

AN INSTITUTIONAL ECONOMICS ANALYSIS OF WEARING A MASK: INTERNALISING THE EXTERNALITY

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1. INTRODUCTION

Human behaviour is the result of the circumstances and responses to various social factors considering the stakes involved in decision making. When the costs are high, individuals think and rationalize before bearing the cost; when the costs are low, individuals decide to bear the costs. This behavioural pattern can also be traced in the Indian masses reflex to the stimuli of various lockdown and unlock periods in the past six months. Initially, the fear of the unknown and uncertainty played a vital role in enforcing a lockdown and attempted imposition of social distancing to contain the spread of the novel coronavirus. As people became familiar with recovery rates, complacency grew, resulting in choking the already weak public administration and health infrastructure. To contain the surge of the virus, the Government responded by introducing a series of measures such as social distancing with lockdown, which resulted in shutting down the global economy³ resulting in an economic slump. The country has faced an acute shortage of money in terms of migrant labour crisis and a crumbling economy. The economy consists of various individual units working with self-interest in profit motives to reap economic benefits. Various disciplines observe and study parts of this pandemic, for instance, the medical fraternity focuses on developing a vaccine, the psychology aspect concerns itself with the mental health aspect, the financial aspect deals with the monetary policy and institutional economics provides the necessary tools to understand individual behaviour. Institutional economics does not restrict the study of individual behaviour to their purchasing power but rather extends to a study of their behaviour and decision making. This decision making includes economic decisions like savings and investments, expenditure patterns like buying Veblen goods and also decisions that affect the society at large like not

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³ Nuno Fernandes, *Economic Effects of Coronavirus Outbreak (COVID-19) on the World Economy*, UNIVERSITY OF NAVARRA, IESE BUSINESS SCHOOL. (Sept. 10, 2020), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3557504.

wearing a mask and not complying with social distancing norms. Many learned individuals are of the opinion that until a vaccine is developed the only effective method to control the spread of the virus is to strictly wear a mask and adhere to the social distancing norms.

This essay attempts to analyse economically the impact of not wearing a mask and not conforming to the social distancing guidelines in public spaces. A broad understanding of the issue reflects that there are certain costs associated with individuals not wearing a mask and there are also costs that the society has to bear otherwise; an externality arises when the former exceeds the latter. This externality is attributed to information asymmetry insofar as individuals are not aware of the transaction costs⁴ (transaction is going out without a mask) and moral hazard where individuals though they are aware of the impact still make an active choice not to wear a mask and flout the social distancing guidelines.⁵ This externality results in market failure. The essay evolves to internalise both the costs and benefits; the solutions provided include efficient local self-governments to internalize the costs, and effective implementation of rules and guidelines to increase awareness engendering reduction of information asymmetry.

1.1. Market Failure

Market failure is the economic situation defined by an inefficient allocation of goods and services in the free market. Additionally, individual incentives for rational behaviour do not lead to rational outcomes for the group. In essence, it means that each individual makes the correct decisions for him/herself, but these prove to be the wrong decisions for the group. In traditional microeconomics, this is shown as a steady-state disequilibrium in which the quantity supplied does not equal the quantity demanded.⁶ Market failure can be identified as a two-fold issue in the wake of such a pandemic. First, the market failure of tangible physical goods. However, this essay mainly focuses on the second one, namely, the market failure arising out of individual behaviour. Individual behaviour refers to the transactions that arise out of decisions like wearing a mask or deciding what the socially desirable and optimal level of going

⁴ F.H. Hahn, *Equilibrium with Transaction Costs*, 39 *ECONOMETRICA*, 417,439 (1971).

⁵ Herbert G. Grubel, *Risk, Uncertainty and Moral Hazard*, 38 *THE JOURNAL OF RISK AND INSURANCE*, 99,106 (1971).

⁶ Market Failure, 28 *ECONOMIC AND POLITICAL WEEKLY*, 2489 (1993).

out of the house is; subsequently what is the level of social distancing that has to be maintained. Wearing a mask is an economic transaction not because of the monetary cost of buying the mask but because of the non-monetary difficulties one has to face while wearing a mask. Most important, when an individual decides against wearing a mask, it is the society that bears the brunt.

A negative externality is a cost borne by society and parties who are not directly involved in the transaction. The producer and consumer initiate a transaction and any third party including but not limited to any organization, property owner or public resource or society as a whole, are affected by this transaction. This impact on the third party is defined as an externality. It may also be referred to as a spillover effect. A negative externality can be in the form of high external cost—a negative externality results in market failure. With reference to COVID-19, negative externalities are the outcome of an imbalance between the private cost and social cost and that of lack of awareness. Assuming Adam Smith's theory of Free Markets that states individuals act in self-interest to be true, an individual who steps into a public place should wear a mask and maintain social distancing as the same align with his self-interests; but such is not the case. It is quite evident that when an individual steps out without a mask, not only is the individual exposed to the imminent threat of contracting the virus but also his surroundings are compromised. This impact on the surroundings is considered an externality leading to market failure.

