

Rat race: An Application of Nudge Theory

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Abstract: The study looks at the problem of Rat Race through an example of social media, how alarming it is for young adults and how it affects an economy. It examines how this Rat Race of social media for likes, comments and followers are built in our minds and without realizing we use social media way too much than it is required, leading to supply-side shock. Hence, there is a need to intervene and suggest some measures to change the behaviors of the people. The study examines whether Nudge theory can help to overcome this problem or not by conducting pre- and post-experiment questionnaire on 88 candidates by exposing the participants to various offline activities like sports, field trips, volunteering. Their social media behavior and psychological responses were recorded before and after the intervention. Results indicate that carefully designed nudges can reduce screen time, improve mental health and potentially enhance productivity among youth.

Key Words: Rat Race, Nudge Theory, Behavioral Economics

1. Introduction

The Rat Race is a way of life where individuals are trapped in fierce competition for the sake of wealth, power and worldly satisfaction. When people say that they feel like running an endless race and want to quit the constant cycle of work-sleep-work-repeat, they are referring to ‘quit the Rat Race.’

The first recorded meaning of Rat Race is said to be defined in 1934, where a game ‘follow-the-leader’ is played by a group of people who are asked to follow all the actions performed by an experienced pilot. However, after 1945 the phrase ‘Rat Race’ is explained as competitive struggle and is used in many different novels and articles. For instance, Jim Bishop uses the term Rat Race in his book ‘The Golden Ham: A Candid Biography of Jackie Gleason’.

"Television is a rat race, and remembers this, even if you win you are still a rat."

Examples of Rat Race can be seen within the professional as well as the personal lives of humans. Mostly, they have no idea why a particular trend occurs and why they follow that path, which can be exhausting

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routine and affect their productivity. Whether it is Rat Race in offices for promotions, parents spending huge amounts on private educational institutes or young adults running to brands such as Nike, ZARA, LV for overpriced garments. All such actions, in one end, add frustration to individuals' lives and lead to unhealthy competition, resulting in inefficiencies.

This routine can be more alarming than we can imagine, not only for individuals but for a country overall. Let's take the example of social media which is one of the biggest platforms for communication in the twenty-first century. Social media can be viewed as online facilitators or webs of individuals who enhance social connectivity. However, over usage of social media by individuals can act as a tool for cyber bullying, online harassment, and trolling. Social media also causes the issue of social comparison where people compare their own lives to the lives of their friends through their friends' posts. In 2017, a study declares that problematic social media use is related to lower life satisfaction and self-esteem scores. Another negative impact is the link between sleep disturbance and the use of social media. In 2011, researchers began using the term "Facebook addiction disorder" (FAD), a form of internet addiction disorder, which is characterized by compulsive use of the social networking site Facebook, resulting in physical or psychological complications.

This is not only affecting individuals but also the overall economy by decreasing the productivity level of labor. A reduction in productivity leads to inefficiencies and an increase in the cost of production of firms and eventually might affect the supply side of a country. This shows how dangerous it is to overuse social media and society needs to take a step before this constant useless routine affects them and the GDP (Growth Domestic Product) of their country.

Even though social media, in today's world, is playing an essential role on the learning behavior of university students to achieve sustainable education and the world has become a global village where technology has made it a smaller world. But the findings in different research papers have revealed that the usage of social media in Pakistan has a negative influence on a student's behavior as compared to positive aspects. Although the results may not be generalized to the entire student

community it clearly shows how much social media is affecting society and there is a need to address this problem.

The study examines how this Rat Race of social media for likes, comments and followers is built in our minds and without realizing we use social media way too much than it is required, leading to supply-side shock. Hence, there is a need to intervene and suggest some measures to change the behaviors of the people.

Nudge theory is a concept of decision making, behavioural economics and consumer behaviour that deals with choice architecture influencing the behaviour and decision making of individuals and groups. It basically suggests that positive reinforcement and indirect suggestions are ways in which we can change human behavior. It may not be a full-fledged management model but is considered to be helpful within any formal change management model. In Nudge theory, we need to first define the outcome, identify the obstacles and consider the individuals affected by it then by removing the obstacles; we introduce new ways or brainstorm the nudges and then review the result.

The theory of nudge was popularized by Richard Thaler and Cass Sunstein in their book *Nudge: Improving Decisions about health, wealth and happiness*. It has influenced American and British politicians. In their book they say:

“A nudge, as we will use the term, is any aspect of the choice architecture that alters people's behaviour in a predictable way without forbidding any options or significantly changing their economic incentives. To count as a mere nudge, the intervention must be easy and cheap to avoid. Nudges are not mandates. Putting fruit at eye level counts as a nudge. Banning junk food does not.”

Above statement clearly shows that there is a difference between nudging certain behaviour and compelling a certain choice. For instance, a good nudge may consider being one which encourages a certain choice, but is transparent, which means that the choice architect should make the nudge clear and obvious. Choice should be retained with consumer who is able to make the final choice. A nudge should also have a good reason to believe that it is warranted, for example, strong health costs of smoking/eating too much sugar.

The study will look these two concepts together and will try to come up with a solution to overcome or at least reduce the negative effects of being in a social media Rat Race.

1.1 Problem Statement

Rat Race between young adults (aging from 18-25) on social media for followers, likes and comments might lead to trolling and negative comments which can increase depression rate. All these for worldly satisfaction which can disturb and might reduce the mental capability of a whole generation. Resulting in less productivity, inefficiencies and high cost of production which can eventually lead to supply side shock in an economy.

1.2 Research Question

To determine whether this Rat Race occurs in Lahore between the young adults (aging from 18-25) on social media for maximum number of followers, likes and comments, which increase trolling levels and eventually leads to attention-deficit hyperactivity disorder (ADHD) and depression. All this threatening the productivity and leading to inefficiencies, creating supply shock in an economy. We will conduct different experiments to provide those candidates with Nudges and determine how those Nudges affect their lifestyle. Does it help them with their depression and can reduce inefficiencies in an economy.

1.3 Research Objectives

- i. To determine whether young adults in Lahore, using social media are in Rat Race
- ii. To explain how this race leads to trolling and depression
- iii. To determine that effect on generation and their mental health
- iv. To check how it leads to economic disturbance through supply shock
- v. To identify whether there is a solution to this problem through the methods of nudge theory
- vi. To identify whether candidates can reduce their social media time 50% if these positive reinforcements are successful
- vii. To check what are the benefits that the society face as a whole

2. Review of literature

2.1 Introduction

This literature study is an essential element in comprehending the complex connections between Rat Race, Nudging and Social Media activities. It examines the foundation of Nudging along with the consequences of using Social Media. Reviewing existing studies and evidence helps to provide an understanding of how Nudging can be leveraged to address the challenges posed by the relentless pursuit of social validation and engagement on social media.

2.2 Nudging

(Bar-Gill, 2022) says that even though the critical aspect of these nudge-type policy interventions (the mode of communication) remains unexplored, but these nudges are increasingly utilized by governments around the world to achieve policy goals related to health, safety, employment, environmental protection, retirement savings, debt, and more. (Pujara, 2022) Argue that the irrational or undesired behavior displayed by the people even in an informed public policy is a classic example of how real decisions are different from rational decisions. A method is used to see whether Indians invest or devise policy by carry out the marketing campaigns in such an effective manner, leading to help us bridge the gap of non-investment behavior.

(Sunstein, 2021) Explains their views on how Nudge has transformed the way individuals, companies and governments look at the world. The study shows that no choice is ever presented to us in a neutral way but by knowing how people think, we can make it easier for them to choose what is best for themselves, for their families and for society. By discussing how best to nudge us in the right directions, without ever restricting our freedom of choice.

