Sihoo Kim

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Rockwell College

Patrick Egan

Investigating Human Rationality Through Behavioural Aspect

The book written by Steven D. Levitt & Stephen J. Dubner, 'Freakonomics : A Rogue Economist Explore the Hidden Side of Everything', views various aspects of our daily lives through an economic lens. Use of clever economic analysis, the book suggests a new direction to economics. This has now developed into 'Behavioural Economics'.

Traditional economics has proposed the assumptions concerning consumer behaviour which builds the basis of the subject. The assumptions are as follows :

1. It is assumed that consumers have limited incomes

2. It is assumed that consumers seek to get maximum utility from that income

3. It is assumed that consumers will act rationally

4. It is assumed that consumers are subject to the law of diminishing marginal utility.

However the assumptions have limitations when it comes to reality. Even the consumers seek to get maximum utility from one's income, it is nearly impossible to act rationally in all times. To make the distinction clear, in behavioural economics, it has divided people into two groups.

- Econ : group of people who stays rational at all times and only makes calculative actions.

- Human : group of people who are vulnerable to errors and are easily controlled by one's emotions.

In order to better understand the above groups it is crucial to understand two systems in the brain that dictates our thinking process. (Thinking, Fast and Slow)

- System 1 : brain's fast, automatic, intuitive approach

- System 2 : mind's slower, analytical mode, where reason dominates

According to Daniel Kahneman, system 1 is one which dictates most of our decisions, reason being that system 2 requires substantial energy depending on the task.

Enthralled by this unique way of approaching economics, I have carried out various investigation of actions that can be seen among the age group of 17-20 in order to argue that people are not rational most times and the emotional value is bigger than is estimated in decision making.

First investigation was made during the lunchtime, when all pupils sprint out of their class in order to avoid a burden of waiting in a long queue. My first aim of this investigation was to check the amount of time that can be saved by sprinting to the canteen. I left the class earlier and stood in front of the canteen. I recorded the time when the first one who reached the canteen, most certainly a person who ran towards the lunch queue, took a seat with food (A). Then I waited until I was able to record the time when the last pupil to reach the canteen got his food (B). The results are as follows :

A : 12.50

B : 12.58

To avoid the errors that might arise due to unexpected factors, I have carried out this investigation for a full week. The results of the rest 4 days are as follows :

Day 2

A : 12.50

B : 13.00

Day 3

A : 12.52

B : 13.00

Day 4

A : 12.51

B : 13.02

Day 5

A : 12.52

B : 12.58

Average 8.6 minutes were saved by running to the canteen. Next step of my investigation was to find the pupils opinion on this result. I have made this survey sheet and randomly selected 50 pupils to answer it. The question is as follows :

Do you think running to the canteen is a rational decision?

To give a twist to this investigation, for the first group of pupils, A, I told them to answer the question first and then showed the result of my previous investigation. However for the second group, B, I showed the result before the questions were given. Here I was able to spot a dramatic impact of that mere difference.

A

18 Yes

32 No

B

36 Yes

14 No

My final investigation required me to record the average amount of pupils running. Just like I did to record the time saved, I stood in front of the canteen and recorded the number of pupils running to the lunch queue.

Day 1

46 running

Day 2

52 running

Day 3

37 running

Day 4

45 running

Day 5

53 running

(the total amount of people using the canteen that I took this investigation is 94)

Average of 46.6 people are running. This is nearly half of the pupils using the canteen. Again I randomly chose 30 pupils from the canteen for a survey. The survey included two questions.

1. *Do you think running to the canteen at lunchtime is a rational behaviour?*

2. *Do you run to canteen at lunchtime?*

As I did with the earlier survey, I took two groups and gave a slight change to each question naires. First group, A, was given a question sheet which had question 1 on the top and question 2 on the bottom. The other group, B, got a question sheet which had question 2 on the top and question 1 on the bottom. The results are as follows :

A

1. Do you think running to the canteen at lunchtime is a rational behaviour?

7   Yes

23 No

2. Do you run to canteen at lunchtime?

9   Yes

21 No

B

1. Do you run to canteen at lunchtime?

17 Yes

13 No

2. Do you think running to the canteen at lunchtime is a rational behaviour?

10 Yes

20 No

The results show the interesting aspect of human psychology and its effect on rationality. Very first investigation on the time saved suggests the power of information it has on our decision making. 32, over half of the people involved in group A said it is not rational to run to the canteen. However from group B, only 14 people said it is not rational to run. 18 people had changed their mind because of one's knowledge of the result.