This externality leads to a strain in resource allocation in the fight against COVID. This impacts the number of beds available and the number of people infected in the country; such is the grave nature of the market failure.

2. PRIVATE COST AND EXTERNAL COST

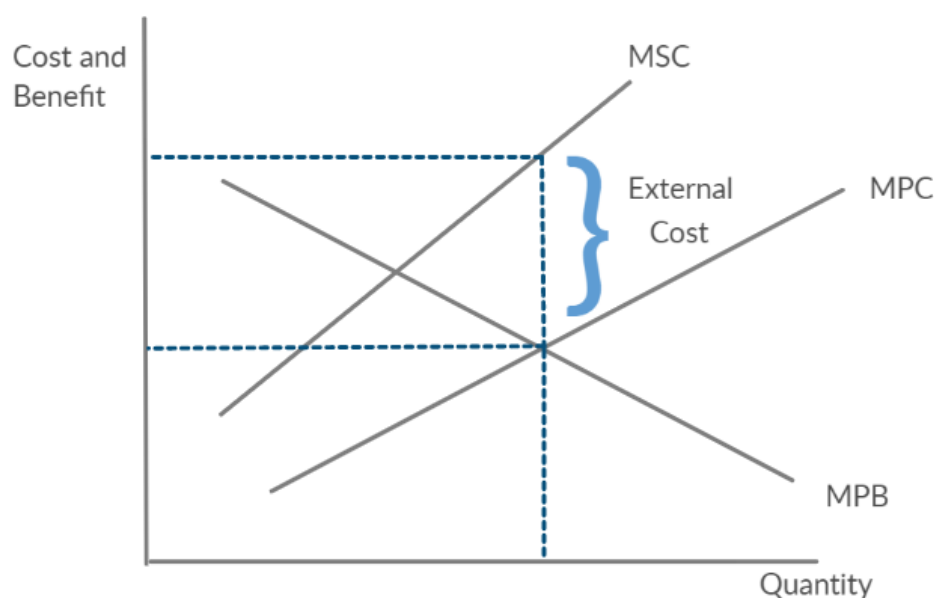
A socially optimal transaction is one where either the private cost or social cost is equal, or the social cost exceeds the private cost ($MSB=MPB$). A private cost is a cost that an individual bears to get a private benefit which is rivalrous and exclusionary in nature; whereas, a social cost is often non-monetary and in some cases non-mercantile. In the current situation, the spread of COVID-19 is a very high cost which probably cannot be exceeded by any other cost.

In order to proceed with the comparison with private and social cost, it is imperative to make certain assumptions, like:

- All individual decisions are based on bounded rationality.
- Though the marginal impact of each person not wearing a mask may be subjective and different, but for the purpose of this essay, we assume that at a theoretical level and practical level there is some harm which is minimal that is met under all circumstances. The threshold of that difference may vary depending on various factors like the number of people who one comes in direct contact with and personal immunity strength but is still contingent on the fact that it is harmful in one way or the other.
- The recovery rate is high, but the state and individuals would still prefer preventive action over recovery.
- The absolute monetary cost of buying a mask is so low that it is negligible and accessible by all.
- All masks and social distancing guidelines are equally effective to all.
- The factors affecting decision making are out of one's own free will without social factors like religion, gender and other demographic and geographic factors.

2.1. Private Cost

Private cost is the cost borne by an individual or firm directly involved in a transaction, and private benefit is the benefit derived by an individual or firm directly involved in a transaction as either buyer or seller. The private benefit to a consumer can be expressed in terms of utility, and the private benefit to a firm is profit. The private cost that is borne by an individual in this situation includes the price of the mask, and the other difficulties that they face in order to comply with the rules and the private benefit are that one is protected from the virus. $MSC=MPB$. Search socially optimal level graph



(a.) Private Cost

In this instance, the social cost includes the difficulty faced by society when individuals do not wear a mask or do not comply with the social distancing guidelines. The marginal private cost in this situation is the increase in difficulty in every successive hour that a person spends outside wearing a mask. This also includes the cumulative effect of multiple difficulties. For instance, when a person wears glasses, the marginal cost is not the only difficulty in breathing but also the continuous fogging of glasses and itchiness. These costs are above and beyond any other normal difficulties that they face due to change in lifestyle and economic activities. It is also important to note that for some individuals, the cost will be higher because they are not making any economic gain by wearing a mask. Contrastingly, some celebrities or individuals may make an economic gain by simply wearing the mask of a certain brand. For example, when a person is wearing a mask at a convenience store while buying daily essentials, there is no real economic gain per se that is derived from wearing a mask. But, on the other hand, when a consumer chooses to go to a shop where a shopkeeper is wearing a mask over a shopkeeper who is not wearing a mask,⁷ the shopkeeper's economic interest is directly linked to the cost

⁷ Karl Dieter, *Externalities, Social Networks, and the Emergence of Norms: A Critical Analysis and Extension of James Coleman's Theory*, 85 SPRING 167,196 (2018).

borne in order to wear a mask.⁸ A celebrity may endorse a particular brand and make profits out of it, linking the costs to direct economic benefits. What is interesting to note is wherever there are direct economic benefits, people are most likely to follow without intervention; thereby making rules and regulations necessary for instances where there are no direct economic incentives at play. As clearly seen in the graph, when an individual breaks the rules of the lockdown, the social cost is greater than the private cost, but, the individual perceives a greater marginal benefit from it.