(Sunstein C. R., 2017) Argue that, because of our human sensitiveness to an array of biases, we often make bad choices and decisions that make us poorer and more miserable than we might already be. However, insights from other disciplines, using behavioural economics suggest that apparently small and elusive solutions (nudges) can lead to mix and

unequal beneficial outcomes without unduly restricting our freedom of choice.

2.3 Social Media

Research shows that spending too much time on social media is linked with memory deficits, especially in your transitive memory. Transitive memory involves deciding what information is important enough to store in your brain and what information can be outsourced. (Fotuhi, 2020) says beyond lowering your ability to maintain your attention on any one selected topic, social media makes you addicted to your screens.

(Abbas, 2019) presents new empirical findings regarding social media usage, as social media has become a vital element of education, increasingly important in both course delivery and course assessments. These study findings revealed that social media has both positive and negative impacts on students' learning processes, and a balanced approach is recommended while using social media applications. (Andreassen, 2016) talks about how social media and video games are related to psychiatric disorders such as ADHD (attention-deficit hyperactivity disorder), OCD (obsessive-compulsive disorder) and depression. Being a female was significantly associated with addictive use of social media, whereas being male was significantly associated with addictive use of video gaming.

(Fozi, 2016) discusses how the availability of internet was made possible in 1992 which has developed several million users. The article explains different aspects of how internet has effect the country, for instance; the impact of social media on student's behavior in Pakistan and the impact of social media on democracy in Pakistan. The study claims that social media sites have been very critical in removing the geographical boundaries and provide a common platform all over the world. #

(Prabhakaroro, 2016) said that social media provides human not only an educative platform, but it also increases connections and communications and if used properly, also builds bridges over barriers and strengthens relationship. Negative correlates of social media include behavioral addition, the decrease in real life social community participation and academic achievement, as well as the relationship problems. Stalking and cyber bullying, identity theft, victimization to rumors, missing out

attitude, aggressive and callous behavior and host of other mental and social abnormalities are also the result of excessive use of social media.

(O'Keeffe, 2011) discussed that using social media sites is among the most common activity of today's children and young adults. Website that allows social interaction is considered a social media site, such as Facebook, MySpace, and Twitter; virtual worlds and gaming sites such as Club Penguin and Second Life; video sites such as YouTube; and blogs. These sites offer today's youth a portal for entertainment and communication and have grown rapidly in recent years.

2.4 Young Adults and Their Behavior

(Chiang, 2022) examines the relationship between experienced discrimination and emotional response, which is less pronounced among those who frequently observed discrimination in the media. Notably, subtle discrimination through personal experience or media exposure is positively associated with behavioral coping.

(Nichollas, 2022) examines the relationship between procrastination and grades, which turns out to be negative. To address procrastination, the first way is to communicate about social norms relating to submission times; and the second is the information nudge highlighting grade disadvantages of late submission. Disappointingly, neither nudge led to earlier average submission times which show that nudges might be less effective when trying to change habitual behaviors.

(Cho, 2020) conducts a survey of 842 adults and concluded that efforts to reduce stigmatization should address racial stereotypes and emotions, maladaptive coping, and biased media use by providing education and resources to the public. Fostering collective efficacy and media-based contacts with Asian Americans can facilitate these efforts.

2.5 Rat Race

(Ferreira, 2020) talks about how everyone wants to get of rat race. The study discusses what it is and why everyone wants to escape toxic working environment just for the sake of little amount of salary. Different ways are discussed, for instance giving yourself a reason why to quit, purchase essentials and acquire assets.

(Michael, 2019) explains 7 different strategies which help them to deal with Rat Race; the Status Quo Strategy, the Portfolio Income Strategy, the Passive Income Strategy, the Passion Income Strategy, the Windfall Strategy, the Sabbatical Strategy and the Gratitude Adjustment Strategy. These strategies give an idea how to overcome the problem of Rat Race.

3. Theoretical Framework

3.1 Rat Race of Social Media

In today's fast-paced world, social media has become the epitome of a rat race. Humans find themselves constantly chasing validation, recognition, and a sense of belonging within the virtual realms of platforms like Instagram, Facebook, and Twitter. It has become a never-ending race, fueled by the pursuit of likes, followers, and viral content. Each scroll and click is driven by the desire to keep up with the trends, to project an idealized version of one, and to stay relevant in the digital landscape.

The pressure to curate the perfect feed, gain popularity, and amass virtual acclaim has turned social media into a competitive arena, where individuals are constantly fighting for attention and comparison becomes the norm. In this relentless pursuit, authenticity often takes a backseat as people strive to present an exaggerated image of their lives. The race on social media is one that can leave individuals feeling inadequate, anxious, and disconnected from reality, as they become consumed by the need to outshine and outperform their peers.

An example of how this Social media Rat Race has affected young adults is when a viral video star, Larz, a 20 years old boy, on Dr. Phil show said that he does not talk to this family because 'they are irrelevant'. He further added that:

"If they got followers or got rich I'd probably talk to them again... Now I have a career and I'm famous, like that's what happens you get famous, you cut people off."

Another case of this endless race is when a woman named Ayesha Akram, a tick-tock star is said to be allegedly assaulted by hundreds of men on Independence Day, in Lahore. However, an audio recording between Ayesha and suspect Amir aka Rambo has surfaced in which the police have discovered some mysterious elements. The police have reported to

the news outlet that they both were planning to take money from the suspects who have been arrested in the case. Minar-e-Pakistan incident is later on declared as deftly planned by Ayesha conniving with her friend in a bid to come under spotlight and gain empathy from the public. These are only two examples of how young generation in society has been using social media negatively and the government needs to take steps to reduce the social media Rat Race.

It is crucial to recognize the impact of this rat race and find a healthy balance between the virtual world and real-life experiences, where true connections and personal growth thrive beyond the confines of social media.

3.2 Someone Needs to Interfere

The false assumption is that almost all people, almost all the time, make choices that are in their best interest or at the very least better than the choices that would be made by someone else. (Thaler and sunstein)

Hence, our goal is to help people make the choices that they would have made if they paid full attention and possessed complete information, unlimited cognitive ability, and complete self-control. As long as these people, who are the Homo sapiens (Thaler), are not choosing rationally, some changes in the choice architecture could make their lives go better.

The concept of choice architecture is to simply provide Homo sapiens an organize context in which they can make decisions. For instance, if someone is a doctor and describes different treatments available to her patient, she is a choice architect. In this study, the author, as a choice architect, provide different ways in which young adults can spend their time rather than scrolling down the social media feed.

3.3. Interfering Through Nudge

Nudge theory is a concept that involves subtly influencing people's behavior and decision-making processes through indirect suggestions and positive reinforcement. While nudge theory can be a powerful tool for promoting positive behaviors, it is important to approach its implementation with caution and ethical considerations.

Interfering through nudge theory requires a delicate balance between respecting individual autonomy and promoting beneficial outcomes. The intention behind nudges should be to assist individuals in making informed choices that align with their own best interests and societal goals. It is essential to respect for personal autonomy in the design and implementation of nudges and prioritize transparency. People should be made aware of the nudges being employed and given the option to opt out if they choose to do so.

Ultimately, the application of nudge theory should be guided by ethical principles, promoting individual autonomy, transparency, and positive societal outcomes. It should serve as a tool to empower individuals rather than manipulate them, fostering a sense of choice and control in their decision-making processes.

