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***Riding The Digital Wave: Examining The Impact Of Digital
Transportation***

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Abstract

The introduction of digital transportation platforms has transformed the global transportation landscape and altered the manner in which individuals navigate urban environments. This dissertation explores the multidimensional effects of digital transport, with a particular emphasis on the disruptive effect Uber has had on conventional modes of transport. This study provides an in-depth analysis of Uber's impact on the urban mobility ecosystem by employing a comprehensive research methodology that includes both secondary and primary data sources. The secondary research component includes a comprehensive review of academic literature, industry reports, and market analyses to provide a comprehensive understanding of the development and dynamics of digital transportation platforms. Moreover, it illuminates the regulatory, economic, and social implications of the proliferation of these technologies. The primary research phase includes surveys, interviews, and observational studies with diverse stakeholder groups, such as Uber consumers, drivers, and relevant urban policymakers. This process of collecting primary data provides invaluable insight into user behaviour, satisfaction levels, and the broader societal effects of adopting Uber as a primary mode of transportation.

This dissertation aims to provide a prospective view of the future of digital transportation. By synthesising current trends, technological advancements, and emergent business models within the transportation industry, it forecasts the potential trajectory of this transformative sector. The results of this investigation contribute to a nuanced comprehension of the intricate interaction between digital transportation platforms and conventional transportation systems. Additionally, the findings of this study will be instrumental in enlightening urban policymakers, industry stakeholders, and the general public about the implications of adopting digital transportation solutions. The study not only explains Uber's transformative impact on the digital transportation landscape but also sets the groundwork for a more comprehensive understanding of the future of urban mobility in an increasingly interconnected world.

Keywords:

Digital transportation, Uber, Urban Mobility, User Behaviour, Transportation ecosystem, future trends, Urban mobility, Disruptive technology

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CHAPTER 1: Introduction

1.1 Background of the research

The transformation of industries is currently underway, exerting a significant influence on the trajectory of the future. Digital technology serves as the fundamental basis for progress and ingenuity within the ever-evolving landscape of the twenty-first century (Neubert, 2013). The far-reaching impact of this phenomenon permeates all facets of contemporary society, encompassing the transformation of communication and the redefinition of several industries. This study delves into the intricate realm of digital technology, analysing its impacts on many businesses, identifying emerging patterns, and postulating potential implications for the future. Comprehending the intricate dynamics that arise from the interplay of technology and society is of paramount importance in effectively navigating the digital landscape and harnessing its potential to foster enhanced connectivity, efficiency, and sustainability on a global scale.

The advent of the digital environment in the transport industry has ushered in an era of disruption, fundamentally altering how we travel and engage with mobility. The proliferation of digital advancements has permeated all facets of transportation, encompassing the integration of GPS technology and the expansion of ride-sharing platforms (Doyle, Gilbert and Morgan, 2020). Furthermore, this paradigm shift has facilitated the efficient movement of individuals and goods and created opportunities for the development of a more efficient, environmentally sustainable, and interconnected transportation system. The integration of digital technology and transportation infrastructure has introduced unprecedented opportunities and transformed our perspectives, arrangements, and modes of travel.

The incorporation of digital technologies has significantly revolutionised public transport, rendering it a more attractive and reliable option for urban commuters (BBC News Pidgin, 2023). The utilisation of real-time updates on public transport timetables and delays has significantly transformed the user experience, resulting in reduced uncertainty and enhanced convenience. The implementation of contactless payment systems and digital ticketing has streamlined the boarding process by eliminating the need for paper tickets and cash transactions. Furthermore, the utilisation of data-driven insights has facilitated transport companies in the optimisation of timetables and routes, aligning services with the specific wants of passengers.

Uber is an innovative and transformative force that has revolutionised the transportation industry within the dynamic and evolving realm of the sharing economy. Uber was

established in 2009 to transform the transportation industry through the creation of a peer-to-peer ride-sharing network accessible through a smartphone application (Uber, 2023). The firm has experienced significant growth over the years, establishing itself as a global entity and significantly reshaping the prevailing norms in the field of transportation. This study offers a comprehensive examination of Uber's notable trajectory, focusing on its developmental trajectory, challenges faced, strategies for market entry and localisation, and the substantial impact it has exerted on traditional transportation services. This study aims to examine the key factors that contributed to Uber's achievement as well as the challenges it encountered during its global expansion efforts.

1.2 Research Problem

The quick growth of digital marketing platforms has revolutionised how transport firms like Uber engage with their consumers. The digital world gives unheard-of potential clients for consumer connection, but it also poses particular difficulties in retaining customers' loyalty and happiness. Feedback Mechanisms and Customer Sentiment Analysis are the primary components of the first component of our research problem.

Evaluating the efficiency of Uber's electronic feedback systems for obtaining client feedback and determining satisfaction levels. Examining the efficiency of Uber's digital marketing tactics for attracting new clients and the digital onboarding process. This will involve evaluating the app's usability, advertising opportunities, and incentives for new users. This sub-problem will also look at how Uber uses user input to enhance user experiences and improve services.

Personalisation and customer segmentation are related to the second component of the research problem. assessing the degree to which Uber makes use of digital resources to customise user experiences, such as specialised advertising, location-based suggestions, and customised promotions. Understanding the efficacy of segmentation strategies used by Uber to serve a variety of consumer categories would be necessary for this.

1.3 Research Aim and Objectives

1.3.1 Research Aim

The purpose of this study is to thoroughly explore the critical elements that, in the context of Uber's digital marketing initiatives, affect consumer engagement and promote loyalty. This study aims to pinpoint the particular digital marketing strategies, tools, and tactics used by Uber and examine how they affect consumer engagement key performance indicators including user retention, use frequency, and satisfaction.

The study also seeks to identify any connections that could exist between successful digital marketing techniques and increased client loyalty, eventually delivering practical knowledge for maximising digital marketing initiatives in the transportation sector.

1.3.2 Research Objectives

- To Investigate the many digital channels and platforms that Uber uses for customer acquisition, engagement, and loyalty to analyse Uber's digital marketing channels and platforms. The Uber app, website, social network accounts, email campaigns, and other digital touchpoint are included in this.
- To assess the success of user onboarding in the digital environment. Analyse the user experience throughout the digital platform onboarding process by looking at elements like app navigation, the registration procedure, and the clarity of the instructions given to new users.
- To examine digital marketing personalization tactics. Look at the personalization strategies Uber uses in its online advertising, such as user-specific suggestions, location-based services, and targeted advertising.
- To Assess Customer Feedback Mechanisms and Sentiment Analysis. Evaluate the efficacy of Uber's digital feedback mechanisms, such as ratings, reviews, and surveys, in capturing customer sentiment and levels of satisfaction, as well as the utilisation of this feedback to improve services.
- To conduct a comparative analysis of digital marketing strategies, it is imperative to examine them about industry best practices. Perform a comprehensive evaluation of Uber's digital marketing strategies in comparison to the prevailing best practices within the industry. This study aims to find both the aspects where Uber's strategies correspond with the best practices and the possible areas that might be enhanced for better performance.

1.4 Rationale Of Study

1.4.1 Benefits and Consequences Of Digital Environment

Benefits of the Digital Environment:

The advent of digital communication has brought about a period characterised by unparalleled interconnectedness and enhanced availability of information. The advent of the internet has facilitated the integration of individuals, corporations, and organisations into a worldwide network, surpassing the limitations imposed by geographical boundaries. The development of this technology has significantly transformed the methods through which individuals engage in communication, collaboration, and commercial operations. The abundance of instantaneous communication facilitated by platforms such as social media, email, and video conferencing has grown customary, allowing for immediate interactions irrespective of geographical separation. The current state of global interconnectedness has created novel opportunities for international commerce, intercultural interactions, and cooperative endeavours (Plekhanov, Franke and Netland, 2022). Furthermore, the creation of the digital environment has facilitated the democratisation of knowledge accessibility. The internet has replaced libraries, which were formerly confined by physical boundaries, with an expansive and limitless realm. In contemporary times, anyone with access to the internet can readily access an extensive reservoir of information encompassing a wide spectrum of subjects, including scholarly investigations as well as pragmatic do-it-yourself instructional materials. The enhanced accessibility of education has resulted in a transformative effect, granting learners the ability to follow their interests and passions with unparalleled convenience (Scott, 2016). Furthermore, technology has facilitated the democratisation of entrepreneurship, enabling startups and small enterprises to engage in global competition, without necessitating significant initial financial resources.

Within the domain of innovation, the digital landscape has catalysed swift advancement and implementation. Digital tools have greatly expedited progress in diverse industries, ranging from artificial intelligence and machine learning innovations to advancements in renewable energy and healthcare technologies. As a result, the emergence of new industries and the subsequent increase in job opportunities have effectively catalysed economic expansion and propelled the advancement of technology. The digital environment has emerged as a conducive platform for the proliferation of innovation.

The consequences of the digital environment:

Although the digital environment presents several advantages, it is not devoid of obstacles and drawbacks. The digital gap is widely recognised as a prominent and urgent concern. Despite the extensive presence of digital technologies, there exists a disparity in both accessibility and competency across individuals (TPS, 2020). The previously mentioned division has the potential to further intensify pre-existing social and economic disparities, thereby placing marginalised populations in a position of disadvantage within a society that is more reliant on digital technologies.

Privacy problems are a significant issue in the realm of digital technology. The widespread prevalence of collecting, storing, and utilising personal data has given rise to substantial ethical and legal inquiries. Individuals contend with a perception of susceptibility, realising that their digital trace is susceptible to surveillance, breaches of data, and unauthorised intrusion. The difficulty of reconciling the necessity for insights derived from data analysis with the obligation to safeguard individual privacy continues to be of utmost importance.

The digital environment is susceptible to substantial risks arising from cybersecurity threats (Langeland, Andersson and Flotve, n.d.). The presence of malware, ransomware, phishing assaults, and several other forms of cyber threats can result in adverse financial consequences, data breaches, and the disruption of essential services. The perpetual arms race between cyber criminals and cybersecurity specialists highlights the dynamic nature of the threat landscape in question.

Moreover, the advent of the digital landscape has ushered in a period characterised by an overwhelming abundance of information and the proliferation of misleading or false content. The proliferation of internet information can be overwhelming, posing a growing challenge in distinguishing credible sources from misleading or fabricated news. This phenomenon presents a significant task for individuals to engage in a thorough and analytical assessment of the reliability and trustworthiness of the information they come across. This process is of utmost importance for making well-informed decisions and fostering robust democratic dialogue.

In summary, the digital environment presents beneficial opportunities and complicated obstacles. Successfully navigating this particular environment necessitates a comprehensive knowledge of its complicated dynamics and a steadfast dedication to conscientious and morally upright methodologies. Achieving a harmonious equilibrium between leveraging the capabilities of digital technologies and addressing their adverse

ramifications is of utmost importance in ensuring a digital future that is both sustainable and inclusive (Eckhardt and Bardhi, 2015).

1.4.2 Significance of the Research to UBER

The investigation into Uber's digital marketing methods and their effects on customer engagement and loyalty are of utmost importance for the company's continued success and competitive advantage in the transportation sector. Through a comprehensive analysis and comprehension of the efficacy of various digital marketing platforms, methodologies, and tailored methods, Uber has the opportunity to optimise its tactics for acquiring and retaining customers. This insight optimises the allocation of resources in marketing budgets and enhances the efficiency of returns on investment. Additionally, the knowledge acquired from this study enables Uber to offer an improved user experience, promoting increased consumer happiness and loyalty.

Consequently, this can result in favourable word-of-mouth recommendations and enhanced brand advocacy. Moreover, the research outcomes would empower Uber to adeptly negotiate regulatory environments and efficiently reduce any risks linked to digital marketing strategies. By adopting a data-centric approach to decision-making, Uber may proactively anticipate market trends and effectively respond to changing client preferences, thus encouraging the long-term viability and expansion of the company (Deloitte, 2023). In general, this study functions as a strategic guide, providing direction to Uber in developing digital marketing tactics that are both effective and efficient and that effectively engage its global user base, which is characterised by its diversity.

1.5 Research Questions

- What is the impact of demographic characteristics on the utilisation and acceptance of Uber's services relative to conventional transportation methods?
- How do Uber consumers perceive and adopt emerging transportation technologies?
- What are the potential socioeconomic and environmental consequences of the extensive adoption of digital transportation platforms, especially Uber?
- What are Uber's primary challenges and opportunities in the evolving digital transportation landscape, and how do they intend to resolve them?

- How do Uber's business model and sustainability strategy align with anticipated future trends in digital transportation?

1.6 Chapter Overview

- Chapter 1: Introduces digital transportation and its impact with a focus on Uber.
- Chapter 2: Explores theoretical models along with the perspectives on the future of Digital Transportation.
- Chapter 3: Details the research approach, data collection, and ethical considerations.
- Chapter 4: Data Analysis and Findings: Presents research outcomes on digital transportation and its influence on consumer behaviour and preferences.
- Chapter 5: Interprets findings and explores practical implications of the emergence of digitalisation in the transportation industry.

Chapter 2: Literature Review

2.1 Introduction

The emergence of digital transportation platforms has had a significant impact on conventional transportation concepts, representing a notable disruption in the realm of modern transportation. Uber, as a prominent example, represents the forefront of this societal change symbolising the fundamental change in how people traverse urban environments. Uber has rapidly gained importance due to its user-friendly interface and unique business strategy, leading to significant changes in the way commuting, urban mobility, and economic engagement are understood (Schofield Insurance, 2017).

This literature review aims to examine the substantial body of research, assessments, and scholarly discussions about the impact of Uber on several aspects of modern transportation and societal contexts. The objective of this research is to consolidate the accumulated knowledge from a range of studies, to develop a complete comprehension of the effects of Uber on urban mobility, economic systems, regulatory frameworks, and user behaviour.

Uber's impact is observable across various domains, ranging from the disruption it caused in the business to the social consequences that resulted from its existence. The purpose of this review is to analyse the various aspects of the impact of Uber on urban life. This will be achieved by examining empirical research, theoretical frameworks, and expert perspectives to identify the patterns and consequences that have arisen as a result of Uber's integration into urban communities.

In addition, (Abduljabbar et al., 2019) research sheds light on how the wide availability of the Internet gives us the ability to trade anywhere and it has brought great opportunities in the field of transport and travel. Simple man no longer has to rely on public transport but often can choose the departure and the arrival to the selected destination by themselves, adding to a better understanding of how digital transport services affect society as a whole.

2.1.1 The Role of the digital environment in transportation

The emergence of the digital environment has brought about a significant transformation in the realm of transportation. The integration of modern technology has emerged as a significant driver of efficiency, ease, and sustainability in individuals' navigation of their surroundings. Real-time information and navigation systems provide commuters with

timely updates on traffic conditions and alternate routes, thereby enhancing their ability to make informed decisions and navigate effectively.

Digital connectivity has been effectively utilised by platforms such as Uber and Lyft to offer convenient and immediate ride services, hence transforming the conventional taxi sector. Furthermore, the implementation of electronic ticketing and payment systems has effectively optimised the process, resulting in a decreased dependence on physical tickets and cash-based transactions.

The advent of digital transformation has yielded several benefits, including the optimisation of travel experiences and a related decrease in individual car ownership. This shift can be attributed to the growing prevalence of car-sharing and micro-mobility solutions (Scott, 2016). Moreover, the utilisation of data-driven decision-making has become an essential instrument for transportation planners, facilitating the optimisation of services and infrastructure expenditures through the analysis of real-time usage trends. The digital landscape has emerged as a vital component of contemporary transportation, fundamentally reshaping our methods of mobility, strategizing, and engagement within urban settings.

2.2 Uber: A Trailblazer in the Realm of Digital Transportation

The advent of digital platforms such as Uber has had significant economic ramifications for the transportation sector. The research conducted by Eduardo Valento (2019) and Roberto Patrus (2019) highlights the dual impact of Uber on employment and local and sharing economies. These studies underscore the role of Uber in not only providing job possibilities for drivers but also in catalysing a ripple effect throughout other sectors, including hospitality and retail.

2.2.1 The Phenomenon of Emergence and its Subsequent Expansion

The establishment of Uber in 2009 brought about a significant transformation in the transportation sector. The organisation was established to leverage digital technology to connect drivers and individuals seeking transportation services, hence addressing the existing gap in the market. Uber was initially introduced in San Francisco and swiftly garnered momentum, leading to its subsequent expansion into several prominent cities across the globe.

The rapid expansion of the platform can be credited to its intuitive design, facilitating clients to effortlessly request trips through a streamlined process on their mobile devices. Additionally, Uber's competitive pricing strategy, together with the added convenience of cashless transactions, has successfully appealed to a diverse range of users, including both business professionals and casual commuters (LinkedIn, 2016).

2.2.2 The Concept of Disruptive Innovation

The business model employed by Uber serves as a notable illustration of disruptive innovation in the transportation industry. Through the utilisation of the digital landscape, Uber implemented a decentralised, on-demand transportation system that posed a significant challenge to the established authority of conventional taxi services (Mohammed, 2013). This invention has not only brought about a significant transformation in the way individuals avail transport services, but it has also changed the conventional understanding of 'ride-sharing' by introducing a flexible and peer-to-peer model.

Moreover, Uber's implementation of the gig economy paradigm, in which drivers function as self-employed individuals, signified a deviation from the conventional employment frameworks commonly observed within the transportation sector (Mohammed, 2013). The implementation of this particular model enabled drivers to have increased flexibility in their work arrangements. However, it also gave rise to significant ethical and regulatory concerns about labour rights and protections.

2.2.3 Technological Underpinnings

The success of Uber is contingent upon a sophisticated technology infrastructure that serves as the foundation for its operational activities. At the core of this is the incorporation of Global Positioning System (GPS) and cartographic technology, facilitating accurate geolocation monitoring and effective path optimisation (Kumar and Moore, 2002). This technology not only facilitates the effective transportation of drivers to passengers but also enables precise fare calculation depending on the distance covered.

In addition, the mobile application interface of Uber is intentionally crafted to possess qualities of simplicity and user-friendliness. The platform offers a cohesive user experience for both drivers and passengers, incorporating functionalities such as live tracking, projected arrival times, and in-application chat. Moreover, the application functions as a

central platform for a range of features, encompassing payment processing, monitoring of trip history, and provision of customer support.

The utilisation of data-driven decision-making serves as a fundamental pillar of Uber's operational strategy. The platform systematically gathers and evaluates extensive quantities of data about user behaviour, journey patterns, and driver performance. The utilisation of this data is employed to augment user satisfaction, optimise pricing tactics, and enhance the overall efficiency of the transportation sector as a whole (TPS, 2020).

2.2.4 Environmental Considerations

Environmental factors play a crucial part in influencing the impact of digital transportation platforms such as Uber, as they contribute to the pursuit of sustainable urban mobility. One of the noteworthy contributions of platforms such as Uber resides in their capacity to mitigate overall emissions in metropolitan areas. Uber has a proactive approach to addressing the environmental impact of urban transportation by incorporating electric and hybrid vehicles into its fleets. The significance of this transition is emphasised in a study conducted by Rayle et al. (2016), which highlights the potential of low-emission vehicles to significantly reduce greenhouse gas emissions. Furthermore, it is worth noting that ride-hailing services possess the capacity to enhance the efficiency of vehicle utilisation rates, hence reducing the prevalence of vacant or underutilised automobiles on the streets. This phenomenon not only mitigates traffic congestion but also facilitates a more optimal allocation of resources.

