Name

Course

Tutor

Date

Annotated Bibliography

**Buckeridge, David L, et al. "Effect of motor vehicle emissions on respiratory health in an urban area." Environ Health Perspect, vol. 11, no. 3, 2010, pp. 293–300.**

In this study, the researchers sort to determine the relationship between emission from motor vehicles and respiratory diseases in busy urban areas. In the study conducted in Southeast Toronto, the researchers in a bid to create a successful exposure assessment used the exposure model implemented using a geographic analysis system to estimate daily exposure in the enumeration area (EA). The researchers used hospital admissions diagnostics to determine genitourinary and respiratory conditions. They assessed the impact of motor vehicle emissions in the defined enumeration area using the Poisson mixed-effect model and the distribution of variables in the area. Their findings showed that motor vehicle emissions in urban areas had a notable effect on admission rates for complications related to respiratory diseases, including Asthma, Respiratory tract infections, Pneumonia, Bronchitis, and chronic obstruction. Furthermore, the researchers found that there was no effect of exposure on hospital admissions for non-respiratory diseases.

**Chanaron, Jean-Jacques and Julius Teske. "Hybrid vehicles: a temporary step." International Journal of Automotive Technology and Management, vol. 7, no. 4, 2007.**

This paper explores the sustainability of hybrid technology motor vehicles in the United States. The paper focuses on whether the hybrid technology system on motor vehicles strongly accepted by US consumers is actually sustainable in the long run. The paper critically analyses variables influencing hybrid diffusion technology, including significant non-financial factors influencing buying decisions among US customers. The researchers also conducted an in-depth overview of strategies used by Original Equipment Manufacturers (OEMs) and the suppliers to understand the sustainability of the materials utilized in creating the technology. The findings show that current US consumers of hybrid technology have a positive perception of the technology, and many are willing to use the technology in the future. The researchers concluded that though the hybrid technology is yet to be applied profitably, it has excellent potential in the US since most Americans have positive perceptions.

**Hajderi, Asllan And Stavri Paco. "Hybrid Vehicles And Their Impact On Pollution Reduction In Urban Areas." *Interdisplinary Journal of Research and Development*, vol. 4, 2017.**

This study conducted by Asllan Hajderi and Stavri Paco focuses on knowledge of the construction of the hybrid vehicles and their effect on reducing pollution in urban areas. The paper wanted to study component systems fitted in hybrid vehicles, which make them efficient in reducing environmental pollution in urban areas compared with vehicles running on engines. The study which measured air pollution generated by conventional vehicles and pollution caused by hybrid vehicles in popular intersection indicated that the use of 5% hybrid vehicles reduced pollution by 22%. The study concluded that hybrid technology vehicles are more effective than vehicles using engines because they not only use less fuel, but they also contribute to minimal environmental pollution. Besides, the study showed that the use of hybrid vehicles to replace conventional vehicles manufactured before 1996 provides a reduction in urban pollution by 44% in two years.

**Karim, A. and Z. Shahid. "Performance and Cost Analysis of Conventional Petrol Car Converted Into Solar-Electric Hybrid Car." *J. Energy Resour. Technol*, vol. 140, no. 3, 2017.**

This study provides a critical analysis of the performance and cost of conventional petrol vehicles when converted into solar-electric hybrid vehicles. With ever-increasing environmental-related and fuel problems brought by conventional vehicles, the researchers wanted to understand the effectiveness of solar-electric hybrid vehicles in mitigating these problems. The study found that although solar-electric hybrid vehicles have greater efficiency in managing environmental problems, they require sophisticated electronic, mechanical, and electrical systems, which are difficult and costly to manufacture. Researchers showed that to reduce the cost of hybrid vehicles, manufacturers can convert conventional fuel-based cars into hybrid electric vehicles by installing electrical and electronic systems. The paper provides details about the installation of hybrid systems on conventional vehicles. The study concluded that the conversion of conventional cars into hybrid systems vehicles by fitting electric and electronic systems could help to save fuel costs and reduce environmental pollution significantly.