Instances of individuals perceiving greater private benefits than the private cost by ignoring the external cost.

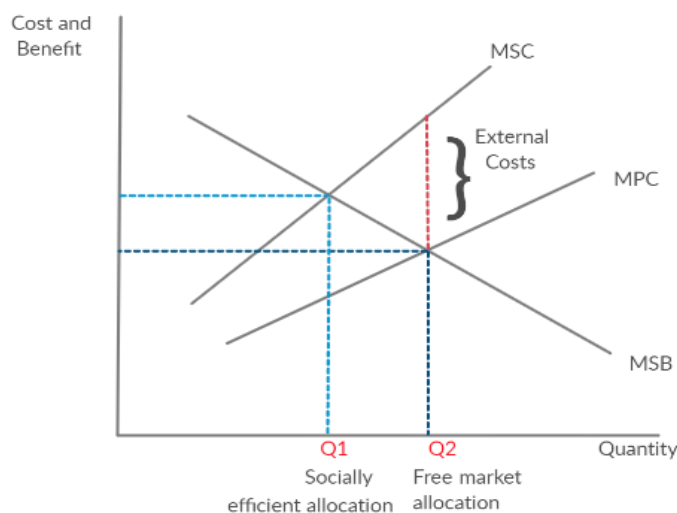
It has been alleged that Kanika Kapoor has violated the social and legal norms by attending casual parties and gatherings despite the contested corona positive status. The U.P. Police have filed an F.I.R. regarding the same. Irrespective of the corona result status it is noteworthy that the said individual had returned from the U.K. this mandates a strict quarantine that was violated. In this instance, based on the media reports and statements of the accused, it is safe to say that the private costs that were considered are monetary, and therefore, it was low. The perceived private benefit was non-monetary and was very heavily linked to social capital and personal social gains. Hence, resulting in the presence of the said individual at various parties. These acts attract the penalty of law because there are larger social costs involved. The social costs are the levels of policy implementation, the safety of other individuals at those gatherings and higher costs of enforcement considering the celebrity status of individuals gathering.

2.2. Social Cost

The social cost is the total cost to society. It includes private costs plus any external costs. Rational choice theory suggests that individuals will only consider their private costs. For example, when deciding how to travel, we will consider the cost of petrol and time taken to drive. However, we won't take into consideration the impact on the environment or congestion

⁸ Robert Frank, *Melding Sociology and Economics: James Coleman's Foundations of Social Theory*, 30 JOURNAL OF ECONOMIC LITERATURE 147,170 (1992).

levels for other members of society. Therefore, if social costs significantly vary from private costs, then we may get a socially inefficient outcome in a free market.⁹



(b.) Social Cost

The social cost is a scenario including the spread of the coronavirus and the cost of administering the healthcare services. Beyond this, it also includes the cost of enforcing the rules and regulations. For example, if the Government were to employ marshals to keep a check and fine individuals who do not wear a mask, the cost of such administration is also borne by the taxpayers in its monetary sense, and it also increases the cost because there are more individuals who are prone to risk in their duties. It is also to be noted that there is an overarching social cost of economic breakdown due to increased threats of the virus. As seen in the graph, the social marginal cost increases as the number of individuals who do not wear a mask increases. The external costs arise due to the decisions that individuals make, albeit, the concession that the arithmetic number of people they impact are not the same.¹⁰ In this scenario, as seen in the graph, the social benefit is no more than the private benefit, but the social cost exceeds the private cost. It is inconceivable at any point to derive a social benefit out of not wearing a mask, especially given the circumstances of widespread COVID infections. The far-reaching hypothesis may look like individuals while exercising should not wear a mask because

⁹ Ronald H. Coase, *The Problem of Social Cost*, 22 THE JOURNAL OF LAW & ECONOMICS, 141,162 (1979).

¹⁰ R. Roberts et al., *A guide to interpreting economic studies in infectious diseases*, 16 CLINICAL MICROBIOLOGY AND INFECTION, 1713,1720 (2010).

it is counter-productive and exercising is considered to be helpful to the health of individuals and healthy individuals put less strain on the healthcare system. Even if such a hypothesis were to be proved, the social cost still exceeds the private benefit.

For example, the Karnataka state government opened a COVID care facility of 10,000+ beds only to close it down in a month's time citing the reason to be the lack of patients. It is interesting to know that the social cost in its monetary sense is also borne by the citizens, but more importantly, there is a reduction in the healthcare infrastructure. It may be argued that there is still some benefit out of it because it has been stated that the beds will now be given to government hostels and hospitals. However, this benefit does not outweigh the social cost for not having a 10,000 bed COVID care facility. It is crucial to analyze the reasons cited for its closure. It is not true that there is a lack of patients, but it is just the lack of patients who enrol themselves in COVID care facilities. It also brings into light the problems of market failure from the aspect that there is gross underreporting and under testing for the virus.