Nevertheless, it is important to recognise that the actual ecological consequences of digital transportation platforms depend on a variety of circumstances. The mix of the vehicle business, the rate of adoption of cleaner technologies, and the operational efficiency are all significant factors in determining outcomes. Furthermore, the supply of power for electric vehicles is a vital factor to be taken into account, since it influences the degree to which the transition to electrification contributes to emissions reduction. Fundamentally, it is crucial to adopt a holistic strategy that takes into account the complete life cycle of cars and the accompanying infrastructure in order to achieve significant advancements in sustainable urban mobility, despite the potential for good environmental impact offered by platforms such as Uber.

2.2.5 Equity And Accessibility

The study of the societal impact of digital transport platforms places significant emphasis on the core principles of equity and accessibility. At first glance, platforms such as Uber have the capacity to improve the availability of transport services, especially for persons who lack access to personal vehicles. This holds special importance for persons who have limitations in their mobility, as ride-hailing services offer a degree of autonomy and convenience that may not be easily accessible through conventional public transportation alternatives.

Nevertheless, there are ongoing issues regarding the equitable availability of digital transit, namely in places that are underserved and have low-income populations. The study conducted by Henao and Marshall (2019) sheds light on the possibility of digital disparities, wherein persons lacking access to smartphones or dependable internet connectivity may encounter obstacles in effectively utilising such services. Additionally, the pricing dynamics within digital transport platforms have the potential to influence accessibility, especially during periods of high demand or in regions with restricted service availability. In order to effectively tackle issues of fairness and accessibility, it is imperative to adopt a comprehensive approach that encompasses several tactics aimed at guaranteeing affordability, availability, and digital inclusion. The establishment of partnerships among digital transportation platforms, governmental bodies, and community organisations plays a crucial role in the creation of effective strategies that address these disparities. This collaboration is essential in guaranteeing that the advantages of digital mobility are made available to everyone within the community.

2.3 Business Model

The business model of Uber revolves around the provision of a digital platform that connects riders with drivers, enabling convenient and on-demand transportation services. This platform operates on a peer-to-peer basis. The business model implemented by Uber brought about a significant transformation in the transportation sector through the strategic utilisation of technology and the adoption of a platform-centric approach (Mission Local, 2021). Uber serves as a mediator, facilitating the connection between riders and drivers via a user-friendly mobile application. This platform functions as an online marketplace, effectively facilitating the real-time matching of supply (drivers) and demand (riders). The

main source of revenue stems from a percentage-based commission, often ranging from 20% to 30% of the fare paid by the passenger, for each ride.

The implementation of surge pricing by Uber during moments of high demand enables the company to flexibly modify prices, thereby achieving a state of equilibrium between the availability of drivers and the level of customer demand. In addition, Uber provides a range of service alternatives, encompassing the delivery of food via UberEats, the availability of shared rides through UberPool, and the provision of private car services via UberX. The adoption of a diversified approach not only serves to broaden its range of services but also guarantees that Uber maintains its versatility as a viable option for fulfilling urban transportation requirements.

2.3.1 The Concept of Open Innovation in the Context of Uber

Uber's approach to innovation is beyond its internal capabilities. The company actively adopts open innovation, acknowledging the significance of collaboration and the opportunity for external contributions to augment its offerings. An illustrative instance is the Application Programming Interface (API) developed by Uber, enabling external developers to include Uber's services in their respective applications (Kumar and Moore, 2002). This facilitates a symbiotic association, whereby developers acquire entry to an extensive user demographic, while Uber expands its market presence by leveraging diverse partner platforms. Furthermore, Uber has established significant alliances and interfaces with entities such as Google Maps, thereby enhancing the efficiency of the user's booking experience.

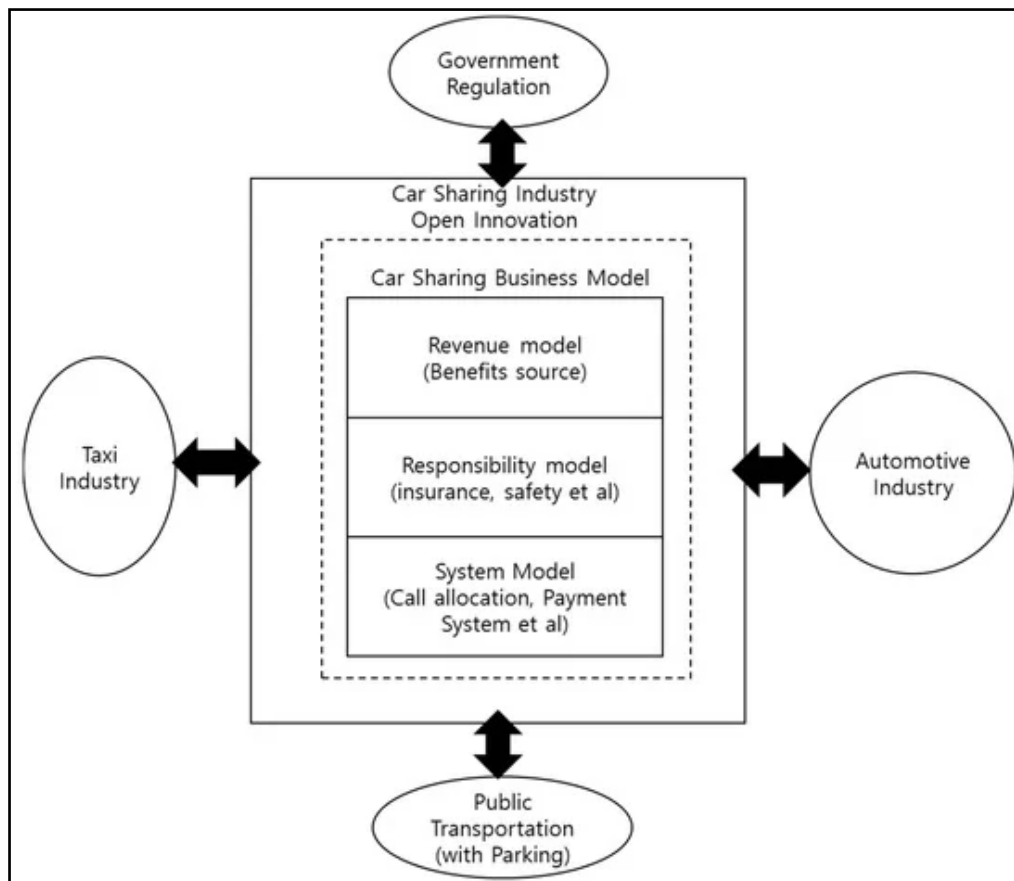


Figure 1. Research framework—car-sharing business model dynamics.

(Source: Yun et al., 2020)

Uber Movement provides urban planners and policymakers with anonymised data about traffic patterns and travel durations. The implementation of this open data project facilitates the process of making well-informed decisions about city planning and the development of transport infrastructure. Moreover, Uber proactively pursues prospects for acquisitions and investments in pioneering startups, thereby enabling the company to broaden its range of services and maintain a leading position in the ever-evolving landscape of urban mobility. The integration of internal innovation with a receptive attitude towards external contributions situates Uber as a proactive and progressive participant within the transportation sector.

2.3.2 The two-sided marketplace model

The Two-Sided Marketplace Model is a significant business structure that centres on the establishment of a platform or marketplace that facilitates the connection between two separate groups of users, with one group offering value to the other. This concept has garnered considerable attention and recognition across several industries, notably in the

digital domain. The underlying idea of this platform is that its value and success are directly correlated with the ability to attract a larger user base on both sides. The Two-Sided Marketplace Model plays a fundamental role in the functioning of digital transportation platforms such as Uber and Lyft. On one hand, there are individuals who provide their automobiles and driving services. Conversely, there are individuals who actively pursue means of mobility. The platform functions as a middleman that facilitates and coordinates these interactions, establishing a mutually advantageous ecology.

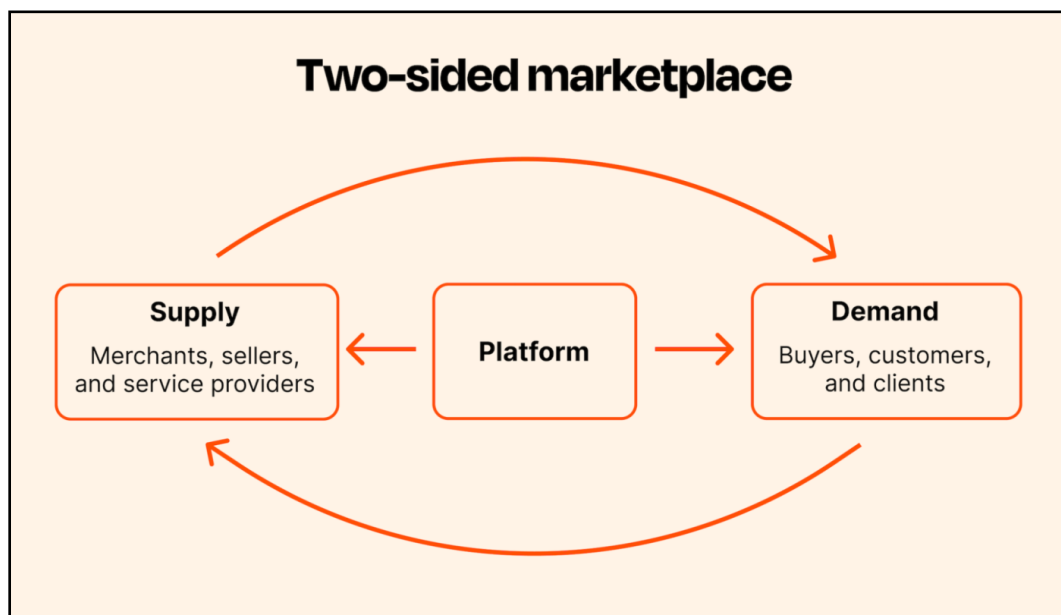


Figure 2. Two-sided marketplace
(Source: Zapier, 2023)

The concept of network effects is a significant characteristic of the Two-Sided Marketplace Model. As the number of drivers participating in the platform increases, it concurrently enhances its appeal to passengers, and conversely, as the number of riders grows, it further enhances the attractiveness of the platform to drivers. The presence of a positive feedback loop facilitates exponential expansion in the user base. The distinguishing factor that enhances the value of platforms operating under this model is the presence of a substantial number of users on both sides of the marketplace. Ensuring equilibrium between supply and demand represents an additional crucial facet of this paradigm. Achieving an optimal balance is crucial in order to maintain driver activity and profitability, while simultaneously minimising wait times for riders during their travels. In order to attain this equilibrium, platforms frequently utilise dynamic pricing algorithms that adapt fares in

accordance with real-time fluctuations in demand and supply situations (LinkedIn, 2023). Additionally, the Two-Sided Marketplace Model presents distinct sources of revenue. Platforms earn revenue from multiple sources, including fares paid by riders and commissions or fees levied on drivers. The presence of two revenue streams enhances the platform's financial stability and profitability, so ensuring its long-term viability.

In general, the Two-Sided Marketplace Model has brought about a significant transformation in the digital transportation sector, establishing a dynamic ecosystem that yields advantages for both drivers and riders. Moreover, it has opened up avenues for novel approaches to urban mobility. Platforms working within this framework have emerged as vital components of contemporary urban areas, providing convenient and effective travel options for a vast number of individuals globally.

2.3.3 Digital Ecosystem Framework

The Digital Ecosystem Framework is an all-encompassing conceptual model that delineates the interrelated network of people, technologies, and services within a particular digital environment. Within the realm of the digital transport sector, this framework offers a systematic perspective on the collaborative interactions among different components that enable the smooth functioning of transport services via digital platforms.

The Digital Ecosystem Framework comprises a wide array of stakeholders at its fundamental level. The individuals encompassed within this category consist of riders, drivers, platform operators, regulators, and technology vendors (USAID, 2022). Each of these entities assumes a vital position in the operation and advancement of the digital transportation ecosystem. For example, the individuals who utilise the platform most frequently are riders and drivers, yet the responsibility for managing and operating the platform lies with the platform operators. Regulatory bodies establish and enforce the legislation and standards that regulate transport services, thereby assuring adherence to safety and quality protocols. Technology providers play a significant role in providing the necessary technological infrastructure and tools that are essential for the functioning of the platform.

Technologies and platforms play a pivotal role as fundamental elements within the digital ecosystem. This encompasses several technological advancements, such as mobile applications, GPS systems, payment gateways, and intricate algorithms designed for tasks like route optimisation and dynamic pricing. The mentioned technological components

serve as the fundamental infrastructure of digital transportation services, facilitating the ability to track in real-time, conduct secure transactions, and operate with optimal efficiency.

In summary, the Digital Ecosystem Framework offers a systematic perspective on the complex interactions among players, technologies, and services in the realm of digital transportation. Comprehending this conceptual framework is crucial for digital transportation platforms in order to effectively negotiate complex interconnections, harness technological advancements, and adjust to regulatory dynamics (USAID, 2022). Ultimately, this understanding contributes to the achievement and long-term viability of their services.

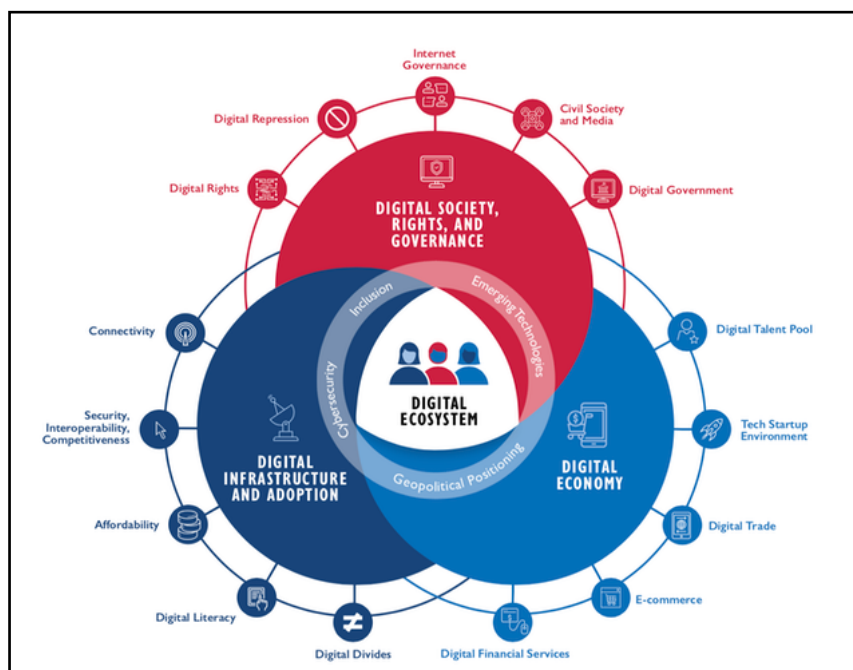


Figure 3. Digital Ecosystem Framework

(Source: USAID, 2020)

2.4 Literature Gap

2.4.1. An Assessment of the Environment Throughout the Long-Term

The absence of research on the long-term environmental impact of digital transportation platforms like Uber is a major gap in the existing body of knowledge. Studies that already exist have, for the most part, concentrated their attention on the immediate advantages of decreased emissions and congestion (Rayle et al., 2016). However, to conduct an accurate assessment of the effects on the environment, it is necessary to investigate the

entire lifecycle of the vehicles, which includes their manufacture, operation, and eventual disposal. To determine whether or not these platforms are truly sustainable, a deeper and more comprehensive understanding of the environmental impacts they may have over extended periods is necessary.

2.4.2. The Changing Nature of User Behaviour Over Time

Even while research has provided useful insights on user behaviour and preferences about ride-hailing services, there is still a noticeable knowledge gap in regards to understanding how these behaviours change over time. The majority of previous research has concentrated on immediate behaviours and decisions. On the other hand, little is known about the patterns of long-term adoption and the factors that influence user loyalty to platforms such as Uber. It is necessary to do research into the processes by which these services get embedded in daily routines and the evolution of user preferences over extended periods (Hall & Palsson, 2018).

2.4.3. The Influence on the Integration of Public Transportation

Although several studies have looked into the connection between digital transportation platforms and public transit, our current lack of knowledge prevents us from having a complete understanding of the wider influence that these platforms have on transit systems. Additional study is required to investigate how platforms such as Uber either complement or compete with public transportation, as well as the implications this has for the number of people who utilise public transit and the planning of urban infrastructure. According to Clewlow and Mishra (2017), this knowledge gap is particularly significant for urban planners and politicians who are attempting to construct transport networks that are integrated and efficient.

2.4.4. Impacts on Society, the Economy, and Equity

Although research has started to examine the socioeconomic consequences of digital mobility, there is still a need for more detailed examinations of how different demographic groups are affected by these services. Considerations regarding accessibility for areas with low incomes, potential differences in service availability, and the broader influence on

transportation equity should all be included in the scope of research in this field. According to Henao and Marshall (2019), the development of urban transport systems that are inclusive and equitable requires a deeper knowledge of the potential for digital transport to either increase or ease already existing imbalances.

2.4.5. Considerations Regarding Behaviour and Safety

In the area of digital transportation, research on user behaviour and safety considerations is only getting started. There are not enough in-depth studies that investigate the behaviour of passengers and drivers, the efficiency of the safety features that are applied by platforms, and the broader implications for urban safety and security. As these platforms become an increasingly fundamental part of urban transportation, policymakers, urban planners, and industry stakeholders need to have a comprehensive understanding of the influence these platforms have on user behaviour and overall safety (Nasar, 2018).

2.5 Perspectives on the Future of Digital Transportation

The concept of multi-modal integration in the realm of digital transportation has been discussed by scholars such as Hall and Palsson (2018), who suggest that the future of this field relies on the seamless integration of diverse transportation modes. The authors propose that mobile applications are undergoing a transformation to provide a broad range of mobility alternatives, extending beyond automobiles to encompass electric scooters, bicycles, and public transportation systems. The objective of this integrated strategy is to offer consumers a comprehensive and streamlined method for navigating urban surroundings.

Micro-mobility and last-mile solutions have been highlighted by urban planning experts, such as Cervero and Shaheen (2016), as playing a crucial role in effectively tackling the difficulties associated with last-mile transportation. The supporters argue that electric scooters and bicycles present a practical, environmentally friendly, and economically viable substitute for short-range transportation, hence diminishing the reliance on private automobiles and reducing traffic congestion.

Intelligent Transportation Systems (ITS) have been recognised by transportation scholars, including Rayle et al. (2016), for its significant capacity to bring about transformative changes in the field of transportation. The authors contend that these technologies, which leverage sophisticated data analytics and artificial intelligence, possess the capability to optimise the flow of traffic, improve safety, and forecast transportation demand. The implementation of intelligent transportation systems (ITS) has the potential to contribute to the development of urban transportation systems that are both more intelligent and adaptable. This, in turn, can result in cities that are more sustainable and efficient in terms of transportation.

Brynjolfsson and McAfee (2014) have postulated a future scenario characterised by the prevalence of autonomous vehicles and ridesharing networks. The authors propose that the extensive integration of autonomous vehicles, in conjunction with effective ridesharing platforms, has the potential to yield a substantial decrease in the quantity of privately owned automobiles. This outcome would consequently reduce traffic congestion and enhance the efficiency of transportation systems.

Personalised Mobility Experiences: Scholars specialising in user experience design and personalised technologies, such as Norman (2013), see a forthcoming era in which digital transportation systems would provide exceptionally tailored experiences. The authors contend that the utilisation of data analytics and artificial intelligence (AI) would empower platforms to comprehend the unique tastes and habits of individuals, hence facilitating the provision of personalised transportation alternatives. This encompasses a spectrum of functionalities, including proposing the most efficient paths and providing up-to-date suggestions informed by factors such as weather, traffic circumstances, and individual inclinations.