The above result is a insight to what outside factors can do to our rationality. Group A was able to be true to themselves since the directed number 8.6 did not mess up with one's belief. However for group B, the number 8.6 altered one's belief and led to an enormous change to the outcome.

Similar conclusion can be made from the second investigation on the numbers of pupils running to the canteen. Since I made a record of about half of the students running to the canteen, I expected around 13-17 students to answer yes to the question : *Do you run to canteen at lunchtime.* As expected, 17 people from group B answered yes to the question. On the other hand, only 9 people answered yes from group A. However the answer for question : *Do you think running to the canteen at lunchtime is a rational behaviour?,* remains similar for both group. The only difference between each group was the order of two questions.

Similarly to the investigation on time saved, being asked of one's opinion on the rationality of the action has given an opportunity to distort one's memory of oneself at lunchtime so that his opinion can actually fit his action.

Also the results of this investigation proves that lots of pupils still run to the canteen even though they are acknowledged that it is an irrational behaviour. Thus it can be concluded that the sudden eagerness of lunch and the image of oneself waiting in the queue masks the fact that running is irrational and leads to an irrational decision.

For further analysis in inspecting the case of lunchtime rush, I have made out a table based on the game theory.

	Run	**Not Run**

Run	Energy loss / Risk of Injury / Trouble with teachers	People who did not run comes late
Not Run	People who did not run comes late	Fair for all / No injury / No trouble with teachers

As represented above, running leads to unnecessary loss of energy, high risk of injury and troubles with teachers. If one group runs and the other does not, group which did not run comes late to the lunch queue. However if no one runs, it is fair for all and prevents and negativity coming from running. This easily leads us to conclude that walking to the canteen is the ideal decision and this further carries out a conclusion that lots of students are irrational.

The next investigation was made both in school and the local gym. First in the school, I got help from the secretary office to record the number of pupils paying for supervised study after school and the attendance among those pupils.

- Pupils paying for supervised study : 236

- Pupils with a continuous attendance : 198

- Pupils with frequent absences : 27

- Pupils who rarely is present : 11

The payments are all made at the beginning of the school year. 236 pupils decided to use the after school, supervised study service which requires an extra payment. From my investigation with the help of my study supervisor, the attendance rate gradually drops as the school year passes. The above results are the recent attendance rate according from my study supervisor (01.01.2019 - 28.02.2019).

I have carried out a similar investigation from the local gym at my town. This time I recorded the number of registration at the gym on January and the attendance of the new members as time passes.

- New registrations at January : 36

- Attendance rate of new members at January : 87%

- Attendance rate of new members at February : 82%

- Attendance rate of new members at March : 64%

(above is the data taken from 2018-2019)

Similarly to the investigation at school, attendance rate shows a gradual drop as time passes. And according to the secretary of the gym, January is the time where most registrations are done.

I am quite certain that lots of people had similar experience as above where they decided to start something new and gives up soon after they have started. Memes posted on Facebook and Instagram on the new years about how people starts falling apart from the new years resolution as the time passes gets a huge number of likes. My personal count of the likes it has got are as follows :

Facebook : 13405 likes

Instagram : 9304 likes

The above supports the assumption that lots of people are well acknowledged of the fact that lots of new year's resolutions are not being kept. Both the gym registration on January and payment for supervised study at the beginning of the school year then shows the similar outcome.

People easily plans and sets the new goals every new year and beginning of the school year. They are well acknowledged that most of the plans are not going to be kept soon after they have made their mind. Unfortunately, regardless of their knowledge on the fact that majority

fails to keep up with one's plan people still registers themselves to the gym and pays for the supervised study.

These errors gathers up and eventually lead to huge amount of financial loss. Especially in the situations when the payments are not refundable. In this case it can be seen that both the act of registering by taking a risk or oneself not participating in the act and the decision to avoid the participation is irrational. And unfortunately these kind of impulsive consumption pattern is easily seen every year.