3. THE PROBLEM OF AN IMPENDING SOCIAL COST

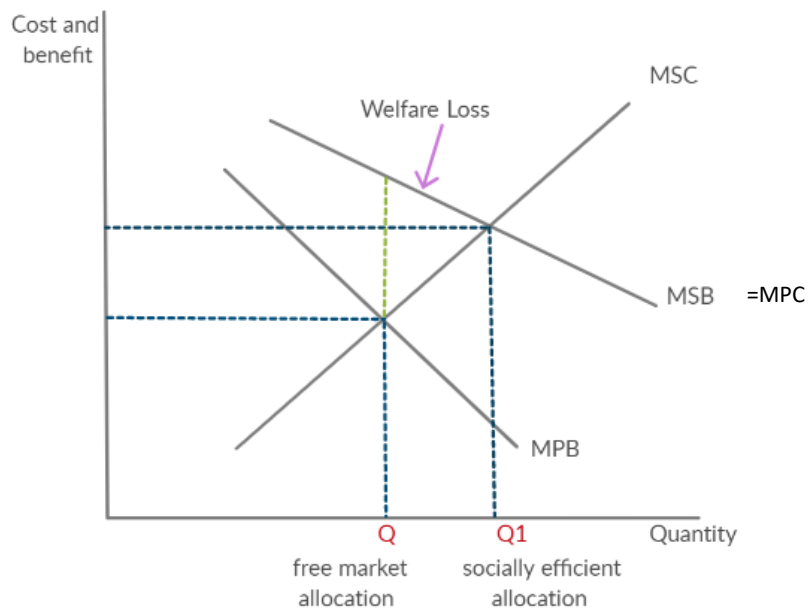
On conducting written interviews with over 150 people of an almost homogenous section of the society of those who can be considered to function at a level where the monetary cost of the mask is almost negligible. Most of these individuals have access to public spaces in urban settings like the city of Bangalore or Kochi. An enquiry was made on the number of times an individual had gone out (daily, once a week or once a month). Following this, they were asked about problems or difficulties if any at all, faced while wearing a mask. They were then given an opportunity to share their opinion on why other people do not wear a mask. By incorporating a correlation between the numbers of times a person had gone out and the difficulties they faced while wearing a mask, we can arrive at a rough estimate of the private cost that the individual pays. As a result of this private cost, if the person has taken off their mask in public spaces, it clearly shows the tipping off point wherein the individuals make an active trade-off where they consider the private benefit of taking off the mask to be greater than the private cost. The consequence of this is often not considered. This is the point where the externality begins because now the individual's action has resulted in a very high social cost.

Let us assume that person X wears glasses and goes out daily. X admits that due to fogging up of glasses and itchiness, the mask is removed for the most part of the day. Another person Y has gone out only once a month to purchase essentials. Y confesses that despite not removing the mask at all, there was an alarming sight of the general public at large, not wearing masks properly. Person Z is of the opinion that it is not possible for him to socialize in a restaurant with a mask. Person L works in a pharmacy near a COVID care centre and is almost always wearing a P.P.E. at work.

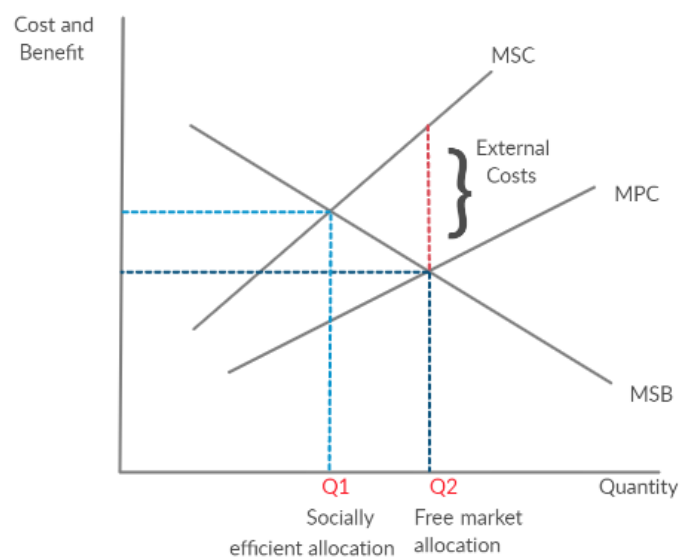
- **Analysis when each of them wears a mask - Ideal scenario**

	Private cost	Private benefit	External cost	Social Benefit
Person X	High	High	Low	High
Person Y	Low	High	Low	High
Person Z	Low	High	High	Low
Person L	High	High	Low	High

X represents someone like a shopkeeper who might want to wear a mask but is unable to because of the issues that X faces like the long durations and work conditions. X's private cost is quite high because they bear the brunt of issues like fogging up of glasses and so on. The social cost is low if they continue to wear a mask despite their private costs. The social benefit is quite high due to multiple reasons like economic mobility and activity and making the choice of bearing the private cost rather than a simple trade-off removing a mask. But, in reality, as mentioned earlier, X removes the mask quite often; now, the private costs are low because of the trade-off resulting in high social costs. The high social benefit that had accrued does not seem high anymore because of the social cost. It is better that there is less economic activity than a shopkeeper coming in contact with his customers without a mask, thereby resulting in low social benefit as well.