In summary, the development of digital transport is a topic that continues to be the focus of continuing discussion and investigation among professionals across several disciplines. Although it may be challenging to access specific perspectives from individual authors, there exists a prevailing agreement that the advancement of transportation technology will result in enhanced urban mobility solutions that are more interconnected, streamlined, and

tailored to individual needs. The adoption of these advances possesses the capacity to fundamentally transform urban navigation in the future.

Chapter 3: Research Methodology

3.1 Dissertation Methodology

3.1.1 Research Methodology

Researchers use research methods to collect, analyse, and interpret data. It covers everything from creating research questions to concluding the research. The validity and dependability of study findings depend on a well-defined research process. It requires picking the right data collection methods, samples, and analytical procedures. Researchers must also examine ethics and methodology appropriateness. A solid research technique is the foundation of any successful research effort, offering a framework for a thorough and relevant examination.

3.1.2 Research Onion

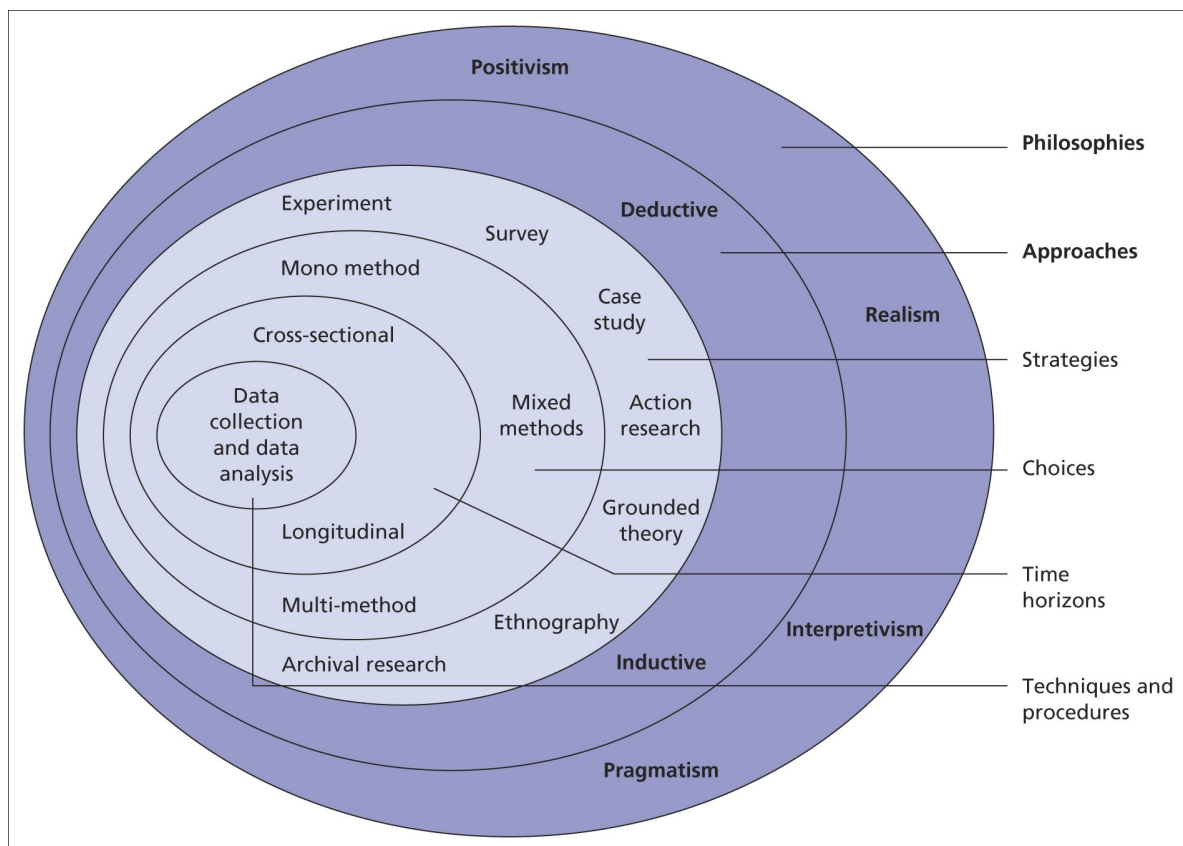


Figure 4. Research Onion

(Source: ResearchGate, 2023)

Saunders et al.'s (2007) conceptual framework, the "research onion," serves as a methodical tool for researchers to effectively manage the complexities involved in the research process. Consisting of six layers, this framework outlines the sequential progression from overarching philosophical assumptions to the precise methodologies employed for data gathering and analysis. The initial layer pertains to the researcher's foundational philosophical standpoint, involving the selection between positivism (which emphasises objectivity), interpreting (which prioritises subjective understanding), or pragmatism (which combines elements of both approaches). The successive levels of the research process involve making decisions related to the research methodology, such as whether to use a deductive or inductive approach.

Additionally, researchers must determine the appropriate research strategy, which may include options such as conducting experiments, surveys, or case studies. Another consideration is the time horizon of the study, which can be either cross-sectional or longitudinal. Furthermore, researchers must select appropriate data-gathering methods and decide on the most suitable data analysis techniques. This framework offers researchers a comprehensive guide, guaranteeing coherence between the selected research components and the overall study goals. The research onion facilitates the efficient planning, implementation, and assessment of research projects by providing a methodical framework for researchers to navigate across several layers.

3.1.2.1 Research Philosophy

The concept of research philosophy serves as the fundamental framework that directs the overarching approach and viewpoint embraced by a researcher when doing a study. Philosophy comprises the foundational beliefs and underlying assumptions on the nature of knowledge, reality, and the appropriate methodologies for conducting research. The field of research encompasses three fundamental research philosophies, namely positivism, interpretivism, and pragmatism. Positivism places significant emphasis on the utilisation of direct evidence and objective measurement, operating under the assumption that a scientifically investigable objective reality exists. In contrast, interpretivism emphasizes comprehending subjective experiences and the significance that individuals attribute to them. The statement recognises the concept of the social construction of reality and its subjective nature, wherein individuals may perceive and interpret reality differently. Pragmatism is a philosophical framework that integrates aspects of both positivism and

interpretivism, advocating for a versatile approach that utilises the best suitable research methodologies for the given research inquiry (Dudovskiy, 2012). The selection of a research philosophy carries significant consequences for the formulation, implementation, and analysis of a study. The significance of this factor extends to decisions about the design of the study, the collection of data, and the methodologies employed for analysis, thus exerting a significant impact on the total research process.

3.1.2.2 Research Approach

The choice of research approach by researchers affects the overall course of their work. The document establishes the approach that will be employed to investigate the research questions or hypotheses. There are two principal research methodologies, namely deductive and inductive. The deductive approach is characterised by the formulation of a theory or hypothesis as the initial step, followed by the utilisation of empirical observation and data analysis to evaluate and validate it (Proudfoot, 2022).

On the other hand, the inductive technique commences by examining specific observations or data and subsequently progresses towards the formulation of a theory or comprehension. The selection of these methodologies is contingent upon the characteristics of the research inquiries and the preexisting knowledge foundation within the discipline. Each approach possesses distinct strengths and perspectives, generating an impact on the entirety of the research process, spanning from the gathering of data through the interpretation of findings.

3.1.2.3 Research Strategy

As conceptualised within the research onion framework, the research strategy encompasses the distinct plan or methodology that a researcher adopts to carry out their study. This crucial element heavily influences the formulation and implementation of research. The strategy comprises the decision-making process concerning the methodologies and techniques employed for collecting and analysing data. Researchers can select from various methodologies, including experiments, surveys, case studies, or ethnography, based on the specific research questions and the phenomenon being studied. The chosen research strategy should be consistent with the overarching study design and objectives, guaranteeing that the data gathered is pertinent and suitable for

addressing the research goals. Through careful consideration and implementation of a well-designed research plan, researchers can augment the credibility and dependability of the findings obtained from their investigation.

3.1.2.4 Methodological Choice

This project will utilise a mixed-method approach to collect data, incorporating both quantitative and qualitative methods. This integrative methodology merges the merits of quantitative and qualitative research methodologies to yield a more thorough comprehension of the impacts of digital transportation, with a particular emphasis on the Uber platform.

There are several advantages associated with the collection of quantitative data. The process of quantitative data collecting entails the methodical acquisition of numerical data, enabling the application of statistical analysis to quantify patterns and correlations. This study aims to gather quantitative data by administering surveys to a wide sample of individuals who utilise Uber services, encompassing both riders and drivers. This strategy presents various advantages. First and foremost, this methodology allows the researcher to acquire a substantial sample size, hence enhancing the generalizability of the findings to a wider community of individuals who utilise the services of Uber. Furthermore, the utilisation of quantitative data facilitates the recognition of patterns, correlations, and statistically significant associations, hence furnishing empirical substantiation that supports research findings. This approach is additionally less prone to researcher bias, as it depends on standardised inquiries and response formats.

There are several drawbacks associated with the collection of quantitative data. Nevertheless, the process of gathering quantitative data is not without its constraints. The current representation may lack the ability to fully encompass the specifics of individual experiences or the complexity that comes with user viewpoints. Furthermore, the predetermined response choices utilised in survey instruments may not adequately capture the complete spectrum of participant perspectives, hence potentially resulting in an oversimplification of complicated matters. Furthermore, the exclusive reliance on quantitative data may fail to offer a comprehensive contextual understanding of the underlying causes behind specific patterns or behaviours, thus highlighting the significance of including qualitative data.

The process of qualitative data collecting entails the acquisition of non-quantitative data, typically obtained through methods such as interviews or open-ended survey replies. This research will employ qualitative methodology to gather data, namely through conducting comprehensive interviews with Uber drivers, specialists in the field, and consumers. This technique presents several notable benefits. Qualitative data facilitates a more comprehensive comprehension of personal experiences, motives, and viewpoints about digital transportation. The utilisation of qualitative research methods enables the investigation of intricate social phenomena, facilitating the revelation of implicit significances and contextual factors that may not be readily quantifiable. Moreover, the inclusion of qualitative data in a study might provide valuable insights into unforeseen issues or variables that may have been overlooked during the initial research design.

There are several drawbacks associated with the collection of qualitative data. Although qualitative data collection has certain advantages, it has its fair share of challenges. doing comprehensive interviews, transcribing the recorded conversations, and doing thorough evaluations are essential components of this process, which can be both time-consuming and resource-intensive. Furthermore, qualitative data analysis is inherently subjective and open to the researcher's viewpoints and biases. To uphold reliability and validity in qualitative research, it is imperative to employ careful coding and analysis approaches that establish trustworthiness.

By integrating quantitative and qualitative data in this research, a full and well-rounded viewpoint on the effects of digital transportation can be achieved. This approach will facilitate a more rigorous and nuanced comprehension of the issue. By capitalising on the inherent advantages of both methodologies, the resultant research outcomes will exhibit enhanced reliability, depth of insight, and applicability over a broader spectrum of circumstances.

3.1.2.5 Type Of Investigation

There are two types of studies in the field of research: primary research and secondary research. In our dissertation, we simply conduct primary research using surveys among

British university students, focus groups, social media platforms like Facebook, LinkedIn, Instagram and WhatsApp, email distributions to friends, family and colleagues, and In-Person Surveys like interaction with Uber drivers (within ethical guidelines).

Primary Research

It uses a combination of primary and secondary research methods, which makes up the research technique for this dissertation. Primary research is when data is directly gathered from sources or participants, giving first-hand information that is relevant to the study questions. For this study, surveys are given to British university students, focus groups are formed, people are involved on social media, emails are sent out, and surveys are given to Uber drivers in person. For example, surveys given to British college students are a systematic way to get information about their experiences and thoughts on digital transportation services like Uber. This method is especially useful for figuring out the likes dislikes and actions of this particular group of people. But it's important to think about the biases that could come from self-reporting or how representative the group is.

Adding focus groups brings a qualitative dimension that lets you learn more about the views and experiences of the participants. Along with the quantitative data, this method gives rich contextual information. It's important to make sure that talks are open and honest, but one should also be aware of any biases or group dynamics that might be present. Using social media sites like Facebook, LinkedIn, Instagram, and WhatsApp to spread the word about the poll takes advantage of how common digital communication is in today's world. This method might lead to a large and varied group of respondents. However, it's important to be aware that people's willingness to participate may be affected by how they normally use social media or how comfortable they are with digital polls.

Sending emails to personal networks makes the method even more personal, which could lead to more honest feedback and higher response rates. Take advantage of existing networks and relationships in this way, which can help get people involved. But it's important to be aware of the possibility of bias, since interviewees may already be interested in or know something about the researcher's work or study. Including in-person surveys, especially interactions with Uber drivers (during ethically sound behaviour), provides a one-of-a-kind chance to observe and take data in real-time. This method can give you useful information about the situation that you might not be able to get from polls done from afar. But it's very important to be sensitive to the drivers' needs and respect their time and privacy during these exchanges.

Secondary Research

Along with basic research, recognising the value of secondary research is an important part of a strong research methodology. When you do secondary research, you read and think about a lot of academic books, empirical studies, reports, and other sources that are related to your research topic. This step is very important to the study process for several reasons. In the first place, secondary research gives the study a solid base by giving context and background material. It helps the researcher understand how their work fits into the bigger picture of academic life and what is known about the subject right now. In turn, this makes it possible to come up with study questions that are both new and relevant to the current conversation. It also helps build theoretical frameworks through secondary study. Researchers can build a strong base for their study by using theories, models, and mental frameworks that have already been developed. This theoretical basis not only guides the design and method of the study but also helps figure out what the results mean.

Another benefit of secondary research is that it helps find gaps and areas that need more study. Researchers can find unanswered questions, results that don't make sense, or new areas of interest by carefully reading what has already been written. This information is very helpful for making the study goals and hypotheses. Also, a secondary study lets you combine data from three different sources. Researchers can make their results more accurate and reliable by contrasting and comparing the results of different studies. This method of triangulation helps build a stronger body of evidence that is based on more proof. Using secondary sources in the methodology shows that you care about academic integrity and have a deep knowledge of the research topic. This makes sure that the study is not done by itself but as part of a larger scholarly conversation. In general, secondary research is an important addition to primary research that makes the study's contributions to the field deeper and broader.

With a mixed-methods approach that includes both qualitative and quantitative research, this dissertation technique tries to make the most of what each method does well. The goal of this comprehensive strategy is to give a complete and in-depth look at how digital transport systems affect people, especially British university students and Uber drivers. A thoughtful and all-around approach to studying this changing and growing issue is shown by the wide range of data collection methods that were used.

3.1.2.6 Time Horizons

The study uses a cross-sectional study design that combines qualitative and quantitative research methods to look at how people behave in transportation services operations as a whole. With this method, we can get a picture of what consumers like, how they feel, and how they use things at a certain point in time. Through in-depth interviews and focus group talks, among other qualitative methods, we learn more about the underlying reasons and decision-making processes that affect people's choices of transportation services.

The quantitative part also uses surveys and data analytics to find out how common certain behaviours and tastes are across a large group of people. This way not only lets you look closely at how people behave in a group but also lets you look at things on an individual level, which gives you a full picture of the things that affect the transportation services sector. We believe that this cross-sectional approach will give people in the transport business useful information that can help them make informed choices.

3.1.2.7 Data Collection and Analysis

This dissertation aims to investigate the impact of digital transport, with a specific focus on Uber, by employing a multi-faceted research approach. It involves a comprehensive literature review to understand the existing body of knowledge, followed by a data collection phase that includes both quantitative and qualitative data sources such as Uber's data, government records, surveys, and interviews with stakeholders. Quantitative data will be analyzed using statistical methods, while qualitative data will be subject to content analysis. Geographic analysis, comparative studies, and the identification of key metrics will be used to assess Uber's influence on transportation patterns, traffic congestion, and economic factors. The findings will be interpreted, discussed in the context of research objectives, and used to provide recommendations and policy implications.

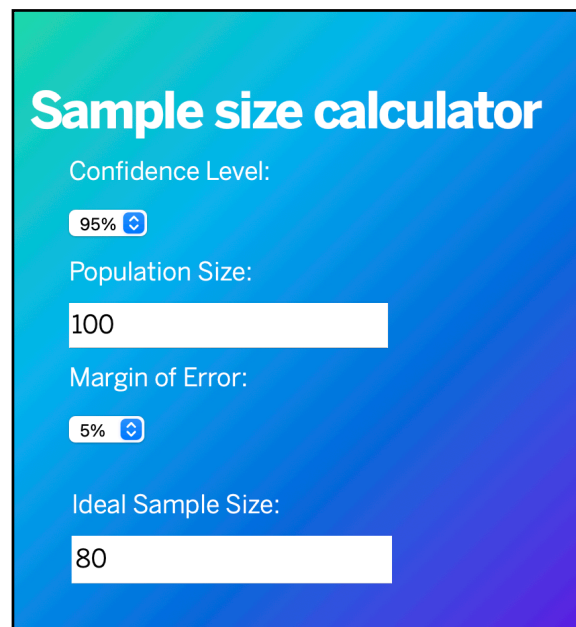
3.2 Sampling

To ensure the representativeness, validity, and reliability of the data, it is necessary to employ a purposeful and strategic sampling technique while doing primary research using surveys. The objective of this study is to gather around 100 survey respondents, a sample

size that has been carefully selected to achieve an appropriate balance between statistical validity and the practicality of data collecting.

3.2.1 Sample Size

A very important part of the survey study is picking the right sample size. It's important to find a balance between statistical reliability and the ability to do the task with the tools that are available. Also, to make sure their sample size is right for their research goals, researchers should use statistical tools, do power analyses, and sometimes even ask experts for help. Our choice to aim for about 100 survey answers is based on a number of factors. However, we need to think about the practical aspects, like the time and resources we have access to, as well as the specifics of our target audience, which includes British students attending universities, focus groups, social media sites like Facebook, LinkedIn, Instagram, and WhatsApp, emails sent to friends, family, and coworkers, and In-Person Surveys like talking to Uber drivers (as long as we follow ethical guidelines).



Sample size calculator

Confidence Level:
95%

Population Size:
100

Margin of Error:
5%

Ideal Sample Size:
80

Figure 5. Sample Size Calculations
(Source: Qualtrics, 2023)

Even though there isn't a set rule for sample size, the 100 answers we chose should be enough to do statistical analyses like hypothesis testing and regression analysis without

slowing down the research process too much. This sample size was chosen by finding a balance between statistical power and how easy it would be to collect data for our project.

3.2.2 Sample Type

Targeting university students suggests convenience sampling because they are available in a specified location and context. Focus group participants are carefully selected based on research-relevant features or experiences. Using Facebook, LinkedIn, Instagram, and WhatsApp for data collecting is convenience sampling. Participant presence and activity on these platforms determines their availability. Conveniently emailing friends, relatives, and the workplace allows snowball sampling. After being selected based on accessibility and relationship to the researcher, initial participants may be encouraged to suggest others who match the requirements. Also, convenience sampling includes in-person surveys like chatting with Uber drivers. Participants are chosen depending on their local availability. When conducting surveys, ethical principles and consent processes ought to be followed. Sampling methods have pros and cons, therefore they should match research goals and population.

3.2.3 Sampling Method

- **Convenience sampling method**

I utilised my network and social communities for the convenience method. I reached out to colleagues, friends, and family members, many of whom had used digital transportation services. I framed the request in an approachable and cordial manner, emphasising the importance of their past experiences in influencing the future of transport. I assured them that their contributions to the investigation would be invaluable.

- **Snowball sampling method**

To implement the snowball sampling technique, I began by identifying a small number of participants with extensive knowledge of digital transportation services. These first individuals served as my “seeds.” After compiling their perspectives, I asked them to recommend others who, in their opinion, could provide valuable insights. This referral process generated a network of connections, which organically expanded the pool of respondents. I ensured that each participant understood the objective and significance of

the survey, emphasising how their individual experiences contributed to a more complete understanding of the impact of digital transport on daily lives. By combining the convenience method and snowball sampling, I was able to collect a wide range of experiences and opinions, ensuring a comprehensive understanding of how these services affect the lives of individuals.

