

¹ Safwan Hungund² Jyoti Kundale³ Reshma Gulwani⁴ Ashwini Raorane

Digital Urban Transportation: A Multi-dimensional Analysis of Uber's Business Model and Social Impact



Abstract: - Uber, a company that began as a solution to a minor inconvenience, has grown into a multi-billion-dollar empire with a complex history of secrets, lawsuits, and controversies. This paper delves into the inception of Uber, its rapid expansion, and the myriad challenges it has faced along the way. From their novel business model to the practices such as using Greyball software (charging different prices for different people) and clawing at competitor's necks, Uber has been the textbook example of ambition, innovation and controversy. The purpose of this research is to expose, at a granular level and by the most systemic manner possible, how Uber was built; what impacts it had on the current taxi industry; and what were the ethics involved in deploying these business strategies. To address Uber's key challenges, proposed solutions include reclassifying drivers as employees to provide better benefits and implementing ethical surge pricing to balance fare fluctuations. Additionally, enhancing data privacy measures and improving safety protocols will strengthen regulatory compliance and rebuild trust with both drivers and passengers.

Keywords: Uber, Ride-hailing, Gig Economy, Ethical Dilemmas, Regulatory Challenges.

I. INTRODUCTION

Uber Technologies Incorporated, more commonly referred to as Uber has completely disrupted the way people move from one location to another with the launch of its hugely successful application. Established back in 2009 by Garrett Camp and Travis Kalanick, Uber has now become a multinational company with its valuation exceeding 70 billion dollars. What initially started off as a service for hiring black chauffeur-driven style vehicles seamlessly through an application over the phone, Uber expanded with its cashless payments impact and accelerated integration with new mobile phones [1]. However, Uber has come under scrutiny on several occasions, notably almost through its entire business it has faced controversies with its policies regarding to classifying the drivers as freelancers. This has sparked a huge debate on whether this is indeed ethical considering the labor rights of those who are employed should be upheld [2]. The business model of Uber has been disruptive, they have been able to alter the dynamics of the entire taxi industry. The app is extremely user friendly as it allows the user to call for a ride in a few clicks together with a new fare automation. Popular alternatives for fare setting include car category, duration, distance as well as dynamic pricing during busy hours. Surge pricing, in particular, has been a point of contention, as it allows prices to fluctuate significantly based on demand, creating uncertainty for drivers and riders alike [3]. Studies suggest that Uber had employed aggressive strategies to gain market share, such as the use of Greyball software to avoid control by the authorities. Such behaviours are a cause for serious questions on the intersection between compliance and dialectical ethics [4].

As this paper focuses, it will delve deeper into various aspects of Uber's business practices, as well as the consequences of its business strategies and the consequences to the society in general. Namely these parts will provide an outline of Uber's history, its regulatory challenges and suggested measures to promote good business ethics in the future conclusions.

II. LITERATURE SURVEY

The review of literature shows an in depth analysis of Uber's business model versus the taxi industry and highlights the fact that Uber business model has a profound effect on the taxi industry. It starts with the brief history of Uber as a handyperson app that has transformed the transportation sector through the use of technology in making the services accessible at less cost. This was a precedent in the evolution of the cab industry, and as a result, the use of app-based taxi booking and administration systems throughout the globe gained greater traction. In contrast, the same rate of growth of Uber was accompanied by ethical and legal problems. One of them was the fact that Uber categorized its drivers to be independent contractors not employees which allows Uber to cut down costs on benefits

¹ *Corresponding author: Jyoti Kundale

² Safwan Hungund

³ Reshma Gulwani

⁴ Ashwini Raorane

administration but came under fire and commenced numerous courts. Also On the other hand, the introduction of such technology as Greyball, which allowed the company to avoid law enforcement in selected countries, also raised appropriate ethical questions concerning the company's policy.

Uber is not an altogether Make-over of their competitors such as Lyft in outdoing them. In their strategy of competition, Uber undertakes certain activities which cross the barriers of fair competition. These actions amply taint Uber's ethical brilliancy and call for moderation in order to allow competitiveness and technology development. To sum up, such research illustrates the ethical and societal context of the economic activities of Uber, and stresses the need to maintain balance between technological progress and moral business behaviour.

A. *The Inception of Uber:*

The inception of Uber can be traced back to the 31st of December 2008, when Garrett Camp and Travis Kalanick faced difficulty in hailing a taxi in Paris. This was the moment that set them off on the course to developing one of the most innovative solutions for urban transport. After getting back to San Francisco, they created UberCab, an application that allows using mobile phones to book cabs, making it easier to hail cabs and putting a modern twist on the taxi industry [5]. The founders initially thought of opening and running a taxi company. However, encouraged by Kalanick's experience with Red Swoosh, a P2P file-swapping company which Akamai acquired in 2007 for \$2million, they switched to a platform-based business model. Uber would not have cars, yet it would connect people looking for rides with independent drivers. Such an approach facilitated quick growth without significant asset investments, thus providing both passengers and drivers with flexibility and confidence that the service would always be available [6].

Uber introduced new experimental practices such as a taxi fare calculator which takes into account several aspects: class of the car (Uber Go, Uber X, Uber XL, Uber Black), rate per minute, and rate per kilometre, together with an adjustable multiplier to account for differences between the supply of and demand for rides in certain regions.

For example, in high-demand zones with fewer drivers, prices are elevated using a surge multiplier. This multiplier is calculated by dividing the map into hexagonal grids and analysing demand-supply dynamics within each grid. If demand is higher than supply, the multiplier increases, elevating fares accordingly [7][8].

Additionally, Uber introduced a dual-rating system where passengers could rate drivers and vice versa. This system stered mutual accountability and encouraged professional and courteous behavior from both parties, further enhancing the platform's reliability and user experience.

1) *Initial Challenges and Strategic Shift:*

Let's start from the beginning. Uber started as a luxury black car service at premium prices. Nonetheless, despite the expense, there were such advantages to this application as convenience, real-time tracking, and cashless payments. All these attracted a niche market of affluent customers in San Francisco. Nevertheless, Uber soon began encountering regulatory issues. The city authorities of San Francisco accused Uber of operating illegally in October 2010 [9] because traditional taxi companies owned their vehicles and employed their drivers, unlike Uber, which did none. Travis Kalanick's reaction was to rename UberCab to Uber and say that it was not a cab company but a technology company, with its drivers being classified as independent contractors instead of employees [10]. This made it possible for Uber to avoid numerous conventional taxi industry regulations.

The move to classify drivers as independent contractors rather than employees had far-reaching implications. By doing so, Uber avoided having to provide benefits like health insurance, paid leave, and retirement contributions, thereby significantly reducing operational costs. However, this decision also led to controversies and litigation regarding the rights and protections afforded gig economy workers. Up until now, there have been many lawsuits over the legal or ethical dimensions of this classification [11]

B. *Expansions and Growth*

Uber's early growth was fueled by significant venture capital investments, beginning with \$4 million in seed funding in 2010, followed by an \$11 million Series A round in early 2011 and a \$37 million round later that year [12][14]. These funds made it possible for Uber to further its operations outside of San Francisco, reaching New York and Chicago by 2011's close. The company can be seen to have utilized creative methods during their

marketing including giving drivers an iPhone with the Uber app installed and offering free rides alongside various discounts to passengers [13]. Such endorsements made it significantly easier for Uber to develop a vast amount of drivers and passenger, this enabled the company to develop a strong base for future expansion.