The purpose of this study is to solely judge how simple types of incidents leads to depression, anxiety and AHAD problems among the young generation, how important it has become to address this problem and one of the ways in which it can be reduced is through the application of Nudge theory.

4. Research Methodology

The research will utilize a pre- and post-experiment questionnaire design to gather data from the participants before and after their engagement in the activities.

4.1. Participants

The study involves a total of 88 participants through random selection using WhatsApp text messages. The target group included young adults residing in various regions of Lahore, ensuring a mix of gender, age groups (within 18–25), educational levels, employment status, and social class. The participants are chosen from the target age group of 18 to 25 and must be active on social media platforms. 14 males are 18 to 19 years old, 18 of them are 20 to 21 years old, 17 of them are from 22 to 23 years old and rest of them are either 24 or 25 years old. Looking at females, 9 of them belongs to 22 to 23 years old, 4 of them are 24 to 25 years old and the rest 14 are equally divided between two groups of 18 to 19 and 20 to

21 years old. Prior consent and voluntary participation is obtained from all participants.

4.3. Procedure

- 1) Pre-Experiment Questionnaire: Before the experiment, participants will be administered a questionnaire to collect demographic information, their social media usage patterns, and their perceptions of the activities being investigated. This questionnaire will serve as a baseline measure of their attitudes and behaviors related to social media and activities.
- 2) Experiment: Participants are instructed to abstain from using their social media accounts during the experiment period, which consist of engaging in the various activities over a specified duration.
- 3) Post-Experiment Questionnaire: After the completion of the experiment, participants are given a second questionnaire to assess their experiences, attitudes, and levels of engagement in the activities after abstaining from social media. The questionnaire also explores their perceptions of social media abstinence and its impact on their overall well-being.

4.2. Data Analysis

In addition to the pre- and post-experiment questionnaires, the study uses bar graphs and pie charts to visually represent and evaluate the data responses obtained from the candidates. These visual representations along with the tables helps to analyze and present the findings, allowing for a clearer understanding of the patterns and trends observed in the data.

By employing bar graphs and pie charts, the study enhances the clarity and effectiveness of data presentation, enabling researchers and readers to quickly grasp the key findings and patterns within the collected data. With the help of tables, the interpretation and discussion of the results contributes to a comprehensive analysis of the impact of Rat Race on social media among young adults.

4.3. Ethical Considerations

Ethical guidelines regarding informed consent, participant anonymity, and data confidentiality is strictly followed throughout the study. Participants

are assured of their right to withdraw from the study at any time without consequences. The research adheres to all applicable regulations and ethical considerations. The questionnaire was reviewed by experts and a pilot test was conducted with 10 individuals outside the main sample to ensure clarity, relevance and consistency.

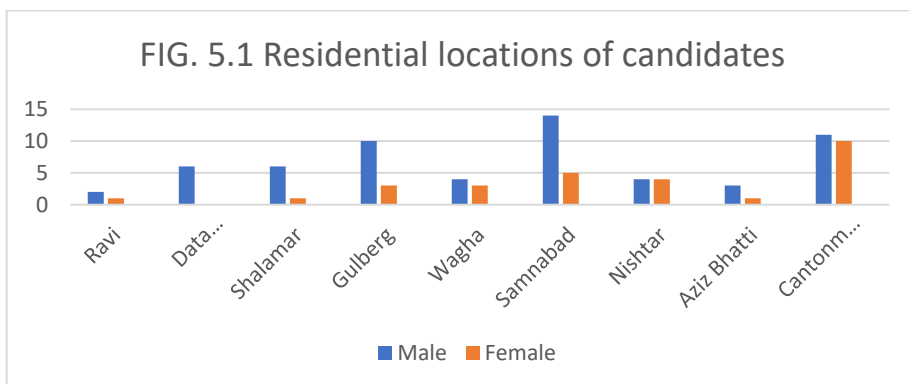
4.4. Limitations

The study acknowledges potential limitations, such as the self-reported nature of data, reliance on a specific age group, and the short-term nature of the experiment.

5. Results and Discussions

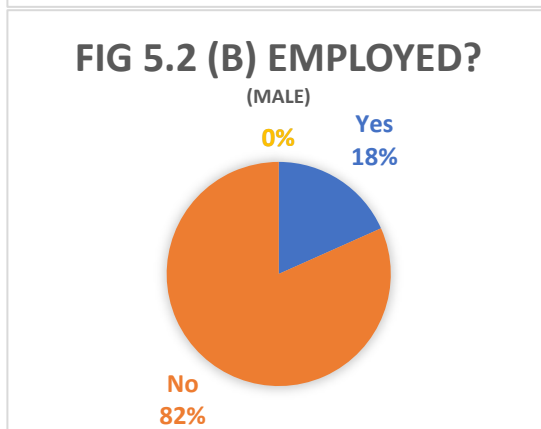
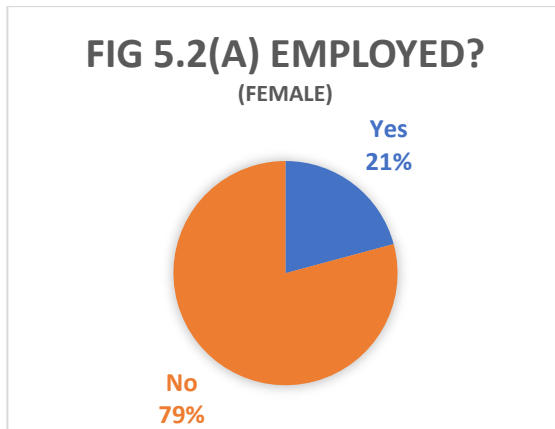
5.1 Pre- experiment questionnaire and discussion

Lab in field experiments is conducted in which 88 young adults are asked a series of questions regarding their social media use. These candidates include females and males, 28 and 60 respectively. The sample is taken from different individuals, living in different area of Lahore. They are even categorized by different parameters such as age, residential location, social class groups, how many family members they have and whether they are employed or not. The purpose of introducing these parameters is to check whether they in any way differ the use of social media in the life of young adults. An unbiased sample is taken from within the residents of Lahore, living in different areas. These areas include Ravi, Data Gunj Buksh, Shalamar, Gulberg, Wagha, Samnabad, Nishtar, Aziz Bhatti and Cantonment. The results are shown below, in figure 5.1, of how many candidates belong to each area of Lahore.



Looking at the family size, total number of 59 candidates has 4 to 5 family members (in which 41 are male candidates and 18 are females). 15 of the males and 9 of the females have 2 to 3 family members, whereas only 4 males have and 1 female has 6 or more than those family members. The results show that almost all the candidates have small family with only 2 to 5 family members.

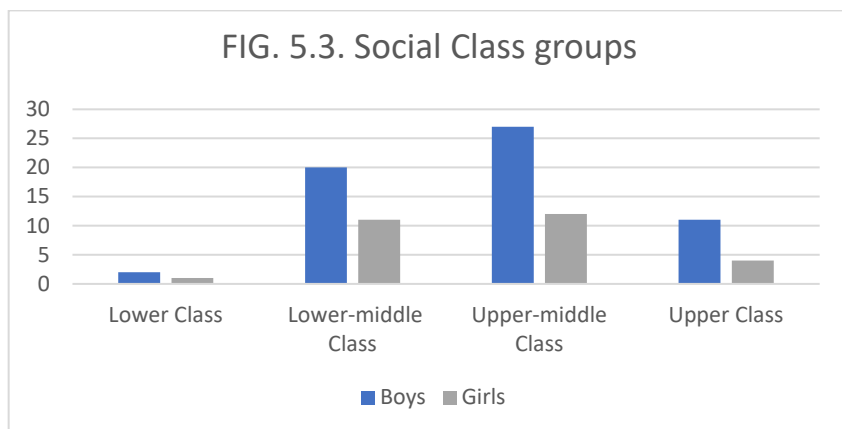
The next question is about whether these young adults are employed or not. This is one of the important questions as it helps to analyze whether there is any relation between being employed and time spent on social media. According to the questionnaire's result, 11 out of 60 males and 5 out of 28 females are currently employed. And all of them are a part of educational institutes.



