



Analysis of the Impact of Value Added Tax and Sales Tax On Luxury Goods on Electric Car Sales in Indonesia

Elsie Kasim¹

¹ Tax Administration Department University Indonesia
elsiekasim@vokasi.ui.ac.id

Abstract. This study aims to analyse the impact of Value Added Tax and Sales Tax On Luxury Goods on electric car sales in Indonesia. Electric vehicles are one of the solutions in reducing greenhouse gas emissions and dependence on fossil fuels. However, the high price of electric vehicles is one of the main obstacles to the adoption of this technology. Value Added Tax and Sales Tax On Luxury Goods are one of the tax components imposed on car purchases in Indonesia. Through this research, an analysis will be carried out on the impact of Value Added Tax and Sales Tax On Luxury Goods on the selling price of electric vehicles and consumer demand. The research method that will be used is qualitative analysis using data on the selling price of electric vehicles before and after the application of Value Added Tax and Sales Tax On Luxury Goods. In addition, data on electric car sales will also be obtained to see changes in consumer demand. The results of this study are expected to provide a better understanding of the impact of Value Added Tax and Sales Tax On Luxury Goods on electric car sales in Indonesia. These results can be the basis for the government in formulating policies that are more effective in encouraging sales of electric vehicles.

Keywords: Value Added Tax, Sales Tax On Luxury Goods, Electric Car, Sales, Consumer Demand.

1. Introduction

1.1 Introduction and Problem Statement

Environmental issues such as climate change and air pollution have become significant concerns in many countries, including Indonesia. Major cities like Jakarta are experiencing serious problems related to poor air quality, primarily due to high levels of air pollution.

The Air Quality Index (AQI) is used to measure the level of air pollution and provide information about air quality that affects human health. A high AQI score indicates poor air quality and can have negative impacts on human health and the environment as a whole.

Jakarta, with an AQI score of 163, has repeatedly made it to the list of cities with the worst air quality in the world. Beijing and Dhaka, two other cities, also face similar issues [1]. Air pollution in these cities is caused by various factors, including vehicle emissions, industrial activities, and unsustainable energy consumption patterns.

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To address these issues, many countries, including Indonesia, are seeking solutions to reduce air pollution and adopt more environmentally friendly energy and transportation alternatives. One prominent solution being developed is the use of electric vehicles, which can reduce greenhouse gas emissions and dependence on fossil fuels.

However, as mentioned earlier, the adoption of electric vehicles in many countries, including Indonesia, still faces several challenges, such as limited charging infrastructure, relatively high prices, and a lack of public awareness. Collaborative efforts from the government, private sector, and society are needed to address these challenges and promote a transition towards more sustainable and environmentally friendly transportation.

One major barrier to electric vehicle adoption is the high price of these vehicles. Electric vehicles often have higher prices compared to conventional internal combustion engine vehicles. The average price of conventional vehicles is Rp419.9 million, while the average price of electric vehicles reaches Rp617 million, with a difference of Rp197 million. This is due to higher production costs for battery technology and other components used in electric vehicles. The high price becomes one of the factors influencing consumers' decisions to purchase electric vehicles [2].

In Indonesia, Value Added Tax and Sales Tax On Luxury Goods are two taxes imposed on vehicle purchases, including electric vehicles. Value Added Tax is imposed on almost all buying and selling transactions in Indonesia, including vehicle purchases. On the other hand, Sales Tax On Luxury Goods is an additional tax imposed on luxury goods, including electric vehicles. Both taxes can impact the selling price of electric vehicles and affect consumer demand [4].

Therefore, this research aims to analyze the impact of Value Added Tax and Sales Tax On Luxury Goods on electric vehicle sales in Indonesia. By analyzing the data of electric vehicle selling prices before and after the implementation of Value Added Tax and Sales Tax On Luxury Goods, as well as examining changes in consumer demand, this study will provide a better understanding of the influence of these taxes.

