The effect of the modernized Electric Vehicle Incentive Program (EVIP) on the new car market in Richmond Hill, Ontario

Subject: Economics
Word Count: 4000

Abstract

Today, environmental damage is among the most pressing issues in society, with one of the contributing factors being greenhouse gas emissions from cars. The simple solution to this, without compromising the necessity of cars, is to gradually adopt electric vehicles as a more mainstream mode of transportation. Unfortunately, electric vehicles are naturally quite expensive for consumers due to their relatively new and advanced technology. To address this issue, the Government of Ontario introduced a voucher named the Electric Vehicle Incentive Program (EVIP), recently re-introduced as the modernized EVIP, to make electric vehicles more affordable to consumers. From this, a research question was formulated to focus the investigation: **To what extent does the modernized Electric Vehicle Incentive Program affect the new car market in Richmond Hill, Ontario?**

The scope of this investigation encompasses economic concepts regarding vouchers, substitutes in consumption, and market failure, which were all applied when determining the theoretical effect of the modernized EVIP. To answer the research question, several aspects were considered: the opinions of consumers and producers, electric vehicle sales, and the effect on various stakeholders. This research was obtained from primary sources, namely corporate interviews from car dealerships and consumer surveys in Richmond Hill, as well as secondary sources in the form of Ontario electric vehicles sales statistics. These results from different sources were compared and evaluated in relation to the theoretical effect of the modernized EVIP.

Through this investigation, it was concluded that the extent to which the modernized EVIP's affects the car market in Richmond Hill is not as significant as desired, but has certainly made a considerable impact. By making electric vehicles more affordable, the modernized EVIP largely eliminated price as a deterrent for consumers. However, other factors such as lack of infrastructure remain as barriers preventing the mainstream adoption of electric vehicles.

[Word Count: 300]

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Introduction

Over the last two decades, developed countries around the world has seen an ever increasing presence of electric vehicles. In 1997, the Toyota Prius, the first modern hybrid electric vehicle was released in Japan. Almost a decade later, in 2006, Tesla Motors announced the beginning of the production of a luxury electric sports car. Following Tesla's announcement and success was the release of the Chevrolet Volt, a plug-in hybrid, and the Nissan LEAF, an all-electric vehicle, in 2010 (Matulka, 2014). Since then, more automakers have been releasing electric vehicles. Today, there are almost 60 different models of electric vehicles available on the market (CAA, 2016).

The main benefits of driving an electric vehicle are evident. Electric vehicles have little to no emissions, making them an environmentally friendly alternative to the typical gasoline-consuming car. In terms of powering the vehicle, electricity is many times cheaper than gasoline. However, due to other factors influencing consumers' choices, only a small percentage of car owners drive an electric vehicle, despite these benefits. As a means of encouraging consumers to purchase electric vehicles, the Government of Ontario introduced the Electric Vehicle Incentive Program (EVIP), which offers a monetary rebate with the purchase of an electric vehicle. Recently, this was re-introduced as the modernized EVIP which generally offers significantly increased incentive amounts for non-luxury vehicles. In general, the modernized EVIP seems to be a viable plan to increase electric vehicle consumption in order to support environmental initiatives to reduce greenhouse gas emissions.

Research Question

With the EVIP being a rebate from the Ontario provincial government to consumers who purchase electric vehicles, there is, of course, the targeted effect of increasing sales of electric vehicles. In addition to that, there are also various stakeholders being affected both directly and indirectly, namely consumers, producers, the government, taxpayers, and society as a whole. Specifically, the investigation examines the modernized EVIP and its impacts. However, studying the effect of the EVIP

for all of Ontario is too broad and involves too many different factors affecting different regions. For that reason, this investigation will be focused solely on the Town of Richmond Hill in Ontario. Furthermore, since the EVIP would also indirectly impact regular cars, the investigation will encompass a broader market of cars to include all types consumer vehicles. Lastly, this market will specifically only include new cars purchased directly from car dealerships as only these are eligible for the EVIP. Taking into consideration these parameters and aims this investigation, the following research question was formulated:

"To what extent does Ontario's modernized Electric Vehicle Incentive Program affect the new car market in Richmond Hill?"

The approach taken to address this research question will begin with answering the question based on economic theory. Next, both primary and secondary research will be conducted in order to determine the effect of the EVIP in reality. Finally, the theoretical and actual results will be compared and analyzed.

Economic Theory

The Market: Richmond Hill

While it may be of greater significance to investigate the entire car market in Ontario to determine the overall effect of the modernized EVIP, unfortunately this cannot be done very effectively in the context of this specific investigation, for two reasons: Firstly, it is too expansive of a region affected by several different factors that cause too many variations between different areas of the province for it to be considered holistically. Secondly, it is near impossible to conduct sufficient primary research for all of Ontario, as there. For that reason, the market that will be investigated is the Town of Richmond Hill, a decently large local municipality.

Richmond Hill is located in southern Ontario in the Greater Toronto Area. With a population of over 200,000, Richmond Hill is one of Canada's fastest growing municipalities (Town of Richmond Hill). There is a total of twelve new car dealerships in Richmond Hill, seven of which carry electric vehicle models, shown as blue dots on the following map:

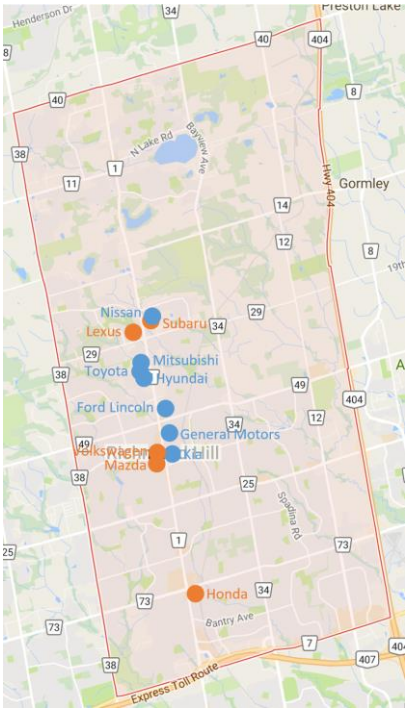


Figure 1: Map of Richmond Hill with car dealerships

Market Failure

In economics, it is ideal for a market to be in allocative efficiency because both consumer and producer surplus is maximized. Generally, this occurs at the point at the same point as equilibrium, where marginal benefit (demand curve) intersects with marginal cost (supply curve) at the price of P_e and Q_e in the following graph:

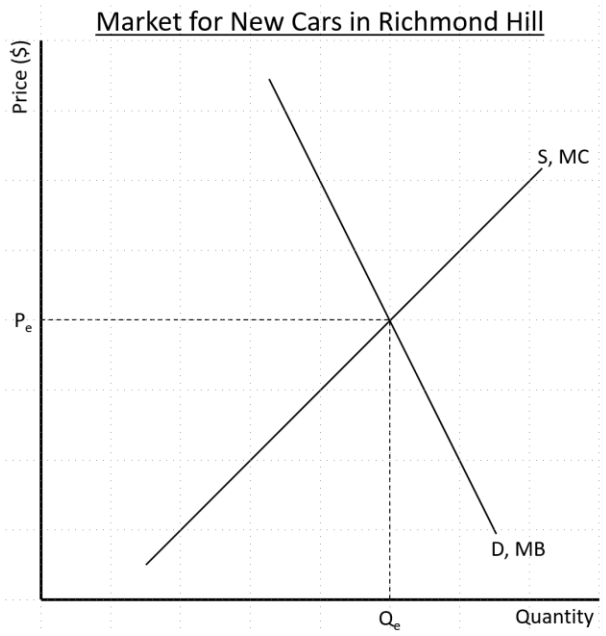


Figure 2: Equilibrium and allocative efficiency

However, many economic markets are not allocatively efficient because market failure occurs due to externalities. An externality is an effect on a third party not directly related in the economic transaction. In the case of the car market, market failure occurs due to a negative externality in consumption, defined as when the marginal private benefit of the consumption of a product is greater than the marginal social benefit. In other words, the consumption of cars by individuals indirectly negatively affects the society, or the third party. This is primarily due to the consumption of natural resources through burning fossil fuels to power the vehicles and the production of pollution.