Majority of candidates (male and female) are not employed, however, all of them are a part of educational institutes. They are either part of undergraduate programs or post-graduate programs. The candidates who are a part of undergraduate programs include are 46 males and 22 females, in which only 3 males are and 1 female is employed. Under the post-graduate program, 8 males and 4 females are part of labor force out of 14 males and 6 females. The result implies that most of the employed young adults belong to post-graduate program and only total of 4 young adults are a part of under-graduate programs.

Candidates are also asked about which social class they belong to. The reason to include this parameter is also to analyze whether there is any difference in use of social media platforms due to difference in social class. The four types of social class include; lower class, lower-middle class, upper-middle class and upper class (also known as elite). Most of the young adults belong to Middle Class, which include lower-middle class and upper-middle class. In lower-middle class, there are 20 males and 11 females and in upper-middle class, there are total of 39 young adults (27 males and 12 girls).

Whereas, the lower class of the economy consists of 2 males and 1 female and upper class has total of 15 young adults, 11 males and 4 females. The ratio of this social class represents that if a sample is taken from the population randomly, then majority of young adults in Lahore belong to the middle class of the social groups. Middle class is also known as working class. The data is represented in the figure 5.3.



Looking at the survey, all of these young adults whether graduate or post-graduate, employed or not, and part of any social group are on social media platforms. This simply explains that, in today's world, social media has become a part of every human being.

FIG. 5.4(A). Are you
on social media?
(male)



■ Yes ■ No

FIG. 5.4 (B). Are you
on social media?
(female)



■ Yes ■ No

According to the results, presented in pie chart above (figure 5.3A and 5.3B), all of the sixty males and 28 females use social media platform. Indicating that social media has become a part of every individual in this world of globalization. In economics term, social media can be termed as 'bare necessity of life', meaning even though humans can live without it but, now, in today's world it has become a very important part of human life. But the real question is how much social media and whether its use is really worth it?

The first objective of this study is to determine whether Rat Race exists between young adults or not. To answer this, the first questionnaire asked all the 88 candidates how much time they spend on social media. These

results can be analyzed by comparing some of above mentioned parameter. For example; age, employed or not and social class groups.

The reason to analyze the data with these variables is to see whether there is any kind of pattern in the use of social media between ages, employment and social groups. Also, to estimate an average time use by different candidates.

5.2 Age and Time Spend on Social Media

First, let's look at different age groups between 18 to 25 years old and their time spend on social media platforms. The results can tell whether Race exists between all of these groups or some.

Table 5.1 HOW MUCH TIME DO THEY SPEND ON SOCIAL MEDIA?									
	MALE				FEMALE				
AGE	0-2 HOURS	3-5 HOURS	6-8 HOURS	9 & MORE HOURS	0-2 HOURS	3-5 HOURS	6-8 HOURS	9 & MORE HOURS	
18-19	1	4	7	2	3	1	3	0	21
20-21	2	6	6	4	0	1	3	3	25
22-23	2	5	8	2	0	1	5	4	27
24-25	4	2	5	0	2	0	2	0	15
	9	17	26	8	5	3	13	7	
	60				28				88

The columns are first divided into parts 'female' and 'male' and then, into the average amount of time each individual has spent on social media (0-2, 3-5, 6-8 and 9 & more hours). The rows are divided into age groups from 18 to 25 years old.

The total numbers of candidates who use social media for only 0 to 2 hours are 14. This means that only 15.9% of the sample population uses these platforms for 0 to 2 hours. Looking at the details, in male category,

there are only 9 candidates. Age 24 to 25 have highest number of frequency (4 or 44.4%) for using social media for 0 to 2 hours, age 18 to 19 have only 1 (11.11%) frequency, while rest 4 (22.2% each) candidates are equally divided into 20 to 21 and 22 to 23 age group. On the other hand, female category has total of only 5 candidates who use social media for only 0 to 2 hours. 3 (60%) of them belong to 18 to 19 age group and rest 2 (40%) from 24 to 25.

Young adults who spend 3 to 5 hours on social media are 20 with a percentage of 22.7% from total 88 candidates. In male category, there are 17 candidates. Majority of them belong to 20 to 21 age group (6 or 35.3%), 5 of them from 22 to 23 ages, while 4 of them are either 18 or 19 years old and 2 are 24 or 25 years old. In female category, there are only 3 candidates who spend 3 to 5 hours on social media. There is first who belongs to 18 to 19 years old, second from 20 to 21 and third from 22 to 23, while there is no female candidate aging from 24 to 25 who use social media for 3 to 5 hours a day.

The 6 to 8 hours is the most common option selected by candidates participating in the experiment, 39. This means that 44.3% of the total population use social media applications for 6 to 8 hours. 26 males are divided into four groups; 8 in 22 to 23, 7 in 18 to 19, 6 in 20 to 21 and rest 5 in 24 to 25 age group. Whereas the female category has 13 candidates, 5 of them belong to 22 to 23 age group, 2 of them to 24 to 25 group and rest 6 are equally divided into 18 to 19 and 20 to 21 age group.

The rest 15 candidates claim that they use social media for more than 9 hours these include 8 males and 7 females. There is no young adult aging from 24 to 25 who claim that they use social media for 9 or more hours. 4 male aging from 20 to 21 and rest 4 are divided equally among 18 to 19 and 22 to 23 age group. In female category, there 3 females aging either 20 or 21 and 4 from age group 22 to 23. No female aging from 18 to 19 claims that they use social media for more than 9 hours.

By dividing these candidates into age groups and determining how much time each age group has spent on social media, examines that in case of both males and females age 22 to 23 has the highest ratio percentage of using social media for 6 to 8 hours which is most common option selected by candidates overall. According to the survey, it can be seen

young adults use social media platforms way too much. There are 24 hours in day and according to National Sleep Foundation guidelines healthy adults need between 7 and 9 hours of sleep per night. After which, these young adults have 15 to 17 hours per day. If 8 hours of that day is spending on social media, they are left with only 7 to 9 hours a day. What about other activities of life? School/University, hanging out with family and friends, eat or does office work.

22 and 23 is basically the only age you can use as leverage. Meaning that because it's the exact age between life-as-you-know-it and what will later be known as 'real life' (that's scientifically proven, of course), people expect you to make some mistakes. Mistakes like overcooking pot-roast or dating someone who may not be right for you. And that's okay, because you're just 22 or 23. But it is also said that the age 22 to 23 is very important time period of life, where individual's metabolism is probably at its peak. Having said that, they are also allowed to dream big without any inhibitions. Despite people saying that they can achieve anything at any age, the truth is adults simply cannot be career-selfish when they are married with three kids and own a dog and fish. The time is now. And if that time is now, then wasting time on social media is huge cost young individuals are paying.

5.3 Employment and Time Spend on Social Media

Secondly, let's look at whether being employed has any effect on spending time on social media or not. The table 5.2 is divided into males and females column and then further again into time each of them spend on social media. The rows answer the question of whether candidates are employed or not. The total sum is equal to 88 individuals.