In the year of 2012, Uber decided to go International starting with Paris and extending to a few Canadian cities and parts of the UK [15]. However, this entire period wasn't devoid of issues, Uber was met with a lot of resistance from local taxi firms along with the government which resulted in Uber having to deal with a multitude of lawsuits, protests and similar issues. This approach was essentially "regulatory hacking", in which Uber would begin their operations and deal with compliance afterwards and although this received a lot of criticism it allowed Uber to break into the market quicker [16].

Globalization meant that the company also had to meet varying regulatory and cultural requirements. For example, in India Uber launched two-wheelers and autorickshaws in order to suit the local market and consumer behavior. Despite operational difficulties arising from differing infrastructure and customer expectations, Uber's ability to customize its services helped establish its presence globally, demonstrating the scalability and adaptability of its business model.

1) *Legal and Regulatory Challenges:*

Uber's expansion into global markets triggered several legal and regulatory obstacles across the world. The local governments, along with taxi associations, raised complaints against the company for functioning without abiding by the laws and disrupting the taxi industry's business. On the other hand, Uber tried to get out of these accusations through a mix of legal manoeuvres and fierce lobbying, claiming that they were a technology platform and not a transportation company, which is why the same regulations as taxi companies did not apply to them. This highly contentious view allowed Uber to continue working in various markets in spite of the opposition. Yet in other places, the company was prohibited entirely, imposed large fines and even extensive restrictions which required them to make use of extreme compliance, litigation, negotiation or lobbying [17][18].

The pressure from regulators was applied from local, nation, and even international regulators. Other factors like investigations and court actions also proved to be barriers to Uber's objectives. In 2017 the highest court of Europe delivered a crucial judgment arguing that Uber should be viewed as a taxi service rather than a digital service, which meant Uber was needed to follow strict guidelines within Europe. This move served to emphasize the broader issues surrounding the regulation of gig economy businesses, which operate out of digital platforms but on different operational models. These legal battles underscored the complexities of integrating disruptive business models into existing regulatory frameworks while shaping the regulatory discourse for the gig economy [19].

C. *The Greyball Controversy:*

Uber created a software tool known as Greyball that is mired in controversy. Through the integration of geo-fencing, content fingerprinting, credit card tracking, and even social media searches, Greyball was able to ascertain whether a regulator or a law enforcement officer was trying to surveil its operations. Uber would subsequently send these users to a fake version of the app called a "honey pot" that limited or offered no rides at all, thus scuttling regulatory enforcement and sting operations [20][21]. In the beginning, Greyball was employed with the intention to beat fraud and protect harassment, but the way it was employed for regulatory evasion raised numerous ethical and legal issues [22].

The deployment Greyball put Uber in the middle of a storm considering it was purportedly illegal for the company to undermine legal processes, fool regulators and spy on users. The tool was also concerning because in order to build such analysis, user data was mined and profiled which bordered on a serious data privacy issue, both in regard to the company's future accountability and also editorial agency. All this led to a US version of the Leveson inquiry after the New York Times first revealed the program in 2017, and the company came under wider condemnation. All this led to investigations, lawsuits, and several resignations of directors who were involved in the Greyball program's inventions. And such incidents led to regular toughening of Uber's policies on data usage and cooperation with regulatory authorities [23].

D. *Competitive Tactics and Market Domination*

1) *Aggressive Strategies Against Competitors*

The business strategy employed by Uber in increasing its market share of taxis in the United States has been characterized by fierce competition against its rival, Lyft. Uber staff crowded the Lyft app to book and cancel appointments at large, which irked the drivers and hampered the service. Further, Uber utilized a data analytic software, nicknamed 'HELL', to monitor competitive activities, focusing on dual service drivers and bribing them to use only Uber. This tactic substantially decreased the driver capacity of Lyft, thus enhancing the market share of Uber. Beyond driver incentives, Uber engaged in aggressive marketing and promotional campaigns, offering generous rebates to attract passengers. While these tactics bolstered Uber's dominance, they triggered price wars, reduced fares, and intensified market competition, straining Uber's finances and raising questions about the sustainability of its business model [24].

2) *Dark Strategy to Disrupt Lyft*

Uber had a manipulative and dark strategy where it told its drivers to call fake Lyft rides so that they would stay busy with them and fail to accept real ride requests. They used the app of their competitor, Lyft, for booking rides, only to cancel them immediately after the driver arrived at the pickup point. As a result, Lyft drivers wasted significant time and effort chasing non-existent passengers, leading to frustration and decreased earnings. In contrast, Uber ensured that its own drivers were always ready to ferry actual passengers, which gave it an upper hand over competitors as well as increased its market share at the expense of Lyft [25].

3) *Strategic Undermining and Financial Sabotage*

Uber employed aggressive tactics to outcompete Lyft, including instructing staff to book Lyft rides, interact with its drivers, and persuade them to join Uber, effectively poaching drivers from its rival. Additionally, CEO Travis Kalanick reportedly interfered with Lyft's fundraising efforts by contacting potential investors, suggesting Uber was also planning to raise funds. This strategy aimed to create uncertainty about Lyft's financial stability and future, thereby deterring investor support and redirecting funding to Uber. These maneuvers not only strengthened Uber's market position but also significantly weakened its main competitor [26].

4) *Lobbying and Political Influence*

Uber's expansion strategy heavily relied on aggressive lobbying efforts to influence regulatory frameworks in various countries. The company directly engaged with key government figures, including Emmanuel Macron in France, Donald Trump and Joe Biden in the USA, and Boris Johnson in the UK, seeking to reshape taxi regulations on a country-by-country basis. Beyond direct lobbying, Uber implemented grassroots campaigns, mobilizing riders and drivers to support its lobbying agenda through petitions, rallies, and social media campaigns. These efforts garnered widespread public backing, enabling Uber to influence regulatory decisions by leveraging popular support [27].

Uber employed experienced lobbyists and public affairs professionals to advocate for its interests, actively participating in regulatory hearings, policy submissions, and meetings with government representatives. However, critics argued that these aggressive lobbying tactics risked undermining democratic processes, allowing Uber to evade accountability and compliance with regulations. Concerns over undue influence were exacerbated by controversial practices like Greyball, further eroding trust between Uber, regulators, and the public [28].

E. *Financial Hardships and Driver Exploitation*

1) *Financial Model and Driver Compensation*

Uber's financial model is based on a 30% commission from each fare, leaving the remaining 70% for drivers. However, this split does not consider the significant expenses drivers must bear, such as vehicle maintenance, fuel, and loan payments. As a result, many drivers face economic hardship, with some even resorting to extreme measures, including suicide, under financial pressure [29]. The scenario in question demonstrates the shortcomings of Uber's model which is based on a selfemployment strategy rather than employment contracts. While this model helps the company in lowering the payroll expenses and the provision of employee benefits, it, however, places the

burden of vehicle related costs entirely on the drivers. Costs such as paying lease or purchasing a vehicle, fueling the vehicle, and other maintaining it can be especially discouraging for those working full time and using Uber as their sole source of income [30].

Considering vehicle costs aside, there are issues drivers deal with that include cost and demand variability, and absence of fare stability. Another unique approach used by Uber is surge pricing, which increases the earnings during busier times of the day but instead results in provoking a large amount of uncertainty regarding earning inflating and waiting time output for the company's drivers. This unpredictability only serves to worsen the financial condition of the drivers and hence makes achieving any kind of stability quite difficult [31].

