventions includes motivating the men to fulfill the needs of females of the family.

4.3. Financial Inclusion

BE can help us to understand and resolve various problems associated with financial inclusion in India.

- The socially backward sections of the economy can be nudged in the direction of financial inclusion with the

help of creating a 'status-quo bias' amongst the minds of poor in favor of banking. This can be achieved through targeted celebrity endorsement campaigns supported by the government at the national level to make people aware of the benefits of banking and to arouse a general public sentiment in favor of financial inclusion. This policy can be linked to the theory of the state to help the individuals in taking economically sound decisions towards increasing their welfare.

- The banks should reduce the formalities and should recognize the importance of 'default option' in easing the process of for rural population. The facilities important to banking such as issue of debit cards, net banking, cheque books, etc. must be defaulted in the application form to help the people in availing all the benefits of banking. It can help the people to escape status quo bias and enable the state to guide them into making economically correct decisions for them. A similar scheme that was initiated as a pilot project by Social and Behavioral Sciences Team in United States of America to improve the pension scheme for army personnel's proved to be a success.
- 'Mental Accounting' is an important concept that can enable a policy maker to solve the problems of savings amongst the poor sections of the society. It makes use of the characteristic of human beings to differentiate between same things on the basis current availability. It makes use of the argument that money is not fungible and people spend less of it if they carry less with them. Thus a bank deposit helps the individual to save money that can be used in the times of crisis.
- Specific training camps should be set up in the rural areas to actively assist people who are using banking facilities for the first time. Special attention to areas where illiteracy rate is higher like in the parts of Uttar Pradesh & Bihar.
- Implementing behavioral solutions can really help the policy makers to reduce the gap between availability and usage of services and thus can greatly enhance the efficiency of this pilot program of Indian Govt. Under the PMJDY, 260 million accounts have been opened as of 21st December 2016, which is a world record.

4.4. Opportunity Costs Trade-Offs

- Behavioral approach towards development is not directed towards a revolutionary change in the status quo of the various existing welfare programs run by the government. Rather, it only aims to make the functioning of the existing system better.
- Implementation of behavioral economics designs require careful study of data collected from various strata of population and thus the forecasting of magnitude of change that each policy will bring about becomes difficult.
- For designing these 'nudges', government will have to set up or partner with specialized team of behavioral scientists and economists, which will certainly add to the cost structure of the programs.
- It's difficult to forecast the magnitude of change which these interventions will bring about.
- The lack of data for altering policies to shape them in accordance with public behavioral maybe difficult.

5. Conclusion

The government already uses choice interventions like subsidies and taxes to shape citizen behavior. It should further augment policies with the help of behavioral economics to understanding cognitive biases correctly, and formulate interventions that consider such biases, as these biases can have a huge impact on making public-spending more effective. To put it simply, if behavioral interventions have the potential to increase the efficacy of our social spending, the government should wait no further to act on this front.

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