**Liao, Fanchao, Eric Molin and Bert van Wee. "Consumer preferences for electric vehicles: a literature review ." *Journal Transport Reviews*, vol. 37, no. 3, 2017.**

This paper provides a comprehensive literature review on consumer preferences of electric vehicles (EVs) to inform policymakers about the implementation of EVs and give recommendations for future research. Though the use of electric vehicles alleviates problems related to oil dependency, pollution, and global warming, its penetration is still low in spite of strong promotional policies. To determine the reasons for low penetration, researchers conducted thorough economic and psychological factors that shape consumer's preferences. The researchers also estimated consumer's financial, infrastructure, technical, and policies and how these factors influence the penetration of electric vehicles. The researchers found that the existing studies on the use of EVs have the same conclusion concerning the significance of technical, financial, and infrastructure on the penetration of EVs. The researchers concluded that consumer preferences influence the adoption of EVs, and the effectiveness of incentive policies have done little to increase customer preference.

**Malmgren, Ingrid. "Quantifying the Societal Benefits of Electric Vehicles ." *World Electric Vehicle Journal*, vol. 8, 2016.**

This study conducted by Malmgren Ingrid sought to quantify the benefits the society achieves through the introduction of electric vehicles. The paper aimed at identifying different benefits related to the use of electric vehicles over conventional vehicles. The researcher noted that even though the barrier facing penetration of electric vehicles in the society is high costs, there are many benefits that electric vehicles bring in the society that are often omitted in cost-benefit analysis. The study found that the notable benefits of electric vehicles are a reduction in environmental pollution, improved air quality and human health, and better economic growth. The researcher noted that analysis of benefits brought by electric vehicles helps the policy-makers to develop investment and incentive frameworks to increase penetration of the vehicles.

**Reynolds, C and M Kandlikar. "How hybrid-electric vehicles are different from conventional vehicles: the effect of weight and power on fuel consumption." *Environmental Research Letters*, vol. 2, no. 1, 2007.**

This paper sought to determine how weight and system power in hybrid electric vehicles affect fuel consumption in each vehicle set. With increasing hybrid electric vehicle consumption in North America, a recent generation of hybrid vehicles are heavier and more powerful and uses more fuel hence eroding the benefits of hybrid technology. The researchers revealed that the weight penalty for fuel consumption in hybrid-electric vehicles is lower than the equivalent weight in conventional fuel engines. Besides, the researchers indicated that when hybrid system vehicles are compared with conventional vehicles, the average fuel consumption benefit for the hybrid vehicles was 2.7l/100km. The researchers concluded that an increase in weight and power in the hybrid-electric vehicle increases the fuel consumption penalty.

**UCS. “Car Emissions and Global Warming.” 6 Nov. 2014, <https://www.ucsusa.org/resources/car-emissions-global-warming**

This article published by Union of Concerned Scientists, and it provides a detailed review of facts linking vehicle emissions and global warming. The article provides information about how the vehicles, including cars and trucks in the US, contribute to one-fifth of carbon into the atmosphere. The article notes that the transportation sector in the US, including trucks, planes, ships, trains, and cars, contributes 30% of US carbon emissions. The article further indicates that oil-related emissions will continue increasing in the coming years if urgent mitigation, including regulations to use less oil, is not imposed. The article concludes by providing different solutions, including using fuel-efficient vehicles that burn less fuel and generate little emission and using cleaner fuels such as cellulosic biofuels that can reduce pollution by 80%. Besides, the article proposed the use of electric vehicles because it uses renewable energy and produces zero carbon emissions

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Chanaron, Jean-Jacques and Julius Teske. "Hybrid vehicles: a temporary step." *International Journal of Automotive Technology and Management*, vol. 7, no. 4, 2007.

Hajderi, Asllan And Stavri Paco. "Hybrid Vehicles And Their Impact On Pollution Reduction In Urban Areas." *Interdisplinary Journal of Research and Development*, vol. 4, 2017.

Karim, A. and Z. Shahid. "Performance and Cost Analysis of Conventional Petrol Car Converted Into Solar-Electric Hybrid Car." *J. Energy Resour. Technol*, vol. 140, no. 3, 2017.

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