The results of this research are expected to provide deeper insights to the government in formulating effective policies to encourage electric vehicle sales in Indonesia. With a better understanding of the impact of Value Added Tax and Sales Tax On Luxury Goods, the government can consider appropriate policy measures, such as tax reductions or exemptions, to address price barriers and promote wider adoption of electric vehicles in Indonesia.

1.2 Literatur Gap

In the preparation of the study entitled “Analysis of the Impact of Value Added Tax and Sales Tax on Luxury Goods on Electric Car Sales in Indonesia”, the researcher uses four other research results that have relevance to the theme raised by the researcher and at the same time become a reference in the preparation of research.

The first research that became a reference is an international journals title *Transport Reviews* year 2017 by Makena Coffman, Paul Bernstein and Sherilyn Wee, title *Electric Vehicle Revisited: A Review of Factors That Affect Adoption*. According to his report, the high purchase price of electric vehicles is a key hindrance to their adoption. Despite indications that electric vehicle ownership costs can be competitive with other vehicles, upfront expenses continue to dominate [6].

The second research that became a reference is a report from The International Council on Clean Transportation year 2016 by Zifei Yang, Peter Slowik, Nic Lutsey and Stephanie Searle, title “Principle for Effective Electric Vehicle Incentive Design”. This study illustrates that the incentive's design can have a significant impact for a variety of reasons. Various parts of the incentive's design influence the total consumer value, customer eligibility, electric vehicle model eligibility, and the incentive's understandability to dealers and consumers alike [8].

The third research that became a reference is an international journals title *Energy Policy* year 2009 by David Diamond, title “The Impact of Government Incentives of Hybrid-Electric Vehicle: Evidence from US States”. This analysis shows that there is a substantial relationship between incentives that make electric vehicles more cost competitive with traditional gasoline counterpart vehicles. This discovery is especially significant since it implies that improvements in electric vehicle technology and accompanying battery price reductions will allow market expansion with fewer incentives over time [3].

The fourth research that became a reference is an international journals title *Journal of Transport Economics and Policy* year 2003 by Fredrik Carlsson and Olof Johansson-Stenman, title “Cost and Benefits of Electric Vehicles”. This study illustrates how battery automobiles are often determined to be socially unprofitable, while having lower private life-cycle expenses and external costs than gasoline cars. One key reason for this is that electric vehicles are heavily 'subsidised' by having a relatively low energy tax in comparison to fossil fuel taxes [5].

These papers offer insights on factors that effects adoption of electric vehicle. What is the impact of Value Added Tax and Sales Tax On Luxury Goods on electric vehicle sales in Indonesia? In the present study, researchers attempted to analyze the impact of Value Added Tax and Sales Tax On Luxury Goods on electric car sales in Indonesia.

2. Materials and Methods

The method utilized in this study was evaluated based on the research methodology, type of research, data gathering methodologies, and data analysis techniques.

2.1 Research Approach

In this study, a quantitative technique with a post-positivist paradigm was applied. The post-positivist perspective, according to Neuman [7], assumes that objective, quantifiable facts are generated and constructed in order to become a social reality. A science and study are created from measurable and precise data gathered through a data collection method and integrated with hypotheses in an objective and value-free manner in this methodology. Based on this perspective, the author attempts to address the issue in this study by analyzing the influence of Value Added Tax and Sales Tax on Luxury Goods on electric car sales in Indonesia.

2.2 Type of Research

2.2.1 Based on Research Objectives

Judging from the research objectives, this research is included in the type of descriptive research. Descriptive research is research that tries to present a complete picture of a situation, social situation, or social relations in it related to research, for research problems or answers to research [7]. In this study, the researchers tried to describe the impact of Value Added Tax and Sales Tax On Luxury Goods on electric car sales in Indonesia.

2.2.2 Based on Research Benefits

Based on the benefits, this research is classified as pure research. In academia and science, pure research focuses on benefits. This research was conducted to satisfy the researchers' interests and curiosity in order to solve the questions mentioned, specifically the impact of Value Added Tax and Sales Tax on Luxury Goods on electric car sales in Indonesia.