2) *Protests and Demands for Better Compensation*

The financial difficulties faced by Uber drivers have instigated mass protests and claims for improved wages. Drivers have demanded lower commission rates, improved rewards against their expenditure, and better conditions of engagement. In solidarity with anti-uber protests, traditional taxi companies which too have been adversely impacted financially have joined the rallying calls. Protests have witnessed thousands of drivers boycotting work for an entire day signifying the overdue resentment among gig economy workers across the globe. These activities have underscored other general issues of poverty, abuse, and the desire for dignity and wages in the gig economy [32].

To mitigate the drivers' protests, Uber implemented policies which are expected to induce good feelings among drivers, such as the tipping system through the application, fare changes and better support. Nonetheless, it is argued by other experts that such practices are no more than window-dressing measures that conceal important issues connected with the low level of wages and poor working conditions. The economic model and the payment system concerning Uber have effects not only on the drivers but also on the change of the ordinary taxi service and the movement to the jobs within the gig economy. This transformation triggered alarming debates about the issues of labor rights and the socio-economic effects of the gig economy business strategies and the nature of work in the future.

F. *Scandals and Legal Battles*

Uber has encountered serious controversies particularly with regards to security and safety. The platform has received allegations of cases of drivers being involved in crimes and even sexual assaults giving a rise to serious questions about the measures of safety set in the application. The aggressive growth of Uber as well as the fact that the drivers are deemed as independent self employed and also the lack of attention to these driver's background checks also added to these issues further. Although Uber does perform background checks on their drivers, they typically aren't as extensive as what is obligatory for standard taxi drivers, which causes suspicion regarding their usefulness. In the aftermath of these events Uber rolled out features including real time tracking of the rides, buttons that can be pressed for emergencies during rides, and stricter checks on the backgrounds of the drivers. These actions, however, were heavily criticized and pointed to reactionary stances of Uber rather than a sharer and overall passenger safety enhancing strategy [33]. In addition to the above Uber has found itself in legal and PR disputes that have had a toll on its reputation and functioning. Most importantly, however, was the Waymo lawsuit in 2017, Google's self-driving car company, concerning Uber's alleged theft of trade secrets for which it settled for *USD 245 million* in 2018 [34].

Besides, Uber continues to face lawsuits of new nature, on the classification of drivers as independent contractors, its use of the controversial Greyball program, and allegations of unfair competition and antitrust violations. These legal disputes have raised broader questions about labor rights, corporate governance, and accountability within the gig economy. The unresolved litigation, coupled with conflicting regulatory decisions in various jurisdictions, underscores the legal and ethical complexities embedded in Uber's business model and operations [35][36].

G. *Leadership Changes and Attempts at Reform*

1) *Resignation of the CEO*

The CEO's exit in June 2017 was the beginning of the hard times for Uber as it had to tackle all manner of internal

and external controversies such scandals and legal suits. The resignation was part of the effort to rectify the many challenges the company was facing and to transition it in a more responsible and viable business direction.

2) *Appointment of New Leadership*

After that, an appointment of a new leader was done so that the development of trust and image rebuilding was possible. Reinforced focus by the new leadership was on driver engagement, customer interactions, service delivery, safety, and legal aspects. Many of those concerns, especially in relation to litigation and other infamous activities were addressed, even though there still are issues regarding the growth and profitability of the firm on a long-term basis.

Key Problems in Uber's Leadership and Operations:

- Leadership changes and internal scandals.
- Aggressive growth strategies leading to controversies.
- Legal challenges and regulatory issues.
- Difficulty in maintaining a sustainable and profitable business model.
- Ongoing safety concerns and driver dissatisfaction.
- Complexities within the gig economy impacting long-term stability

III. EXPERIMENTAL OR MATERIALS AND METHODS

This section describes the tools and techniques of data collection, as well the analytical frameworks that were employed in carrying out this research. The research uses a combination of qualitative and quantitative analysis, which is a multi-method approach and deeply analyzes Uber's challenges, normal operations, practices in business and effects on stakeholders. Key Elements include:

A. *Data Collection:*

- 1) Secondary Sources: Extensive review of published literature, media reports, corporate filings, legal documents, and government regulations to gather relevant data.
- 2) Case Studies: Particular cases like legal battle for a particular period of time (e.g., Waymo lawsuit), safety scandals, and regulatory disputes, were analyzed to provide real-world context.

B. *Methodology:*

- 1) Qualitative Analysis: Thematic analysis was employed to identify recurring issues in Uber's business practices, such as driver exploitation, dynamic pricing, and regulatory challenges.
- 2) Quantitative Analysis: Data on driver earnings, fare structures, and ride volume were analyzed using statistical tools to measure financial stability and the economic impact on drivers.
- 3) Comparative Analysis: Uber's policies and practices were compared with its competitors to evaluate its market position and ethical considerations.
- 4) Policy Review: Examination of local and international regulations affecting Uber's operations to understand legal and compliance challenges.

C. *Analytical Framework:*

- 1) SWOT Analysis: To identify Uber's strengths, weaknesses, opportunities, and threats in the global ride-hailing industry.
- 2) Impact Assessment: Evaluation of Uber's practices on stakeholders, including drivers, passengers, and regulators, with a focus on economic, social, and environmental dimensions.
- 3) Trend Analysis: Examination of historical data to identify trends in driver earnings, customer complaints, and market expansion.

D. Tools and Software:

- 1) Data Visualization Tools: Tools such as Microsoft Excel and Tableau were used to present findings graphically.
- 2) Content Analysis Software: NVivo was utilized for qualitative analysis of textual data from interviews and reports.
- 3) Geospatial Analysis: Geographic data on ride volumes and surge pricing patterns were mapped using GIS tools to study regional variations.

E. Limitations:

- 1) Restricted access to proprietary data from Uber limited the scope of some analyses.
- 2) Variability in regional policies and practices posed challenges in standardizing comparisons across different markets

IV. PROBLEM

A. Driver Classification and Compensation

Employers often classify drivers working for Uber, Lyft, or a similar ridesharing business as independent contractors. As a consequence, Ridesharing firms are not required to offer employee benefits such as health insurance, paid leave, retirement contributions, and more. This position can also turn into a legal problem as it encroaches on the right of the workers such as the professional drivers, who might be classified as full-time, but do not enjoy any form of job security and essential benefits which would ordinarily be accorded to them. The end result is net loss of revenue for the drivers, who are self employed and have to meet the expenses of vehicle upkeep, gasoline, insurance and the like. Also, the variability of income due to grossly fluctuating demand and shifting fares makes it worse for them, which at times escalates to protests, or at the other extreme, even suicides.

B. Surge Pricing and Dynamic Fare Calculation

There are several controversies surrounding Uber's dynamic pricing policy, which also led to other numerous arguable issues. Dynamic fare pricing maintains algorithm driven prices that change in real time depending on supply and demand, particularly during rush hours or emergencies when prices go up significantly more than normal charging fare. This model has generated a global flame, especially during a situation where the users have no option other than being charged at the peak of a natural calamity. Though Uber asserts it is a technical respect, the surcharge mechanism is regarded by many as a sham; Uber asserts it works because it pulls more drivers into areas of unfilled need. The ambiguity issues on fare determination, along with pricing unfairness feels, lowered the passenger satisfaction of Uber and even regulators trust to the mass.

C. Data Privacy and Greyball Software

Throughout its existence, Uber has undergone a lot of criticism, which includes its use of data and its privacy practices, for using the Greyball Software. Greyball was used to alter the app's status so that regulatory authorities wouldn't be allowed to use the application in places of business that weren't legal for the service. This has been condemned all over the world as immoral practice of bypassing local laws. Moreover, Uber gathers unique amounts of data from all users, including aftermath of the trip where the rider is tracked, which causes a lot of issues regarding privacy. The data accumulated by the company through misuse undermines the user's trust and at the same time calls into doubt the legality of the Uber's principles of data handling.