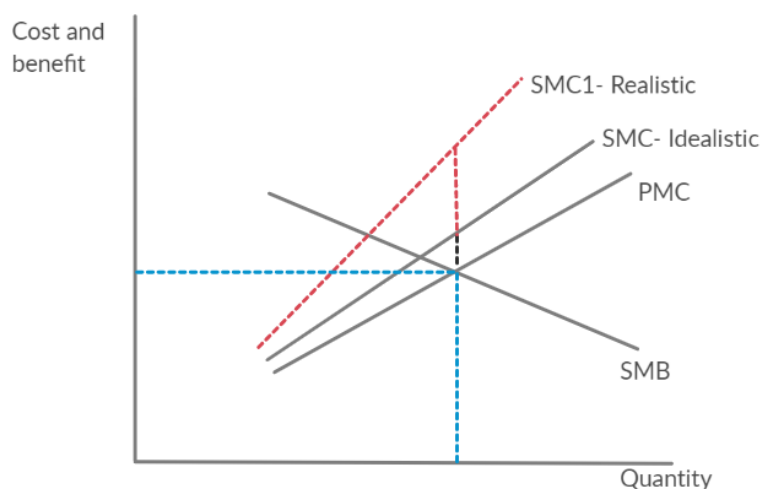


(i.) X in an idealistic situation



(ii.) X in a realistic situation

Person Y in an ideal scenario is wearing a mask and going out only when required, and this means that his private cost is very low because of the less number of times he has gone out. His private benefit is quite high because he is wearing a mask. His social cost is low because he is also wearing a mask and does not add on to the externality. Y assumes in an ideal scenario that people have to follow social distancing guidelines; therefore, there is a high social benefit out of it. But in reality, he realizes that people are not wearing the mask, and hence the social benefit is reduced.

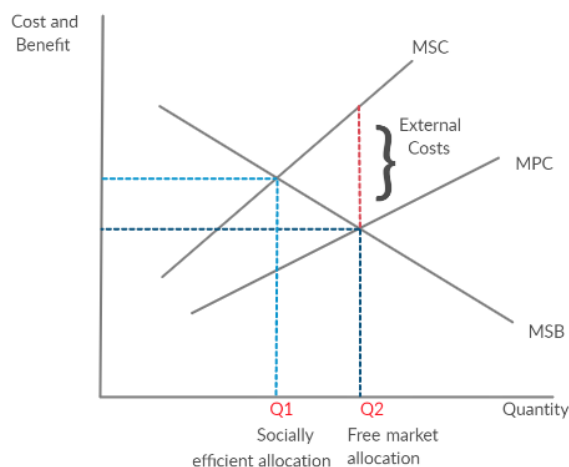


In the idealistic situation, Y serves as a negative externality where the difference between the social marginal cost and the private marginal cost is significantly low; whereas in the realistic situation there is a substantial difference between the private and the social marginal costs.

Person Z represents the worst form of the externality because that is the socially least desirable group to fight the pandemic. This would be the representation of those individuals who still choose parties and other narrow personal gains over the safety and precaution against COVID. It may be a result of various factors like belief in one's own immunity, wrong prioritization of safety measures and so on. Here the private cost is low because one doesn't bear the difficulty of wearing masks or living away from a fancy social media life filled with glamour. Since this individual deprioritizes the safety of being protected from the virus, the other forms of validation form high private benefit. It is imperative to note that the attitude of the person decides whether being protected from COVID because of a mask and social distancing is a high private benefit or low private benefit, nevertheless here a party or gathering is perceived as a higher private benefit over the costs. The social cost is very high because it increases the cost of enforcement and adds more patients or has the potential to spread the virus.¹¹ The social benefit is the lowest because most of these acts harm the society and benefits are intangible and personal like satisfaction, emotional bonding and social acceptance, this benefit cannot be

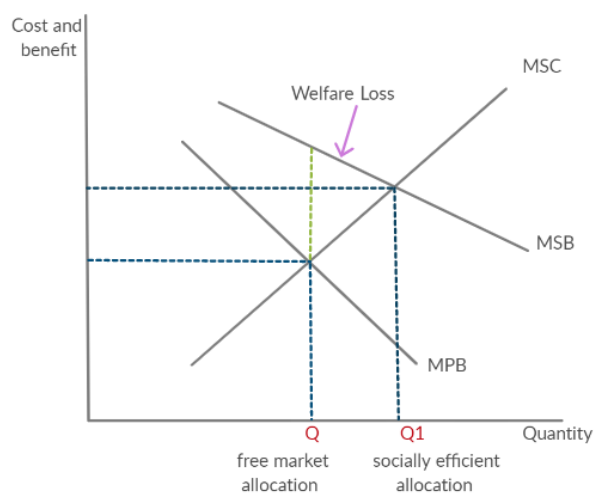
¹¹ Ralph Turvey, *On Divergences between Social Cost and Private Cost*, 30 *ECONOMICA* 309,313 (1963).

outweighed as against a large number of persons being saved from the shackles of the pandemic. Since the outlook of the person is in itself questionable, it remains the same in a normative sense and realistic sense.