Similar error can be observed when an impulsive consumption is made. Within my school, I tried selling 100 pens to group of 100 students. For the first group A, price of the pen was $1. For the second group B, price of the pen remained the same but I informed that I am selling the pen for a cheaper price ($3->$1).

From group A, total 29 people bought the pen. From group B, 52 people bought the pen. The good I was selling and the price of it was identical for both groups. Just because group B was informed that the pen was on a discount, I was able to get more people to buy it.

This is one type of an impulsive consumption. The word discount tempts the consumers to spend an unnecessary money for the good. For example, it is widely known that variety of people buys gym gears in bulk over the gym sale period and never uses them. Then why is this happening?

I have analysed the reason as follows :

'When the rate of discount reaches certain point, consumers heavily bias towards the amount reduced rather than the amount they still have to pay. This eventually tempts consumers to spend money on goods that might be unnecessary since they believe that substantial amount of money has been saved. Also the reason for the impulsive consumption on gym membership and gears at the start of the year can be described that consumers used one's System 1 hoping to but a fitness which cannot be achieved. Unlike the consumers, the gym owners used their System 2 in providing incentives in order to gather the customers.'

Finally observing the current economic trend in South Korea, the key term that we must focus is 'So-Hwack-Hang' and 'Ga-Shim-Bi'. 'So-Hwack-Hang' translates to 'small but certain happiness' in Korean. For the young people in this overly competitive society with uncertain future, there is desire to find constant and frequent satisfaction. This has caused economic decisions for instant reward than steady accumulation. The word 'Ga-Shim-Bi' has formed due to t

he 'So-Hwack-Hang' trend. It is a term which has a twist to 'bang for the buck'. Rather than focusing on the goods' price efficiency or durability, it focuses on people's psychological utility. In order to investigate how much impact the trend has on the consumer's behaviour I have made out an online questionnaire and got 100 of my Korean friends to answer it.

Q1. Choose which option would be more appealing

A) $5 for an umbrella on a rainy day

41 people

B) $8 for your favourite coffee instead of umbrella (you don't have an umbrella)

59 people

Q2. Choose which option would be more appealing

A) receive $100 after 2 weeks

37 people

B) receive $70 now

63 people

Q3. Choose which option would be more appealing

A) save $500 - increases to $550 in 2 months

18 people

B) spend $500 for coat you wanted

72 people

As illustrated from the results, consumption pattern of the younger generation has shifted from seeking for a steady accumulation to demanding instant rewards.

From the first question, it has confirmed that consumers are more attracted to small luxuries in their lives than a necessity. My analysis of this result is that the emotional utility that umbrella carries is smaller than a coffee. Economically, the value of the umbrella should be higher since umbrella is considered necessary on a rainy day but more than majority of consumers decided to sacrifice one's convenience in order to pursue the short term luxury. It is a perfect example of how 'Ga-Shim-Bi' has submerged into consumer's conscience.

Second and third question reflects consumers' preference of instant reward. Due to an overly competitive society where the amount of effort is not being reflected from the result, consumer decided to put more value on their instant needs and wants.

The formation of the above trend is due to the environmental factor and it has stimulated consumers towards an economically irrational behaviour.

Korean economist 'Im Hae Chan'' has said, this shift in consumer behaviour is due to overly competitive society which made it difficult to be fulfilled with a longing goal. This statement further supports my argument of environmental influence on behaviour.

Finally to use System 1 and System 2 to describe the above results, it can be seen that consumers are often dictated by System 1 since they chase for instant reward rather than a bigger reward which requires people to wait. Also the fact that lots of people chose to buy coffee instead of much needed umbrella on a rainy day explains that rationality cannot only be defined by the economic value of the good but also the emotional utility it can carry. This all finally sums up and leads to one point.

'Consumers are irrational lots of times and are easily influenced by the surrounding and emotion. System 1 takes over lots of our decisions and people sometimes refuses to use one's System 2 in order to avoid the tiny amount of effort required.'

The above investigation had led me to explore deeper aspect of economic rationality. To escape from the traditional economics and the theory that is learnt in class, it broaden my insight in viewing the economics. Through this, I wanted to prove that rationality can be redefined by interlocking with the aspects of our thinking process and emotions.