D. Safety and Security Concerns

Uber has been embroiled in several controversies ranging from security and safety, and it has not come out unscathed. Shocking reports of Uber drivers premeditating sexual assaults, kidnapping passengers, and in some cases, even murder, have turned many people's perception towards the platform upside down. However, Uber does make an effort to check the backgrounds of its drivers, it is evident there are loopholes because the safety procedures do not cover a range of checks that the conventional taxi services do, thus making the public vulnerable to more incidents. The problem of safety is further aggravated by Uber's rapid growth, where the focus was directed only towards scaling instead of selecting the right drivers and safeguarding the customers. Detractors have claimed that

Uber is simply playing catch up when it comes to ensuring the safety of its passengers and have relied on the introduction of new features post a negative event.

E. Regulatory Challenges and Legal Battles

Uber has faced intense criticism ever since its aggressive expansion move into new markets without properly understanding the regulations. The company's so-called 'regulatory hacking' sophistry consists of providing the service in different jurisdictions without the requisite licenses hence drawing ire and multiple lawsuits from the city administrations as well as the Taxi unions. On its timeline, Uber has had to pay heavy fines, received permanent bans and even had to negotiate terms after launching its services unlawful Uber's activities. This not only explains the large number of legal cases Uber has been in adorably enough all over the world, but also soured its relationship with authorities and the public. These shortage of licenses for providing the service alongside with the ability to self classify drivers continues to be one of the major challenges that Uber faces today.

F. Driver Exploitation and Financial Hardships

The earnings policy of Uber has been a contentious issue for many drivers as they give only a mere 70% of the fare to the driver and retain 30% as their share which when aggregated along with the high vehicle maintenance costs, fuel and loan repayments show. Most drivers earn far less than they anticipated. For some drivers, the financial burden has been unprecedentedly high, and they have sadly opted for Suicide. This occurs as a result of the economy, which has a handoff method of addressing operational expenses directly to its workers while allowing companies like Uber to reduce their labour costs. This has led to widespread protests and calls for fairer compensation and better working conditions.

G. Competitive Tactics and Market Domination

Uber has been charged with using unethical and brute-force tactics to control the ride-hailing industry. One of the tactics involved creating false Lyft rides for its competitor and then canceling them, thereby disrupting Lyft's operation and irritating its drivers. Likewise, Uber used a specialized tool for data analysis called "HELL" which analyzed its adversaries' movements and distinguished those drivers that worked for Uber as well as Lyft. After that, Uber offered incentives to such drivers to make them Uber exclusive, thereby increasing Uber's driver base and debilitating Lyft. Such predatory practices were accompanied by aggressive marketing and promotion, and enabled Uber to capture significant market share, but also attracted profuse criticism for compromising fair competition.

H. Scandals and Leadership Issues

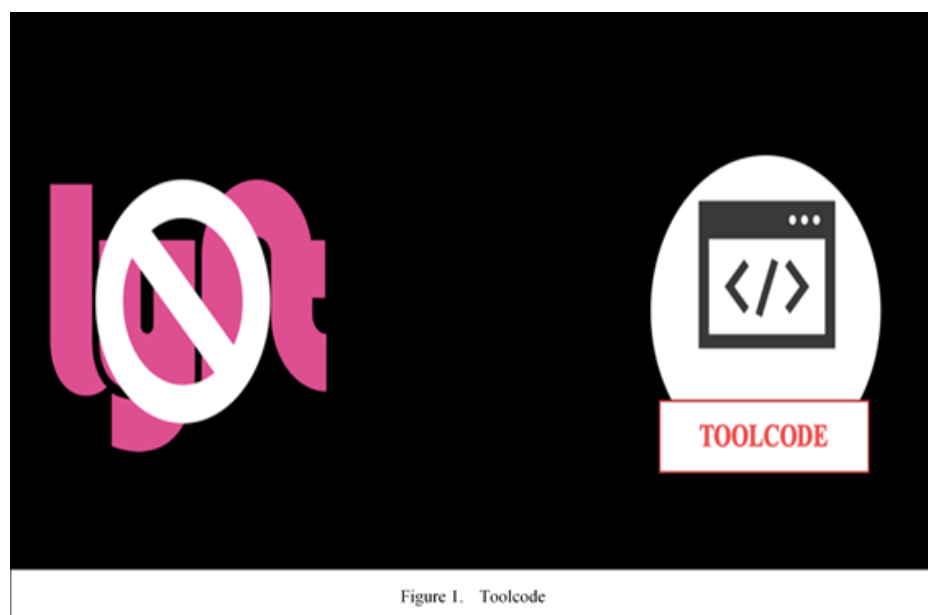
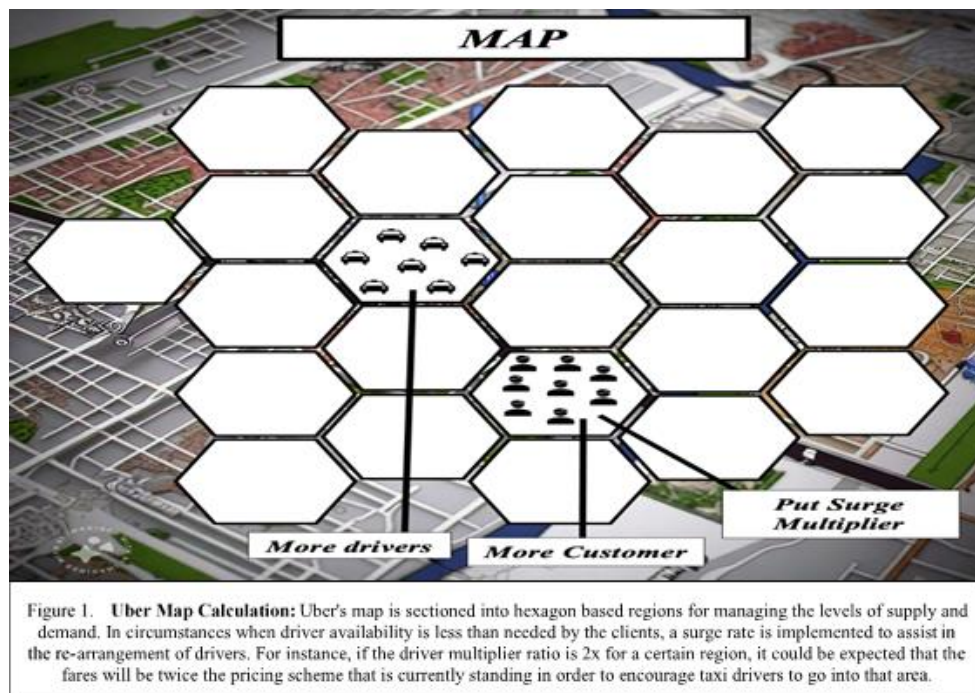
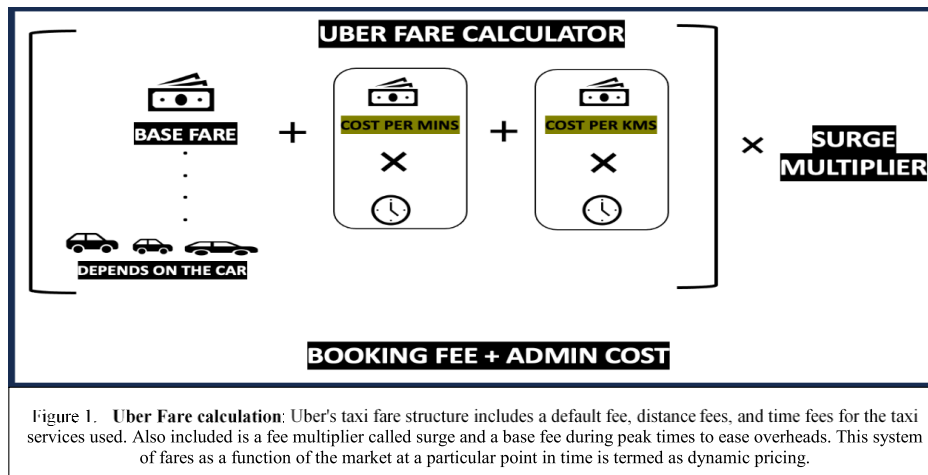
Uber has been surrounded by scandals that have greatly impacted its reputation. The most notable issue was related to sexual harassment cases that promoted the co-founder and CEO, Travis Kalanick, to resign. Furthermore, Uber has also had settlements with titular property lawsuits in the case of Waymo, where they were required to pay \$245 million. The scandals have shown that Uber has several flaws in its culture including impaired accountability and transparency. Although it was hoped that the leadership changes, such as the acquisition of Dara Khosrowshahi as Uber's CEO, would reform the image of the company, the legacy of these controversies still remain.

