Research Methods and Professional Practice's Presentation

Introduction

Hello and welcome to my research proposal presentation, I will be discussing my topic of the causes and impacts of increasing road traffic on the environment and individual in London as this is an important topic when it comes to the future and climate change.

Research Problem

With there being an increase in road traffic in London this can lead to a wide range of negative externalities. When it comes to the environment there is an increase in the levels of pollution and the amount of greenhouse gas that is released. Following this when there are impacts on the environment there are impacts on the individual as there are negative health implications such as respiratory issues due to the reduction in air quality, alongside noise pollution which can reduce quality of life.

Research Question

For addressing the area of research around causes and impacts of road traffic in London the question that I will aim to answer is "What are the causes of increasing road traffic in London and how does this increase impact the environment and individual?". This allows me to address the increase of road traffic in London which allows me to discuss all the reasons such as: population growth and city planning (Dietz & Atkinson, 2014).

This then leads to discussing both the environment and individual, when it comes to discussing the environment, I will cover both air and noise pollution with the mention of how this causes wider issues to climate change. This then leads to being able to discuss how this impacts an individual who lives in London's health both physically and mentally.

Aims and Objectives

The aims and objectives of this research proposal are to identify and breakdown what is causing the increase in road traffic in London London's increasing population growth; its economic growth; and public transport infrastructure.

This will the follow on to discussing how those contributing factors have taken a toll on the environment with their being an increase in both air and noise pollution as when there is more road traffic there is an increase in greenhouse gas emissions.

This will then lead us nicely into discussing the adverse health issues an individual can face both physically and mentally with particular focus on respiratory issues and the overall quality of life. (Carey et al., 2016), (UK Health Security Agency, 2023).

The final objective will be to discuss what is being done currently by the government to help prevent an increase in road traffic in London and what the recommendations are to help reduce road traffic using examples from other cities as well to see what London can take away.

Key literature related to the project

Literature for this research will use information gathered from the mayoral office in London where the incumbent Mayor Sadiq Khan has addressed the issue and what he plans to do to combat the issue as this is his responsibility (Khan, 2016). This allows us to use independent research papers to then assess the impact of road traffic in London using papers from (Carey et

al., 2016) which break down the long-term health issues associated with air pollution, this is then supported by Dietz and Atkinson's paper on which areas this is concentrated in. To discuss further about the impacts of noise pollution that impacts quality of life I will use data from the (UK Health Security Agency, 2023).

To then discuss the ways London is already trying to mitigate increasing road traffic I will discuss economic factors such as the congestion charge and Ultra Low Emission Zone which its impacts are discussed at length by (Green et al., 2020) for the congestion charge and (Ma et al., 2021) and (Hajmohammadi & Heydecker, 2022) for the Ultra Low Emission Zone.

All of these sources showing great strength in discussing the research proposal at hand.

Methodology

To analyse this question, we will use a fusion approach by using both quantitative and qualitative data.

When it comes to getting qualitative data, we can do this by obtaining primary data by creating a survey using Qualtrics as this will be easy to distribute to a sample of people who live in London which will assess how they feel about road traffic and if they feel they have been negatively affected when it comes to their quality of life. This will allow us to make a light assessment which could lay a framework for a bigger study which measures an individual's health and wellbeing living in London over a long period of time.

Quantitative data is more readily available as Transport for London and the local government collect statistics on various aspects of road traffic in London. This will be helpful as we can obtain: the effectiveness of public transport and how many people use it; when traffic is at its highest; and which areas are more harshly affected by road traffic which can be good when collecting data for our aforementioned qualitative survey.

Ethical Considerations

Throughout this process the highest standards of ethics will be applied in order to ensure that the research is carried out ethically. I will be following the Menlo Report (Finn & Shilton, 2023) on ethics as it outlines having respect for individuals who I would aim to survey as apart of my methodology as I would require their consent to participate in order to obtain qualitative data. In addition, I will understand the beneficence as I will benefit from getting data to work with for my research but what would come of the research for the ones participating would be low as it is a survey only if there was a larger scope for the research would there be potential for a harsher ethical concern (Finn & Shilton, 2023). Justice will also be considered as those participating in the survey should be treated well and that the result of the research should be released (Finn & Shilton, 2023). Finally, we must also show respect for the law and public interest and ensure that the data we collect that due diligence will be taken at each stage of the research process to ensure that the highest levels of ethics are taken into account to maintain professionalism.

Artefacts

Once the data is collected, we will begin working on some artefacts to help bring the data to life and make what is proposed in this research. Using Python I will create regressions using Transport for London and environmental agencies data that show how much road traffic causes greenhouse gas emissions and economic impact. Alongside this using data from I will aim to create a heatmap which shows where emissions are strongest including the ability to filter the

different greenhouse gases showing where most of these emissions are concentrated. These heat maps will show off also where most congestion is which can show policy makers which areas need to be targeted the most. These heat maps are a great visualisation for stakeholders to easily understand where the most road traffic is taking place and that is an issue. Ideally this heat map will also be able to adjust based on the time of day to see which times road traffic is worse and how city planners can adjust prevent increasing road traffic.

Timeline

In order to complete this research is a timely manner on a 6-month time frame which is of typical length for a dissertation I will use the first month to complete a comprehensive literature review to add on to the literature mentioned earlier in this presentation to collect relevant third-party data and be able to answer the research question accurately. This is also time where the survey for the methodology will be developed so that in month 2 survey testing can begin to see if it is sufficient. At this same time other third-party data can be collected so that we follow the Gantt chart process of doing other things whilst the survey is developed.

Month 3 the quantitative data collection will continue whilst the write up will begin as this is when we should have completed our collection of all third-party data such as from Transport for London and environmental agencies who have collected environmental data in London.

Month 4 qualitative data collection will begin where relevant stakeholders will be contacted to give their experience on the environment of London hoping to have this complete by the end of month 4.

Month 5 is where all of the data should be collected, and we can now begin the data analysis stage where regressions will be run on the quantitative data collected and be supported by the qualitative data collected in month 4. This will then be slotted in to the relevant written sections that will have been drafted during the data collection phase with supported literature mentioned in the literature review. Finally in month 6 the write up will be concluded and will be peer reviewed so that there is time to incorporate feedback into the final report, this will then be disseminated to the stakeholders and policy makers interacted with throughout the research process. Then if sufficient it can be set to be published with enough support in its findings.

6 months aims for there to be focus put into efficiency and that more papers can be published about the negative implications of increased road traffic in London so that policymakers can be pressured with strong data and research to make the decisions to protect the environment and individuals who live in London before it is too late.

Conclusion

Thank you for listening to my research proposal on the causes and impacts of increased road traffic in London.

Reference List

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