TABLE 5.2 HOW MUCH TIME ON SOCIAL MEDIA									
Employed?	MALE				FEMALE				
	0-2 HOURS	3-5 HOURS	6-8 HOURS	9 & MORE HOURS	0-2 HOURS	3-5 HOURS	6-8 HOURS	9 & MORE HOURS	
YES	6	4	0	0	5	1	0	0	16
NO	3	13	26	8	0	2	13	7	72

	9	17	26	8	5	3	13	7	
	60				28				8
									8

Total of 16 candidates are employed out of 88 and rest 72 are unemployed. 6 females are employed in which 5 of them spend only 0-2 hours on social media and the 6th one claim that she spends 3 to 5 hours on average on these platforms. Considering the males, 6 of them spend time on social media for 0 to 2 hours, while the rest 4 claim those 3 to 5 hours.

Looking at the candidates who are not employed 22 females and 50 males. Only 3 unemployed males say that they spend only 0 to 2 hours on social media, 13 of them say they use it for 3 to 5 hours and 8 of them say they use it for more than 9 hours. However, majority of them with 26 candidates say that they spend 6 to 8 hours on social media, averagely. Females who are unemployed say that only 2 of them use social media for 3 to 5 hours while 7 of them spend more than 9 hours. Here, again majority female candidates spend 6 to 8 hours on average (13).

Hence, these results simply tell that young adults who are employed are less likely to spend more time on social media compared to those who are unemployed. Employed candidates are contributing towards the GDP (Gross Domestic Product) while the unemployed ones are just wasting their times on using these social media platforms.

The purpose of this study is not to make these young adults get a job, but rather to stop using too much social media so that they can focus more on their studies, physical and mental health. All these are important for their productivity level in future. A better skilled person who is physically and mentally stable can bring more benefit to the economy than a skilled person who is not physically and mentally stable.

5.4 Social Class Groups and Time Spend on Social Media

Thirdly, let's see if there is any pattern between different social class groups and their time spend on social media platforms. Social group's also known as socio-economic groups are divided according to their income and occupational levels. The class groups are divided into four sets; Lower Class, Lower-Middle Class (L-M Class), Upper-Middle Class

(U-M Class) and Upper Class (also known as elite Class). Candidates are simply asked which part of social class group they consider they belong to.

The results are shown in the Table 5.3

TABLE 5.3 HOW MUCH TIME DO THEY SPEND ON SOCIAL MEDIA?									
Social group	MALE				FEMALES				
	0-2 HOURS	3-5 HOURS	6-8 HOURS	9 & MORE HOURS	0-2 HOURS	3-5 HOURS	6-8 HOURS	9 & MORE HOURS	
Lower Classes	0	2	0	0	1	0	0	0	3
L-M Classes	4	5	9	4	1	1	5	2	31
U-M Classes	5	6	11	3	3	1	7	3	39
Upper Classes	0	4	6	1	0	1	1	2	15
	9	17	26	8	5	3	13	7	
	60				28				88

Even though there are only 3 candidates who belong to Lower Class, the overall percentage tells that 2 of the boys spend 3 to 5 hours on social media while the girl only spend 0 to 2 hours on social media. Then, the Lower-Middle Class where the total number of candidate are 31 (22 males and 9 females). In which 4 males and 1 female use social media for only 0 to 2 hours, 5 males and 1 female use it for 3 to 5 hours, 9 males and 5 females use for 6 to 8 hours, while the rest 4 males and 2 females say that they use social media for 9 or more than 9 hours. The majority of candidates in Lower-middle Class use social media for 6 to 8 hours.

Upper-Middle Class also has their majority in 6 to 8 hours category with 11 males and 7 females. 7 out of total 39 candidates say they use social media for 3 to 5 hours, 8 (5 males and 3 females) say that they use it for 0 to 2 hours while the rest 6 say that they use these platforms for 9 or more than 9 hours. The Upper Class or the elite class with 10 males and 4 females has zero candidates who claim that they use this platform for 0 to 2 hours. 4 males and 1 female say that they use social media for 3 to 5 hours 1 male and 2 females claim that they use for 9 or more than 9 hours. The rest of the majority say that they use social media platforms for 6 to 8 hours per day on average, 7 candidates (6 males and 1 female).

Social groups of any society and economy have different characteristics. The purpose to include different socio-economic or social groups is that they often have certain factors in common that make them useful for market research and analysis. For instance, children of Upper-Middle or Elite class families are generally more likely to use social media more than children of Lower or Lower-Middle class. While this generalization does not mean that children of Lower or Lower-Middle class cannot or universally are not a part of social media Rat Race, this data may be used to help generate a better nudge in order to help more children from low-income families to quit the Rat Race, for instance, giving them a paid-job.

The reason to explain all three parameters in detail is to understand that majority of young adults belonging to different Class groups, age or whether employed or not use these social media platforms for 6 to 8 hours on average per day. Hence, it is safe to say that there is social media Rat Race between young adults (aging from 18 to 25), living in Lahore.

5.5. Why do we need to interfere?

The fast-paced and competitive nature of social media platforms can contribute to the phenomenon often referred to as the "social media rat race." This refers to the constant pursuit of attention, validation, and comparison with others, which can lead to negative effects on mental health and potential economic disturbances. Second, third and fourth objective of this study is how this race leads to trolling and depression, effect on generation and their mental health and how it leads to economic disturbance through supply shock.

The first questionnaire also asked few question to these candidates about the overall use of social media, how they feel about using it and what are

the reasons behind the use these platforms and much more. Tables 6.1 and 6.2 show the result of 88 candidates (60 males and 28 females). Table 5.4 examines the use of social media, how much they use social media and whether the reason for the use is likes, comments, followers, education or entertainment. Table 6.2 examines how these candidates feel about using social media by giving them few scenarios and determining how this leads to depression, attention-deficit hyperactivity disorder (ADHD) and further to, supply-side shock for the economy.

SAGE OF SOCIAL MEDIA PLATFROMS					
TABLE 5.4	STRONGLY AGREE	AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE
Do you think that you use social media way too much?	3	12	24	43	6
Do you think that your friends use social media way too much?	12	20	38	10	8
Are you on social media because of peer pressure?	0	1	8	44	35
Are you on social media for likes?	3	3	27	23	32
Are you on social media for comments?	2	1	28	24	33
Are you on social media for followers?	3	2	27	23	34
Are you on social media for educational purposes?	0	6	14	50	18
Are you on social media for entertainment?	29	26	20	13	0
Do you think most of the things on social media are	5	12	30	16	25

useful?					
Do you post regularly?	27	33	20	7	1

Looking at the table 5.4, it can be easily be examined that young adults use social media for 6 to 8 hours, on average, does not agree to the fact that the time spend on it is way too much. For instance, when asked do they use social media way too much. Only 15 young adults agreed to it, rest 73 were either neutral or they disagree to this. This is one of the reasons that steps need to be taken for the future of an economy as the young adults are not going to realize the problem by themselves. The purpose of the using social media is entertainment. Majority of them (55) either strongly agreed or agreed to this reason while the rest 20 are neutral and 13 disagreed. They also agreed to the fact that they post on daily basis, 60 of them either strongly agreed or agreed to this, while 20 were neutral and only 7 of them disagreed to this.