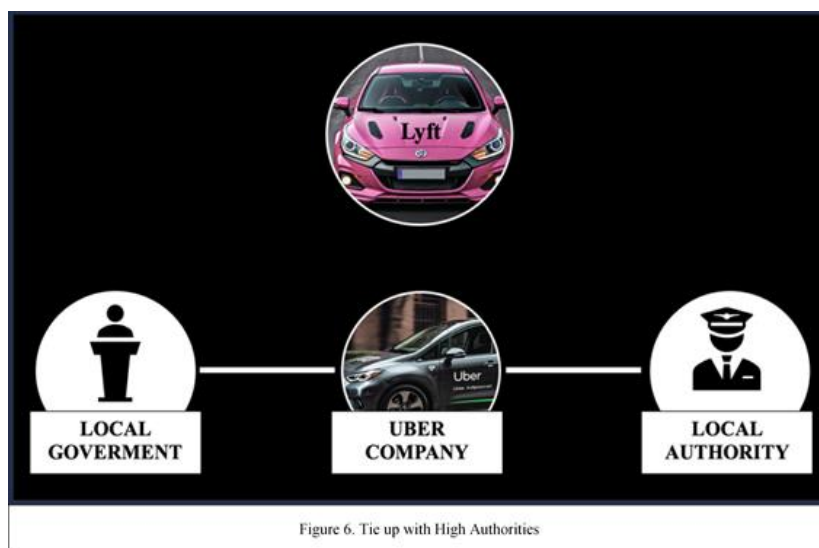
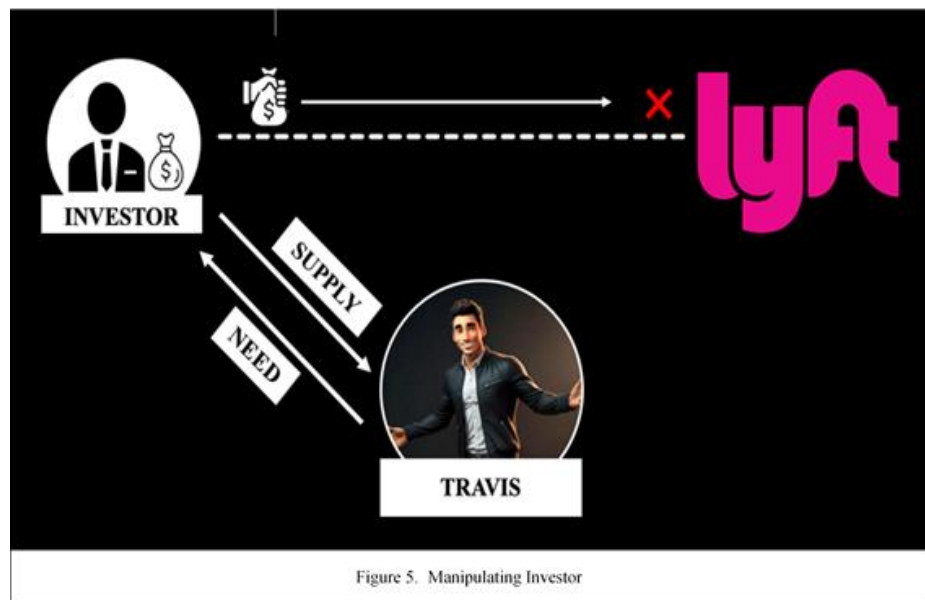
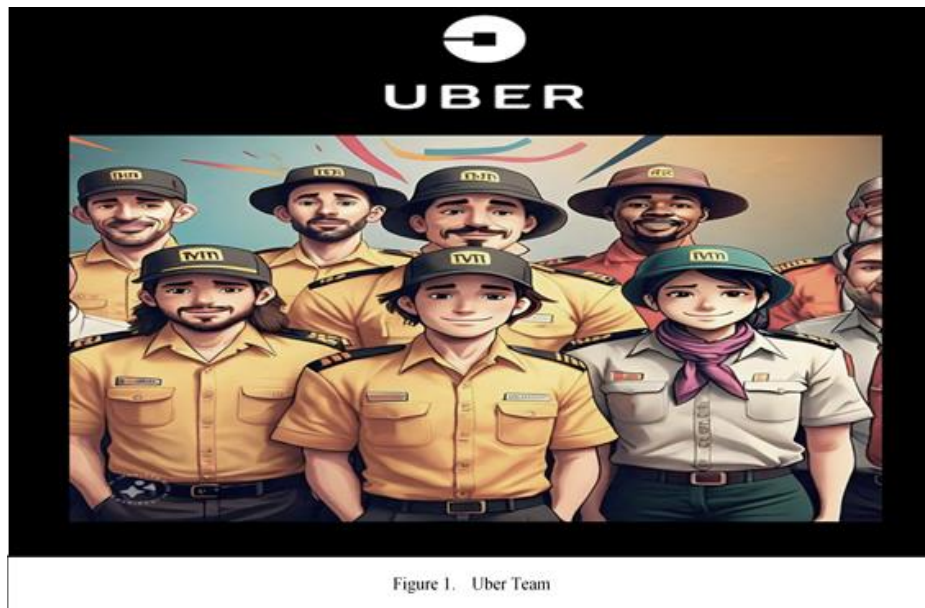
I. Environmental and Sustainability Issues