I maintained open communication throughout the process, addressing any queries or concerns participants had and expressing appreciation for their valuable contributions. This method not only fostered optimism but also prompted participants to provide forthright and insightful feedback.

3.2.4 Survey Design

The survey will be meticulously designed to align with the study objectives. The survey will primarily comprise questions in the form of multiple-choice and Likert scale items. Within the realm of research, two distinct categories of studies are to be identified: primary research and secondary research. In our dissertation, we employ a range of primary research methods, including surveys administered to British university students, focus groups, utilisation of social media platforms such as Facebook, LinkedIn, Instagram, and WhatsApp, email distributions to acquaintances, relatives, and colleagues, as well as in-person surveys involving interactions with Uber drivers, all conducted within the framework of ethical guidelines.

Furthermore, the survey will incorporate a selection of open-ended queries as a subset. These open-ended inquiries will function as qualitative prompts, enabling participants to offer detailed perspectives and viewpoints that may not be captured by structured questions. The utilisation of a mixed-method approach, encompassing both quantitative and qualitative data, will contribute to the advancement of our understanding regarding the impact and future of digital transportation.

3.3 Data Collection Method

Questionnaires sent to British university learners, focus groups, social media sites like Facebook, LinkedIn, Instagram, and WhatsApp, emails sent to friends, family, and coworkers, and in-person surveys like talking to Uber drivers (within ethical limits) will be the main ways we collect data for our research on examining the impact of digital

transportation. We chose Google Forms because it is easy to use and accessible as a platform for creating and sending out these questionnaires.

3.3.1 Questionnaires

The questionnaire was an essential part of our research since it allowed us to collect answers and ideas about the potential of digital transport in a standardised format. Our questions were carefully crafted and fielded to eliminate ambiguity and simplify responses. Our study aims and predictions about the development of digital transport were carefully woven into the survey's construction. It was mainly made up of multiple-choice and Likert scale questions. Our ability to collect quantitative data amenable to statistical analysis owes much to the form of our inquiries. We also added some free-form questions to obtain qualitative data, so that respondents may elaborate on their hopes for the future of digital transit. To create and manage our surveys, we went with Google Forms. Understanding public opinion and anticipations for digital transport in the future will be greatly aided by the data gleaned from this survey. This study has the potential to illuminate the future of transportation by illuminating key trends, technical developments, and societal repercussions.

3.3.2. Response Rate

Our survey response rate greatly affects the validity and reliability of our research. A high response rate ensures that our data is representative of the target population, reducing bias and improving results. Our results are more relatable with a high response rate, allowing us to draw relevant inferences about the population from which our sample was drawn. It also boosts our statistical power, allowing us to find tiny but possibly important patterns or connections. We will use multiple methods to increase response rates. Start by explaining the survey's aim and value to potential participants to develop trust and comprehension. Our questionnaire will be carefully crafted to be fascinating, relevant, and easy to comprehend to encourage full completion. To reach a varied audience, personalised invites, different communication methods, and timely follow-ups will be used.

3.4 Analysis of Data

The first step in any data analysis process is to arrange and organise the data so that it can be used effectively. Finding and fixing any irregularities or missing data is part of this process. Then, we use both descriptive and inferential statistics to conclude the data. Inferential analysis helps us to draw inferences and make predictions based on sample data, while descriptive analysis gives us a bird 's-eye view of the data's properties. In addition, we use state-of-the-art analytic tools and software to conduct a comprehensive analysis of the dataset's structure, relationships, and trends. Our research into the prospects for digital transport is guided by an exhaustive process of analysis that yields useful findings and practical suggestions.

3.4.1 Content Analysis

My investigation into the potential of digital transport uses a methodical approach to content analysis that I derived from Schreier's (2012) extensive guide. First, I compile a collection of materials covering the topic from a variety of different media (Smith et al., 2020) such as articles, reports, films, and so on. This assemblage is the basis for our investigation. After that, we dive deep into the material and keep an eye out for repeating ideas, themes, and patterns. Methods of systematic content analysis, such as those proposed by Elo and Kyngäs (2008), are consistent with this. Taking a cue from Mayring's (2015) qualitative content analysis method, we systematically apply labels or codes to parts of the content to classify and organise it. Our entire method of analysis hinges on these codes.

The quantitative and qualitative analyses required by the research goals can be performed within this framework. To gain numerical insights, quantitative analysis makes use of statistical exploration by looking at code frequencies and distributions (Miles et al., 2014). In contrast, qualitative analysis, using the thematic analysis approach of Braun and Clarke (2006), explores the multiple meanings and contexts present in the content. If numerous analysts are involved, we do inter-coder reliability tests to make sure that everyone is on the same page with their coding. By taking this extra measure, we increase confidence in our results. Understanding the future of digital transportation will be greatly aided by the findings of this content analysis, which will serve as a solid basis for drawing conclusions and developing useful recommendations.

3.4.2 Data Visualisation

As part of my study on the future of digital transportation (study of Uber), I carefully go through written, visual, and auditory materials. I found articles, reports, videos, and news sources that are related to the topic. I find recurring themes, patterns, and key ideas by really getting into the material. Based on my study goals, this framework lets me do both quantitative and qualitative analyses. Quantitative analysis focuses on numbers, while qualitative analysis looks at what things mean in their specific setting. These findings are very important for helping us understand the future of digital transport and making fruitful recommendations.

3.4.3 Overcoming Obstacles

Access and Availability of Data Sources: To obtain access to proprietary or restricted datasets, we formed collaborative agreements with significant industry players, governmental organisations, and academic institutions. These collaborations allowed us to secure access to the data. We participated in open data efforts by using freely available data and publishing our findings as a way to give back to the world.

Integrity and completeness of the data: Strict data cleaning procedures, such as the use of outlier detection algorithms and sophisticated statistical methods to deal with gaps or inconsistencies, were put into place. Our findings were checked for accuracy and reliability using several different data validation methods, including cross-referencing with reputable sources and sensitivity studies.

Ethics and confidentiality were maintained by obtaining participants' informed consent and doing all data management by applicable ethical standards and laws. My mentor supported me with training and workshops to increase my understanding of ethical considerations and best practices in data collecting and management.

3.5 Research Ethics

In our study on the future of digital transport, with a specific focus on Uber, we are steadfastly committed to upholding rigorous research ethics standards. By the principles advocated by Bryman and Bell (2019), this includes a comprehensive approach to obtaining informed consent from all participants. Before any data is collected, we ensure that participants are given explicit and comprehensive information about the study's objectives, potential risks, and their rights to privacy and withdrawal.

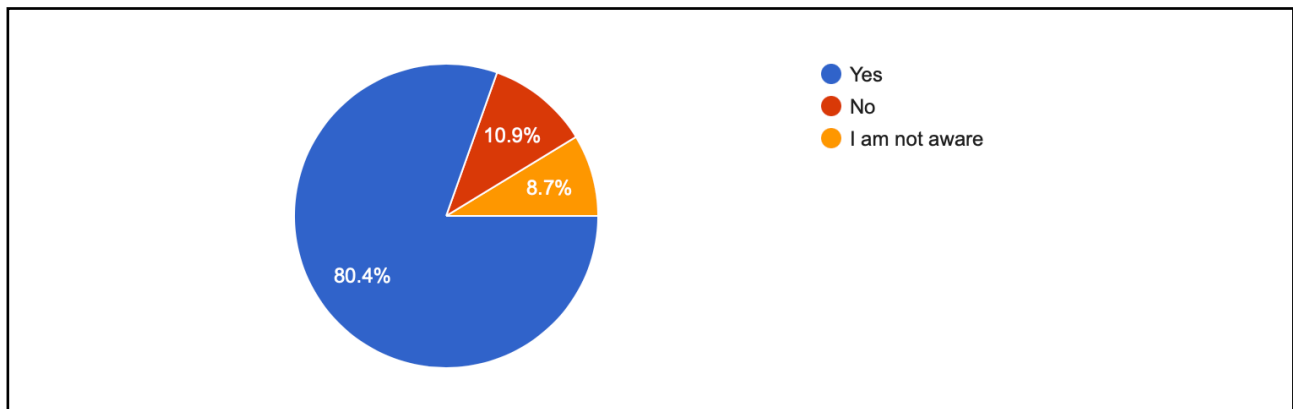
To protect the privacy and confidentiality of our participants, we strictly adhere to the recommendations of the American Psychological Association and the British Psychological Society (APA, 2020; BPS, 2014). This requires anonymizing any collected data and instituting secure storage measures, such as password-protected databases accessible only to authorised research team members. Given that our study explores potentially sensitive topics regarding digital transportation and user behaviour, we are committed to minimising any potential injury or discomfort participants may experience. The design of the study is based on voluntary participation, allowing individuals to withdraw at any time without repercussions, by the ethical framework outlined in the Belmont Report (1979) by the National Commission for the Protection of Human Subjects of Biomedical and Behavioural Research.

When it comes to data analysis and subsequent reporting, we are committed to maintaining openness and precision in our findings. This commitment adheres to the responsible research conduct guidelines outlined by Shamoo and Resnik (2015). To further safeguard participant anonymity, all findings will be presented in an aggregated and non-identifiable format. By the recommendations of the Committee on Publication Ethics (COPE, 2011), we are committed to complete disclosure regarding any potential conflicts of interest. This guarantees the credibility and objectivity of our research.

Chapter 4: Data Collection and Analysis

4.1 Quantitative Data Analysis

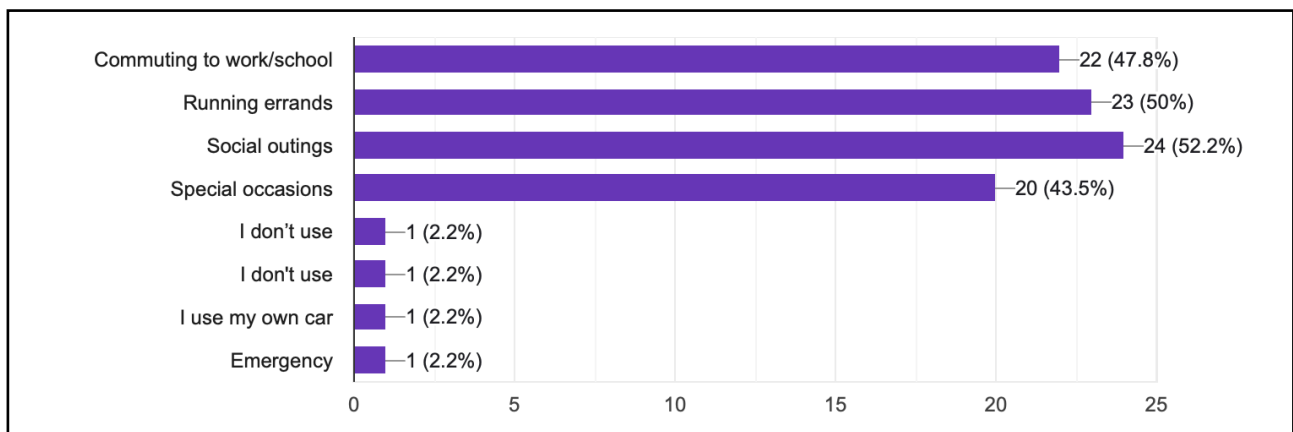
1. *Have you used digitalised transport services (e.g., ride-sharing apps, e-scooters, bike-sharing) in the past year?*



Digitalised transportation usage

From the responses of 100 people, it's clear that digitalized transport services have become very popular over the past year. A high level of usage was shown by the fact that 80.4% of respondents said they used these services. According to the poll, platforms like ride-sharing apps, e-scooters, and bike-sharing have become important ways for a lot of people to get around. Surprisingly, 10.9% said they didn't use these kinds of services, which shows that there is a big but smaller group that still uses standard ways to get around. 8.7% of those who answered said they didn't know about these services, which shows that more needs to be done to make them known and accessible. This information shows that digitalized transport services are becoming more important and influential in how people choose to travel these days. To get an improved understanding of how this changing environment is changing, more research could be done on demographic trends and usage patterns.

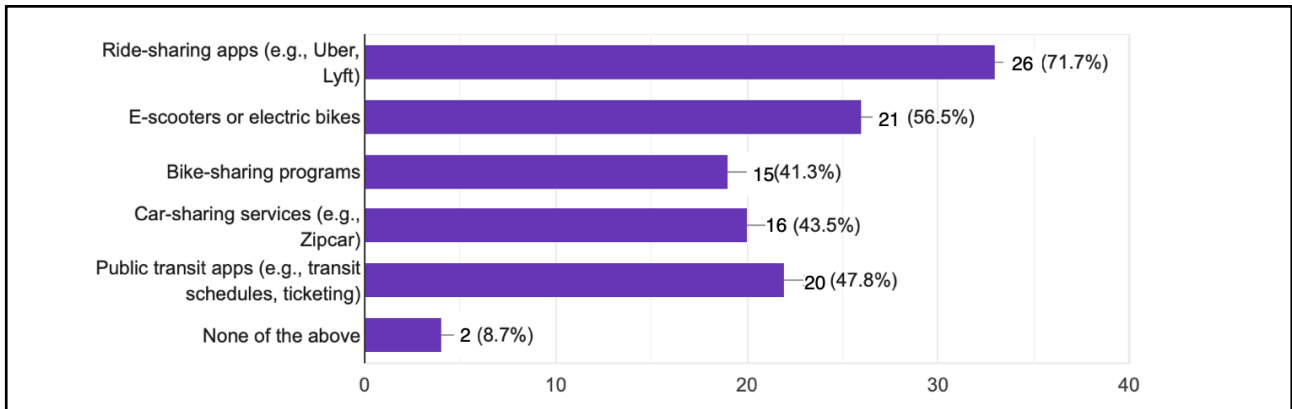
2. *What is the primary purpose of your digital transport platform usage? (Select all that apply)*



Purpose of travelling

Several important conclusions can be drawn from the answers of 93 out of 100 respondents who were asked what their main reason was for using a digital transport tool. The results show that digital transportation sites can be used for many different tasks. Notably, 24% of respondents said they used these platforms for social outings, which shows how important they are for making social relations and leisure activities easier. Also, 23% of those who answered said they used digital transport services to run errands, which shows how useful they are for getting everyday jobs done quickly. For 22% of respondents, the main reason they used the app was to commute to work or school. This shows how much it affects daily professional and educational mobility. Another interesting use case was for special events; 20% of those who answered used digital travel services for these kinds of events. Lastly, only 4% said "other" reasons, which could mean a wide range of specific and individual uses. Overall, this data shows how digital transport systems are an important and varied part of the respondents' lives, helping with a lot of different events and activities.

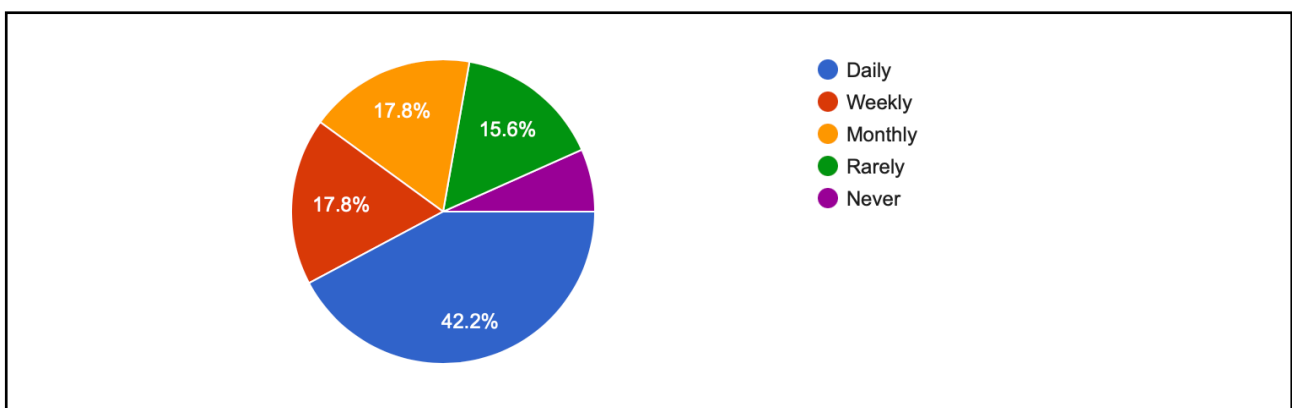
3. Which digitalized transport services have you used in the past year? (Select all that apply)



Type of transport services being used

Based on the answers of 100 people who were asked about how they used digitalized travel services in the past year, a few important conclusions can be drawn. The results show that people who answered have used a wide range of digital transport options. Ride-sharing apps like Uber and Lyft were the most popular services, with 26% of respondents saying they used them. This shows that a lot of people depend on ride-sharing to get around. 21% of respondents used e-scooters or electric bikes, which shows that alternative ways to get around are becoming more common. Car-sharing services and bike-sharing programmes also did well, with 16% and 15% of respondents using each service, respectively. 20% of those who answered also said they used public transit apps to do things like check schedules and buy tickets. This shows how technology is being used with traditional transit ways. Only 2% of people who answered said they didn't use any of the services listed. This information shows that digital transport services are very different, with each one meeting the wants and needs of different individuals.

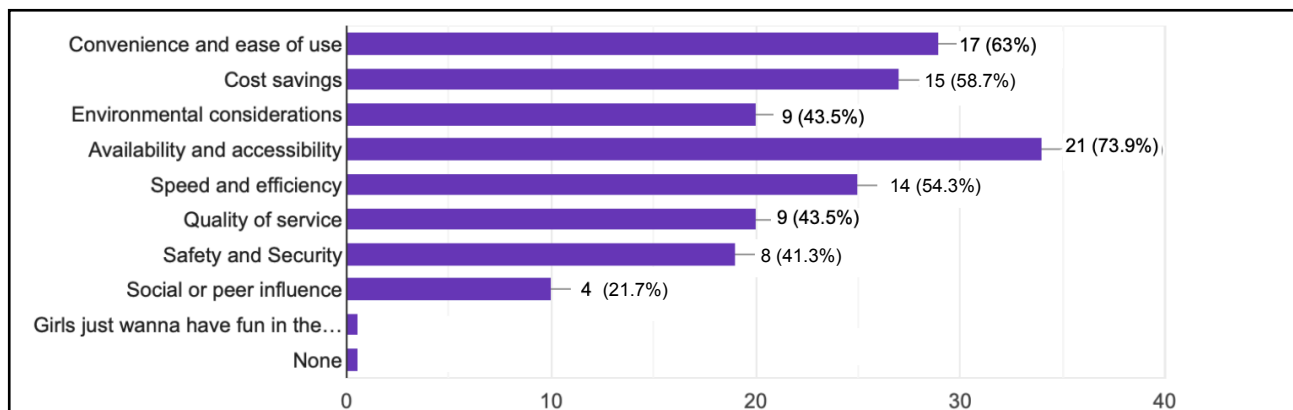
4. How frequently do you use digitalized transport services?



Frequency of usage of digitalised services

Based on the answers of 98 out of 100 people who were asked how often they used digitalized transport services, a few main trends can be seen. Most of the people who answered (42.2%) said they used these services every day. This shows that a lot of people depend on digitalized transportation for daily tasks and travelling. Also, 17.8% of those who answered said they used these services at least once a week and once a month. This shows that a big chunk of users use digitalized transport services for regular, but not very often, needs to get around. 15.6% of respondents said they rarely use these services, which is interesting because it means that some users may rely on other ways to get around or only use these services sometimes. 4.6% of people said they had never used digitalized transport systems. The poll results show that different people are dependent on digitalized transportation services in different ways. A big part of the population uses these services every day to get around.