EMOTIONAL WELL-BEING REALTED TO SOCIAL MEDIA					
TABLE 5.5	ALWAYS TRUE	OFTEN TRUE	SOMETIMES TRUE	RARELY TRUE	NEVER TRUE
Do you think social media provides with worldly satisfaction?	10	7	16	34	21
Do you feel sad if NO ONE likes your post?	57	21	9	0	1
Do you feel sad if NO ONE comments on your post?	45	25	11	5	2
Do you feel sad if NO ONE replies to your story?	53	30	3	1	1
Do you feel happy or satisfied if your favourite person likes your post?	67	17	3	1	0
Do you feel happy or satisfied if your favourite person comments on your post?	59	20	4	5	0
Do you feel happy or satisfied if your	66	18	3	1	0

favourite person replies to your story?					
Do you take special photos to specifically post on social media?	49	21	17	1	0
Do you take photos of your food to post on social media?	37	31	15	4	1
Do you feel disappointed or angry if you see something bad on social media?	34	20	30	3	1
Does that affect your other activities?	12	21	43	10	2
Do you fight with your family and friends if something unpleasant happens on social media?	5	10	45	24	6
Do you think social media increases your anxiety level?	11	15	32	19	11
Do you feel social media contributes to your depression level?	6	11	34	27	10
Do you think social media might be the reason that decreases your attention span?	3	4	20	32	29

The real problem arises when most of these young adults say that they do not use social media for likes, comments and followers. However, when asked about how they feel at the time when no one likes and comments on their posts, and reply to their story majority of them said they feel sad always. They even feel happy and satisfied if their favorite person likes comments on or reply to their stories. Clearly, if one's favorite might not simply like their posts, they might feel sad or depressed about it.

This all can lead to an increase in one's anxiety level and attention-deficit hyperactivity disorder (ADHD). For example, a person is asked about how much time his friend takes to reply on What'sApp (one of the social media apps) and what does he do during that waiting period. He said around 5 to 10 minutes most of the times, however, the waiting period varies up to 1 or 2 hours and during that period, keeps his phone right in

front so that he can quickly reply when notification pops up. This example simply tells that how much time is wasted on social media waiting for people to reply and even if, one performs another task his mind is diverted, continuously checking his social media accounts to check whether he got a reply, like, comment or not. This can simply lead to the problem depression, worsening of mental health contributing to economic disturbance and supply shock. Following are the three main points which can be concluded and give us the answer to 'Why we need to interfere?'

5.6. Trolling and Depression

The competitive environment on social media, coupled with anonymity and the ability to engage with others from a distance, can encourage trolling behaviour. Trolling involves deliberately provoking or harassing others online, often for personal amusement or to gain attention. This behaviour can lead to feelings of distress, anxiety, and depression for those who are targeted by trolls. Additionally, the pressure to maintain a curate and perfect online persona can contribute to mental health issues such as low self-esteem, body image concerns, and a constant fear of missing out (FOMO).

5.7. Generational Effects and Mental Health

The impact of the social media Rat Race on mental health can be particularly significant for younger generations who have grown up in a highly connected digital world. The constant exposure to idealized versions of others' lives on social media platforms can create feelings of inadequacy, loneliness, and anxiety. These pressures and comparisons may contribute to an increase in mental health issues such as depression, anxiety disorders, and a decline in overall well-being. All of these contributing to economic disturbance.

5.8. Economic Disturbance and Supply Shock

The social media rat race can also have economic implications through potential supply shock. When individuals excessively invest their time and attention in social media, it can lead to reduced productivity, decreased focus on work or studies, and disrupted personal relationships. Furthermore, the influence of social media influencers and the monetization of online platforms can perpetuate a culture of materialism and consumerism, leading to unsustainable consumption patterns and economic imbalances.

Young adults of an economy are the most important and most affected stakeholders when talking about not only economy's future but also the global future. There are more young people in the world than ever before and they are critical members of the global society bringing ideas, innovations and movements. They are also on the frontlines of other major economic transformations across the global economy. Instead of driving ideas, they are scrolling down their Instagram feed and sending snaps of their food on Snap Chat. If they waste their times on social media platforms, worrying about the quantity of likes, comments and followers can that help an economy? No, however, it can simply put economy's business cycle on downward slope because they are not being productive.

An example of Pakistan where 64% of the population are young adults, cannot afford overuse of social media platforms, especially in this time period. The year 2023 is the time to act as the biggest question right now for Pakistan is whether they are going default or not. The people who can save it are these young adults through their ideas and innovations, however, if they spend daily average of 6 to 8 hours on social media how can Pakistan overcome its financial crises.

Addressing the negative effects of the social media rat race requires a multi-faceted approach. It involves promoting digital literacy and responsible social media usage, fostering open conversations about mental health and well-being, and cultivating resilience and self-worth beyond social media metrics. Creating supportive online communities, promoting empathy and kindness, and encouraging healthy boundaries can also contribute to a more positive online environment. From an economic perspective, it is important to promote sustainable consumption, ethical practices in influencer marketing, and regulations that protect individuals from online harassment and trolling.

Hence, there is a need to solve this problem. One of the ways is through the application of Nudge theory.

5.9. Interfering and results

As already discussed, Nudge theory is basically a method in which through positive reinforcement and indirect suggestions are we can change human behavior. We need to first define the outcome, identify the obstacles and consider the individuals affected by it then by removing the obstacles; we introduce new ways or brainstorm the nudges and then review the result. The study has already identified the obstacles, which is the overuse of social media by the young adults and how it has affected their lifestyle. The new ways in which this problem can be reduced are discussed below.

To apply this method, different activities are held to judge behaviour of these young adults. 5 different activities are given to them and each candidate is allowed to freely choose whatever activity they want to do. These activities include; Cricket match, hanging out at café with friends, movie, community work (cleaning out a local park) and field trip.

The following are the protocols of the experiments:

- 1) Candidates are given the opportunity of choosing their own activity.
- 2) During the experiment, they are told to behave normally and enjoy the activity without any kind of restriction.
- 3) They are observed by the experimenter in all 5 activities.
- 4) At the end of the experiment, they are given a questionnaire to record their experience.

Let's look at all these 5 different experiment one by one and check whether they work as a nudge for young adults (ranging from 18 to 25 years old) living in Lahore. Even though these experiments do not contribute to GDP of the economy in monetary terms, they are going to work as a tool for mental and physical stability of these candidates and further, due to multiplier effect, for the whole economy.

5.10. Cricket match

Cricket is one of the most popular sports worldwide and is also widely played in Pakistan. The reason to include this game as an experiment in

this study is that Pakistani children start playing this sport at a very young age. However, with changing times and social media this physical game has shifted from ground to phones (online gaming) for many young adults.

Online gaming has many similarities to social media as it is just a newer platform that has garnered huge engagement over the last few years. It has increased by 33 percent over the last three years. Standard social media platforms like Face book, Instagram, Snapchat, and Twitter allow for the same ways of networking. Online gaming has grown so much over the past few years that these bigger standard social media companies are taking notice and making moves. For example, Facebook (in 2020) came out with a gaming app designed to allow players to create and watch live game play.

23 males are divided into 2 teams of 11 candidates per team and 1 empire for the game. The experiment is held at Government College University Lahore's cricket ground. On Tuesday 29th November 2022, at 8:30 all 23 young male adults play the match. Their behavior throughout the activity is recorded and after the activity they are asked to fill out another questionnaire in which they are asked about how they feel about this activity and their use of social media. The table 7.1 below summarizes their responses.