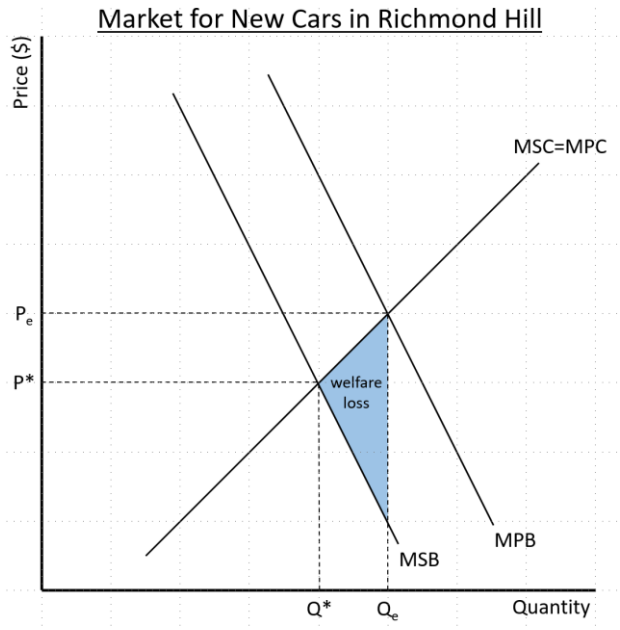


Figure 3: Market failure

The point of equilibrium in this market is the intersection of marginal cost and marginal private benefit at the price of P_e and quantity of Q_e. However, allocative efficiency would be the intersection of marginal cost and marginal social benefit at the price of P* and quantity of Q*, which would be socially optimal. The shaded area shown in the graph illustrates welfare loss, where there is neither producer or consumer surplus, due to this market failure.

Electric Vehicles (EVs)

As an environmentally-friendly alternative to the traditional fuel-consuming vehicle, electric vehicles (EVs), run partially or entirely on electricity. Currently, there are three types of electric vehicles (Ontario Ministry of Transportation, 2016):

Table 1: Characteristics of types of electric vehicles

	Hybrid electric vehicle (HEV)	**Plug-in hybrid electric vehicle (PHEV)**	**Battery electric vehicle (BEV)**
Drive system(s)	Gasoline engine and fuel tank; electric motor and battery	Electric drive train and battery with support of internal combustion engine	Electric drive train and battery
Fuel	Gasoline	External source of electricity and fuel	External source of electricity
Eligible for EVIP?	No	Yes	Yes

Ontario's Electric Vehicle Incentive Program

The Electric Vehicle Incentive Program (EVIP) is a grant program created and introduced by the Ontario Ministry of Transportation in 2010. It offers financial incentives for the purchase or lease of electric vehicles, specifically PHEVs and BEVs, in order to promote adoption and encourage demand for this new technology by making them more affordable for Ontarians (Ontario Ministry of Transportation, 2016). Recently in February 2016, the modernized EVIP was released to make middle-class electric vehicles even more affordable, as well as to reduce incentive amounts for luxury vehicles.

Incentives range from $3000 to $13000 for purchases, depending on battery capacity, seating capacity, and manufacture's suggested retail price (MSRP). For some vehicles, the modernized EVIP may cover up to one-third of the vehicle's MSRP, a substantial incentive for purchasing the vehicle. For more details regarding the values of incentives, please refer to Appendix I.

In regards to economics, the EVIP is classified as a voucher, which is a monetary incentive given to consumers in order to increase quantity demanded.

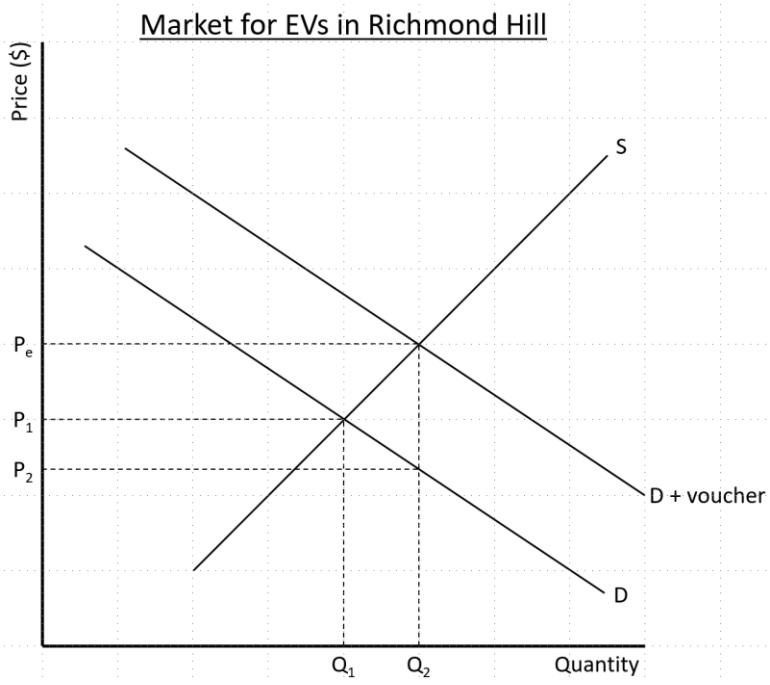


Figure 4: EVIP as a voucher

As shown in the graph, the initial equilibrium is at P_1 and Q_1. With the voucher, the new equilibrium is at P_e and Q_2, a higher price and quantity. However, the price for consumers would be lower than before at P_2.

Theoretical Effect of the Modernized EVIP on the New Car Market

Substitutes in Consumption

Regular fuel-burning vehicle and electric vehicles both serve the same function of transportation to consumers and are therefore substitutes in consumption, because the products are essentially interchangeable in terms of functionality. For that reason, the EVIP as a voucher effectively decreases the price electric vehicles for consumers, creating an increase in the quantity demanded, ultimately resulting in a decrease in demand for regular cars, its substitute in consumption.