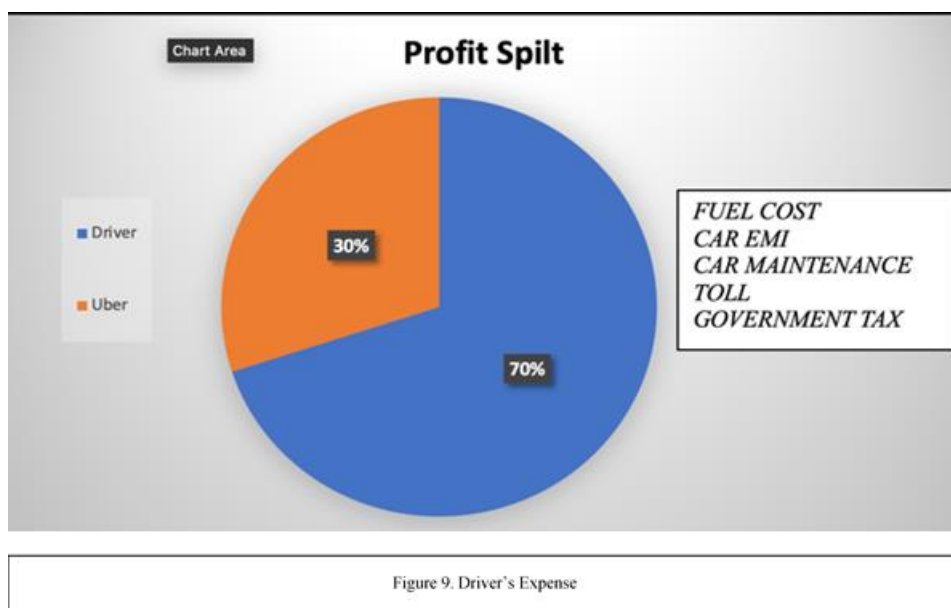
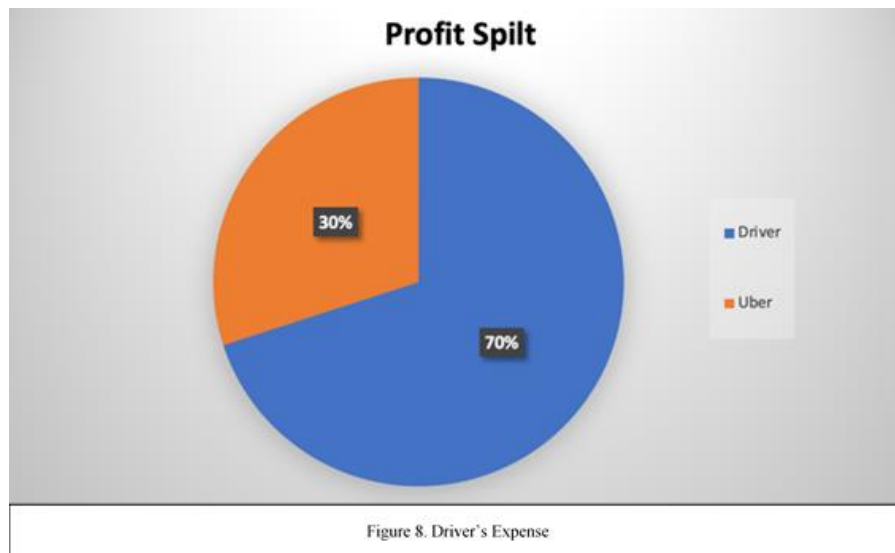
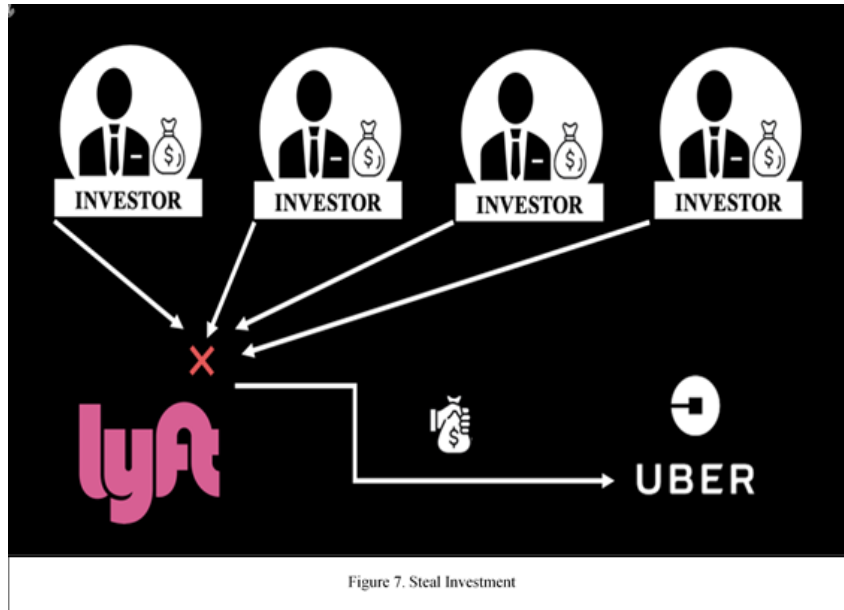
The growth of Uber as an international business means that there will be closer attention paid to the economic and environmental policies of Uber. The excessive adoption of private automobiles for ride-hailing service contributes to urban traffic, congestion, and air pollution. Despite Uber's efforts to popularize ridesharing (UberPOOL), its environmental effect is still relatively modest. In addition, the continued use of conventional automobiles by Uber is inconsistent with the global trend towards greener transportation. In our view, Uber's lack of progress in implementing more robust sustainability measures, such as adoption of electric cars or encouraging the use of public transportation, is a serious drawback in the company's long term plans).

V. FIGURES AND SOLUTIONS

A. Figures







B. Solutions

1) Driver Classification and Compensation

Solution: Either reclassify drivers as employees or create hybrid model (employee-contractor status).

a) *Implementation:* Uber should start moving towards a hybrid employment model in which drivers are considered independent but get crucial benefits such as health insurance, paid leave, retirement plans, among others. This is necessary in order to restructure driver contracts and work with regulatory bodies in achieving relevant legislation.

b) *Benefit:* This solution solves the financial insecurity of the drivers by creating safety with regards to at least healthcare and other essentials. This practice would eventually lead to stability of their earnings with a base pay together with commission which would help in reducing turnover and legal problems.

Supporting Initiatives:

c) *Unionization:* Form a drivers' council of drivers or a driver's union so that drivers have a voice regarding their concerns in company practices. The former could facilitate the negotiation of such terms and encourage fair wages that would enhance the relationship between Uber and its drivers.

d) *Clear Compensation Structure:* Have provisions for strategies that will foster trust in drivers while also providing clarification over how earnings statements on fare calculation, commission and deductions will be explained.

Equation: Hybrid Compensation Model The total compensation of a driver can be calculated as a combination of fixed salary and variable earnings based on rides completed:

$$\text{Total Compensation} = \{\text{Base Salary} + \sum_{i=1}^n (P_i \times Q_i) \times (1 - C)\}$$

Where:

(1)

i. Base Salary is the fixed salary paid to drivers.

ii. P_i is the price per ride for ride ii.

iii. Q_i is the number of rides completed for ride ii.

iv. C is Uber's commission rate.

2) Surge Pricing and Dynamic Fare Calculation

Solution: Implement an ethical surge pricing model with clear explanations.

a) *Implementation:* While surge pricing incentivizes drivers to enter high-demand areas, it should be capped during emergencies, natural disasters, or public crises to avoid exploiting vulnerable passengers. Uber can provide a real-time fare calculation breakdown within the app, allowing passengers to see the reasons behind price surges (e.g., high demand, driver shortages).

b) *Benefit:* Improving transparency and assuring ethical use of surge pricing will aid Uber in the earning back of public faith, as well as allow maintaining a fair system beneficial for both the drivers and the customers.

Supporting Initiatives:

c) *Passenger Subsidies:* To help ease the burden on passengers, consider offering discounts or vouchers to important workers, or during times of crisis.

d) *Dynamic Surge Algorithm Updates:* Regularly audit and refine the surge pricing algorithm to reduce extreme fare spikes and adjust more intelligently based on region-specific data.