TABLE 5.6 RESPONSE TO CRICKET MATCH	YES	NOT THAT MUCH	NO
Did you use social media during the activity?	0	2	21
Was it better than spending time on social media?	20	2	0
Will you be willing to do it again?	23	0	0
Was it fun/ refreshing/ relaxing?	23	0	0
Can you decrease time spend on social media if more activities like these are provided?	22	1	0
Do you think more activities like these will help you with physical and mental stability?	22	1	0

The results from this laboratory experiment clearly shows that almost all candidates do not use social media throughout the game. Majority of them also think it is better than being on social media and all of them are

willing to play again. They find it refreshing, fun, relaxing and also believe that they can reduce their time that is spending on social media.

Even though this activity does not provide a monetary gain to the economy. It can be seen that the purpose of this study is to help young adults to leave the fierce trap of social media so that they can have better mental and physical stability to improve their productivity level and maybe learn a skill. For instance, if anyone is interested in choosing cricket as a profession, these activities might provide an opportunity for them to not only practice but also a way to get discovered by national level coaches which in future can help gain in monetary terms as well.

5.11. Hanging out at café with friends

The purpose of this experiment is to simply judge whether a gathering of friends can help to nudge a way for young adults to overcome this Rat Race. The experimenter, texted her friends from Alevels to plan a meeting at Tim Hortons on the very first day of its opening, Saturday 11th February 2023. To her surprise all of her group including 9 females and 11 males (total of 20 young adults) agreed to meet.

The candidates meet outside the Café which is located in phase 6, and the gathering ended up for almost 4 hours 30 minutes. The wait in line, getting donuts, coffee and juices and sitting with friends while talking about their lives and career choices is something which is very simple. The experimenter observed that almost all of her friends avoided using social media while sitting in gathering of friends. The table 5.7 summarizes their responses.

TABLE 5.7 RESPONSE TO HANGING OUT WITH FRIENDS AT CAFÉ	YES	NOT THAT MUCH	NO
Did you use social media during the activity?	3	9	8
Was it better than spending time on social media?	12	8	0
Will you be willing to do it again?	19	1	0
Was it fun/ refreshing/ relaxing?	20	0	0
Can you decrease time spend on social media if more activities like these are provided?	19	1	0
Do you think more activities like these will help you with physical and mental stability?	18	2	0

The results are in favor of the hypothesis, they are willing to reduce their social media time and quit this endless social media Rat Race. This sample includes Lower-Middle Class (2 females and 4 males), Upper-Middle Class (6 females and 7 males) and Elite Class (1 female). The fact they paid for their food items just simply tells that young adults need places and platforms so that they can overcome Rat Race of social media. They just need a little nudge. For instance, a simple discount deal at their favorite café or restaurant can help them to come out of their beds and leave social media.

5.12. Movie

On Tuesday 8th November 2022, the department of economics held a movie day for semester 1 (Batch of 2022). The candidates involve total of 6 females and 14 males. This experiment involves all four social groups Lower Class (2 males and 1 female), Lower-Middle Class (3 females and 6 males), Upper-Middle Class (2 females and 5 males) and Elite Class (1 male). Before starting the movie (lights out), they are asked to fill the first questionnaire to gather some information and those results are summarized before together with all other 88 candidates. After the movie, they are asked to fill out the second questionnaire and results are shown in table 5.8.

TABLE 5.8 RESPONSE TO THE MOVIE	YES	NOT THAT MUCH	NO
Did you use social media during the activity?	5	11	4
Was it better than spending time on social media?	7	11	2
Will you be willing to do it again?	10	7	3
Was it fun/ refreshing/ relaxing?	10	9	1
Can you decrease time spend on social media if more activities like these are provided?	4	15	1
Do you think more activities like these will help you with physical and mental stability?	4	13	3

The results of movie experiment are not as promising as the others. However, that also depends on preferences of young adults. For example, one of the candidates, while giving back the survey form said that he does not really like horror movies but a comedy movie can develop his interest and help him reduce more time.

5.13. Community work (collecting and distributing food and clothes in village)

The reason to include this activity is to check whether these young adults can work for the betterment of the society without any personal gains, in terms of monetary and otherwise. There are many benefits of community work as it teaches them about social responsibility, develop leadership skills and helps with self-discovery by bringing people together and learn about multiculturalism and diversity.

10 out of 88 candidates (3 females and 7 males) chose the community work experiment. All 10 of them are asked to bring some clothes and food items to donate. On Monday 23rd January 2023, at 10 am all these candidates gathered around Paragon city and went together to donate food and clothing items at village near Burki road, Pularvan.

Their behavior throughout the activity is recorded and after the activity they are asked to fill out another questionnaire just like in other activities. The table 5.9 summarizes their responses.

TABLE 5.9 RESPONSE TO THE COMMUNITY WORK	YES	NOT THAT MUCH	NO
Did you use social media during the activity?	1	5	4
Was it better than spending time on social media?	6	4	0
Will you be willing to do it again?	7	3	0
Was it fun/ refreshing/ relaxing?	7	3	0
Can you decrease time spend on social media if more activities like these are provided?	6	3	1
Do you think more activities like these will help you with physical and mental stability?	8	2	0

The fact that they all belong to elite Class group makes it more interesting. The assumption that is usually taken for young adults belonging to elite class is that they arrogant and selfish and the reason that this experiment's sample include only them is to analyze can they do come out of their social media Rat Race and provide something for the community and the economy without any self-gain or benefit.

The result shows that majority of these candidates are willing to this activity again and they do believe that this can help them with physical

and mental stability. Even though majority of these candidates use social media during the experiment, they claim “not that much”. This indicates that through these activities the use of social media can be reduced and the youth can help to change the economy by being more productive and active physically. For instance, these exchanges promote a sense of trust and cooperation that strengthens our ties to others—and research has shown that having positive social interactions is central to good mental and physical health.

5.14. Field trip

Field trips as adults, that would more than likely be a meaningful trip for them and one they would remember (personal communication, April 30, 2014). Young adults that take trips to new environments can be positively impacted as it can be very important in exposing themselves to new situations and helping them to grow beyond what they would in the typical confines of the classroom.

On Saturday 7th February 2023, the experimenter arranged a field trip for her 15 university friends (10 females and 5 males). Before leaving, they filled out the first questionnaire. The trip involves the tour of open bus inside the old Lahore. This bus tour starts from Gaddafi Stadium and takes the candidates through the city. It stops at Greater Iqbal Park for 2 Hours. From here the candidates along with the experimenter takes a ride to Badshahi Mosque and Minar e Pakistan. After the experiment, these 15 young adults belonging to Lower-Middle Class and Upper- Middle Class are asked to fill out the second questionnaire. The table 5.10 summarizes their responses.

TABLE 5.10 RESPONSE TO THE FIELD TRIP	YES	NOT THAT MUCH	NO
Did you use social media during the activity?	0	14	1
Was it better than spending time on social media?	15	0	0
Will you be willing to do it again?	15	0	0
Was it fun/ refreshing/ relaxing?	15	0	0
Can you decrease time spend on social media if more activities like these are provided?	14	1	0
Do you think more activities like these will help you with physical and mental stability?	12	3	0

Results clearly show that taking young adults on a field trip is a success. Even though, all of them said that they do not use that much social media during the activity, all of them think it is better than spending time on social media. This gives a positive hope as they are willing to do this instead of sitting inside their bedroom scrolling down their social media feeds.

All the above experiments are laboratory experiments. The main purpose of all these experiments are to provide an alternative for young adults so that they can reduce the time spend on social media, quit the cutthroat Rat Race and actually do something which can help them with physical and mental stability and benefit the overall economy.