2.2.3 Based on Time Dimension

This research is cross-sectional in the sense that it is only undertaken at a specific time, namely before and after the new provisions take effect.

2.3 Data Collection Techniques

This study's data collection methods are library research and field research..

2.3.1 Literature Research

This study's literature review involves the collecting of literature in the form of books, papers, and associated regulations.

2.3.2 Field Research

In this study, field investigations were conducted by interviews (in-depth interviews). Face-to-face in-depth interviews were performed between interviewers and resource individuals or parties involved in electric vehicle policy.

2.4 Data Analysis Techniques

Only data and material relevant to this research will be analyzed and presented in the analysis and discussion portion of this study.

3. Results

A sales tax on luxury goods is a tax levied on manufacturers that create or import items as part of their business operations or occupations. Sales Tax on Luxury products is levied only once, when luxury products are manufactured or imported. Assembling, cooking, mixing, packaging, bottling, and other similar tasks with the assistance of persons or other business organizations are examples of products production.

Considerations for putting a Sales Tax on Luxury products include balancing the tax burden between low- and high-income consumers, controlling the consumption of luxury products, protecting small or traditional manufacturers, and protecting state revenue. Luxury goods are non-essential products, goods consumed by specific portions of the population, goods generally consumed by high-income persons, and items consumed to demonstrate status.

Sales Tax On Luxury Goods is collected once, either at the time of delivery by the manufacturer of luxury goods or at the time of importation of luxury goods. Subsequent transfers are no longer subject to Sales Tax On Luxury Goods.

The tariff for Sales Tax On Luxury Goods is set at a minimum of 10% and a maximum of 200%. The different tariff rates for Sales Tax On Luxury Goods are based on the classification of luxury goods subject to the tax.

The government has revised the policy on Sales Tax On Luxury Goods for electric-powered vehicles in Indonesia. The revised regulations are stated in Government Regulation No. 74 of 2021, which amends Government Regulation No. 73 of 2019 concerning luxury taxable goods in the form of motor vehicles subject to Sales Tax On Luxury Goods. The government amended Article 36, which stipulates that motor vehicles subject to Sales Tax On Luxury Goods at a rate of 15% with a tax base of 0% of the selling price are motor vehicles that use battery electric vehicle or fuel cell electric vehicle technology. Article 36 specifies that the 0% Sales Tax On Luxury Goods rate applies to battery electric vehicles (BEVs) or fuel cell electric vehicles. However, the Sales Tax On Luxury Goods rate for other types of electric vehicles has been increased.

In Government Regulation No. 73 of 2019, the 0% Sales Tax On Luxury Goods rate also applied to plug-in hybrid electric vehicles (PHEVs), but in Government Regulation No. 74 of 2021, the government stipulates that PHEV electric vehicles with a cylinder capacity of up to 3,000 cc are subject to a 15% Sales Tax On Luxury Goods rate.

In addition to Sales Tax On Luxury Goods, there is also Value Added Tax. Value Added Tax is a tax on the consumption of goods and services within the customs territory, imposed in stages at each production and distribution stage. Value Added Tax is an indirect tax because the payment or collection of the tax is made by parties other than the taxpayer.

On October 29, 2021, the government enacted a new taxation law, namely Law Number 7 of 2022 concerning the harmonization of tax regulations. According to this law, the Value Added Tax rate, which was previously 10%, was increased to 11% starting from April 1, 2022, and will further increase to 12% on January 1, 2025.

The government provides subsidies for the purchase of electric vehicles as of April 1, 2023. The subsidy refers to the Value Added Tax incentive, which is valid until December 2023. Through this incentive, individuals who purchase electric vehicles only need to pay 1% of the Value Added Tax, while the remaining 10% is paid by the government. However, not all electric vehicles sold in Indonesia are eligible for this Value Added Tax incentive. According to the Ministry of Finance Regulation No. 38 of 2023 on Value Added Tax on the delivery of certain four-wheeled battery-based electric motor vehicles and certain battery-based electric motor bus vehicles that are subsidized by the government for the 2023 fiscal year, only electric vehicles with a minimum of 40% domestic components are eligible for the incentive.