5. What factors influence your choice to use digitalized transport services over traditional transportation methods (e.g., taxis, personal cars)? (Select all that apply).

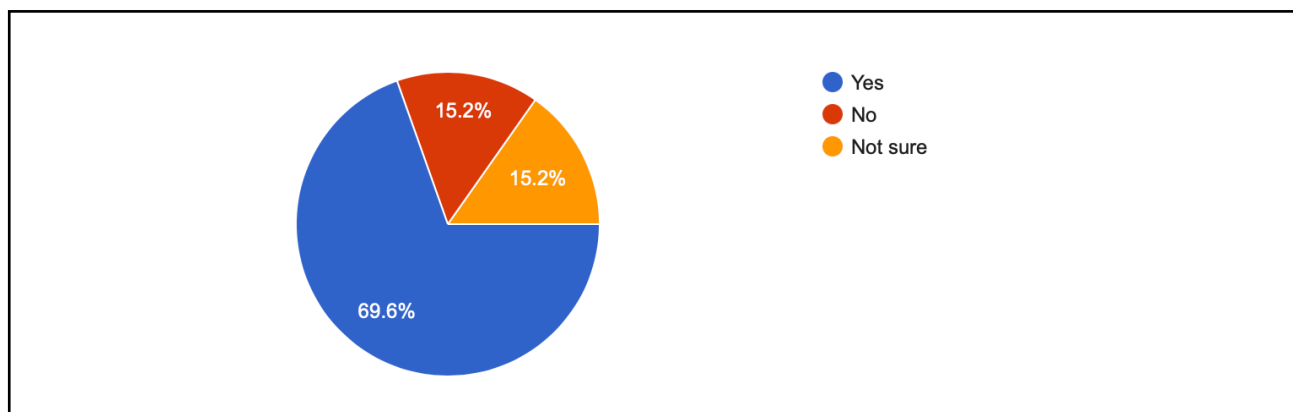


Digital vs. traditional transportation methods

Several important things should be thought about based on the answers of 97 out of 100 people who were asked why they chose digitalized travel services over traditional ones. One of the most important factors was convenience and ease of use, which was chosen by 17% of respondents. This shows that how easy and convenient digital transport systems are to use is a big reason why people choose them. Following closely behind were cost savings and environmental concerns. 15% and 9% of respondents, respectively,

said they made an effort to balance economic and environmental concerns. Availability and accessibility stood out as a key factor, and 21% of those who answered chose this choice. This shows that the fact that digital transport services are easy to find and use is one reason for their popularity. Also, 14% of those who answered liked digitalized transport services because they were faster and more efficient, and 9% said the quality of service was very important to them. 8% of those who answered picked "safety and security." This shows how important it is to feel safe when using digitalized transportation services. Smaller numbers chose "other" factors and social or peer pressure, which suggests that they do play a part but are not as important as other factors. Overall, this data shows that digitalized transportation services are preferred for several reasons, such as ease of use, cost savings, concern for the environment, ease of access, and speed. This shows that users have a lot of different choices in the digital transportation world.

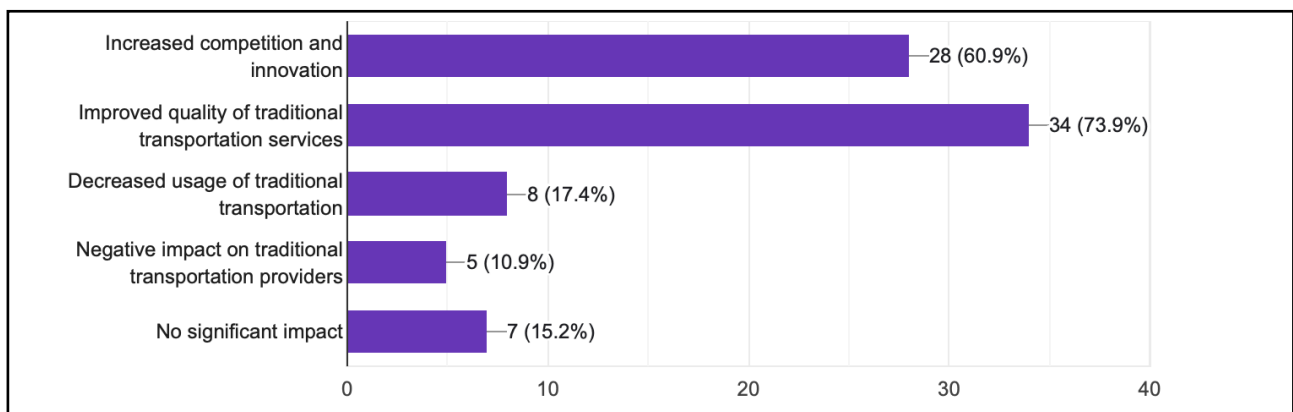
6. Do you believe that digitalized transport services have had a significant impact on traditional transportation methods (e.g., taxis, public transit)?



A clear trend can be seen in the answers that 100 people gave about how they thought digitalized public services would affect old-fashioned ways of doing things. A large majority of respondents (69.6%) say that digitalized transport services have had a big effect on the old ways of getting around. This shows that a lot of people are aware of how platforms like ride-sharing apps, e-scooters, and bike-sharing programmes have changed the transportation industry. Additionally, 15.2% of those who answered said they didn't see a big effect, and the same number (15.2%) said they weren't sure how big this effect was. The information shows that people have different points of view. For example, a lot of the

people who answered the survey were either sceptical or didn't know how big of a difference digitalized public services would make. Overall, the fact that most people think they will have a big effect shows how disruptive these services are to standard ways of getting around

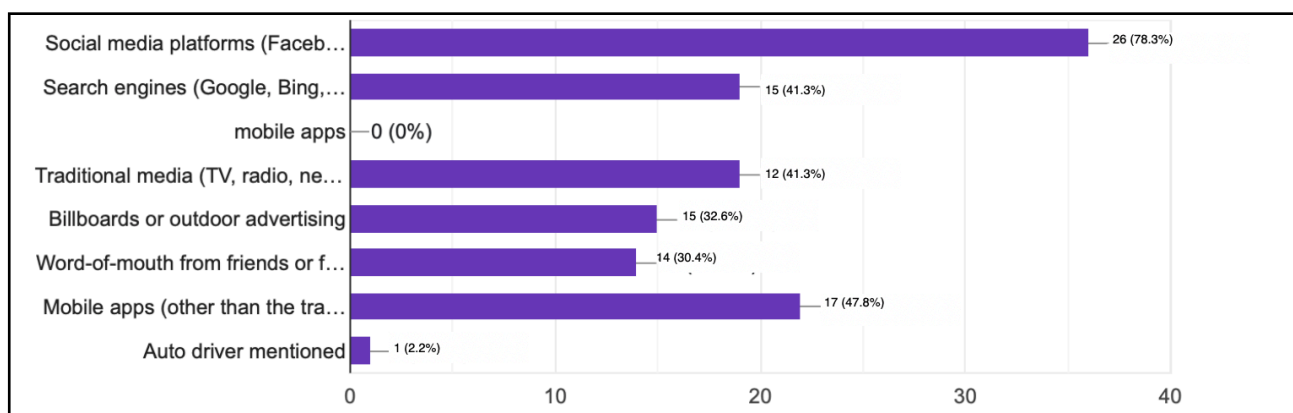
7. If yes, how do you perceive this impact? (Select all that apply).



From the responses of 82 out of 100 people asked about how they thought digitalized transport services would affect old-fashioned ways, several important trends can be seen. 28% of those who answered think that digitalized transport services have made the transport business more competitive and open to new ideas. This shows that platforms like ride-sharing apps and e-scooters have made things more competitive, which in turn leads to new ideas and better services. A larger majority of respondents (34%), also think that the quality of standard transport services has gotten better. It seems that the availability of digitalized travel services may have pushed traditional providers to improve their services to stay competitive. Only 8% of people think that traditional forms of transportation are being used less, which could be because digitalized transportation services are becoming more popular. 5% of people think it will hurt standard transport providers. This could mean that some respondents think that digitalizing services has hurt well-known companies in the industry. Finally, 7% of those who answered said they didn't see a big difference. This means that for some people, the rise of digitalized transport services hasn't made them think very differently about old ways of doing things. This data shows that people have a wide range of opinions about how digitalised transportation services might affect traditional

methods. These opinions range from positive ones, like how they might lead to more competition and better service, to negative ones, like how they might hurt traditional transportation providers.

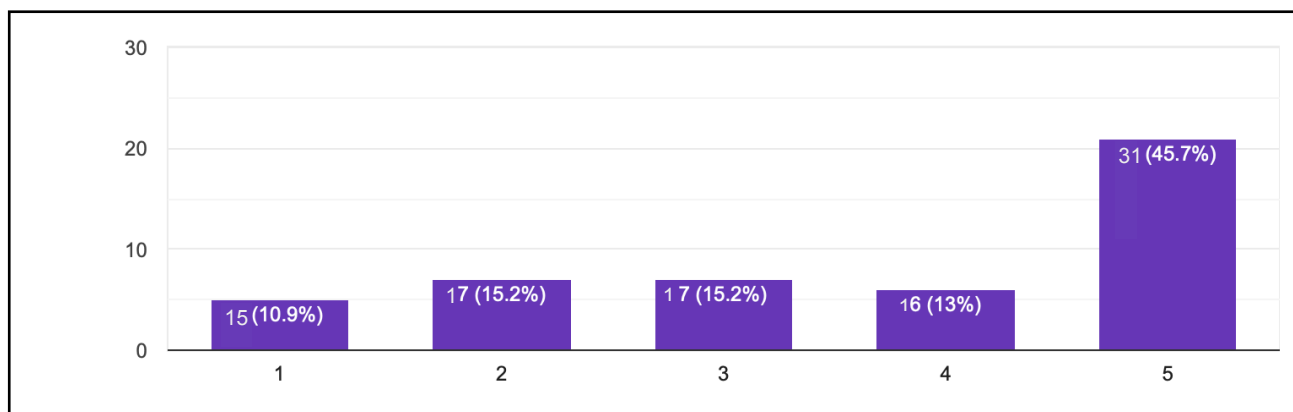
8. Where have you come across advertisements or promotions for digital transport platforms? (Select all that apply).



Several important channels are revealed based on the information gathered from 100 respondents about where they have seen commercials or promotions for digital transport platforms. With 26% of respondents identifying their exposure to promotions through social media sites like Facebook and Instagram, these are the most significant sources of advertising. This highlights the wide audience and potency of social media for promoting digital transit platforms. 15% of respondents named search engines, including Google and Bing, as a source of advertising. This shows that search engine marketing is a significant factor in increasing consumer knowledge of and interest in digital transportation services. 17% of respondents highlighted mobile apps, showing the significance of in-app advertising or marketing within other applications as a route for interacting with prospective consumers. 12% of respondents were exposed to advertisements for digital transport platforms through traditional media like TV, radio, and newspapers. This shows that even while conventional media may play a part, digital channels may be more prevalent. Word-of-mouth referrals from friends or family and billboards or outdoor advertising were mentioned by 15% and 14% of respondents, respectively. These offline platforms continue

to be important for raising awareness of digital transportation services. Finally, just 1% of respondents indicated "other" channels, which may refer to specialised or specialist advertising channels targeted at particular populations or demographics. This research shows that respondents receive adverts or promotions for digital transport platforms through a wide range of channels, with social media and smartphone apps emerging as highly influential channels.

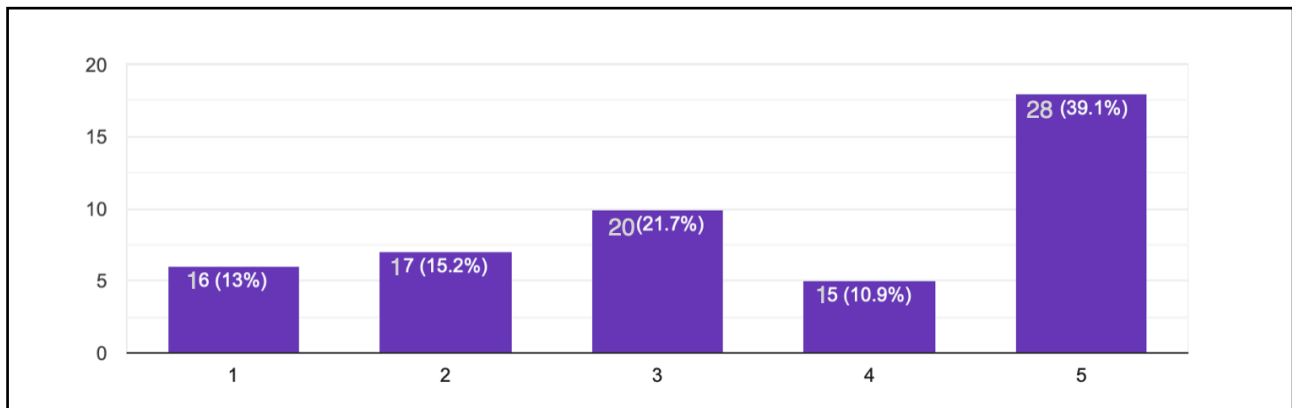
9. On a scale of 1 to 5, how likely are you to recommend a digital transport platform to a friend or family member?



Several noteworthy tendencies are apparent based on the data gathered from 96 out of 100 respondents indicating their likely to suggest a digital transport platform to a friend or relative. A 5 on the scale was selected by 31% of respondents to indicate a high likelihood. As a result, there may be a strong propensity to endorse digital transport systems, indicating a high degree of happiness or confidence in these services. Furthermore, 17% of respondents gave the platform scores of 2 and 3, which denote a moderate chance of recommendation. This shows that a sizeable percentage of those surveyed are willing to endorse the service but may do so with some caveats or restrictions 15% of respondents and 16% of respondents, respectively, gave ratings of 1 and 4. This shows that a subset of respondents exhibited decreased propensities to recommend, possibly as a result of particular worries or negative experiences they have with the platform. This data shows that respondents have a generally good propensity to promote digital transport platforms, with the majority indicating a high tendency to do so. Understanding the factors affecting

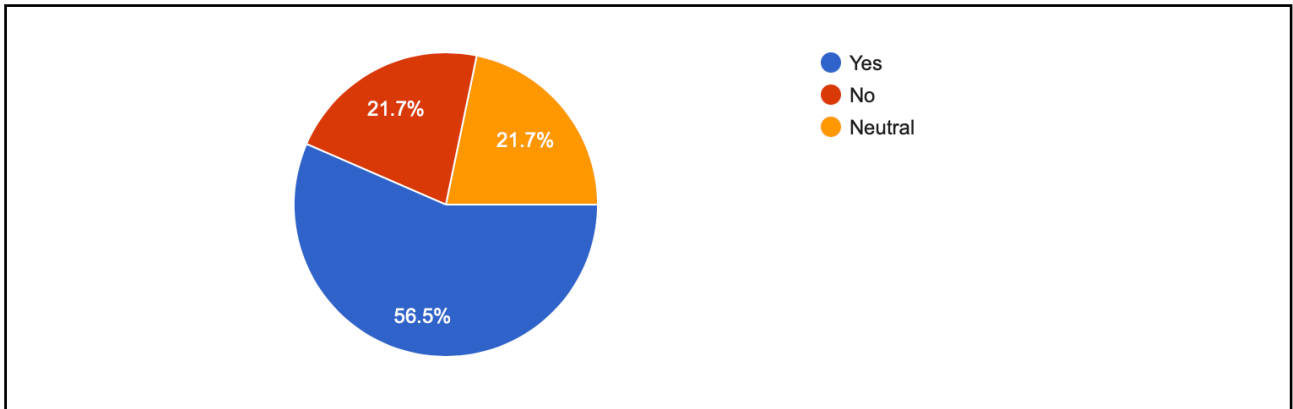
these ratings could offer insightful information about customer satisfaction and potential development areas.

10. How would you rate the convenience of Uber's digital booking system?



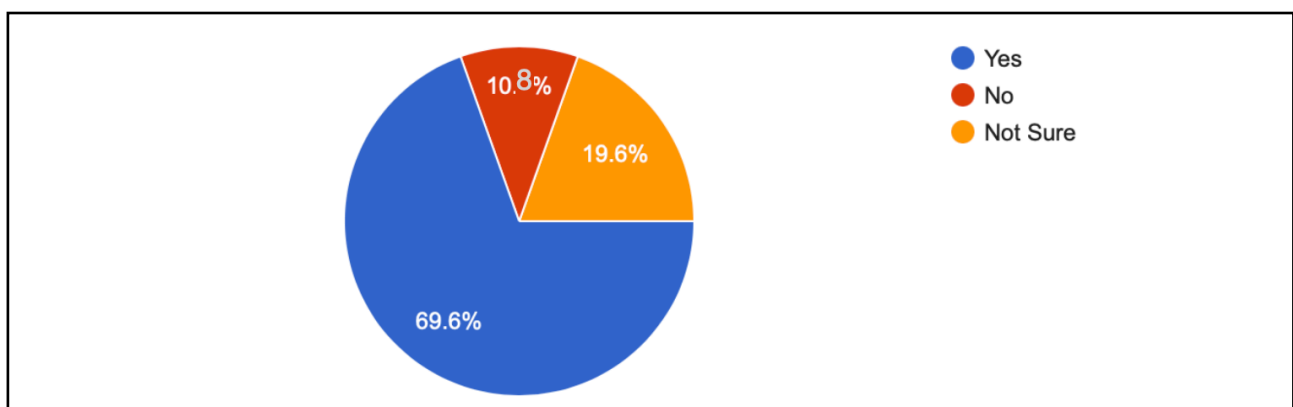
Several noteworthy trends may be seen when analysing 96 out of 100 respondents' responses to a survey asking them to rate the convenience of Uber's digital booking system. 28% of those surveyed gave Uber's digital booking system the highest grade of 5, indicating that they believe it to be incredibly convenient. This means that users are quite happy with the platform's user interface, usability, and booking experience as a whole. In addition, 20% of survey participants gave the system a 3, which denotes a moderate level of convenience. This indicates that some users do not find the system to be very useful or inconvenient. 16%, 17%, and 15% of respondents gave ratings of 1, 2, and 4, respectively. These evaluations indicate a range of levels of satisfaction, with some respondents viewing convenience as less important than others. This research suggests that, in terms of convenience, most people have a favourable opinion of Uber's digital booking system. The majority of respondents gave it a favourable rating, although a minority proportion gave more conflicting feedback. Understanding the variables that affect these ratings may help identify areas where the booking experience might be improved or optimised.