6. Conclusion and recommendations

The study looks at the problem of Rat Race through an example of social media, how alarming it is for young adults and how it affects an economy. It examines how this Rat Race of social media for likes, comments and followers are built in our minds and without realizing we use social media way too much than it is required, leading to supply-side shock. Hence, there is a need to intervene and suggest some measures to change the behaviors of the people.

The first questionnaire results show how important it has become to intervene in this fierce Rat Race of social media and through the application of Nudge theory it can be reduced. The hypothesis does not require young adults to stop using social media but rather reduce the time spend on it. The majority of young adults spend 6 to 8 hours on social media on average, daily. Belonging to any social group, age or employed or not, they use social media way too much than it is required which is harmful for their own health. This health in return can hinder the growth of an economy through supply-side shock.

By conducting these laboratory experiments and questionnaire provided at the end of each experiment, it can be clearly seen that providing little Nudges by government can help to build up a more productive labor force. As they can be more physically and mentally strong if they are

provided with little things or nudges. It can help economy to increase its GDP, generating more employment and demand in the economy. This is why it is important to address this problem as soon as possible especially in an economy like Pakistan where the majority of the population are young adults.

Pakistan is a developing country that faces a multitude of challenges that have hindered its economic growth. One of the biggest issues that Pakistan faces is its demographic structure. Approximately 64% of Pakistan's population is below the age of 30, which presents both opportunities and challenges for the country's economic development. To fully utilize this demographic dividend, it is crucial to introduce new activities for the young generation of Pakistan that can help improve the economy.

Introduce public or private discount campaigns, loyalty rewards, or digital detox days encouraging youth to spend time away from social media. Government can use environmental cues (e.g., posters, friendly reminders, alternative activities) to nudge students toward healthier lifestyle choices. Partnering with local organizations to create youth service platforms that reward participation and develop soft skills that contribute to future employability. Recognize social media addiction as a real and growing challenge in policy documents. Fund more behavioral research to explore scalable nudges for national implementation.

Introducing new activities as small nudges for the young generation can provide a significant boost to Pakistan's economy in multiple ways. Government and NGOs can include structured group activities (sports leagues, field trips, and creative clubs) in school/university programs to promote real-life engagement. Firstly, it can help in creating more job opportunities. The introduction of new activities will lead to the creation of new businesses, which will require more employees. The development of various sectors such as tourism, sports, entertainment, and technology can provide a wide range of job opportunities. This will not only help in reducing unemployment but also increase disposable income, which ultimately boosts the economy.

Secondly, the introduction of nudges can foster innovation and creativity. Young people are known for their innovation and creativity, and allowing

them to explore their interests and talents can lead to the development of new products, services, and technologies. Innovation is essential for any economy to grow and by promoting innovation; Pakistan can create a niche for itself in the global market.

Thirdly, new activities can contribute to the overall development of the country. For instance, the development of the tourism sector can put Pakistan on the global map, attract foreign investment, and create a positive image of the country. Similarly, the development of technology can lead to the modernization of the country's infrastructure, making it more efficient and effective.

Lastly, providing little nudges to introduce new activities for the young generation can also lead to cultural and social development. These activities can provide a platform for young people to work together, learn from each other, and build stronger bonds within their communities. This can lead to better social cohesion, increased community engagement, and ultimately a better quality of life for the people.

This study confirms the existence of a social media Rat Race among young adults in Lahore and demonstrates that Nudge Theory can effectively reduce screen time and improve well-being. The application of simple nudges like outdoor sports, group outings, or community service proved to be low-cost, high-impact interventions. The research found that social media is used excessively for entertainment and validation, leading to a strong emotional response to digital engagement. Participants were willing to substitute screen time with meaningful offline activities.

References

- Akerlof, G. A. (1976). The Economics of Caste and of the Rat Race and Other Woeful Tales. *Quarterly Journal of Economics*, 90(4), 599. <https://doi.org/10.2307/1885324>
- Arno, A., & Thomas, S. (2016). The efficacy of nudge theory strategies in influencing adult dietary behavior: a systematic review and meta-analysis. *BMC Public Health*, 16(1). <https://doi.org/10.1186/s12889-016-3272-x>
- Brunnermeier, M. K., & Oehmke, M. (2013). The Maturity Rat Race. *Journal of Finance*, 68(2), 483–521. <https://doi.org/10.1111/jofi.12005>
- De Zúñiga, H. G., Jung, N., & Valenzuela, S. (2012). Social Media Use for News and Individuals' Social Capital, Civic Engagement and Political Participation. *Journal of Computer-Mediated Communication*, 17(3), 319–336. <https://doi.org/10.1111/j.1083-6101.2012.01574.x>
- Hausman, D. M., & Welch, B. F. (2010). Debate: To Nudge or Not to Nudge*. *Journal of Political Philosophy*, 18(1), 123–136. <https://doi.org/10.1111/j.1467-9760.2009.00351.x>
- Kietzmann, J., Hermkens, K., McCarthy, I. G., & Silvestre, B. S. (2011). Social media? Get serious! Understanding the functional building blocks of social media. *Business Horizons*, 54(3), 241–251. <https://doi.org/10.1016/j.bushor.2011.01.00>
- Mangold, W. G., & Faulds, D. J. (2009). Social media: The new hybrid element of the promotion mix. *Business Horizons*, 52(4), 357–365. <https://doi.org/10.1016/j.bushor.2009.03.002>
- Miyazaki, H. (1977). The Rat Race and Internal Labor Markets. *The Bell Journal of Economics*, 8(2), 394. <https://doi.org/10.2307/3003294>
- O'Keeffe, G. S., & Clarke-Pearson, K. (2011). The Impact of Social Media on Children, Adolescents, and Families. *Pediatrics*, 127(4), 800–804. <https://doi.org/10.1542/peds.2011-0054>
- Shu, K., Sliva, A., Wang, S., Tang, J., & Liu, H. (2017). Fake News Detection on Social Media. *SIGKDD Explorations*, 19(1), 22–36. <https://doi.org/10.1145/3137597.3137600>
- Soofi, M., Najafi, F., & Matin, B. K. (2020a). Using Insights from Behavioral Economics to Mitigate the Spread of COVID-19. *Applied Health Economics and Health Policy*, 18(3), 345–350. <https://doi.org/10.1007/s40258-020-00595-4>
- Soofi, M., Najafi, F., & Matin, B. K. (2020b). Using Insights from Behavioral Economics to Mitigate the Spread of COVID-19. *Applied Health Economics and Health Policy*, 18(3), 345–350. <https://doi.org/10.1007/s40258-020-00595-4>
- Spurk, D., & Straub, C. (2020a). Flexible employment relationships and careers in times of the COVID-19 pandemic. *Journal of Vocational Behavior*, 119, 103435. <https://doi.org/10.1016/j.jvb.2020.103435>
- Spurk, D., & Straub, C. (2020b). Flexible employment relationships and careers in times of the COVID-19 pandemic. *Journal of Vocational Behavior*, 119, 103435. <https://doi.org/10.1016/j.jvb.2020.103435>

-
- Sunstein, C. R., & Reisch, L. A. (2017). *The Economics of Nudge: Critical Concepts in Economics*.
- Thaler, R. H., & Sunstein, C. R. (2012). *Nudge: The Final Edition*. Penguin UK.
- Vlaev, I., King, D., Dolan, P., & Darzi, A. (2016). The Theory and Practice of “Nudging”: Changing Health Behaviors. *Public Administration Review*, 76(4), 550–561. <https://doi.org/10.1111/puar.12564>