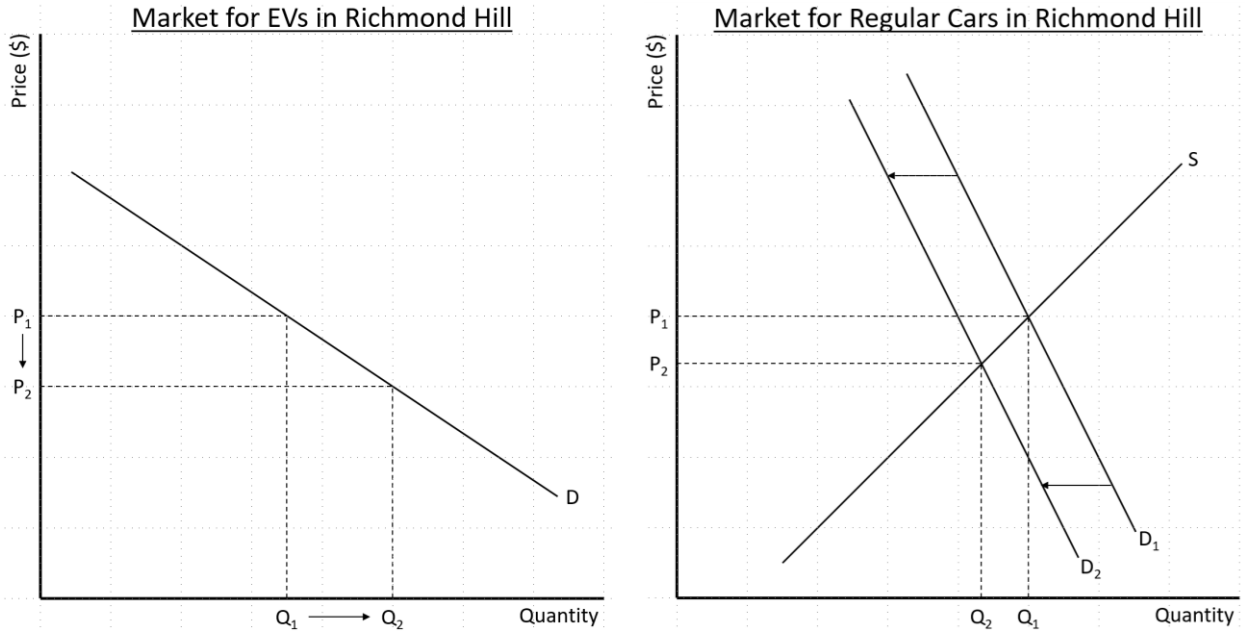


Figure 5: Substitutes in consumption

Solution to Market Failure

Due to the decrease in demand for regular cars from the EVIP voucher, this change can also be considered in relation to the problem with market failure.

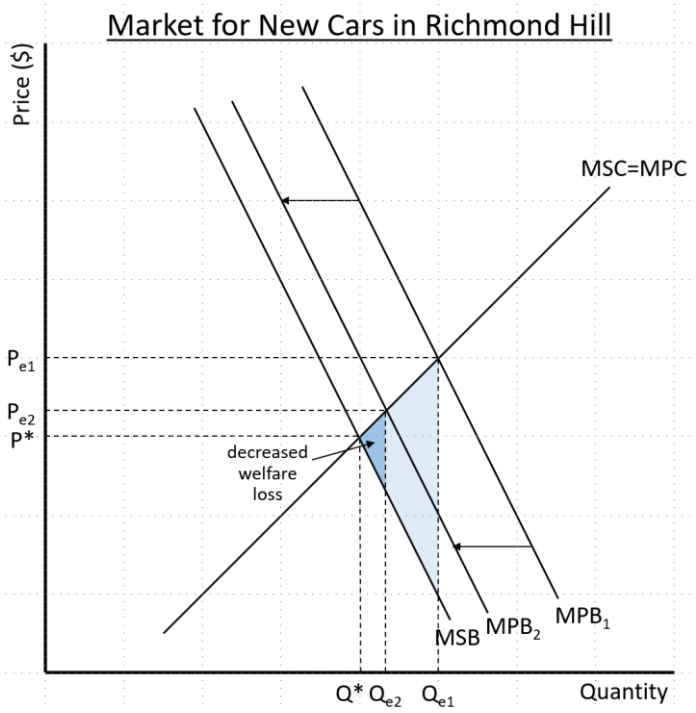


Figure 6: Solution to market failure

By showing the same decrease in demand for regular cars on the market failure graph, it demonstrates that the decrease in demand, or decrease in marginal private benefit, brings the marginal private benefit curve closer to the marginal social benefit curve. It can also be observed that there is a decrease in the region of welfare loss from this shift in the marginal private benefit curve. Since electric vehicles are not perfect substitutes for regular cars, there will continue to be demand for regular cars nonetheless, so the negative externality in consumption will still exist. Therefore, the marginal private and social benefit curves are still not equivalent to each other, and welfare loss will still exist. However, this results in a smaller difference between the two curves, and although they are not equivalent for the market to be in allocative efficiency, it is nonetheless an improvement from the original market failure with a much greater welfare loss.

Of course, these effects of the EVIP on the car market are all theoretical, based on economic models. In reality, the effects of the voucher on the car market will likely vary from these theoretical effects and must be investigated through research.

Research

Methodology

The research for this investigation will consist of two main aspects: primary and secondary research. Since the research question is focused on the effect of the EVIP on the car market in Richmond Hill, primary research in the form of corporate interviews and consumer surveys will only be conducted for Richmond Hill. Although this investigation focuses on the car market in Richmond Hill, the rest of Ontario will be considered as well, because the EVIP affects all of Ontario and there is a lack of sources available on specifically Richmond Hill. For that reason, sales statistics for electric vehicles in Ontario will be analyzed as secondary research, and the results from these statistics will be interpolated for Richmond Hill. Finally, the research findings from both primary and secondary sources obtained through this process will be compared with each other to draw a conclusion.

Corporate Interviews

Firstly, primary research involves corporate interviews with sales representatives at car dealerships in Richmond Hill. In Ontario, the leading EV models in the past two years having consistently been the Tesla Model S, Chevrolet Volt, and Nissan LEAF, respectively. Other prominent models include the Smart for Two, Ford C-Max, Fusion, and Focus, BMW i3 and i8, and the Mitsubishi iMiEV (Trochaniak, 2016). With General Motors (Chevrolet), Nissan, and Ford dealerships located in Richmond Hill, representatives from these dealerships will be interviewed. Although there is no Tesla dealership in Richmond Hill, taking in to account the significance of the Tesla Model S in the electric vehicle market, a representative from the Tesla dealership located relatively nearby will also be interviewed. A list of the questions posed to each representative and a chart summarizing their responses can be found in Appendix II.

Overall, there was positive feedback in terms of opinions towards the EVIP and consumers seem to be knowledgeable about the incentive, as well. While there were generally only slight increases in