Equation: Capped Surge Pricing Model to restrict escalation of fares during emergency situations, the surge multiplier can be capped using the following equation:

$$P = (\beta_0 + \beta_1 D + \beta_2 T) \times \min(S, S_{\max})$$

Where:

- i. P is the final price.
- ii. D is the demand (number of ride requests).
- iii. T is the time of day (to capture peak/off-peak).
- iv. S is the surge multiplier.
- v. S_{\max} is the maximum allowed surge multiplier during emergencies.
- vi. $\beta_0, \beta_1, \beta_2$ are coefficients to be estimated from historical data.

C. Data Privacy and Greyball Software

Solution: Create strict procedures for safeguarding user data and entirely abolish Greyball-like tools.

a) *Implementation:* Uber is obligated to enforce rules globally, for example, the General Data Protection Regulation (GDPR) of the EU and the California Consumer Privacy Act (CCPA). Uber should, as already said, enable users to manage their data in an effective manner, for instance, allow users to request to not be tracked, or that their data to be deleted. No Greyball nor any other form of software that escapes regulation must not be used, but prohibition of such software must be accompanied with an endorsement of openness regulation must be permanently banned, with a public commitment to transparency.

b) *Benefit:* This would help restore consumer confidence, improve regulatory compliance, and shield the company from further lawsuits related to privacy issues.

Supporting Initiatives:

c) *Regular Privacy Audits:* Develop planning and processes for external privacy auditing in order to check whether Uber complies with the requirements for conducting responsible and accountable environment management. Audit results should be published..

d) *Data Protection Training:* Designate external trainers to teach the supervisors and contractors concerned the requisite aspects of data protection.

Equation: Privacy Risk Index (PRI) To mitigate privacy threats and assist prevent data breaches Uber can apply privacy risk index:

$$PRI = \frac{\sum_{i=1}^n (D_i \times S_i)}{N} \quad (3)$$

Where:

- i. D_i is the sensitivity level of the data type ii (e.g., location, payment info).
- ii. S_i is the severity of a potential data breach for data type ii.
- iii. N is the total number of data types Uber collects.

D. Safety and Security Concerns

Solution: Strengthen driver's background checks, integrate safety programs, and implement safety features in application.

a) *Implementation:* Uber's hiring process should also incorporate psychological evaluations and assessments, in addition to background checks, that are usually the norm. Every other year drivers would need to go through an assessment of their driving history as well. In addition to this, every driver would be required to undergo training on conflict management, crisis management, and passenger security.

b) *Benefit:* By improving its security systems, Uber will fulfill the requirements for passengers and be able to gain the reputation of a safer means of transport.

Supporting Initiatives:

c) *Real-time Safety Features:* In order to enhance passenger safety within the Uber app, Introduction of emergency buttons that connects to local authorities, Introduction of live tracking of the ride, Initiation of ride sharing, and others can be helpful. Uber should allocate a portion of the funds for advanced technology solutions to improve passenger safety.

d) *Driver Assistance Programs:* A safer environment for passengers can be achieved by establishing programs that assist drivers with mental health, financial literacy and private safety.

Equation: Safety Risk Reduction Uber can enhance security by implementing a driver safety measure, which has an inverse relation with incidents and rides completed:

$$\text{Safety Score} = \frac{R}{I + 1} \quad (4)$$

Where:

i.R is the number of rides completed.

ii.I is the number of safety incidents reported.

E. Regulatory Challenges and Legal Battles

Solution: Strengthen regulatory relationships and develop a culture of compliance..

a) *Implementation:* It is necessary for Uber to abandon its current model of regulatory hacking and develop a more constructive approach to local and national authorities. A specific regulatory team must also be set up to investigate local laws before offering services and deal with local governments. This team can also prepare investor and compliance reports on a regular basis and submit them to the management instead of dilatory legal tactics.

b) *Benefit:* Having friendly relationships with the boundaries will minimize the legal management of conflicts, ease entry into the markets and save the business from paying penalties and periods of bans.

Supporting Initiatives:

c) *Transparent Operations:* Offer information on regulatory compliance on a voluntary basis and in a biannual basis. That can reduce some anxiety from the people and the authorities' outbursts.

d) *Third-party Audits:* Conduct regular third-party audits to ensure all of Uber's practices are in full compliance with local laws. This can also identify areas of potential risk before they become legal problems.

Equation: Compliance Cost-Benefit Ratio Uber can assess the cost of regulatory compliance relative to the benefits of operating in a region:

$$\text{Compliance Ratio} = \frac{C \text{ compliance}}{B \text{ revenue}}$$

Where:

i.C compliance is the total cost of compliance with local regulations.

ii.B revenue is the total revenue generated from operating in that region.

F. Driver Exploitation and Financial Hardships

Solution: Enhance the pay for the drivers and also implement a cost-sharing strategy.

a) *Implementation:* If Uber wishes to disregard their 30% cut, they could look towards introducing a revenue-sharing model for their drivers in order to maintain a stable income threshold in the off peak hours, while at the same time being able to maintain the cut in peak hours. Furthermore, Uber could aid in reducing operational costs for their drivers by combining with fuel corporations, automotive insurance firms, and maintenance service providers in order to give the drivers subsidies or discounts.

b) *Benefit: As this model aids the drivers by bringing down their cost of operation, the drivers will be given improved financial stability, resulting in increased retention and satisfaction.*

Supporting Initiatives:

c) *Guaranteed Minimum Wage: During the time periods when Uber sees a decrease in demand, they could look to keep a minimum pay for particular hours in order to ensure that the drivers are not taken advantage of.*

d) *Driver Incentive Programs: Evaluation any incentive programs strategically directed towards drivers who perform well, show loyalty or achieve a set target or goal, which includes both monetary (examples bonuses) and non-monetary (examples health benefits) returns.*

Equation: Minimum Wage Guarantee Uber can ensure drivers earn a minimum wage using a guaranteed income model:

$$\text{Guaranteed Income} = \max \{W_{\min}, \sum_{i=1}^n (P_i \times Q_i \times (1 - C))\} \quad (6)$$

Where:

i. W_{\min} is the minimum wage for the given time period.

ii. P_i is the price per ride.

iii. Q_i is the number of rides completed.

iv. C is the Uber commission rate.

G. Competitive Tactics and Market Domination

Solution: Adopt ethical competition strategies and foster partnerships.

a) *Implementation: Uber may need to drop its predatory approaches, such as booking fake rides with its competitors. Instead, it can nurture healthy rivalry with its competitive edge. Uber and its competitors could work together on public safety campaigns, joint marketing efforts, or even environmental issues as a good example of Uber's collaboration potential.*

b) *Benefit: Ethical competition improves Uber's image and builds trust among both customers and regulators, leading to long-term sustainability in the market.*

Supporting Initiatives:

c) *Joint Initiatives: Assist your rivals in tackling concerns that impact drivers' safety and other aspects together. This partnership might assist in making the whole industry higher up and lessen resentment among rivals.*

d) *Ethical Marketing: Propose integrated and complete honest campaigns of Uber, showing its advantages but casting no doubt on other competitors. This can help build the reputation of the company having ethical standards of doing business on the market.*

Equation: Market Share Growth To model Uber's market share growth, we can use:

$$\Delta M = \frac{\Delta U}{U + C} \quad (7)$$

Where:

i. ΔM is the change in market share.

ii. ΔU is the change in Uber's user base.

iii. U is the current Uber user base.

iv. C is the number of competitors' users.