Z in both, idealistic and realistic, situations is a negative externality

Person L represents the small fraction of the society that is the positive externality. This person represents those pharmacists and support staff who at almost all times wear a P.P.E. kit. Normatively they have a high private cost because they have to endure the insulation and higher stress levels and workloads. For these individuals, the private benefit is the combination of direct economic incentives like fixed salaries and so on. Most importantly, the benefit is the level of protection they have against the virus in such compromised environments of work. The Social cost is very low because they are incentivized enough to wear masks and P.P.E.s and use sanitizers to prevent the viral infection. These individuals are responsible for the actual situation to change along with other COVID warriors like doctors, and so on. In reality, the private benefit becomes quite low; this is owing to the fear and a large number of healthcare workers being infected by the virus. The rationale behind the private benefit becoming low is the actual increase in private cost.



L in both, idealistic and realistic, situations is a positive externality

- **Realistic analysis**

	Private cost	Private benefit	External cost	Social benefit
Person X	Low	High	High	Low
Person Y	High	High	High	Low
Person Z	Low	High	High	Low
Person L	High	Low	Low	High

4. BOUNDED RATIONALITY VIS-A-VIS WEARING MASKS IN PUBLIC AND ITS ECONOMIC ANALYSIS

In modern economic analysis, the assumption of perfect rationality as seen in the classical school has been questioned time and again. As a response to perfect rationality institutional

economics adopts bounded rationality. Bounded rationality takes into account the limitations that humans face, as in the case of lack of awareness of every single possible outcome or not being able to measure or prioritize utility in its objective sense and personal bias.¹² Therefore, bounded rationality is the principle that acknowledges the fact that humans are not always fully rational and sometimes act based on other factors like personal tastes and preferences, societal significance and status and so on. Sometimes, individuals also choose less effective options and are happier or more satisfied with less efficient outcomes. With respect to COVID-19 and not wearing a mask, one must assume bounded rationality over perfect rationality. Even in the premise of the bounded rationality, one must act in a manner that the Government's cost to enforce social distancing and other rules is less than the benefit that arises out of such measures. It is safe to assume that the unsurmountable cost due to a rapid increase in the community spread of the virus is the worst outcome and individuals along with the Government, strive to keep that at bay. Therefore, as long as the spread of the virus is in check, that is, a non-monetary benefit that individuals are willing to pay. The following sections entail a cost-benefit analysis and the impacts on costs of enforcements which in turn reflect in the level of social cost.

4.1. Wearing a Mask

Bounded rationality often focuses on adaptive behaviour suited to an organism's environment. The media and statistics have helped in creating an atmosphere which has reinforced the importance of wearing a mask. By going out in public and refusing to wear a mask while one is ailing of a contagious disease, he possesses the potential risk of contaminating the others, and some or one of them may die. Despite criticisms of not accounting for morals and principles of individual behaviour, a cost-benefit analysis is befitting to understand the larger outcome of containing the virus. Understanding the rationale behind a multidisciplinary problem is quite cumbersome, but a cost-benefit analysis will broadly discuss the incentive structures that are fairly universal in nature. As mentioned earlier, the costs here include private costs like difficulties faced while wearing a mask and not just the costs of procuring the mask. The private benefit extends to one's safety which is of subjective importance. It is, however, true that if each individual wears a mask at all times, and it is beneficial for society. The externality as a

¹² Gregory Wheeler, *Bounded Rationality*, THE STANFORD ENCYCLOPAEDIA OF PHILOSOPHY (Sept. 9,2020), <https://plato.stanford.edu/archives/fall2020/entries/bounded-rationality/>.

result of one not wearing a mask is internalized when one wears a mask. This corrective action can happen as a result of a Pigouvian tax or other solutions, as explained later in the essay. A cost-benefit analysis will clearly reflect that the risk of not wearing a mask includes the opportunity cost of being infected by the virus, which is a very high cost to any individual. The benefits they are not limited to an individual trying to avoid the virus, but it includes a higher level of economic activity because each one is aware that the other is also taking precautions. This reduces the strain on the level of socially optimal movement on individuals, i.e., the restrictions on genuine inter-state travellers or inter-district travellers will reduce because everyone in most parts of the country is taking precautionary measures. The point of equilibrium on the socially optimal movement graph is the one where the social cost is either equivalent to or less than the private cost and the social benefit is greater or equivalent to private benefit.¹³ Therefore, the summation of Rs. X (cost of the mask) + nL (n signifies the intensity which is subjective and L is the non-monetary cost like fogging up of glasses and so on) is less than D (the benefits that accrue when each individual wears a mask and is aware that others also take precautions). The benefits grow largely when wearing a mask is coupled with restraint being exercised by symptomatic individuals, and when people do not roam around unnecessarily.