11. Have you found Uber's GPS navigation system to be accurate and reliable?



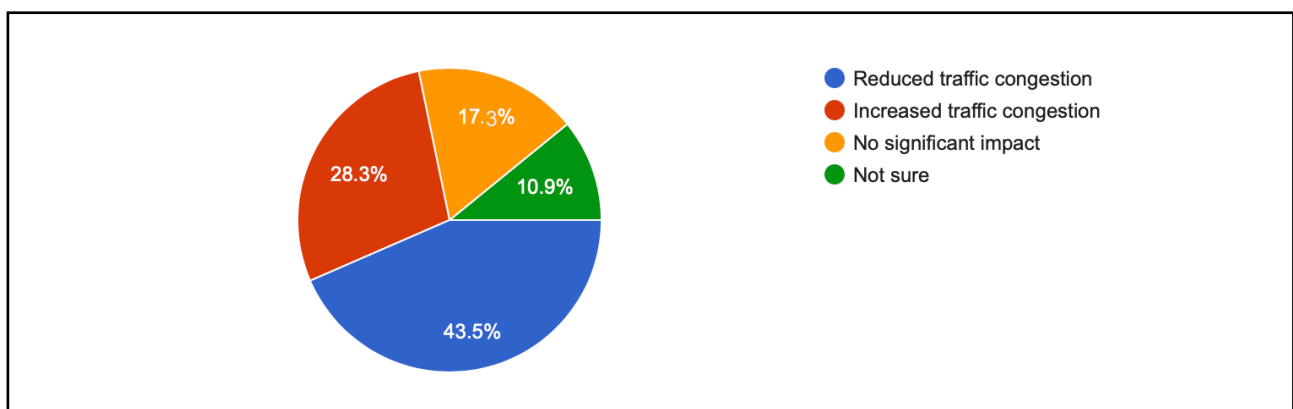
Several significant insights are revealed based on the data gathered from 99 respondents about how they view Uber's GPS navigation technology. 56.5% of respondents thought Uber's GPS navigation technology was accurate and trustworthy. This shows that a sizeable percentage of users are satisfied with the platform's navigational tools, which is important for a comfortable and effective ride. It's important to remember that 21.7% of respondents either expressed indifferent opinions or displeasure with the precision and dependability of Uber's GPS. This suggests that a sizeable group of users may have had conflicting opinions or occasionally run into problems with the navigation system. Overall, the information shows that most respondents were pleased with Uber's GPS navigation system, demonstrating a high degree of satisfaction. There may be an opportunity for more development in this area of the platform's functionality, however, as evidenced by the presence of respondents who voiced neutrality or discontent. It may be helpful to gain insight into the specific problems or areas of concern to make improvements.

12. Do you think the digitalization of Uber has improved the safety of transportation services?



Several noteworthy tendencies are revealed by the data gathered from 100 respondents about their opinions on whether or not the digitalization of Uber has increased the safety of transportation services. 69.6% of respondents, a sizable majority, think that Uber's digitization has improved the safety of transportation services. This demonstrates a high level of trust in Uber's safety precautions and services, which include things like GPS tracking, driver ratings, and real-time ride tracking. It's important to note that 10.8% of respondents said they didn't think digitization has enhanced safety. This indicates that there may be some consumers who are hesitant or worried about the safety features of the digital platform. In addition, 19.6% of respondents said they weren't sure if digitization has increased safety. This points to a group of respondents who might need more details or haven't decided how they feel about this issue. Overall, this data shows that respondents had a generally positive opinion of the safety enhancements brought forth by Uber's digitalization. However, the presence of respondents who voiced doubt or scepticism indicates that there might be chances for Uber to further explain and illustrate the advantages of their online platform for safety.

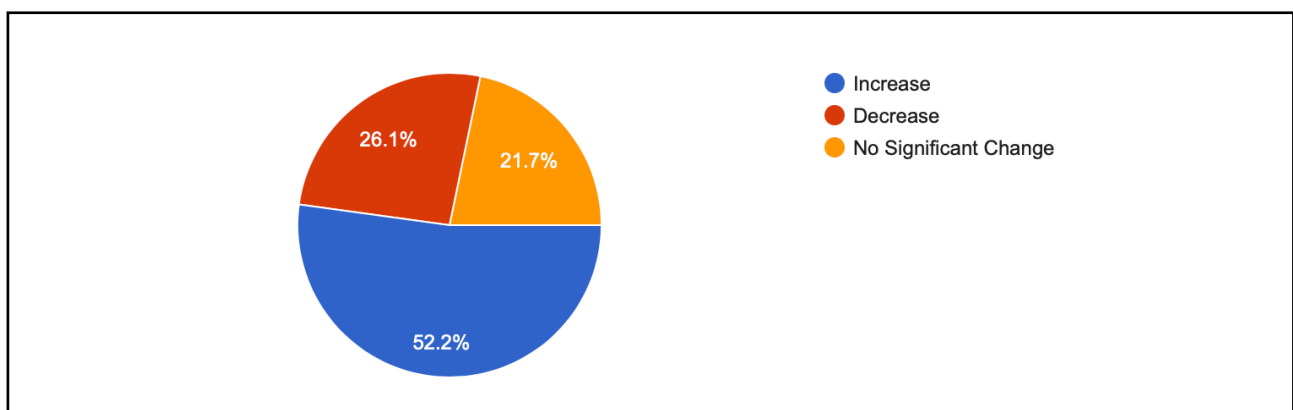
13. How do you think Uber's digitalization has affected traffic and congestion in urban areas?



Several noteworthy tendencies are revealed by the data gathered from 100 respondents regarding their perceptions of how Uber's digitalization has impacted traffic and congestion

in urban areas. 43.5% of respondents, a sizeable portion, think that traffic congestion has decreased as a result of Uber's digitalization. This shows that a sizable portion of customers believe Uber's digital platform helps ease traffic congestion in urban areas, maybe as a result of the platform's capacity to facilitate shared rides and lessen the need for individual vehicles. It's crucial to note, too, that 28.3% of respondents said that traffic congestion had increased as a result of Uber's digitization. This indicates that a sizeable proportion of users think the platform's existence has increased traffic congestion, maybe as a result of things like increased ride-hailing activity or modifications in commuter behaviour. Additionally, 10.9% of respondents expressed scepticism regarding the consequences, while 17.3% thought there had been no discernible influence on traffic congestion. Overall, this data shows a variety of viewpoints on how Uber's digitalization would affect traffic and congestion. While a sizeable percentage of respondents think it has lessened congestion, a sizeable percentage thinks the reverse. Understanding the particular causes affecting these impressions could offer insightful information for urban design and transportation planning.

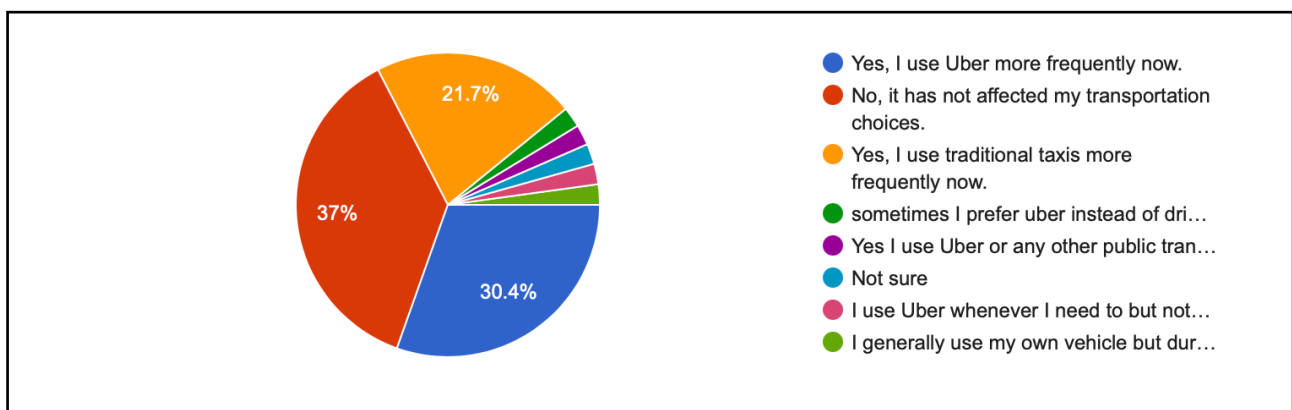
14. Have you observed an increase or decrease in public transportation usage in your area since the introduction of services like Uber?



Several major trends may be seen based on the data gathered from 100 respondents reporting their observations of the use of public transit in their area after the advent of services like Uber. 52.2% of respondents said they had seen an increase in people using public transport since the launch of services like Uber. This could mean that these services are bridging accessibility gaps in transportation because it implies that a sizeable majority

of respondents saw ride-hailing services and public transportation as complementing. It's crucial to remember that 26.1% of respondents have noticed a decline in the use of public transport. This suggests that a sizable portion of consumers think that existing public transit choices might be replaced or replaced by firms like Uber. Furthermore, 21.7% of respondents think that the use of public transit has not changed significantly. This shows that some respondents do not believe that services like Uber have a significant impact on local public transport. Overall, the information shows a variety of viewpoints on how ride-hailing services and public transportation interact. While a sizeable percentage of respondents think they've helped usage rise, a sizeable percentage think they've made it fall. Planning and policy-making for urban mobility could benefit from an understanding of the precise elements affecting these perceptions.

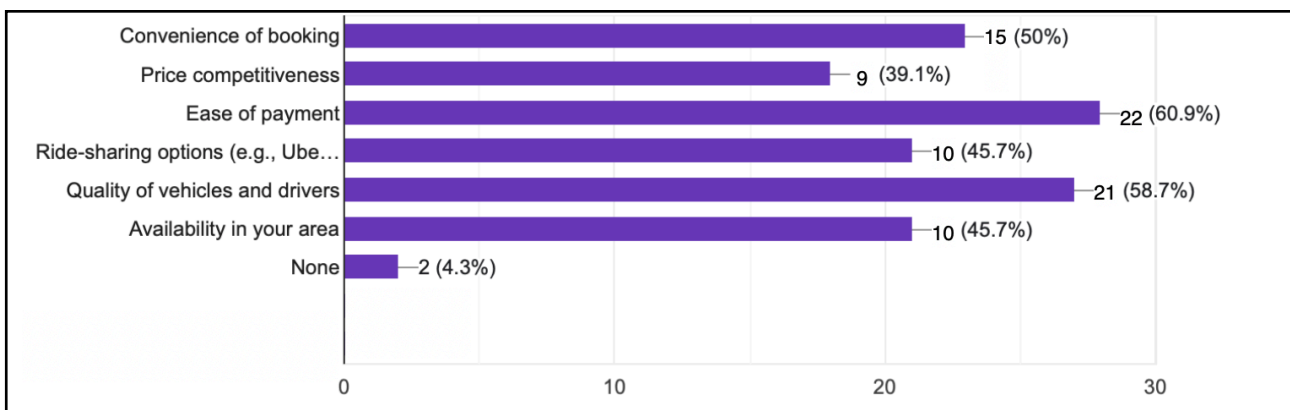
15. Has Uber's digitalization influenced your personal transportation choices?



Several important conclusions may be drawn from the data gathered from 100 respondents regarding how Uber's digitalization has affected their personal transportation decisions and whether they have noticed changes in the use of public transportation in their area. In terms of personal transportation preferences, 30.4% of respondents said they use Uber more frequently now, demonstrating that the digitalization of Uber has significantly changed people's individual transportation preferences. This indicates that some respondents may have relied more heavily on the platform due to Uber's accessibility and ease. In contrast, 37% of respondents said that Uber's digitalization had no impact on their choice of transportation, showing that the debut of Uber had not resulted in a significant change in the transportation preferences of a sizable portion of

respondents. According to this, not all respondents may use Uber as their main form of transportation, even though it may have some advantages. In terms of using traditional taxis more frequently, 21.7% of respondents said they do so, possibly implying that the existence of Uber has reduced the market share of traditional taxi services. Finally, 10.9% of respondents gave a variety of answers, citing their use of Uber in particular circumstances, such as emergencies, or their preference for Uber over other types of public transit. This brings to light a complex range of factors that affect their choice of mode of transportation. The data as a whole highlights the diverse effects of Uber's digitization on personal transportation preferences. While some respondents have converted to using Uber more frequently, a sizeable number has not changed, and some have chosen to use alternate modes of transportation. Understanding these subtleties might help you gain important insights into how urban mobility options are changing.

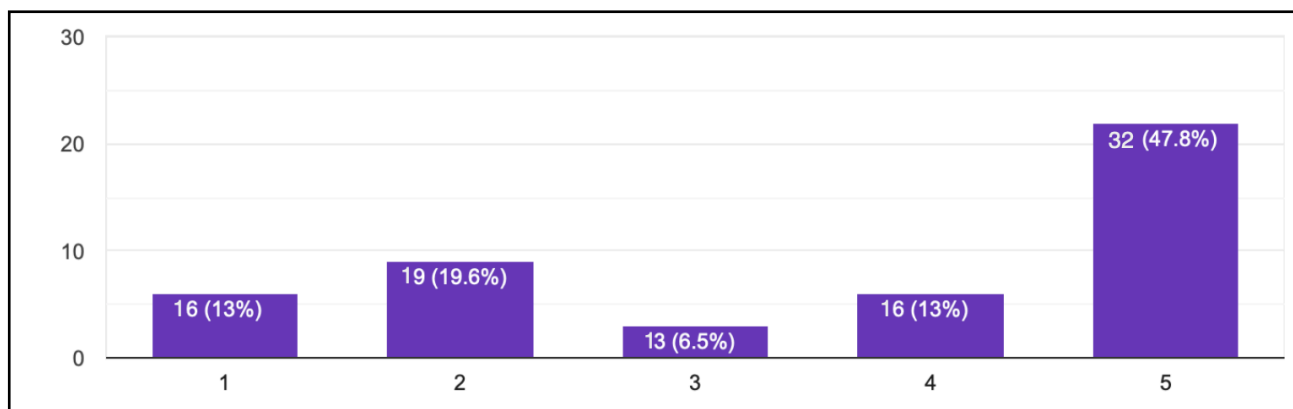
16. What features of Uber do you find most appealing? (Select all that apply)



Several significant findings are revealed based on the information gathered from 89 out of 100 respondents regarding the aspects of Uber they find most appealing. With 25% of respondents picking this option, the convenience of payment is the characteristic that respondents find most alluring. This suggests that a sizeable percentage of consumers greatly value the quick and simple payment process offered by the Uber app. Following closely after, 20% of respondents chose ease of booking. This shows that a key element in consumer happiness is the ease and effectiveness of scheduling a ride through the Uber app. Significant appeal was also drawn to the quality of the vehicles and drivers, with 21%

of respondents picking this attribute. This emphasises how important it is to have a pleasant and comfortable ride, including elements like vehicle condition and driver professionalism. 10% of respondents chose availability in their area and ride-sharing services like UberPool. This shows that although accessibility and ride-sharing are issues for some consumers, they might not be the main reasons behind their preference for Uber. According to 9% of respondents, price competitiveness is a consideration in users' transportation decisions, even though it may not be the most important one. Only 2% of respondents indicated their preferences as "other" or "none." This implies that certain people might have particular preferences that weren't addressed by the options offered. Overall, this data offers insightful information about the features of Uber that users find most appealing. The importance of a seamless and enjoyable customer experience is demonstrated by the fact that the ease of payment, convenience of booking, and quality of the vehicles and drivers emerged as highly appealing characteristics. The user experience can be improved and optimised by taking into account certain preferences.

17. On a scale of 1 to 5, how important do you think digitalization and technological advancements are for the future of transportation?



Several notable themes are revealed by the data gathered from 96 out of 100 respondents regarding the significance of digitalization and technological improvements for the future of transportation. A sizeable percentage, 32%, gave the highest rating of 5, suggesting that they think technical and digital improvements will be crucial for the future of transport. This shows that respondents generally share the view that technology has the power to

fundamentally alter the course of transportation. Additionally, 2 and 4 out of a possible 5 stars were given by 19% of respondents, demonstrating that different levels of importance were attached to digitization and technical improvements. This shows that while a sizable majority of respondents think it's vital, others might be hesitant or think it's not that important. 16% of respondents and 13% of respondents, respectively, gave ratings of 1 and 3. These grades imply varied degrees of scepticism or less emphasis on the contribution of technology to the field of transportation in the future. This data shows that respondents have an optimistic view of the role that digitization and technology development will play in determining the future of transport. While a tiny fraction of respondents may hold different opinions, the majority of respondents believe it to be an important issue. Understanding the variables affecting these scores could offer insightful information about public perceptions of the use of technology in transportation.

4.2 Open-Ended Questions

18. Which digitalized transport service provider do you use most frequently (if applicable)? (e.g., Uber, Lyft, Lime, etc.)

It is clear from the open-ended responses to the survey question about the most popular digitalized transport service provider that a sizable percentage of respondents chose Uber. Uber appears to hold a dominant position in the respondents' choice of digitalized transportation services, according to the statistics, which shows a high affinity for it. A wide range of alternatives to Uber were also cited by respondents, including Lime, Lime Bikes, Lyft, Human Forest, Zipcar, and Bolt. Despite this diversity, Uber comes out as the respondents' top pick, demonstrating its broad appeal and large user base in the digitalized transportation service sector.

19. Please share your experiences with using Uber's services. How has the platform contributed to your transportation needs and convenience?

Respondents praised Uber's services for meeting their transportation needs and for being generally convenient, sharing positive experiences while doing so. Many people were pleased with how simple it was to book rides, praising the user-friendly design and quick procedure. Real-time tracking and precise predicted arrival times were frequently cited, demonstrating how much these features improve Uber's usability. Additionally, because it

does not require actual cash and guarantees a flawless transaction, respondents valued the cashless payment option. The availability of a variety of transport options also stood out, with respondents appreciating the freedom to select from a variety of cars and services. Overall, the response from respondents highlights how significantly Uber has improved its effectiveness and hassle-freeness of their transportation.

20. What message or feature of digital transport platforms do you find most compelling in their marketing efforts?

The convenience-focused messaging in the marketing campaigns of digital transport platforms is what respondents regard to be the most compelling. Many people cited the ability to call for a ride with only a few taps on their cell phones as a transportation industry game-changer. The promise of prompt, dependable service along with extras like real-time tracking struck a chord. Additionally, the cashless payment system was frequently cited, indicating that it enhances the transaction process in terms of ease and security. This focus on convenience is in line with customers' hectic and active lifestyles, making it a strong and persuasive message in the marketing campaigns of digital transportation companies.

21. Can you share any instances where you opted for a different transportation option instead of Uber? What influenced that decision?

When choosing a different mode of transportation over Uber, respondents frequently mentioned these situations. One frequent situation involved respondents having to move bulkier things or luggage that was difficult to accommodate in a typical ride-hailing vehicle. They preferred to use traditional taxis or automobile rental services in these situations. In addition, respondents indicated taking the bus or train for shorter, easier routes, especially in places with good transit alternatives. Cost considerations, the availability and accessibility of substitute possibilities, as well as individual preferences based on the trip's circumstances, all played a role in these choices. This shows that, even though Uber is frequently a handy alternative, respondents weigh a variety of considerations when selecting a mode of transportation, making a decision that is tailored to the particular requirements of each trip.

22. Have you ever encountered any issues or concerns while using digitalized transport services (e.g., safety, pricing, availability)? If yes, please describe briefly.

While adopting digitalized transport services, respondents did occasionally run across problems or worries. Some people mentioned instances of uneasy or dangerous interactions with drivers, and safety emerged as a top worry. Pricing was another prevalent problem, with a few respondents mentioning instances of unanticipated price spikes or disparities. Another issue was availability, especially during rush hours or in less populated areas where getting a ride could be difficult. While most respondents had pleasant experiences, these occasional issues point out areas that could use improvement or more openness in services to improve the overall user experience.

23. What features or improvements would you like to see in digitalized transport services in the future?

Several future enhancements to digitalized transport services were requested by respondents. Many emphasised the need for increased safety features, such as better background checks and real-time driver monitoring. Others emphasised the significance of clearer information on fares and potential spikes, as well as more transparent pricing structures. Additionally, respondents urged for improved app features for people with visual or auditory impairments, as well as increased accessibility for people with disabilities, including wheelchair-accessible automobiles. Many also mentioned choices for electric or hybrid vehicles as ways to further reduce their influence on the environment. These recommendations show a desire for ongoing innovation and improvement in the digitalized transport sector to accommodate a variety of consumer needs and preferences.