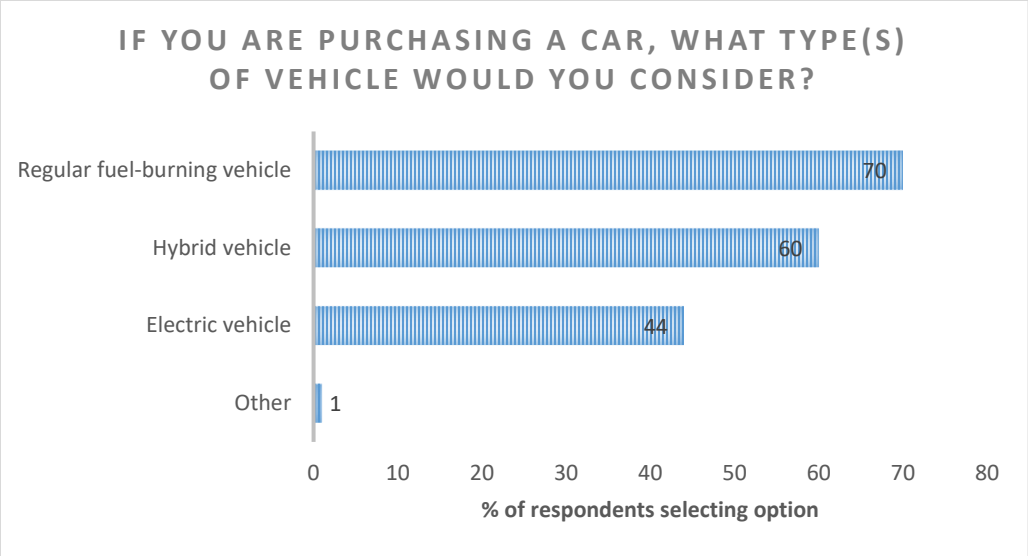
electric vehicle sales due to the EVIP, most representatives mentioned more consumers showing interest and greater prospects for the incentive in the future. Furthermore, an important issue brought forth by two representatives was the lack of infrastructure, specifically charging stations, that prevent consumers from purchasing an electric vehicle.

Consumer Survey

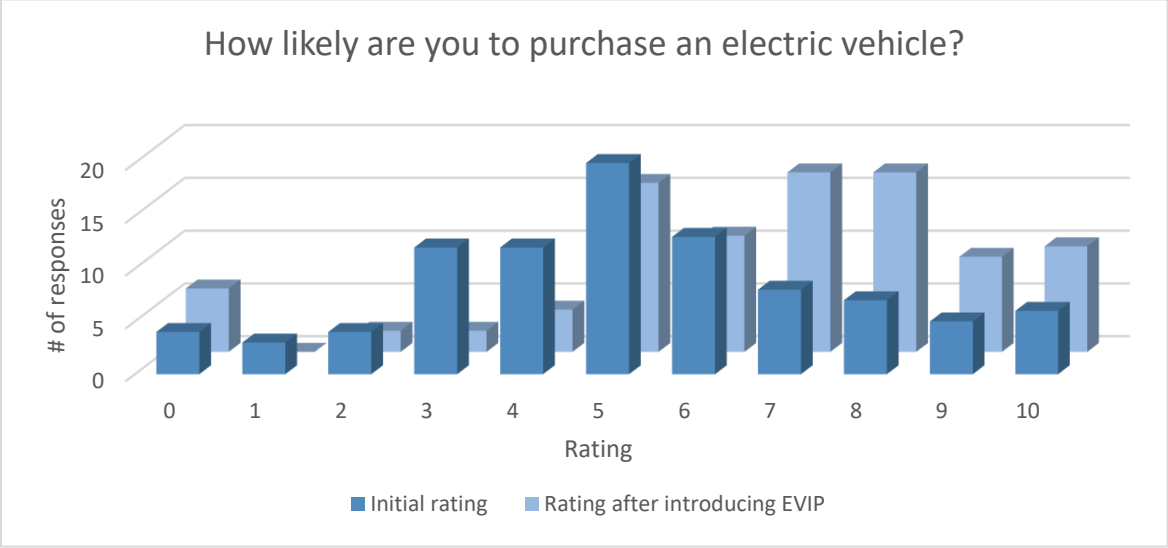
In addition to corporate interviews, a consumer survey was conducted. The consumer survey was designed to generate feedback from residents of Richmond Hill regarding their knowledge of the EVIP and to what extent it affects their willingness to purchase an electric vehicle. To make the survey appealing and user-friendly, the question types consisted only of yes or no questions, multiple choice, and ranking questions. The survey was specifically designed in this way so that it would not be time consuming and did not require excessive thought, maximizing the number of consumers who would be willing to fill it out. A list of the survey questions is located in Appendix III.

The survey was primarily posted on social media to reach a large number of people of all ages and socioeconomic backgrounds to reflect the opinions of the entire Richmond Hill population. In addition, residents of Richmond Hill were asked in person to fill out the survey to acquire even more responses to generate accurate results through a larger sample size with a total of 94 respondents.

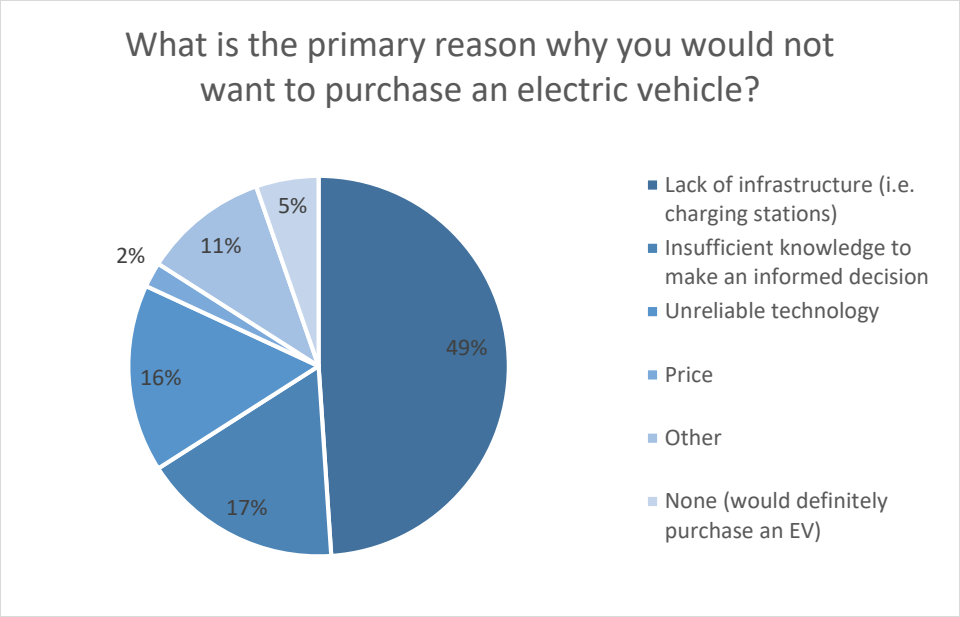
The results of the survey were quite conclusive. Unsurprisingly, when asked what kind of vehicle respondents would consider purchasing, the majority chose the regular fuel-burning vehicle. However, since respondents were allowed select several answers, the majority also chose hybrid vehicles, although significantly less than regular fuel-burning vehicles. As for electric vehicles, while over 40% of respondents selected this option, it was nonetheless the least popular option.



Initially, when respondents were asked to rate from 1 to 10 how likely they are to purchase an electric vehicle, there was a normal distribution of data with the average at 5.21. However, when asked if they were aware of the EVIP, 66% of respondents answered that they were not. Upon giving a brief explanation about the EVIP and asking respondents again to rate the likeliness of them purchasing an electric vehicle, the average rating increased to 6.47.