H. Scandals and Leadership Issues

Solution: Reinforce ethical culture and enhance corporate governance.

a) *Implementation:* Uber should appoint individuals with strong ethical track record to further its leadership rebuilding process. There is also a lot of sense in forming an independent ethics committee which would prevent any form of corporate misconduct and be responsible for the investigation of any abuses. Furthermore, there is a need to influence all levels of the company in relation to leadership and the development of ethical decision making and practice in Uber policies.

b) *Benefit:* Enhanced corporate governance together with the ethical leadership culture in place shall minimize risk of scandals and promote a democratic atmosphere in the company minimizing reputational loss to the company thereafter.

Supporting Initiatives:

c) *Ethics Committee:* Form a permanent committee with independent members to be used under numerous situations internal investigations and unique ethical dilemmas. This organization must be able to sanction senior management and execute punitive actions when it's needed.

d) *Leadership Accountability:* Implement a system for regularly evaluating leadership performance based on ethical metrics, ensuring executives and managers are held to high moral standards.

Equation: Ethical Governance Score (EGS) To evaluate the effectiveness of ethical governance initiatives, Uber can develop an Ethical Governance Score:

$$EGS = \frac{\sum_{i=1}^n \text{Compliance Actions}}{\sum_{i=1}^n \text{Ethical Voilations}} \quad (8)$$

Where:

i. *Compliance Actions* ; represents the number of ethical practices implemented.

ii. *Ethical Violations* ; represents the number of ethical violations recorded.

I. Environmental and Sustainability Issues

Solution: Spirit the switch over to electric vehicles and green transportation systems.

a) *Implementation:* Uber must have bold targets in moving their fleet to electric vehicles (EV's) and at the same time work with car manufacturers in offering cash rewards for drivers switching to EV's. Also, Uber should provide more services such as UberPOOL or improving integration with public transport systems in order to promote vehicle pooling and reduce the number of cars that occupy the streets.

b) *Benefit:* Cutting back on the environmental impact of Uber will not only satisfy the increasing market of consumers' demands for sustainable products but would place Uber at the forefront of cutting edge green urban transportation solutions.

Supporting Initiatives:

c) *EV Incentives:* Offer Financial incentives or lower lease payments for taking on electric vehicle use by the drivers. Uber can partner with EV makers and government initiatives to enable the drivers to participate in this shift.

d) *Sustainability Campaigns:* Conduct wide range public sustainability programs which would encourage users for UberPOOL and other eco friendly services. Uber could also engage in sponsoring studies on more sustainable urban mobility systems and be part of wider environmental measures.

Equation: Carbon Emission Reduction (CER) Uber can track its carbon emission reduction through its EV adoption rate:

$$CER = \frac{\sum_{i=1}^n (E_{gas} - E_{ev}) \times Q_i}{T} \quad (9)$$

Where:

- i. E_{gas} is the average emissions per gasoline vehicle per ride.
- ii. E_{ev} is the emissions per electric vehicle (close to zero).
- iii. Q_i is the number of rides by vehicle type ii.
- iv. T is the total number of rides.

ACKNOWLEDGMENT

The authors would like to express their gratitude to Ramrao Adik Institute of Technology, D. Y. Patil Deemed to be University for providing the resources and facilities necessary to conduct this research. Special thanks to every other members for their valuable insights and feedback throughout this study.

REFERENCES

- [1] M. L. McDonald, "The Uber business model: A critique," *Journal of Business Ethics*, vol. 177, no. 3, pp. 571-585, 2017.
- [2] C. G. F. Frey and H. J. Berger, "The impact of Uber on the taxi industry: Evidence from California," *Journal of Transport Economics and Policy*, vol. 51, no. 2, pp. 195-215, 2017.
- [3] K. P. Kauffman and L. E. Lee, "Ride-sharing services and their impact on public transport," *Transportation Research Part A: Policy and Practice*, vol. 116, pp. 56-69, 2018.
- [4] E. L. Hart, "Uber used Greyball program to circumvent authorities," *The Wall Street Journal*, Mar. 2017.
- [5] "A brief history of Uber," *TechCrunch*, May 2016.
- [6] "A brief history of Uber," *TechCrunch*, May 2018.
- [7] R. M. S. Martinez, "Payday for Red Swoosh: \$15 million from Akamai," *TechCrunch*, Apr. 2007.
- [8] Uber Technologies Inc., "Ride options," 2025.
- [9] Uber Technologies Inc., "Surge pricing," 2025.
- [10] "Uber ordered to cease and desist," *TechCrunch*, 2010.
- [11] R. D. Kauffman, "Corporate governance and the regulatory framework," *Journal of Business Ethics*, vol. 16, no. 4, pp. 651-663, 1996.
- [12] S. S. Ghosh, "The economics of ridesharing: A study of Uber," *SSRN Electronic Journal*, 2015.
- [13] Uber Technologies Inc., "A brief history of Uber,"
- [14] A. R. Carter and L. M. Lee, "Evaluating the Uber business model," *Journal of Transport Management*, vol. 36, no. 1, pp. 85-92, 2017.
- [15] R. H. O. Smith and T. D. Phillips, "The rise of Uber: A quantitative analysis," *Transportation Research Part A: Policy and Practice*, vol. 121, pp. 191-205, 2019.
- [16] Harvard Business School, "Uber: The company and its impact," 2019.
- [17] "Controversies surrounding Uber," *Wikipedia*.
- [18] K. D. Hossain, "Uber's lobbying efforts: An analysis," *Politico*, Sep. 2013.
- [19] "Uber's economic impact," *BBC News*, Dec. 2017.
- [20] J. Isaac, "Uber's Greyball program evaded authorities," *The New York Times*, Mar. 2017.
- [21] "Uber Greyball program," *The New York Times*, Mar. 2017.
- [22] "Uber Greyball program," *The New York Times*, Mar. 2017.
- [23] R. S. C. Kohn, "Uber's Greyball program: Analysis and implications," *Reuters*, Feb. 2017.
- [24] "Update on Uber Greyballing," *Uber Newsroom*, Mar. 2017.
- [25] "Update on Greyballing," *Uber Newsroom*, Apr. 2017.
- [26] R. C. B. McCarthy, "The effects of Uber on transportation," *TechCrunch*, Apr. 2017.
- [27] "Uber's strategies for competition," *The Verge*, Aug. 2014.
- [28] A. B. Smith, "Uber CEO's comments on competition," *Business Insider*, 2014.
- [29] K. D. Hossain, "Uber's lobbying efforts: An analysis," *The Irish Times*, Jul. 2022.
- [30] "The Uber files: A global analysis," *ICIJ*, 2022.
- [31] F. Funk, "Uber's business model," *SlideShare*, 2019.
- [32] A. E. M. Pinguet, *The Disruption of Transport: Uber and Beyond*, 2018.
- [33] "Uber protests and their impact," *Time*, Apr. 2015.

- [34] "Uber: An encyclopedia entry," *ILO Research Repository*, 2019.
- [35] "Uber and the issues of driver safety," *CNN Money*, Apr. 2018
- [36] "Waymo LLC v. Uber Technologies, Inc., No. 3:17-cv-00939," U.S. District Court for the Northern District of California, 2017.
- [37] "Uber and Waymo settle," *Uber Newsroom*, Feb. 2018.
- [38] "Uber's market entry strategy," Transportation Research Part A: Policy and Practice, 2018.
- [39] "The investor letter that ousted Travis Kalanick," *Economic Times*, 2019.
- [40] Uber Technologies Inc., "Dara Khosrowshahi,"