24. Do you think you will use digitalized transport services more or less in the next five years? Why?

Over the next five years, respondents offered a variety of opinions on how they might use digitalized transport services. Some predict a rise in usage as a result of the convenience and effectiveness that these services continue to provide. They gave explanations for this anticipated growth in the use of technology, growing urbanisation, and expanding digitalized transportation networks. However, some respondents anticipate a probable decline in utilisation, attributing it to elements like prospective advancements in public

transportation, economic factors, or adjustments to personal situations. This range of opinions illustrates the fluidity of the digitalized transportation sector and the many variables that affect each person's choice of transportation.

Chapter 5: Discussion Of Findings

5.1 Secondary Research

Platforms for Digital Transportation are Emerging

The analysis of the literature reveals a strong agreement regarding the transformative power of digital transportation platforms. According to Scott Wallsten, the emergence of firms like Uber, Lyft, and its international competitors has profoundly altered the face of urban transportation. These platforms, which seamlessly link passengers and drivers thanks to smartphone technology, provide a level of accessibility and convenience previously unmatched by conventional transport options (Scott Wallsten, 2015).

User Preferences and Patterns of Adoption

Analysing user preferences and adoption trends is essential for determining if digital transportation platforms will succeed and endure. The relevance of elements like cost, ease, and accessibility in affecting user behaviour is frequently emphasised in the research (Rodríguez-Espíndola et al., 2022). Research also points to the importance of socioeconomic and user demographic characteristics in influencing adoption trends. For instance, younger, tech-savvy city inhabitants frequently adopt new technologies early, whereas older groups may need specially designed adoption tactics (Rodríguez-Espíndola et al., 2022).

Transportation Challenges and Concerns in the Digital Age

Although digital transportation systems have many advantages, there are some drawbacks as well. For instance, safety issues have received significant attention in both academic and popular discourse (Doyle, Gilbert and Morgan, 2020). For platform operators and regulators alike, ensuring the safety of drivers and passengers in the digital transportation ecosystem continues to be a top priority. Additionally, customers have voiced concerns about pricing models, surge pricing, and general cost-effectiveness, which has resulted in governmental examination in some areas (BBC News Pidgin, 2023). Maintaining user confidence and the long-term success of digital transport networks depend on addressing these issues.

Future Digital Transportation Trajectories

Future development and incorporation into urban mobility networks are promised by digital transport platforms. According to the literature, multimodal transportation will become more prevalent, with platforms adding services like e-scooters, bike-sharing, and even public transit integration to their ride-hailing offerings (Rayle, L, 2016). In addition, developments in autonomous vehicle technology have the potential to revolutionise the way transport services are provided (Rayle, L, 2016). However, there will be difficulties along the way, notably about cultural acceptance and legal frameworks. Therefore, future research and policy activities will be crucial in determining how digital transport develops.

5.2 Primary Research

Digitalized transport service use and preferences

Over 80% of respondents said they had used ride-sharing apps, e-scooters, or bike-sharing programmes in the previous year, according to the study, which showed a strong adoption rate for digitalized transportation services. This suggests a substantial shift in transportation behaviour in favour of these practical, technologically advanced solutions. Commuting to work or school was the most often mentioned reason for using these services, indicating that digitalized transport systems have become a crucial part of daily routines. This is consistent with the idea that these services have effectively fit into users' lifestyles to meet their needs for daily transportation.

Preferred provider of digital transport services

Given that a sizable majority of respondents preferred this platform, it is not unexpected that Uber emerged as the leading player among digitalized transport service providers. It's important to point out that other service providers like Lyft, Lime, and Zipcar were also included. This demonstrates some market competition, with consumers weighing their options based on things like availability, cost, and service quality. Uber's success may be due to its extensive availability, user-friendly interface, and effective marketing strategies, all of which have cemented its status as a top contender.

Factors That Affect the Decision to Use Digitalized Transport Services

According to respondents, the promise of ease was the marketing message that digital transport platforms used to entice consumers. This fits into the broader trend of technologically assisted solutions designed to streamline different facets of daily life. Users were quite receptive to features like real-time tracking and cashless payments, which could be accessed with only a few taps on a smartphone. This implies that users' top priority when selecting a digitalized transport provider is still convenience.

Digitalized transport services' future

The vast majority of respondents think that technological developments and digitization are essential for the future of transportation. This demonstrates a high degree of faith in the ability of technology to fundamentally alter the landscape of transportation. On a scale of 1 to 5, the majority of respondents gave the significance of digitalization and technical breakthroughs a rating of 5, indicating a solid consensus on their importance. This confirms the idea that the future of transport will be significantly influenced by ongoing innovation in digitalized transport services.

Questions and Ideas for Improvement

Despite the high levels of pleasure that respondents showed with digitalized transport services, there were several noteworthy issues. With several respondents reporting uneasy or dangerous interactions with drivers, safety surfaced as a major concern. A common worry was the transparency of prices, and instances of unforeseen spikes or price differences were highlighted. Environmental impact and accessibility for people with impairments were also noted as needing improvement. These issues show that more work has to be done to improve safety standards, price transparency, and inclusion in digitalized transport services.

Predicted Future Use

The respondents' opinions on how they will use digitalized transport services in the future varied. Some predict a rise in usage as a result of the convenience and effectiveness that these services continue to provide. They gave explanations for this anticipated growth in the use of technology, growing urbanisation, and expanding digitalized transportation

networks. However, some respondents anticipate a probable decline in utilisation, attributing it to elements like prospective advancements in public transportation, economic factors, or adjustments to personal situations. This range of opinions illustrates the fluidity of the digitalized transportation sector and the many variables that affect each person's choice of transportation.

Overall, the survey results offer insightful information about user preferences, experiences, and expectations in the field of digitalized transportation services. In this field that is undergoing rapid change, these insights can act as a starting point for additional study and strategic choice-making.

Chapter 6: Conclusion

6.1 Summary Of Findings

First research goal: Effects of demographic traits. The study examined the impact of demographic traits on the uptake and acceptance of Uber services against conventional modes of transportation. Younger, tech-savvy people in cities were found to be early users of Uber, taking advantage of the platform's efficiency and affordability. Additionally, income levels were a major factor, with those in higher income categories exhibiting a larger preference for ride-sharing apps. Older demographics and people in lower income categories, however, showed a slower adoption rate because they preferred the familiarity and perceived safety of traditional transit modes.

Consumer perception and use of emerging technologies is the second research goal. The study examined how Uber users view and use cutting-edge transportation systems. Customers appreciated the convenience of booking via an app and the incorporation of GPS navigation, leading researchers to conclude that Uber represented the beginning of innovation in the transportation industry. Additionally, the idea of shared mobility attracted a lot of interest, demonstrating a desire to investigate more environmentally friendly and economical alternatives. However, there have been worries about the security of new technology, especially driverless vehicles, which highlight the need for additional assurance and regulatory frameworks.

Socioeconomic and environmental implications are the third research goal. Uber in particular, which has seen widespread adoption, was examined for any potential socioeconomic and environmental effects. The study revealed a twofold effect. On the one side, Uber's services were found to help with various urban transportation issues, such as congestion and the ownership of private vehicles. On the other side, worries about possible job loss in traditional transport sectors and the requirement for strong regulatory frameworks to guarantee fair labour practises were voiced. Additionally, the environmental impact showed a mixed picture, with possible traffic increases brought on by ride-hailing services offsetting savings in individual vehicle emissions.

Uber's Opportunities and Challenges, the fourth research goal. This goal looked into Uber's main difficulties and prospects in the changing world of digital transportation. Managing driver-partner relationships, dealing with safety concerns, and navigating complex regulatory settings were among the difficulties. Additionally, it was determined that there were competitive pressures from other ride-hailing companies and potential

disruptions from autonomous vehicles. Engagement with authorities, investments in safety technologies, and an emphasis on driver support and training were among Uber's initiatives to address these issues. Diversification into complementary services like food delivery and freight as well as potential development into new markets were considered as opportunities for Uber.

Alignment of the business model with sustainability strategy is the fifth research objective. The study assessed how Uber's sustainability strategy and business model compared to the predicted developments in digital transportation. It was discovered that Uber's platform-centric business model is flexible and well-positioned to change along with technology developments. Investments made by the corporation in electric and autonomous car technology were a sign of its future-focused sustainability plan. In line with the trend towards multimodal transportation networks, strategic partnerships with urban planners and public transit agencies also showed a proactive commitment to integrated mobility solutions.

6.2 Recommendations

- Given the dynamic nature of digital transportation, policymakers should engage in ongoing collaboration with platform providers such as Uber to develop adaptable regulatory frameworks. These should strike a balance between innovation and consumer protection while guaranteeing equitable competition in the transportation industry.
- Investment in Last-Mile Connectivity: Governments and urban planners should prioritise investments in last-mile connectivity solutions in order to improve the accessibility and convenience for urban residents. Integration of digital transportation options, such as ride-hailing services such as Uber, with public transit networks can assist in bridging voids in the existing transportation infrastructure.
- Data Sharing and Analysis for Urban Planning: Promote increased openness and collaboration between digital transport platforms and local governments in the sharing of anonymized trip data. For urban planners to make informed judgements regarding infrastructure development, traffic management, and public transportation optimisation, this information can be invaluable.
- Driver and User Welfare Initiatives: Establish mechanisms to guarantee equitable wages, benefits, and workplace protections for digital transportation industry chauffeurs.

Implementing programmes that provide drivers with access to healthcare, retirement plans, and skill development opportunities can contribute to the establishment of a more sustainable and equitable gig economy.

- **Promotion of Multi-Modal Transportation Solutions:** Encourage the adoption of multi-modal transportation platforms that integrate various modes of transport, including ride-hailing, public transit, cycling, and strolling. This strategy encourages environmentally responsible transport practices and reduces urban congestion.
- **Accessibility and Inclusion Considerations:** Implement measures to guarantee that digital transport services are accessible to individuals with varying mobility requirements. This may include wheelchair-accessible vehicles, accommodations for service animals, and user interfaces that are optimised for individuals with disabilities.
- **Encourage the adoption of eco-friendly transport options on digital platforms as part of environmental sustainability initiatives.** Provide subsidies, tax rebates, and other incentives to drivers and platform operators to encourage the use of electric or low-emission vehicles.
- **Smart City Initiatives:** Public-private partnerships and the promoted collaborations between digital transport platforms and city authorities in the creation of smart city initiatives. This may involve the integration of GPS tracking, traffic management systems, and predictive analytics to optimise urban transportation networks.
- **Research and Observation Constantly:** Foster an environment of ongoing research and analysis in order to track the impact of evolving digital transportation platforms. This should include assessments of user satisfaction, economic impacts on regional transportation industries, and the efficacy of regulatory measures.
- **Consumer Education and Safety Measures:** Promote consumer education initiatives to heighten awareness of safe practices and security features in digital transportation applications. Encourage users to utilise built-in safety tools, including real-time tracking and SOS buttons.

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Appendix

• Challenges in Urban Mobility

Urban areas face numerous challenges in terms of mobility. The rise of the digital age has witnessed a swift escalation of urbanisation, resulting in over 50% of the global population currently inhabiting urban regions. The current demographic transition has resulted in significant pressure on preexisting transport systems. Traditional public transport systems frequently have challenges in meeting the needs of expanding metropolitan populations, resulting in problems such as excessive passenger numbers, delays, and insufficient service coverage.

Moreover, the increase in private car ownership exacerbates traffic congestion and environmental pollution. The digitalisation of transportation aims to tackle these difficulties by providing increased flexibility and personalised options as alternatives to conventional transportation methods. Uber, being a trailblazer in the field, has played a substantial role in mitigating challenges related to urban transportation through the provision of a readily available and comfortable alternative.

• Recommendations for Future Research

Based on our comprehensive study and research findings, The primary objective of these proposals is to enhance the scope and comprehensiveness of research on digital transport's influence. By doing so, it seeks to establish a solid basis for a more thorough and nuanced understanding of its implications for urban mobility and society at large.

- **Longitudinal studies:** Research designs that entail the collection of data from the same group of individuals over an extended period. Within the realm of digital transportation, this methodology would involve the systematic monitoring and examination of patterns, actions, and perspectives related to the utilisation of digital transportation platforms (such as Uber) for an extended duration, spanning several months or even years. Through this approach, researchers can get an in-depth understanding of the progression of usage patterns, user preferences, and the effects on urban transport networks as they develop over time.
- **Comparative Analysis:** This research approach entails investigating the adoption and user experience of digital transportation platforms in a range of urban environments, to compare the variations seen across different types of cities. For example, conducting a

comparative analysis of usage patterns and impacts between a highly populated metropolis such as London and a mid-sized city or smaller town can provide significant insights into the diverse effects of digital transportation. These insights can be attributed to factors such as population density, pre-existing transportation infrastructure, and local commuting habits.

- **Incorporating the Perspectives of Non-Users:** In conjunction with examining the behaviours and experiences of digital transportation platform users, it is necessary to collect information from persons who opt not to utilise these services. This methodology entails the implementation of surveys, interviews, or focus groups to gather insights from individuals who have consciously chosen not to utilise platforms such as Uber. Gaining insight into the rationales, concerns, and biases of individuals contributes to a deeper comprehension of the larger implications of digital transportation.
- **Exploration of Accessibility and Equity:** The present study aims to investigate the impact of digital transport platforms on equity and accessibility within urban transport systems. This study entails evaluating the extent to which these platforms offer accessible and cost-effective transportation alternatives for various socio-economic categories, encompassing underserved or economically disadvantaged neighbourhoods. Researchers may explore many elements such as the cost-effectiveness, accessibility across different localities, and the existence of any disparities in digital access while examining these services.
- **User safety perceptions and experiences within the context of digital transportation platforms:** Researchers can examine several elements, such as consumers' level of confidence in the safety precautions taken by platforms, their experiences during rides, and any safety-related concerns or events that may have occurred. Gaining insight into user perceptions and experiences about safety can provide valuable knowledge for developing strategies aimed at improving safety measures and developing trust among users.

- **Limitations of the study**

Geographical Scope: The study focuses predominantly on Uber's impact within a particular geographic region. Therefore, it is possible that the findings do not adequately represent the diverse global digital transportation landscape. The research is time-bound, focusing on a particular period in the evolution of digital transportation. The continued relevance and applicability of the findings may be affected by rapid technological advancements and market dynamics shifts.

Size and Composition of the Sample: The sample size of participants in primary research, such as surveys and interviews, may be small. This could potentially limit the findings' applicability to a larger population.

Selection Bias: It is possible that the participants chosen for primary research do not represent the complete spectrum of Uber users, drivers, and policymakers. This could induce a selection bias and reduce the study's external validity.

Response Bias: It is possible for self-reported data from surveys or interviews to contain response bias. Participants may provide responses based on what they perceive to be socially desirable, as opposed to their actual opinions or experiences.

Dependence on Secondary Data: Reliance on existing literature and reports may establish a bias towards publicly available information. There may be pertinent information missing from these sources.

Regulatory and Legal Context: The findings of this study may be affected by the legal and regulatory framework regulating digital transportation platforms, which can vary considerably between jurisdictions. Due to the dynamic nature of technological advancements in the digital transportation industry, it is possible that some of the findings will become obsolete as new innovations are introduced.

Economic Considerations: The economic conditions and market dynamics at the time the research was conducted may have a significant impact on the results. Changes in economic conditions may affect user preferences and behaviour. The tools and methodologies used for data collection (e.g., surveys, interviews) may have inherent limitations, such as the possibility of social desirability bias, limitations in question framing, or interpretation problems. Even though efforts have been made to adhere to ethical guidelines in research, unexpected ethical challenges may arise during data collection or analysis.

External Factors: The study may not account for external factors (such as global events and economic crises) that could impact the digital transportation landscape and Uber's impact.

Alternative Digital Transportation Platforms: The study focuses predominantly on Uber, but other digital transportation platforms may have unique effects that are not addressed in this study.

Riding the Digital Wave: Examining the Impact of Digital Transportation

Dear Survey Participants,

Before you start this research survey, we kindly ask you to read the following details:

Survey Purpose: This survey is part of a dissertation project conducted by Devyani Goel at the University of Wales Trinity Saint David. The primary goal of this study is to delve into the Impact of Digital Transportation (Study Of Uber). Your responses will be utilized solely for academic and research purposes.

Privacy and Confidentiality: Your participation is entirely voluntary, and we assure you that all responses will be kept strictly anonymous. No personally identifiable information will be collected, ensuring your complete privacy. Your individual responses will be aggregated with those of other participants for comprehensive analysis.

Data Security: All data collected will be securely stored and accessed only by authorized personnel. Once the study is concluded, all data will be promptly deleted to uphold confidentiality.

Third-Party Involvement: Your survey responses will not be shared with any third-party applications, organizations, or individuals. The information you provide will be exclusively used for this academic research endeavour.

Time Estimate: The estimated time required to complete this survey is approximately 5 minutes.

By proceeding with this survey, you signify your understanding of the above information and your willingness to participate. Your involvement is highly valued and will significantly contribute to advancing our knowledge of consumer behaviour and branding strategies.

We genuinely appreciate your time and cooperation.

Thank you.

1. Have you used digitalised transport services (e.g., ride-sharing apps, e-scooters, bike-sharing) in the past year?

- ☐ Yes
- ☐ No
- ☐ I am not aware

2. What is the primary purpose of your digital transport platform usage? (Select all that apply)

- ☐ Commuting to work/school
- ☐ Running errands
- ☐ Social outings
- ☐ Special occasions
- ☐ Other: _____

3. Which digitalized transport services have you used in the past year? (Select all that apply)

- ☐ Ride-sharing apps (e.g., Uber, Lyft)
- ☐ E-scooters or electric bikes
- ☐ Bike-sharing programs
- ☐ Car-sharing services (e.g., Zipcar)
- ☐ Public transit apps (e.g., transit schedules, ticketing)
- ☐ None of the above

4. How frequently do you use digitalized transport services?

- ☐ Daily
- ☐ Weekly
- ☐ Monthly
- ☐ Rarely
- ☐ Never

5. What factors influence your choice to use digitalized transport services over traditional transportation methods (e.g., taxis, personal cars)? (Select all that apply).

- ☐ Convenience and ease of use
- ☐ Cost savings
- ☐ Environmental considerations
- ☐ Availability and accessibility
- ☐ Speed and efficiency
- ☐ Quality of service
- ☐ Safety and Security
- ☐ Social or peer influence
- ☐ Other: _____

6. Do you believe that digitalized transport services have had a significant impact on traditional transportation methods (e.g., taxis, public transit)?

- ☐ Yes
- ☐ No
- ☐ Not sure

7. If yes, how do you perceive this impact? (Select all that apply).

- ☐ Increased competition and innovation
- ☐ Improved quality of traditional transportation services
- ☐ Decreased usage of traditional transportation
- ☐ Negative impact on traditional transportation providers
- ☐ No significant impact
- ☐ Other: _____

8. Which digitalized transport service provider do you use most frequently (if applicable)? (e.g., Uber, Lyft, Lime, etc.)

Your answer _____

9. Please share your experiences with using Uber's services. How has the platform contributed to your transportation needs and convenience?

Your answer _____

10. Where have you come across advertisements or promotions for digital transport platforms? (Select all that apply).

☐ Social media platforms (Facebook, Instagram, etc.)

☐ Search engines (Google, Bing, etc.)

☐ mobile apps

☐ Traditional media (TV, radio, newspapers, etc.)

☐ Billboards or outdoor advertising

☐ Word-of-mouth from friends or family

☐ Other: _____

11. What message or feature of digital transport platforms do you find most compelling in their marketing efforts?

Your answer _____

12. On a scale of 1 to 5, how likely are you to recommend a digital transport platform to a friend or family member?

	1	2	3	4	5	
Very Unlikely	☐	☐	☐	☐	☐	Very Likely

13. How would you rate the convenience of Uber's digital booking system?

	1	2	3	4	5	
Highly inconvenient	☐	☐	☐	☐	☐	Highly convenient

14. Have you found Uber's GPS navigation system to be accurate and reliable?

- ☐ Yes
- ☐ No
- ☐ Neutral

15. Can you share any instances where you opted for a different transportation option instead of Uber? What influenced that decision?