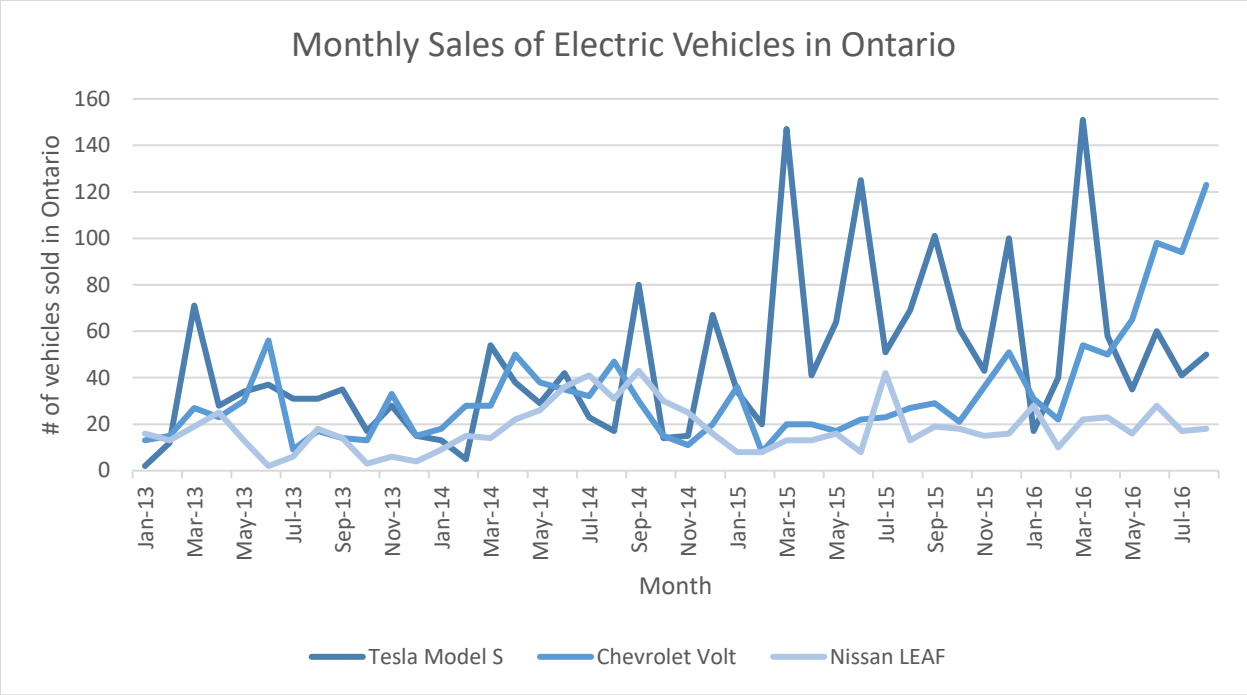
Finally, to better understand the reasons behind why the vast majority of the population prefers fuel-burning vehicles over electric vehicles, respondents were asked to select their primary reason for not wanting to purchase an electric vehicle.



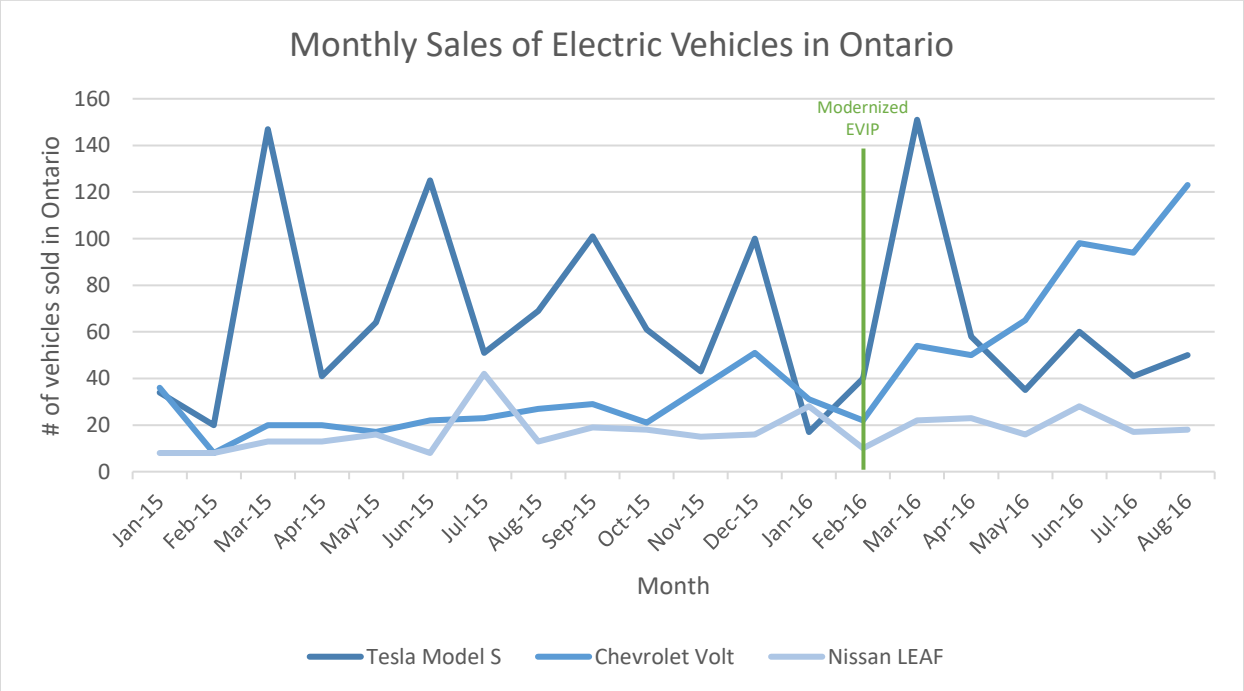
From the graph, it is evident that the lack of infrastructure is by far the largest reason, followed by insufficient knowledge and unreliable technology. It is interesting to note that price is overall an extremely unimportant factor after all respondents are aware of the EVIP, so in this sense, the EVIP has successfully made electric vehicles more affordable.

Electric Vehicles Sales Statistics

To further identify to effect of the EVIP on the car market in Richmond Hill, sales statistics for electric vehicles in Ontario were utilized. After obtaining some sales statistics through Matthew Klippenstein, a renewable energy consultant, the statistics were plotted on a graph for an overall trend to be observed, if any. Since the sales statistics in Ontario were available only for a few select vehicles, namely the three most popular ones and some others, only the trends for these three top-selling vehicles will be analyzed, which are the Tesla Model S, Chevrolet Volt, and Nissan LEAF. Making up a large portion of total sales, the statistics for these three alone should provide a sufficiently accurate representation of the overall changes in sales. The following graph illustrates the monthly sales of these three vehicles from January 2013 to August 2016:



Looking at this graph, there seems to be a distinct growing trend in the sales of the Tesla Model S and the Chevrolet Volt. Meanwhile, Nissan LEAF sales remained more or less constant over the years, despite some fluctuations. On the topic of fluctuations, it is interesting to note that Tesla Model S sales has seen drastic fluctuations from month to month, especially from early 2015 to mid 2016.

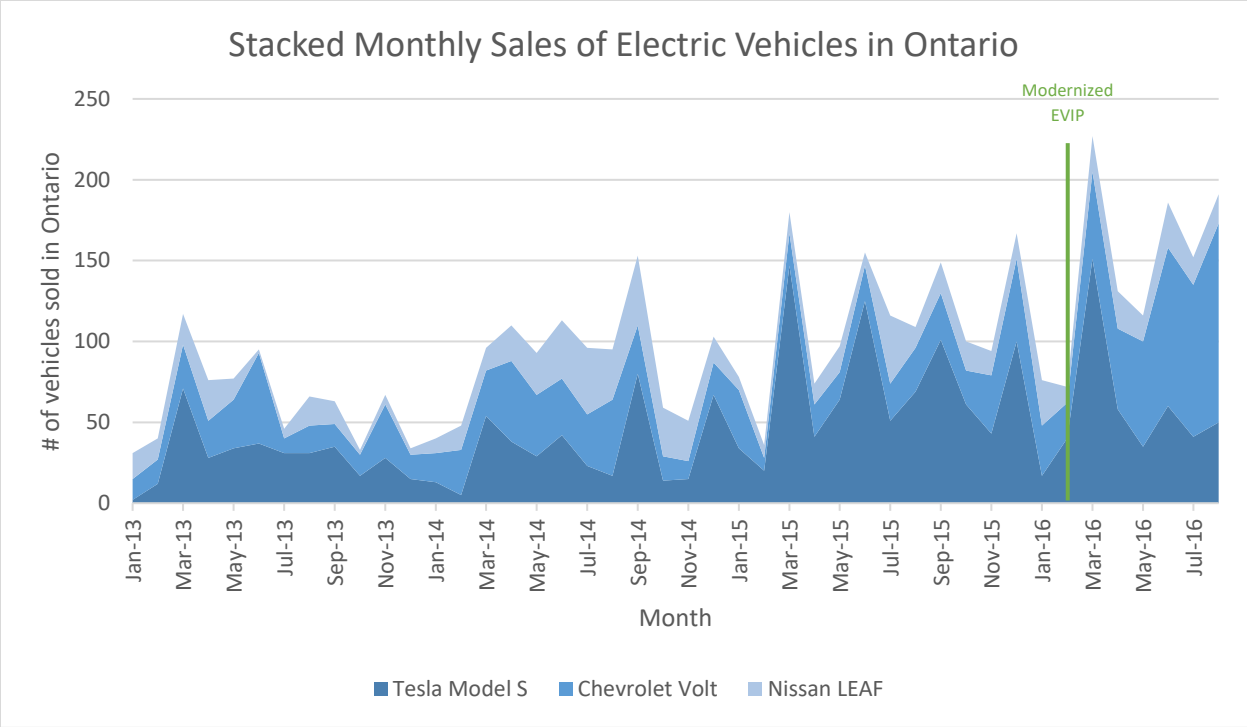


By examining electric vehicle sales before and after the modernized EVIP was implemented, several points can be deduced. Firstly, there was immediately a drastic increase in Chevrolet Volt sales after the implementation of the modernized EVIP, which can be attributed to the substantial inventive of approximately one-third of MSRP given for the Volt.

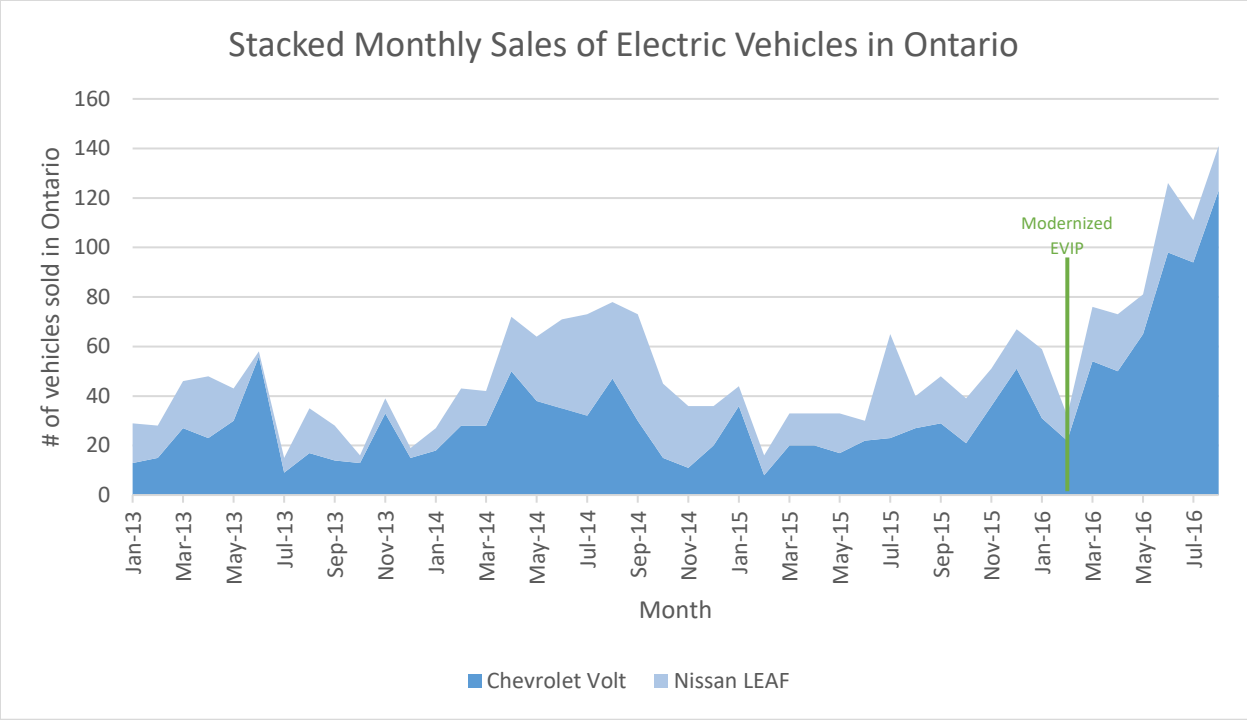
Secondly, as mentioned previously, Nissan LEAF sales seems to have remained fairly consistent. Nonetheless, only looking at after the implementation of the modernized EVIP, there is a marginal increase in sales, although this effect is arguably uncorrelated with the EVIP. Some possible reasons for the minimal increase in sales could be due to other issues such as lack of infrastructure, namely charging stations, or brand recognition of other electric vehicle manufacturers such as Tesla or the Chevrolet Volt.

Lastly, sales for the Tesla Model S can be observed to have a decreasing trend compared to before the modernized EVIP was implemented, despite an upward spike of sales in March 2016. While there are many factors that could have caused this, perhaps it can be attributed to the fact that the rebate given for the Model S was significantly reduced, being a luxury vehicle, therefore consumers now have less incentive to purchase the vehicle.

Overall, an increasing trend in electric vehicle sales can be observed over the years from January 2013 to August 2016, including after the implementation of the modernized EVIP:



Of course, this increasing trend in sales following implementation of the modernized EVIP can be argued to be simply as a result of the general increasing trend in sales of electric vehicles over the years. However, there are also limitations to looking at the stacked line graph of electric vehicle sales. As previously discussed, Tesla Model S sales actually seem to have generally decreased after the modernized EVIP because of the decreased monetary incentive amount. Alternatively, the sales data for the Tesla Model S can omitted from the graph, since the modernized EVIP allocates more incentive given for normal vehicles by reducing the incentive given for luxury vehicles, therefore the increasing Tesla Model S sales were not intended to be increased by the modernized EVIP anyway:



In this graph, there appears to be a much more significant increase in electric vehicle sales after the implementation of the modernized EVIP.