4.2. Staying at Home

Where resources and situations permit, it is best for individuals to stay indoors. This brings a dual benefit; firstly, it reduces the risk factor of contracting the virus and secondly; if one is an asymptomatic carrier, it prevents the spread of the virus. However, in economic analysis, what is more significant is the reduction in enforcement costs as a result of a lesser number of people being subjected to the policy or the rule. Those individuals who are vulnerable to infection may choose to self-isolate. Others may withdraw their children from school or stop visiting crowded places such as cinemas, clubs, gyms, and the like. This scenario we label as 'voluntary individual self-isolation'. In this response, we see some reduction in the costs. The next response level, we describe as being 'voluntary corporate self-isolation'. At this point, employers may voluntarily reduce the scale of their operations or even cease operations in order

¹³ Richard Cornes & Todd Sandler, *In the Theory of Externalities, Public Goods, and Club Goods*, 2 CAMBRIDGE UNIVERSITY PRESS 17, 36 (2012).

to protect their staff.¹⁴ What is important to note is that as each scenario has emerged that the social costs due to the health externality are likely to be falling, while the social costs due to the behavioural externality are likely to be rising. The behavioural externality will result in disorder costs such as reduced amounts of economic activity resulting in job losses. It could (and did) result in panic buying and hoarding. As externalities are internalized due to behavioural responses, the divergence between social and private costs will fall. If that differential falls to zero before equilibrium, then there is no market failure. In the Buchanan and Stubblebine terminology, the externality is not Pareto relevant. It may be the case; however, the externality persists in equilibrium – that is, it is Pareto relevant.¹⁵ At that point, market failure has occurred. In the case of COVID-19 market failure occurs when individuals, despite their voluntary behavioural responses, are still imposing costs upon each other. Given that there are two externalities at work, this is very likely to be the case. The health externality and the behavioural externality work in opposite directions to each other. As more people choose to voluntarily self-isolate in order to avoid contracting the virus, they impose greater behavioural costs on others.

5. BRIDGING THE GAP BETWEEN PRIVATE COST AND SOCIAL COST

The broadly accepted economic solutions to the negative externalities are the Pigouvian tax, Coasean bargaining, tradable permits and quotas. During the past six months, the Government has attempted resorting to all these possibilities.¹⁶ The Pigouvian tax is essentially the fine that the Government has levied on persons not wearing a mask in public places; Coasean bargaining can be seen in certain supermarkets and stores where one does not have access to enter unless a mask is worn and a subsequent random body temperature check is completed. Along with free dispensation of sanitizers, customers are requested to maintain social distancing, and there are instances where shops allow only one person to enter the aisle area. Tradable permits were seen during strict lockdowns where individuals were required to make inter-district passes or other forms of documentation like a COVID pass to move around. This solution is valuable when the strategy is set to reduce the quantity that is instrumental in assessing the marginal

¹⁴ Darcy Allen et al., *On Coase and COVID-19*, SSRN (Sept. 9, 2020), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3585509.

¹⁵ Carl J. Dahlman, *The Problem of Externalities*, 22 THE JOURNAL OF LAW & ECONOMICS 141, 141-162 (1979).

¹⁶ Andrew Winterbotham, *The Solutions to Externalities: From Pigou to Coase*, 26 THE STUDENT ECONOMIC REVIEW 171-180 (2012).

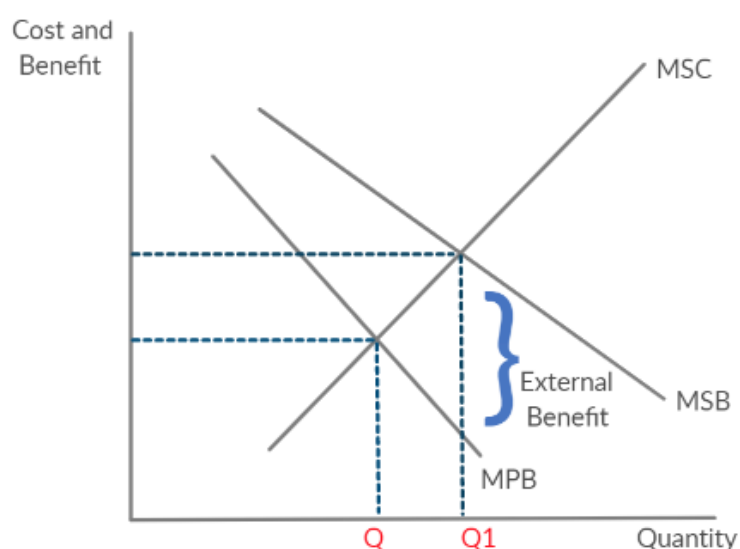
external cost. The price of permits can be very useful in nudging users to, firstly, reduce moving out and secondly, increase their private cost, thereby resulting in greater societal benefit. The idea of quotas is to limit the level of activity. In India, this level was set at daily essentials. This was crucial to decide what must be the components that add up to the socially optimal level of activity. Save for this a situation would arise where individuals who have the purchasing power are able to dictate the terms of the market who would then be unfair for individuals operating at an income basket below that. According to certain media houses and the reflection of the COVID dashboard in India, only some of these have been successful, and that is also limited to small geographical areas. Considering the Indian culture and diversity, coupled with the attitude towards rules and regulations, the social cost of enforcement, has been very high. What the situation warrants now is the solution where the social costs of enforcement in reducing and that can be achieved in the following ways:

- a. By leveraging and employing, in a controlled manner, the already existing three-tier governments with the local self-governments and other last leg policy implementers.
- b. Efficient implementation as a function of increased awareness and incentives.

5.1. Local Self-Government

Apart from the already existing norms, local self-governments are closely related to the Pigouvian Tax and Coasean Bargaining. Local governments are uniquely positioned to combat the issues from these aspects because, in the country, the most familiar face of administration is that of the local self-government. The cost of enforcement reduces because most of them are more likely to follow these when it is a decentralized implementation because the immediate surroundings behavioural cost is high. It is more likely that one's immediate surrounding will induce such behaviour expectations. The monitoring of movement is also higher when local authorities have a say over it. Ironically, the Disaster Management Act, 2005 does not emphasize on the constitutionally recognized and elected bodies of the Local Self Government. This provides more insight into the capacity of the country to home quarantine and gives valuable insight into the testing efficiency and need for institutional quarantine centres and other COVID related infrastructural facilities. The private cost of these individuals increases

to almost the level of social cost to cover the majority of the marginal external cost. This is because individuals are aware of the close nature of the implementation of the rules and regulations. It is more beneficial to look into the marginal benefit of this arrangement. The private benefit doesn't really change in this scenario but the social benefit increases because the transaction cost from a centralized point of policy implementation is higher than that of a decentralized one.



5.2. Efficient implementation as a function of increased awareness and incentives.

Implementation of rules and regulations need not always be archaic or draconian; they can also be socially evolved principles where awareness plays a pivotal role. Awareness is very closely linked to social outlook and accountability. The rules, regulations and fines and their penal provisions deal with the accountability part of it¹⁷ but, that is insufficient. Attitude and social perspective are inseparable from accountability as far as efficient implementation is concerned. In this scenario, awareness is about the disease and its spread and transparency about Government's actions and policies including data. Since there is no objective measure of

¹⁷ Classen, *Externalities as a basis for regulation: A philosophical view*, 12 THE JOURNAL OF INSTITUTIONAL ECONOMICS, 541-563 (2016).

efficiency or value of policing as a policy of implementation of rules, one can assume that it is not very efficient mainly because the number of people breaking the rules is insurmountable whereas the police force is overburdened with work and also prone to the infection. Furthermore, the aspect of repeating the mistake also persists. On the other hand, if the Government were to consider a combination of education and awareness along with it, the dissemination of information may be expected to reduce the repetition aspect and convince more individuals to abide by the law. This will help as a remedy to the externalities faced.

6. CONCLUSION

The spread of COVID-19 is not single-dimensional like the failure of public healthcare, but it involves variables from a subset of the overlap of psychology, institutional economics, medicine and international trade. A substantial part of the COVID pandemic deals with people not wearing masks and not following social distancing guidelines. Consequently, by employing an institutional economic analysis which helps in resolving the problem that has already been identified by the public at large, i.e., people identify the problem that other people do not wear a mask and follow social distancing; through institutional economics, we understand the rationale behind this.

This problem of the spread of COVID can be curbed by unifying the efforts of all levels of Government and citizenry. One way to overcome the overwhelming impediments is to not do anything about it, but this does not seem to be a viable solution, inter alia the Government has to protect the ideal of the welfare state and use the power vested in it when individuals beckon to them for rescue. The solution of increasing awareness combats the information asymmetry and the solution of local self-government deals with the moral hazard part of the causation of the externality. The academic nature of the market failure is such that it is inescapable, but as economic actors, it is justified to use tools to mend behaviour and achieve the true state of welfare. With such clear contextualization, elevating the private cost of individuals to include the external marginal cost shall achieve net nil externality. In conclusion, the genesis of economic analysis lies in human behaviour aimed at maximizing happiness within the social framework of society bound by incentives. Therefore, the decision of either wearing a mask or

not also stems from human behavioural patterns that work at different levels of preference attached to the happiness that is derived from not contracting the virus. Despite the limitations of bounded rationality, individuals value the sense of community as long as majority members of society take necessary precautions. These incentives also include disincentives like fines for not using masks in places of public access. A simple task of wearing a mask creates an entirely new area of behavioural study and lifestyle changes, all in order to save oneself and those individuals one comes in contact with making the economic analysis of that act an insightful one.