The price of the electric vehicle is Rp617,000,000, including 11% Value Added Tax and 0% Sales Tax On Luxury Goods. The taxable base amount is Rp555,855,856, and the Value Added Tax amount to be paid by the buyer is Rp61,144,144. Starting from April 1, 2023, the government provides a subsidy for the purchase of electric vehicles. Through this incentive, the buyer only needs to bear 1% of the Value Added Tax, while the remaining 10% is paid by the government.

As a result of this incentive, the price of the electric vehicle, Rp617,000,000, already includes 1% Value Added Tax paid by the buyer, 10% Value Added Tax subsidized by the government, and 0% Sales Tax On Luxury Goods. The taxable base amount remains Rp555,855,856. The Value Added Tax amount to be paid by the buyer is Rp5,558,558 (1% of the taxable base), while the government covers Rp55,585,585 (10% of the taxable base).

According to Table 1 before April 1, 2023, the price of the electric vehicle that the buyer had to pay was Rp617,000,000. After April 1, 2023, the price of the electric vehicle that the buyer has to pay is Rp561,414,415.

Tabel 1. VAT subsidized by the government

	Before April 1, 2023	After April 1, 2023
Taxable base amount	555.855.856	555.855.856
VAT amount to be paid by the buyer	61.144.144	5,558,559
VAT subsidized by the government	0	55,585.586
Sales Tax on Luxury Goods 0%	0	0
Total amount to be paid by the buyer	617.000.000	561.414.415

4. Discussion

Does this policy have an instant impact? Electric vehicle sales did increase in April, but not significantly. According to distributor wholesales data released by Gaikindo in April 2023, electric vehicle sales experienced an increase. In the fourth month of 2023, electric vehicle sales in Indonesia reached 1,285 units, up from the previous 1,112 units. Specifically, the sales of two electric vehicle models that received subsidies increased, although not significantly. Hyundai Ioniq 5 had sales of 592 units in March, which increased to 716 units in April. Meanwhile, Wuling Air EV had sales of 421 units in March, which increased to 450 units in April.

It is important to note that the impact of a policy is not always immediately visible. In this case, the increase in electric vehicle sales within a one-month period can be seen as an initial impact of the policy. This increase can be a positive indicator that the adoption of electric vehicles is progressing, although it takes time to observe more significant impacts over a longer period.

Furthermore, changes in electric vehicle sales are also influenced by other factors such as pricing, availability of charging infrastructure, and public awareness of the benefits of using electric vehicles. In the long run, policies supporting the use of electric vehicles can play a crucial role in transforming vehicle consumption patterns and reducing greenhouse gas emissions.

The fact that there was an increase in electric vehicle sales, although not significant, indicates that the policy is starting to have an impact and is a first step in promoting the adoption of electric vehicles in Indonesia.

5. Conclusion

Electric vehicle sales in Indonesia experienced an increase from March to April 2023. Although the increase was not significant, it indicates a response to the implemented

policy. The impact of the policy is not instantly visible, but the increase in electric vehicle sales during that period can be seen as an initial step in promoting the adoption of electric vehicles in Indonesia.

Changes in electric vehicle sales are influenced by various factors, including pricing, availability of charging infrastructure, and public awareness. In the long run, policies that support the use of electric vehicles have the potential to transform vehicle consumption patterns and reduce greenhouse gas emissions.

Although the increase in electric vehicle sales in April was not significant, it can be regarded as a positive sign that the adoption of electric vehicles is progressing in Indonesia. It takes a longer time to observe larger impacts and more significant changes in electric vehicle sales. Therefore, it is important to continue monitoring the development of electric vehicle adoption and the effectiveness of supporting policies.

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