Analysis

Evaluation of Research Findings

Comparing economic theory and research findings, it is evident that research findings correspond with economic theory to a certain extent, but are also quite different in some ways. To begin, the primary goal of the EVIP is to encourage demand for electric vehicles by making them more affordable. Economically, by effectively decreasing the price of electric vehicles in the form of an incentive, an increase in quantity demanded of electric vehicles is the expected outcome. This goal was certainly achieved as seen through sales statistics for electric vehicles in Ontario. In addition, this is also reflected in the consumer survey results, with the vast majority of respondents learning of the EVIP for the first time. Their average ranking of likeliness to purchase an electric vehicle increased from 5.21 to 6.47 being informed of the EVIP.

Where the survey results showed the most drastic increase in likeliness to purchase an electric vehicle after being informed of the EVIP, this largely positive response towards the EVIP can perhaps be attributed to the limitations of a survey. That is, surveys are conducted upon a hypothetical basis, thus there may be large discrepancies between an individual's hypothetical opinion and their actual actions. For example, this could mean being overly enthusiastic on their survey response which does not reflect their actions when they are making such a decision in real life.

Meanwhile, corporate interview responses show slightly less significant increases in quantity demanded for electric vehicles, when representatives interviewed generally discussed how the EVIP has not made an immense impact, but is certainly helping and bringing in more interested customers. Through this increase in quantity demanded of electric vehicles, by extension, there is a proportional decrease in demand for its substitute in production, regular fuel-burning vehicles.

Impact on Stakeholders

Consumers

Consumers experience the most direct impact of the EVIP, as the EVIP is designed to primarily act in their best interests by providing an incentive which basically lowers the price of electric vehicles. The modernized EVIP will be especially beneficial to consumers interested in purchasing a conventional vehicle, such as the Chevrolet Volt or the Nissan LEAF since the modernized EVIP offers substantial rebates on these vehicles.

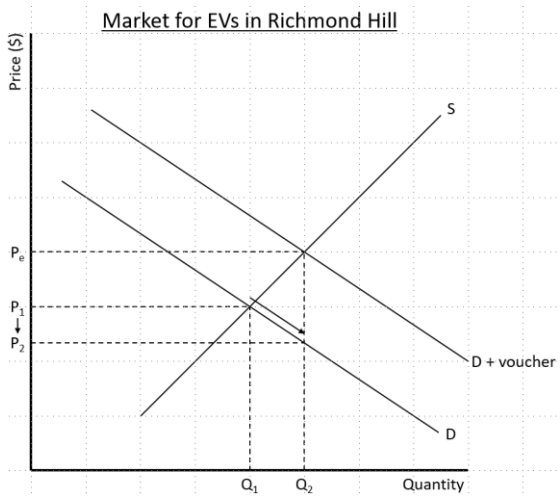


Figure 7: EVIP effectively decreases the price of EVs for consumers

The only case in which the EVIP does not benefit consumers if they are looking to purchase a luxury electric vehicle like a Tesla or Porsche. These vehicles have significantly decreased rebate amounts in the modernized EVIP, making it less incentivized to purchase one of these vehicles.

Producers

Although producers, or car companies, do not directly benefit from the EVIP in terms of lower costs like how consumers benefit from lower prices, they instead benefit from increased sales of electric vehicles. Since consumers receive lower prices for electric vehicles, there will be greater quantity demanded. Producers experience the advantage of increased quantity demanded, without lowering prices, since the revenue that producers receive is comprised of consumer expenditure as well as government expenditure on the EVIP, or the voucher.

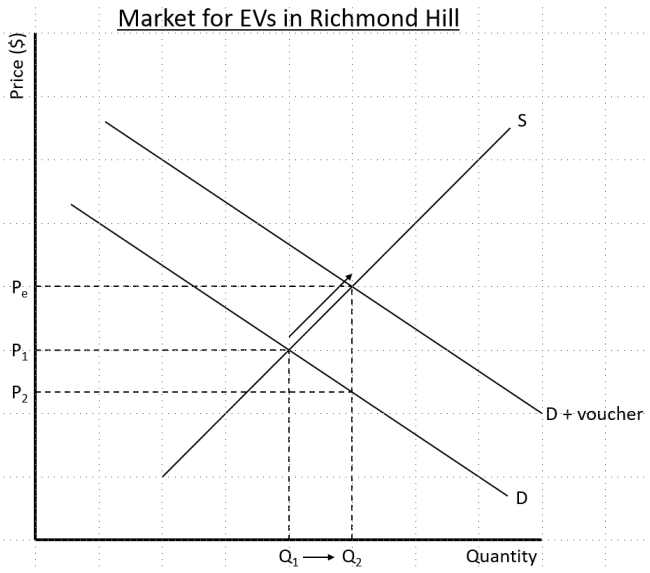


Figure 8: EVIP increases the quantity demanded and supplied

Government

The EVIP is a monetary incentive offered to consumers by the Ontario Provincial Government, therefore the government is the second stakeholder that is directly affected by the EVIP. In order to fund the increased incentives given to consumers through the modernized EVIP, there must be increased government expenditure from the previous government expenditure on the original EVIP. Although increased expenditure is generally considered to be a negative outcome, it is the goal of the government to do what is best for its citizens and the society.

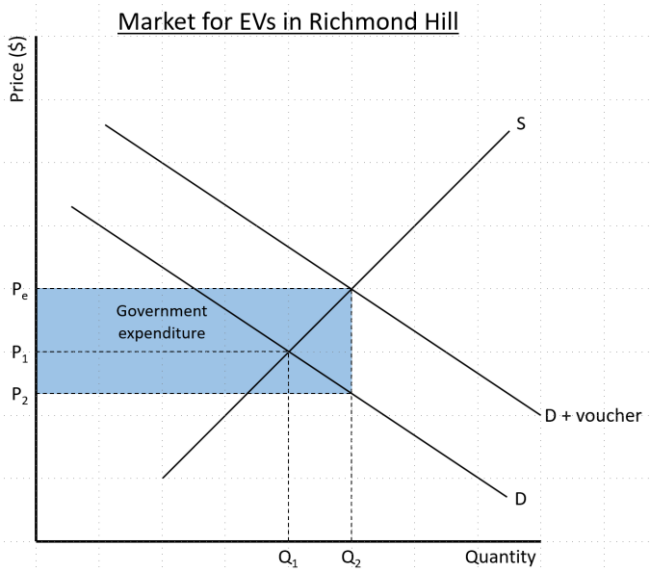


Figure 9: Government expenditure on EVIP

Taxpayers

To fund the government expenditure on the EVIP, the government receives its revenue from taxpayers, both consumers and producers through taxes. Theoretically, the implementation of an incentive program could potentially cause an increase in taxes. Fortunately for consumers and producers, in reality, there has not been any tax increases. This is likely due to the government expenditure on the EVIP only being a small portion of total expenditure, therefore there is no need for the government to receive additional revenue to fund the incentive. However, one disadvantage is opportunity cost because taxpayers' money can be spent on other areas such as investments in infrastructure.

Society

As previously discussed, the consumption of fuel-burning vehicles is a negative externality in consumption, because the emissions of these vehicles cause air pollution, therefore causing damaging effects to the environment. The EVIP increases quantity demand for electric vehicles, subsequently decreasing demand for its substitute in consumption, regular fuel-burning vehicles, ultimately decreasing the effect of the negative externality in consumption by moving the marginal private benefit curve closer to the marginal social benefit curve. For that reason, the EVIP has an overall positive impact on society.

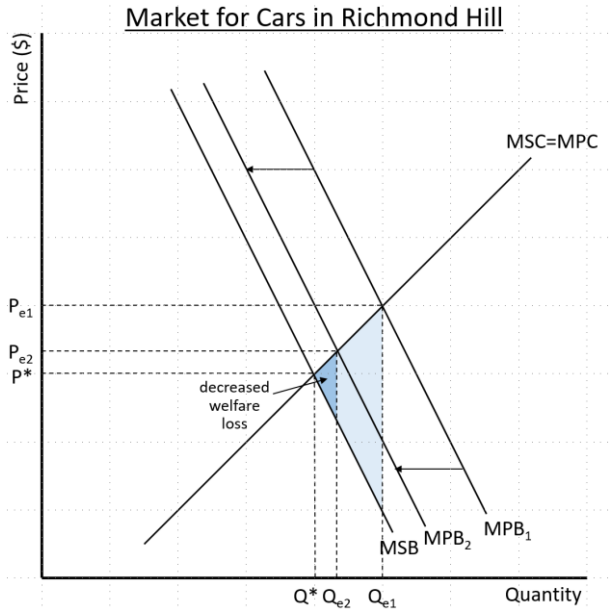


Figure 10: Decreased negative externality in consumption and welfare loss

Conclusion

Through considering the theoretical effect of the modernized EVIP as well as the research findings, a distinct conclusion can be drawn: the extent to which the modernized EVIP's effect on the car market in Richmond Hill is not as significant as preferred, but has certainly made an impact to a considerable degree. The modernized EVIP is expected to increase electric vehicle sales by serving as a voucher that lowers the price that the consumer pays when purchasing the good. This expected result was attained, although perhaps to a lesser degree than expected, in that the increase in electric vehicle sales was not too significant as seen from sales statistics and interview results. Ultimately, this reduces the negative externality in consumption and welfare loss, though a large portion of both remains.

However, despite relatively low increase in electric vehicle sales in Richmond Hill, it is important to keep in mind other factors that would prevent greater adoption of electric vehicles. For example, the modernized EVIP was implemented in February 2016. From then to the present, it has been less than one year since its implementation. When there is a change in the market, it generally takes time for the market to fully react and re-establish equilibrium, thus this should be taken into consideration. Moreover, there are several other factors affecting demand for electric vehicles in addition to price, such as availability of infrastructure and reliability of the technology. In fact, these other factors have been proven from interviews and surveys to play a major role in determining consumer demand.

The EVIP is undoubtedly a step in the right direction from a holistic perspective of creating a better future for citizens, not only based on economic theory, but also according to several interviewees. Regardless of the extent to which the EVIP has increased demand for electric vehicles, it fulfills its purpose of making electric vehicles more affordable for consumers, and by extension decreasing the welfare loss in market failure from fuel-burning cars.

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Appendix

I. Modernized EVIP Incentive Table

Vehicle Manufacturer and Model	Type	Battery Size	Seating Capacity	Incentive
BMW i3	PHEV and BEV	22-33	4	$13,000
BMW i8	PHEV	9	4	$3,000
Ford C-Max (Energi)	PHEV	7.6	5	$7,730
Ford Focus EV	BEV	23-33.5	5	$9,600-$10,635
Ford Fusion EV/Energi	PHEV	7.6	5	$7,730
GM Chevrolet Volt	PHEV	16.5-18.4	4-5	$11,489-$12,747
Hyundai Sonata Plug-In	PHEV	9.8	5	$8,460
Kia Soul EV	BEV	27	5	$10,499-$12,000
Mitsubishi i-MiEV	BEV	16	4	$8,399
Nissan Leaf	BEV	24-30	5	$9,599- $12,164
Porsche Cayenne	PHEV	10.8	5	$3,000
Porsche Panemera	PHEV	9.4	4	$3,000
Smart for Two	BEV	17.6-18	2	$8,500
Tesla Model S	BEV	60-90	5	$3,000
Tesla Model X	BEV	60-90	7	$3,000
Toyota Prius Plug-In	PHEV	4.4	5	$5,000

II. Corporate Interview

Questions

1. What are your thoughts on the EVIP (advantages, disadvantages)?
2. Are consumers generally knowledgeable in the EVIP (i.e. when customers come to your dealership, do they know what it is, its benefits, etc.)?
3. How and to what extent has your dealership tried to promote the EVIP?
4. Have regular car and EV sales changed ever since the introduction of the EVIP?
5. If possible, can you give me some numbers for regular car and EV sales before and after the introduction of the EVIP?

Responses

Table 2: Interview responses from representatives at Tesla, General Motors, Nissan, and Ford

		DEALERSHIP AND REPRESENTATIVE			
		Tesla Yorkdale *Nick Mostafaee*	**Wilson Niblett (General Motors)** *David Townend*	**Alta Nissan** *Wilson Leung*	**Twin Hills Ford Lincoln** *Omar Mohammed*
INTERVIEW QUESTIONS	*1. Opinion of EVIP*	- dropped from $8500 to $3000 with modernized EVIP, unfortunate downgrade - need to improve infrastructure for charging stations	- very good incentive, brought in more people to look at the Volt - downside: supply hasn't met demand	- great that government is giving incentive because LEAF has zero emissions and fits needs of consumers	- great incentive, great benefit - consumers don't trust new technology, don't think it's reliable
	2. Knowledge level of consumers of EVIP	(question wasn't asked because of decrease in incentive)	- very knowledgeable, customers have done a lot of research about car and incentives	- very knowledgeable, customers have put in a lot of time researching impact financially and environmentally	- consumers are knowledgeable, know about incentive
	3. Promotion of EVIP	- TV screens in dealership advertising incentive	- mostly promotion through GM; Volt won green car of the year - most consumers know about it already	- Nissan Canada does promotion - sales reps ask consumers questions to see which vehicles may be suitable and recommend LEAF	- communicate benefits to consumers
	4. Impact of EVIP on sales	- incentive isn't what sells the car, but helps - greater impact when incentive was $8500	- not a big impact yet, but moving in that direction - more people considering it - infrastructure is biggest issue (charging)	- increase in EV sales - more people looking for electric cars	- not much change, but maybe only in this location - maybe greater impact in future
	5. Sales statistics	Unable to disclose			

III. Consumer Survey

Questions

1. Do you live in Richmond Hill, Ontario?
2. If you're purchasing a new car, what type(s) of vehicle would you consider?
    - Regular fuel-burning vehicle
    - Hybrid vehicle
    - Electric vehicle
    - Other
3. How likely are you to purchase an electric vehicle? (Assuming that you are going to purchase a car) (Rank 0-10)
4. What is the most important factor that you consider when purchasing a car?
    - Price
    - Size
    - Brand
    - Functionality
    - Aesthetics
    - Other
5. In order to encourage consumers to purchase electric vehicles, Ontario has the Electric Vehicle Incentive Program with which Ontarians will receive a rebate when purchasing an electric vehicle. Were you previously aware of this incentive? (Yes/No)
6. Incentives range from $3000 to $13000 for all electric vehicle models. As a result, prices for electric vehicles are generally approximately the same as prices for equivalent regular cars (with the exception of luxury vehicles). With that in mind, how likely are you to purchase an electric vehicle? (Rank 0-10)
7. What is the primary reason why you would not want to purchase an electric vehicle?
    - Lack of infrastructure (i.e. charging stations)
    - Unreliable technology
    - Insufficient knowledge to make an informed decision
    - None (I would definitely purchase an electric vehicle)
    - Other