Your answer

16. Do you think the digitalization of Uber has improved the safety of transportation services?

- ☐ Yes
- ☐ No
- ☐ Not Sure

17. How do you think Uber's digitalization has affected traffic and congestion in urban areas?

- ☐ Reduced traffic congestion
- ☐ Increased traffic congestion
- ☐ No significant impact
- ☐ Not sure

18. Have you observed an increase or decrease in public transportation usage in your area since the introduction of services like Uber?

- ☐ Increase
- ☐ Decrease
- ☐ No Significant Change

19. Has Uber's digitalization influenced your personal transportation choices?

- ☐ Yes, I use Uber more frequently now.
- ☐ No, it has not affected my transportation choices.
- ☐ Yes, I use traditional taxis more frequently now.
- ☐ Other: _____

20. What features of Uber do you find most appealing? (Select all that apply)

- ☐ Convenience of booking
- ☐ Price competitiveness
- ☐ Ease of payment
- ☐ Ride-sharing options (e.g., UberPool)
- ☐ Quality of vehicles and drivers
- ☐ Availability in your area
- ☐ Other: _____

21. Have you ever encountered any issues or concerns while using digitalized transport services (e.g., safety, pricing, availability)? If yes, please describe briefly.

Your answer

22. On a scale of 1 to 5, how important do you think digitalization and technological advancements are for the future of transportation?

1 2 3 4 5

Not Important at all ☐ ☐ ☐ ☐ ☐ Extremely Important

23. What features or improvements would you like to see in digitalized transport services in the future?

Your answer

24. Do you think you will use digitalized transport services more or less in the next five years? Why?

Your answer

Submit



Page 1 of 1

Clear form

Never submit passwords through Google Forms.



PRIFYSGOL CYMRU
Y Drindod Dewi Sant
UNIVERSITY OF WALES
Trinity Saint David

E2 FORM

APPLICATION FOR ETHICAL APPROVAL – MA level
CAIS AM GYMERADWYAETH MOESGOL – Lefel MA

CEFNOGWYD / APPROVED	A GYFEIRIWDYD / REFERRED	NIS CEFNOGWYD/ NOT SUPPORTED
Mae'r ffurflen hon i'w llenwi gan bob myfyriwr MA cynnal ymchwil, prosiectau neu gynyrchiadau. Dylai'r ffurflen hon gael ei chwblhau gan y myfyriwr mewn ymgynghoriad â thiwtor y modiwl. Rhaid i bob ffurflen gael ei ystyried gan y Pennaeth Ysgol/Cyfadrn / Gyfadrn. Rhaid i bob ffurflen gael ei gyflwyno i Fwrdd y Gyfadrn Moeseg. Bydd y ffurflen yn cael ei adrodd i'r Pwyllgor Moeseg y BrifYsgol/Cyfadrn os anarferol a / neu y tu allan arfer arferol. This form is to be completed by all MA students conducting research, projects or productions. This form should be completed by the student in consultation with the module tutor. All forms must be considered by the Head of School/Faculty. All forms must be presented to the Faculty Ethics Board. The form is only to be reported to the University Ethics Committee if it is unusual and/or falls outside of normal practice.		

ADRAN 1 – MANYLION MYFYRIWR

SECTION 1 - STUDENT DETAILS

Enw Llawn Full Name	Devyani Goel		
Ysgol/Cyfadrn/ Cyfadrn School/Faculty	UWTSD Business School	Rhif Myfyriwr Student Number	LCMB7020
Tiwtor y Modiwl/ Cydlynnydd Rhaglen Module Tutor/ Programme Co- ordinator	Dr Jaya Gopalkrishnan	Enw'r Gradd Name of Degree	MBA marketing
Teitl dangosol yr Traethawd Hir:		Indicative Title of Dissertation:	
Riding The Digital Wave: Examining The Impact Of Digital Transportation			

ADRAN 2 – GWEITHGAREDD YMCHWIL

SECTION 2 – RESEARCH ACTIVITY

Ydy'r prosiect yn cynnwys:	Does the project include:	Ydy / Yes	Nac ydy/No
Defnyddio holiadur neu offeryn ymchwil tebyg (atodwch gopi drafft)	Use of questionnaire or similar research instrument (attach draft copy)	Ydy / Yes	
Defnyddio prawf ysgrifenedig neu gyfrifiadurol	Use of written or computerised test		Nac ydy/No
Cyfweliad (cysylltwch gwestiynau posibl)	Interview (attach provisional questions)		Nac ydy/No
Dyddiaduron	Diaries		Nac ydy/No
Arsylwi ar gyfranogwyr a hwythau'n ymwybodol o hynny	Participant observation with their knowledge		Nac ydy/No
Arsylwi ar gyfranogwyr a hwythau ddim yn ymwybodol o hynny	Participant observation without their knowledge		Nac ydy/No
Recordio fideo neu sain	Video or audio-taping		Nac ydy/No
Mynediad i wybodaeth bersonol neu gyfrinachol heb gydsyniad penodol y cyfranogwyr	Access to personal or confidential information without the participants specific consent		Nac ydy/No
Defnyddio unrhyw gwestiynau, ysgogiadau prawf, cyflwyniad y gallai rhai cyfranogwyr eu profi fel rhywbeth sy'n achosi niwed / tramgwydd corfforol, meddyliol neu emosiynol	Administration of any questions, test stimuli, presentation that may be experienced as physically, mentally or emotionally harmful / offensive		Nac ydy/No
Cyflawni unrhyw weithredoedd allai achosi embaras neu effeithio ar hunan-barch	Performance of any acts which may cause embarrassment or affect self-esteem		Nac ydy/No
Ymchwilio i gyfranogwyr sy'n ymwneud â gweithgareddau anghyfreithlon	Investigation of participants involved in illegal activities		Nac ydy/No
Gweithdrefnau lle defnyddir twyll	Procedures that involve deception		Nac ydy/No
Gweini unrhyw sylwedd, cyfrwng neu blasebo	Administration of any substance, agent or placebo		Nac ydy/No
Dull arall o gasglu data neu fformat cyflwyno (esboniwch)	Other method of data collection or presentation format (please explain)		Nac ydy/No

Os 'Na' wedi cael ei dicio ym mhob blwch, dylai'r ffurflen gael ei llofnodi gan Bennaeth yr Ysgol/ Cyfadran / Gyfadran a'r canlyniad a adroddwyd i'r Pwyllgor Moeseg ar ddiwedd y semester.

Os 'Ydw' wedi cael ei dicio mewn un neu fwy o'r blychau, rhaid i'r myfyriwr gwblhau'r ffurflen hon a'i chyflwyno i diwtor y modiwl. Rhaid i'r ffurflen wedyn yn cael ei ystyried yn y Bwrdd Moeseg Gyfadran cyn dechrau ar unrhyw waith ymchwil.

If 'No' has been ticked in each box, the form should be signed by the Head of School/Faculty/Faculty and the outcome reported to the Ethics Committee at the end of the semester.

If Yes has been ticked in one or more boxes, the student must complete this form and submit it to the module tutor. The form must then be considered at the Faculty Ethics Board prior to the start of any research.

Llofnodau

Os nad oes unrhyw faterion moesegol sylweddol, dylid ffurflen hon gael ei chwblhau a'i llofnodi gan y myfyriwr a'r goruchwyliwr ac yna llofnodi gan Bennaeth yr Ysgol/Cyfadran.

Signatures

If there are no significant ethical issues, this form should be completed and signed by both the student and the supervisor and then signed by the Head of School/Faculty.

Myfyriwr / Student	Dyddiad: / Date: 02/10/2023
Devyani Goel	
Cydlynnydd y prosiect / Tiwtor Project co-ordinator / Tutor Arolygwr / Supervisor	Dyddiad: / Date:
Pennaeth Ysgol/Cyfadran / Head of School/ Faculty	Dyddiad: / Date

ADRAN 3 – MANYLION Y PROSIECT / YMCHWIL / CYNHYRCHIAD**SECTION 3 – PROJECT / RESEARCH / PRODUCTION DETAILS****1. Braslun o'r prosiect****Project outline**

The purpose of this study is to thoroughly explore the critical elements that, in the context of Uber's digital marketing initiatives, affect consumer engagement and promote loyalty. This study aims to pinpoint the particular digital marketing strategies, tools, and tactics used by Uber and examine how they affect consumer engagement key performance indicators including user retention, use frequency, and satisfaction.

The study also seeks to identify any connections that could exist between successful digital marketing techniques and increased client loyalty, eventually delivering practical knowledge for maximising digital marketing initiatives in the transportation sector.

2. Disgrifiad

Rhowch fraslun cryno o'r prosiect, heb unrhyw jargon, ac yn cynnwys beth bydd angen i'r cyfranogwyr ei wneud. Esboniwch unrhyw dermau technegol neu derminoleg sy'n benodol i'r ddisgyblaeth (Uchafswm 300 o eiriau.)

Description

Provide a brief outline, free from jargon, of the project including what participants will be required to do. Explain any technical terms or discipline specific terminology (Max 300 words.)

This dissertation aims to investigate the impact of digital transport, with a specific focus on Uber, by employing a multi-faceted research approach. It involves a comprehensive literature review to understand the existing body of knowledge, followed by a data collection phase that includes both quantitative and qualitative data sources such as Uber's data, government records, surveys, and interviews with stakeholders. Quantitative data will be analyzed using statistical methods, while qualitative data will be subject to content analysis. Geographic analysis, comparative studies, and the identification of key metrics will be used to assess Uber's influence on transportation patterns, traffic congestion, and economic factors. The findings will be interpreted, discussed in the context of research objectives, and used to provide recommendations and policy implications.

3.	Dulliau Arfaethedig: Rhowch fraslun o'r dulliau casglu data neu o natur yr amser mewn ymarferiadau (hyd at 500 o eiriau).	Proposed Methods: Outline how the data will be collected or the nature of rehearsal time (up to 500 words).
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Questionnaires sent to British university learners, focus groups, social media sites like Facebook, LinkedIn, Instagram, and WhatsApp, emails sent to friends, family, and coworkers, and in-person surveys like talking to Uber drivers (within ethical limits) will be the main ways we collect data for our research on examining the impact of digital transportation. We chose Google Forms because it is easy to use and accessible as a platform for creating and sending out these questionnaires. Targeting university students suggests convenience sampling because they are available in a specified location and context. Focus group participants are carefully selected based on research-relevant features or experiences. Using Facebook, LinkedIn, Instagram, and WhatsApp for data collecting is convenience sampling. Participant presence and activity on these platforms determines their availability. Conveniently emailing friends, relatives, and the workplace allows snowball sampling. After being selected based on accessibility and relationship to the researcher, initial participants may be encouraged to suggest others who match the requirements. Also, convenience sampling includes in-person surveys like chatting with Uber drivers. Participants are chosen depending on their local availability. When conducting surveys, ethical principles and consent processes ought to be followed. Sampling methods have pros and cons, therefore they should match research goals and populatio

5. Lledaenu Gwybodaeth / Cynulleidfa: Rhestrwch i bwy y rhoddir neu y dangosir copi o'r canlyniadau neu adroddiad / cyflwyniad terfynol.	Dissemination of Information / Audience: List to whom a copy of the results or final report / presentation will be given or shown.
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The University

6. Lleoliad y Prosiect: Nodwch bob lleoliad lle y cesglir data neu y cynhelir ymarferiadau / cynhyrchiad.	Location of Project: Identify all locations where data will be collected or rehearsals/ production will take place.
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London

7. Cymeradwyaeth Arall: Oes angen cael cymeradwyaeth unrhyw sefydliad arall cyn cychwyn neu gwblhau'r prosiect? Os felly, gan bwy ac a ydy wedi'i sicrhau eisoes?	Other Approvals: Is there a requirement for approval from any other organisation / institution prior to starting or completing the project? If so, by whom and has it been obtained?
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No

ADRAN 4 – MANYLION CYFRANOGWYR / CYNULLEIDFA

SECTION 4 - PARTICIPANT / AUDIENCE DETAILS

Pwy yw'r cyfranogwyr arfaethedig?	Who are the intended participants?	Ydw / Yes	Na / No
Myfyrwyr / staff Y Drindod Dewi Sant	Students / staff of Trinity Saint David	Ydw / Yes	
Oedolion (dros oed 16 ac yn gymwys i gydsynio)	Adults (over the age of 16 and competent to give consent)	Ydw / Yes	
Plant a phobl ifanc dan oed	Children / legal minors		Na / No
Cleifion neu gleientiaid gweithwyr proffesiynol	Patients or clients of professionals		Na / No
Rhywun sy'n cael ei gadw yn y ddalfa neu y mae'r llys wedi cymryd cyfrifoldeb amdano	Anyone in custodial care or for whom the court has assumed responsibility		Na / No

Aelod o unrhyw sefydliad lle mae'n bosibl bod angen i unigolyn arall hefyd gydsynio.	A member of any organisation where another individual may also need to give consent.		Na / No
Eraill: Nodwch: / Others: please identify:			

Nifer, Oed a Ffynhonnell y Cyfranogwyr Rhowch fanylion yr demograffeg y cyfranogwyr / gynulleidfa.		Participant / Audience Number and Age Provide details of the demographics of the participants / audience.
Nifer o Gyfranogwyr / yn y Gynulleidfa	Participant/ Audience number	Adults
Grŵp oedran y Cyfranogwyr/y Gynulleidfa	Participant/ Audience age group	18 or above

ADRAN 5 – RISGIAU YN PROSIECT

SECTION 5 – RISKS IN PROJECT

Bydd y diffyg ateb cadarnhaol i bob un o'r cwestiynau hyn yn arwain at y gofyniad eglurhad a gallai arwain at oedi yn eich ymchwil. Dim neu Dim NID yn dderbyniol.	A lack of a positive answer to all of these questions may result in the requirement of further explanation and a delay in your research. None or Nil is not acceptable.
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Risg Posibl: (corfforol, seicolegol, cyfreithiol, cymdeithasol neu economaidd)		Potential Risk: (physical, psychological, legal, social or economic)	
A oes unrhyw risg bosibl i:		Is there any potential risk to:	Y d w / N a / Yes No
A	Cyfranogwyr?	Participants?	N a / No
B	Ymchwilydd?	Researcher?	Na / No
C	BrifYsgol/Cyfadrn?	University?	Na / No

2	Rheoli Risg: Os oes, beth yw'r risg a sut y bydd yn cael ei reoli?	Management of Risk: If yes, what is the risk and how will it be managed?
N/a		

3 Os ydych yn delio â phlant ac oedolion sy'n agored i niwed a ydych wedi gwneud cais am dystysgrif DRS? If you are dealing with children and vulnerable adults have you applied for a DRS certificate?

N/A

ADRAN 6 – MONITRO, ADBORTH A CHYFRINACHEDD

SECTION 6 - MONITORING, FEEDBACK AND CONFIDENTIALITY

1.	Monitro: Os ydych yn sylwi ar unrhyw ymddygiad sy'n groes Cod y BrifYsgol/Cyfadrn Ymarfer, unrhyw ganllawiau a gyhoeddir gan y gymdeithas broffesiynol priodol neu weithred anghyfreithlon. Amlinellwch eich strategaeth adrodd.	Monitoring: Should you observe any behaviour that contravenes the University's Code of Practice, any guidelines published by the appropriate professional association or is illegal outline the strategy of your reporting action.
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		Ydw / Yes	Na / No
A wnewch chi roi gwybod am unrhyw ymddygiad sydd yn erbyn Cod Ymarfer y BrifYsgol/Cyfadrn neu sy'n anghyfreithlon?	Will you report any behaviour that is against the University's Code of Practice or is illegal?	Ydw / Yes	
A ydych yn darparu adborth i'r cyfranogwyr?	Will feedback be provided to participants?	Ydw / Yes	
A fyddwch yn dogfennu'r 'caniatâd i gymryd rhan yn y prosiect'	Will you be documenting the 'consent to participate in the project'	Ydw / Yes	

ADRAN 7 – STORIO, DIOGELWCH A MYNEDIAD I DDATA

SECTION 7 - DATA ACCESS, STORAGE AND SECURITY

		Ydw / Yes	Na / No
1.	Ydych chi'n gyfrifol am storio a diogelwch y data eu casglu?	Ydw / Yes	
2.	Sut y bydd y data yn cael ei storio?	How will the data be stored?	

Stored In GoogleForms

3.	Mynediad i Ddata: Pwy fydd yn cael mynediad at y data? A oes unrhyw amodau i gael mynediad?	Data Access: Who will have access to the data? Are there any conditions to access?
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Me and My tutor

4.	Cyfrinachedd / Anhysbysrwydd: Rhestrwch y dulliau a fydd yn cael eu defnyddio i sicrhau cyfrinachedd ac anhysbysrwydd y cyfranogwyr.	Confidentiality / Anonymity: List the methods that will be used to ensure the confidentiality and anonymity of participants.
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No personal questions will be asked

ADRAN 7 – DATGANIAD

SECTION 7 - DECLARATION

Rhaid i'r adran hon gael ei chwblhau gan bob parti perthnasol cyn y gellir cyflwyno'r cais i'r Bwrdd Moeseg Gyfadran.	This section must be completed by all concerned parties before it can be submitted to the Faculty Ethics Board.
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Datganiad Mae'r wybodaeth a gynhwysir yma yn gywir, hyd eithaf fy ngwybodaeth a'm cred. Rwyf wedi ceisio dynodi unrhyw risgiau a phroblemau sy'n gysylltiedig â'r prosiect / ymchwil neu gynhyrchiad ac rwyf yn cydnabod f'ymrwymadau innau a hawliau'r cyfranogwyr.	Declaration The information contained herein is, to the best of my knowledge and belief, accurate. I have attempted to identify any risks and issues related to the project/research or production and acknowledge my obligations and the rights of the participants.
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Llofnodau Dylai'r ffurflen hon gael ei chwblhau a'i llofnodi gan y myfyriwr a'r goruchwyliwr lofnodi ac yna gan Bennaeth yr Ysgol/Cyfadrn/	Signatures This form should be completed and signed by both the student and the supervisor and then signed by the Head of School/Faculty
--	--

Myfyriwr / Student Devyani Goel	Dyddiad: / Date: 02/10/2023
Cydlynnydd y prosiect / Tiwtor Project co-ordinator / Tutor Arolygwr / Supervisor Dr Jaya Gopalkrishnan	Dyddiad: / Date: 02/10/2023

Pennaeth Ysgol/Cyfadrn / Head of School/Faculty

Dyddiad: / Date

Rhaid i bob cais am ymchwil ar sail cyfweiliadau gynnwys y dogfennau canlynol:

All interview based research applications must provide the following pro-forma documents:

1. Ffurflen gydsynio ddrafft
2. Sampl o'r cwestiynau a ofynnir
3. Taflen wybodaeth am yr ymchwil sy'n esbonio'n glir ddiben y prosiect, y deilliannau disgwylidig a'r rheini y dangosir y canlyniadau iddynt.

1. A draft consent form
2. A sample of the questions that will be asked
3. An information sheet on the research that clearly explains what the project is, what the expected outcomes are and who the results will be shown to.

DYCHWELWCH I'R GYFADRAN MOESeg CYDLINYDD
PLEASE RETURN TO THE FACULTY ETHICS CO-ORDINATOR

Cadeirydd y Pwyllgor Moseg Gyfadrn /Chair of the Faculty Ethics Committee

Dyddiad: / Date: