How will the electric vehicle market in China develop in the next 5 years ?

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Abstract:

This dissertation explores the future development of China's electric vehicle market over the next five years, focusing on key factors such as government policies, technological advancements, consumer preferences, and market competition. Using both primary research, including a consumer survey, and secondary data analysis, the study examines how regulatory support, charging infrastructure, battery technology improvements, and environmental awareness will influence market growth. Findings indicate that government support remains a crucial driver of the EV industry, while increasing consumer preference for domestic brands and technological innovation are shaping future demand. However, challenges such as high vehicle costs, charging infrastructure limitations, and evolving policy frameworks may impact growth. The study concludes that while China's EV market is poised for significant expansion, its trajectory will depend on policy adjustments, consumer adoption rates, and advancements in sustainable mobility solutions.

Keywords: Electric vehicle market; government policies; consumer preferences; technological innovation; environmental impact

Section 1 - Introduction

Recently, the government has frequently issued policies for new energy vehicles, and the market has been continuously favorable, the consumption potential of consumers has been released. According to the data released by the China Association of Automobile Manufacturers, in May, the production and sales of new energy vehicles reached 940,000 and 955,000, with a market share of 39.5%, achieving a slight increase year-on-year, and continuing the rapid growth trend. The new energy vehicle industry is a sunrise industry, so its development is strongly linked to government policies. Therefore, the purpose of this study is to figure out the impact of government policies on the demand and supply of new energy vehicle industry and to consider how firms can adapt and survive in the future when government support policies are weakened.

The main reason I choose this project is my father's job is related to this industry, so I often get informa-

tion about those policies, then I became interested in this topic. Additionally, I am going to apply for economics in college, I would like to experience the process of data analysis in advance and promote my interest on this subject, hence I determined to do this study.

Section 2 - Literature Review

2.1 – The market for electric vehicles in China

With the acceleration of urbanization and motorization process, the problem of global climate change is becoming more and more serious, and the sustainable development of environment and transportation has been widely concerned. Electric vehicles can replace gasoline with electricity, greatly reducing exhaust emissions, and have great application potential in the face of severe environmental situation. Our country also issued a series of strategic plans to promote its development and support policy. China's electric vehicle market has continued to grow in recent years, with the output and sales reaching 9.587 million and 9.495 million in 2023, an increase of 35.8% and 37.9%, and the market share reaching 31.6%. What's more the electric vehicles produced in China account for more than half of the global sales. (Global EV outlook 2024)

China's new energy vehicle market is competitive, and many enterprises have invested heavily in technology development, product innovation and market promotion, then gradually formed their own brand advantages. There is BYD, the leading enterprise; NIO, which occupies the upscale market; and Xpeng Motors, which is popular among young consumers. With the rapid development of the Chinese market, foreign enterprises have also increased their investment in China. For example, Tesla has built a gigafactory in Shanghai; and traditional luxury car brands such as BMW and Mercedes-Benz have also launched electric vehicles to cater to Chinese consumers. (China Association of Automobile Manufacturers, Annual Report on China's Automotive Industry.

In addition, there are also a number of new power of car manufacturers in the market, with innovation as the driving force for the rapid growth. In recent years, people's awareness of environmental protection and the promotion

of government policies have increased the acceptance of electric vehicles in the Chinese market. According to the research and interview conducted by Wei, Yang and Tian, most people have the intention to choose new energy vehicles in the future, and 16% of the respondents have a very high willingness. In general, electric cars are more and more popular in the Chinese market.

2.2 - The positive effects of future growth of EV market in China

The future growth of the electric vehicle (EV) market in China is poised to bring a multitude of positive effects, spanning environmental, economic, and social realms. According to Liang's research, new energy vehicles have significant environmental impact advantages in the complete life cycle, and energy consumption, CO_2 emissions and conventional pollutant emissions are lower than traditional fuel vehicles. As the world's largest automotive market, this can significantly alleviate environmental problems. This transition is crucial in a country where many cities struggle with severe air quality issues. By replacing traditional internal combustion engine vehicles with EVs, China can decrease its reliance on fossil fuels, thus cutting down on carbon dioxide and other harmful emissions. This environmental benefit extends to mitigating the impacts of climate change, a global concern that China, as a major emitter, must address.

Economically, the expansion of the EV market in China can stimulate technological innovation and industrial growth. China has already established itself as a leader in EV production and battery manufacturing. As demand grows, increased investment in research and development is expected, fostering advancements in battery technology, charging infrastructure, and autonomous driving capabilities. This growth can also create numerous job opportunities across various sectors, including manufacturing, software development, and infrastructure construction. Moreover, the thriving EV market can attract foreign investment and encourage international collaborations, further bolstering China's position in the global market.

Socially, the widespread of EVs can enhance public health by reducing air pollutants that cause respiratory and cardiovascular diseases. Cleaner air contributes to a better

quality of life, especially in densely populated urban areas. Additionally, the EV market's growth can promote sustainable urban planning and development, integrating green technologies and smart city concepts. Public awareness and acceptance of environmental sustainability can also rise as people experience the tangible benefits of cleaner transportation.(Mordor Intelligence, China electric vehicle industry overview)

In summary, the future growth of the EV market in China holds the promise of substantial environmental improvements, economic advancement, and social welfare, positioning the nation as a pivotal player in the global transition to sustainable transportation.

2.3 - The Economic Theory that describes the Market for Electric Vehicles

The market for EVs is typical example of how economic theories of merit goods apply. Merit goods, such as education and healthcare, are products and services often undervalued by consumers and so which will be under-consumed if left to market forces. Electric cars are merit goods because they are not only a way of transportation but contribute to the environment and public health.

Merit goods generate positive externalities. Positive externalities occur when the consumption or production of a good or service confers benefits on third parties who are not directly involved in the transaction (Saul Levmore, 2017, Merit Goods, Calabresi-Goods, and Rent-Seeking). Electric vehicles bring a range of positive externalities that benefit society and the environment beyond the direct advantages to individual users. Above all, air pollution could be reduced since the levels of harmful gases like nitrogen oxides are significantly lowered. This leads to better air quality and lower risks of respiratory and cardiovascular diseases which benefit public health (Global EV outlook 2024).

The positive externalities of EV market also includes economic benefits. By shifting from oil to electricity as a primary energy source for transportation, countries can reduce their dependence on imported oil (Global EV outlook 2024). The growth of the EV market could drive advancements in battery technology, energy storage, and charging infrastructure as well. This innovation not only

benefits the automotive industry but also has spillover effects in other sectors such as renewable energy and smart grids. Additionally, the EV industry creates new jobs in manufacturing, research and development, and infrastructure construction (Stefan Heldmann, Florian Nägele, and Felix Richter, 2021, Shaping the future of fast-charging EV infrastructure).

2.4 - The development of electric vehicle market in the next 5 years

The electric vehicle market in China is expected to undergo substantial growth over the next five years, driven by increasing sales revenue, diversification of EV types, the emergence of new suppliers, competitive pricing, and rapid technological advancements.

2.4.1 Sales revenue

China's EV sales revenue is projected to grow significantly as the market expands. The China Electric Vehicles Market size is estimated at USD 305.57 billion in 2024, and is expected to reach USD 674.27 billion by 2029, growing at a CAGR of 17.15% during the next 5 years (China EV Market Size & Share Analysis Growth Trends & Forecasts 2024 - 2029).
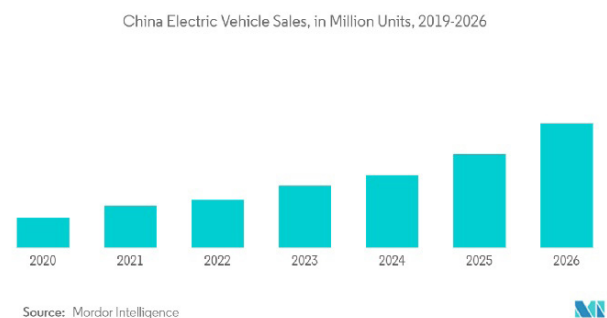
**Figure 1 China Electric Vehicle Sales**

The main reason for the increase in China's electric vehicle sales may be the significant increase in sales volume. This increase is due to many factors, including the government's support and subsidy policies, the improvement of consumers' environmental awareness, the improvement of charging infrastructure, and the continuous progress of electric vehicle technology. In addition, the progress of battery technology will reduce the cost of electric vehicles and increased the range, further improving the attractiveness of electric vehicles.

2.4.2 Variety of electric cars

Urbanization and high population density in major Chinese cities create a significant demand for compact, efficient, and easy-to-maneuver vehicles. Smaller electric cars are particularly suited to the congested traffic conditions and limited parking spaces commonly found in urban areas (6Wresearch, China electric vehicle market outlook). Therefore, The electric vehicle market might still dominated by small cars.

2.4.3 Suppliers

The competitive landscape will contain both established companies and new entrants. Companies like BYD, SAIC Motor, and Geely are already significant players, and new partnerships and collaborations are expected to enhance market dynamics. For instance, companies like Xpeng and Nio are investing heavily in autonomous driving and smart vehicle technologies (Mordor Intelligence, China electric vehicle industry overview). The market will be dominated by several players and more small and medium sized enterprises are attracted to this industry so the market here will be highly competitive.
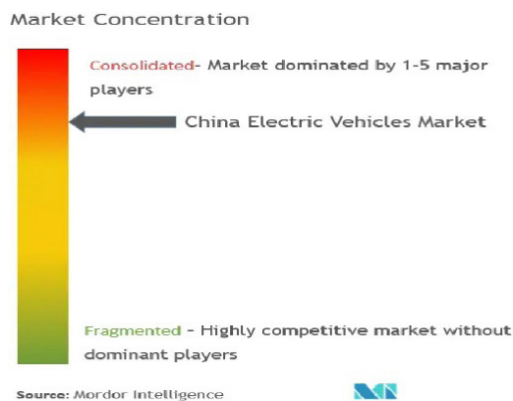
Figure 2 electric vehicle market concentration

2.4.4 Technology development

Technological innovation will be a cornerstone of the EV market's development. Improvements in battery technology, such as increased energy density and faster charging times, will enhance the performance and convenience of EVs. Additionally, advancements in autonomous driving and connected car technologies will offer new functionalities and improve the overall driving experience. China's significant investment in research and development will ensure that it remains at the forefront of these technological advancements.

In terms of infrastructure, China plans to expand its charging network. This includes the deployment of more public charging stations and the development of fast-charging technologies, which will make EVs more convenient for long-distance travel and reduce charging times

One significant area is battery technology. Improvements in battery efficiency, energy density, and cost reduction are expected to continue, driven by increased research and development efforts. The goal is to make EVs more affordable and enhance their range, then boosting sales volume. The decline in battery costs is one of the crucial factors anticipated to promote the EV market growth in the next few years (Xue Yan & Shouheng Sun, 2021).

2.5 - The importance of Government policies

China's electric vehicle market has been significantly influenced by government policies aimed at promoting the adoption of EVs and reducing reliance on internal combustion engine vehicles.

2.5.1 Historical and Current Chinese Government policy towards the EV market

During 2010 and 2020, the Chinese government heavily subsidized EV purchases to boost consumer adoption. These subsidies could be as high as RMB 100,000 per vehicle. The government also provided incentives for manufacturers to produce EVs, including tax breaks and grants (South China Morning Post, China's electric vehicle industry).

Around 2020, subsidies began to be phased out, and the focus shifted towards regulatory measures like the "dual credit" policy. This policy required automakers to meet both fuel efficiency and new energy vehicle production quotas, effectively mandating a certain percentage of EVs in their overall production (

As subsidies decreased, the government introduced stringent regulations and incentives to maintain EV market momentum. This included a mix of regulatory requirements for manufacturers and incentives for consumers, such as favorable licensing policies in major cities and the expansion of charging infrastructure.

2.5.2 How does a subsidy affect a merit good market?

Subsidies have significantly boosted the adoption of electric vehicles in China. By providing financial incentives to both manufacturers and consumers, the Chinese government has reduced the overall cost of EVs, making them more accessible to more consumers. According to the International Energy Agency, China accounted for around 50% of global EV sales in 2020, which largely attributed to government subsidies and incentives (Global EV outlook 2021).

Subsidies have also catalyzed the growth of the domestic EV industry. Financial support has enabled manufacturers to invest in research and development, improve production processes, and take advantage from scale production . This has helped Chinese companies become competitive on a global scale. For instance, companies like BYD and NIO have emerged as significant players in the global EV market (BloombergNEF, Electric Vehicle Outlook 2021).

Additionally, by encouraging the adoption of electric vehicles, subsidies have contributed to reducing greenhouse gas emissions and improving air quality. This aligns with China's broader environmental goals, including its commitment to peak carbon emissions by 2030 and achieve carbon neutrality by 2060. The widespread use of EVs, supported by subsidies, is a critical component of these environmental strategies (Ministry of Ecology and Environment of the People's Republic of China. "China's Policies and Actions for Addressing Climate Change).

2.5.3 The future of government policy in the EV market

The future of government policies in China's electric vehicle market is set to focus on transitioning from subsidy-driven to market-driven growth, enhancing technological innovation, and expanding international market reach (China's EV Market: Opportunities, Challenges, and Future Scope).

The Chinese government may significantly enhance EV infrastructure. The 14th Five-Year Plan emphasizes the development of 20 million EV charging facilities by 2025. By 2030, the State Council aims to create a high-quality charging infrastructure system with extensive coverage and optimal functionality (Outlook for electric mobility, Global EV outlook 2024).

2.5.4 The potential impact of changes in policy

In terms of the reduction of subsidies:
Subsidies have played a crucial role in making EVs more affordable for consumers. A reduction or removal of subsidies could lead to a decline in demand as the cost of EVs rises, potentially making them less competitive compared to internal combustion engine vehicles. A study by Zhang et al. indicated that subsidies significantly boost EV sales, and their removal could slow market penetration.

EV manufacturers might face pressure to reduce costs to maintain competitive pricing, which could motivate innovation in cost-saving technologies. However, smaller and less established manufacturers might struggle without financial support, leading to market consolidation.

In terms of increasing government regulations:
There may be stricter environmental regulations in the future, such as higher emission standards and requirements for EV production quotas, can compel manufacturers to invest more in EV technology and infrastructure. Strict policies have accelerated advancements in battery technology and vehicle performance.(Liu, Z., Ma, T., & Wei, W. 2022, Environmental Regulations and Their Impact on the Electric Vehicle Industry in China)

Enhanced regulations could favor larger, more resourceful companies capable of meeting the new standards. This might drive smaller players out of the market or force them to merge with larger firms.(China Association of Automobile Manufacturers 2022, Annual Report on China's Automotive Industry*)*

Section 3 - Methodology

3.1 - the Research Gap

Conducting a questionnaire in the electric vehicle market is essential for capturing timely and accurate consumer thoughts in a rapidly evolving industry. Timely feedback offers more accurate information for my research.

Few existing literature offer information about consumers and questionnaire fills this gap. Consumer thoughts provide critical insights into various aspects such as purchasing motivations, brand perceptions, and satisfaction levels. Understanding these elements allows companies to tailor their products and marketing strategies effectively. For instance, knowing that consumers prioritize battery

life or charging infrastructure can guide infrastructure investments.

Furthermore, the dynamic nature of the EV market means that what was relevant a few years ago may no longer be applicable. Regular questionnaires help track these changes, offering a real-time snapshot of market dynamics. This is especially important for strategic planning, product development, and competitive positioning.

3.2 - Research Hypothesis

Hypothesis 1 - That consumers are still sensitive to the price of EV in the next 5 years.

Hypothesis 2 - That consumers are willing to see further technological developments especially the battery life and driving range in the next 5 years.

Hypothesis 3 - That consumers would like to see more charging facilities before deciding to buy an EV in the next 5 years.

Hypothesis 4 - That growing environmental awareness will lead to more purchases of EV in the next 5 years.

Hypothesis 5 - That safety concerns are the important factor for consumers deciding whether to buy an EV in the next 5 years.

Hypothesis 6 - That consumers welcome further government support in the next 5 years.

Hypothesis 7 - That good reputation and popularity will significantly increase the likelihood of consumers purchasing an EV.

Hypothesis 8 - That more consumers will turn to domestic Chinese manufacturers in the next 5 years

Section 4 - Results

4.1 - Sample matrix

	14-17years old	18-25years old	26-30years old	Over 30years old
Male	10	23	41	6
Female	7	29	49	6
Total	17	52	90	12

Figure 3 sample matrix

4.2 - Results by questions (see Appendix A)

	Your gender (mean ± standard deviation)		t	p
	Male (n=49)	Female (n=51)		
The relatively low price is an important deciding factor when you consider buying an EV	6.69 + / - 2.40	6.98 + / - 2.53	0.580	0.563
If the range of the electric car is still shorter you will not choose to buy	6.49 + / - 2.74	6.67 + / - 2.82	0.318	0.751
You want more charging facilities near where you live before you consider buying an EV	6.29 + / - 2.55	6.61 + / - 2.72	0.610	0.543
You might buy an electric vehicle for environmental reasons	5.63 + / - 1.93	5.12 + / - 2.21	1.240	0.218
You are concerned about the safety of electric vehicles	5.37 + / - 2.45	5.49 + 2.59	0.244	0.808
You welcome more government policy support for electric vehicles in the future	7.00 + / - 2.52	7.29 + 2.21	0.620	0.536
You are more inclined to choose the more well-known and reputable electric vehicle brands in the market	6.55 + / - 2.62	7.39 + / - 2.09	1.778	0.079
You will choose electric cars made in China in the future	6.04 + / - 2.65	6.73 + / - 2.71	1.275	0.205

4.3 - Main gender differences

The results for T-test are shown in figure above, as the p values are larger than 0.05, we can see that there is no significant difference between different gender groups.

	Your age (mean ± standard deviation)				F	p
	14-17 years (n=8)	18-25 years (n=28)	25-30 years old (n=56)	Over 30 years old (n=8)		
A relatively low price is an important determining factor when you consider buying an electric vehicle	6.00 +/- 3.34	6.93 + 2.21	6.84 + 2.30	7.38 +/- 3.58	0.441	0.724
If the range of the EV is still shorter you will not choose to buy it	7.13 +/- 2.36	6.07 + 2.68	6.43 +/- 2.84	8.88 +/- 2.03	2.406	0.072
You want more charging facilities near where you live before you consider buying an EV	7.00 +/- 2.45	6.32 + 2.91	6.41 + 2.50	6.63 +/- 3.11	0.151	0.929
You might buy an electric vehicle for environmental reasons	5.13 + 2.03	4.89 + 2.20	5.46 + 2.00	6.63 +/- 2.07	1.560	0.204
You are concerned about the safety of electric vehicles	5.00 +/- 3.38	5.25 + 2.52	5.50 +/- 2.49	6.00 +/- 1.85	0.273	0.845
You welcome more government policy support for electric vehicles in the future	7.13 +/- 2.17	6.82 + 2.70	7.14 + 2.23	8.38 +/- 2.26	0.895	0.447
You are more inclined to choose the more well-known and reputable electric vehicle brands in the market	7.25 + 2.55	7.39 + 2.01	6.57 + 2.57	8.13 +/- 1.81	1.491	0.222
You will choose Chinese electric cars in the future	5.88 + 2.80	6.36 +/- 2.60	6.16 +/- 2.75	8.63 +/- 1.69	2.143	0.100

4.4 - Main age differences

According to the results of ANOVA test, there are small differences between age groups except for hypothesis 2, there is relatively significant difference between the age group over 30 years old and the other three.

Section 5 - Discussion

5.1 - Hypothesis 1 - That consumers are still sensitive to the price of EV in the next 5 years.

Consumers' sensitivity to electric vehicle prices is a critical factor influencing market adoption. As mentioned in 2.4, studies suggest that the relatively high upfront cost of EVs is still a significant barrier for many potential buyers, despite the lower total cost of ownership compared to internal combustion engine vehicles. A survey by Deloitte (2023) found that 60% of respondents identified the high purchase price as a primary deterrent to EV adoption.

This hypothesis was supported by the findings from my primary research. In 4.2.1, the mean response for to what extent do you agree that relative low price is an essential determinant when you consider buying an electric car was 6.94, while the standard deviation was 2.376, which means that the results are slightly doubtful and people's opinions are quite different but still a larger proportion of respondents agree with this statement.

Additionally, age and gender did not show significant difference in this hypothesis. The differences are tiny between these groups. This indicates that the hypothesis is not perceived differently by respondents of different genders or age groups in my questionnaire.

So by combining primary and secondary research, we can see that hypothesis 1 was strongly supported and it should be accepted.

5.2 - Hypothesis 2 - That consumers are willing to see further technological developments especially the battery life and driving range in the next 5 years.

As we can see obviously in 2.4.4, the technology for electric vehicle is evolving rapidly, the battery life may be enhanced in the future. Innovate technology to lower the cost of production and improve the range is valued. According to a study by McKinsey & Company (2019), consumers are concerned about the limited range of current EVs, which is often tied to battery capacity. The development of batteries, which promise higher energy densities and faster charging times, is eagerly anticipated by the market.

The hypothesis was supported by the results of my primary research. In 4.2.2, the mean response for to what extent do you agree that you will not choose to buy an EV if the range is still short was 6.65 and the standard deviation was 2.68. It can be seen that relatively more respondents agree with this statement while opinions are separated.

What's more, gender did not show significant difference in this hypothesis. This indicates that the hypothesis is not perceived differently by respondents of different gender groups in my questionnaire. There is a small difference between different age groups, respondents over 30 years old are more likely to treat this as an essential factor.

Therefore, we can conclude that this hypothesis is supported by primary and secondary research, it can be accepted.

5.3 - Hypothesis 3 - That consumers would like to see more charging facilities before deciding to buy an EV in the next 5 years.

Supporting facility is also an important factor affecting the demand for a product. It was mentioned in 2.4.4 that

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the distribution and coverage of charging stations across different regions can influence the adoption rates of EVs. In areas where charging infrastructure is hard to find, potential buyers might be hesitant to switch from traditional vehicles to EVs due to the inconvenience. It is clearly shown that charging facilities are an important determinant

The hypothesis was supported by the results of my primary research. In 4.2.3, the mean response for to what extent do you agree that you will not choose to buy an EV if the range is still short was 6.57 and the standard deviation was 2.012. This shows that relatively more respondents agree with this statement while opinions are separated.

Additionally, age and gender did not show significant difference in this hypothesis. The differences are tiny between these groups. This indicates that the hypothesis is not perceived differently by respondents of different gender or age groups in my questionnaire.

So we can say that this hypothesis can be accepted.

5.4 - Hypothesis 4 - That growing environmental awareness will lead to more purchases of EV in the next 5 years.

We can see in 2.2, the increasing concern over climate change, pollution, and the depletion of natural resources may lead to a shift in consumer preferences , the demand for EVs may rise. Consumers' growing concern about air pollution, especially in urban areas, is driving them to adopt EVs as a means of contributing to cleaner air.

This hypothesis was weakly supported by my primary research. In 4.2.4, the mean response for to what extent do you agree that you will buy an EV for environmental concerns was 5.52, while the standard deviation was 2.065, which means that a little more than half of the respondents agree with this statement but people's opinions are relatively separated.

Additionally, age and gender did not show significant difference in this hypothesis. The differences are tiny between these groups. This indicates that the hypothesis is not perceived differently by respondents of different gender or age groups in my questionnaire.

Therefore this hypothesis could be accepted but with a certain degree of doubt.

5.5 - Hypothesis 5 - That safety concerns are the important factor for consumers deciding whether to buy an EV in the next 5 years.

Safety concerns, like battery fires and high-voltage risks, influence consumer decisions on electric vehicles. Such fears, often amplified by media reports, can deter potential buyers from switching to EVs, even with advancements in safety features. Some consumers may choose to stick with traditional vehicles due to these perceived risks.There was relatively weak agreement for this hypothesis in my primary research. In 4.2.5, the mean response for to what extent do you agree that safety concerns are the important factor was 5.39 and the standard deviation for this question was 2.352 which means about half of the respondents agreed and their choices are divided.

Moreover, age and gender did not show significant difference in this hypothesis. The differences are tiny between these groups. This indicates that the hypothesis is not perceived differently by respondents of different gender or age groups in my questionnaire.

So that we can say that this hypothesis can be accepted but with some areas of doubt.

5.6 - Hypothesis 6 - That consumers welcome further government support in the next 5 years.

As mentioned in 2.5, Chinese government has already provided a series of policies such as reducing taxes and subsidies. These policies made electricity cars more affordable and attractive, the common attitude towards those policies are positive.

The hypothesis was strongly supported by my primary research. As we can see in 4.2.6, the mean for to what extent do you agree that you welcome further government support for EVs was 7.34 and the standard deviation was 1.824 which means that most respondents agree with this statement and their choices are relatively concentrated.

Age and gender did not show significant difference in this hypothesis as well. The differences are tiny between these groups. This indicates that the hypothesis is not perceived differently by respondents of different gender or age groups in my questionnaire.

Then we can conclude that there was strong agreement for this hypothesis in both my primary and secondary research. It should be accepted.

5.7 - Hypothesis 7 - That good reputation and popularity will significantly increase the likelihood of consumers purchasing an EV.

Good reputation and strong brand recognition significantly influence electric vehicle consumer choices. Established brands with a history of quality and reliability are more likely to attract buyers who trust their products' safety and performance. A positive reputation also helps in removing concerns about new technology, as consumers are reassured by the brand's track record. Additionally, strong brand awareness can drive consumer interest and preference, making it easier for companies to capture market share and build customer loyalty in the competitive EV market.

This hypothesis was supported by my primary research. In 4.2.7, the mean response for to what extent do you agree that you are more likely to choose a car brand with better reputation and popularity was 7.12, the standard deviation was 1.747. It can be seen that most respondents agree with this statement and there answers are relatively concentrated.

Age and gender did not show significant difference in this hypothesis. The differences are tiny between these groups. This indicates that the hypothesis is not perceived differently by respondents of different genders or age groups in my questionnaire.

Due to the double corroboration of primary and secondary research, this hypothesis should be accepted.

5.8 - Hypothesis 8 - That more consumers will turn to domestic Chinese manufacturers in the next 5 years

Consumer demand for domestic electric vehicles is expected to grow in the future. As mentioned in 2.4, local manufacturers improve quality, technology, and affordability, domestic brands are becoming more competitive with global players. Supportive government policies also contribute to this trend. The combination of advanced features in domestic EVs make them an attractive option for consumers.

The hypothesis was supported by the primary research I did. In 4.2.8, the mean response for to what extent do you agree that you will turn to domestic electric car brand in the future was 6.65, and the standard deviation for this

question was 2.234. This means that a larger proportion of respondents agreed but their answers are separated.

Gender did not show significant difference in this hypothesis. The differences are tiny between these groups. This indicates that the hypothesis is not perceived differently by respondents of different gender groups in my questionnaire. In addition, there is a small difference between age groups, the mean response is ascending with age.

So it could be concluded that this hypothesis was supported by both my primary and secondary research, it should be accepted.

Section 6 - Conclusion

How will the electric vehicle market in China develop in the next 5 years?

In conclusion, based on both primary and secondary research, it can be concluded that the most important factor in the development of the EV market in the next 5 years is that Chinese government's strong support for the EV industry will remain a key driver of market expansion. As we can see in 4.2.6, hypothesis 6 was accepted without reservation and was true for all age groups and all genders, a large proportion of people welcome further government support, policies such as subsidies, tax incentives, and stringent emissions regulations will continue to encourage both consumers and manufacturers to invest in electric vehicles. Additionally, as mentioned in 4.2.2 and 4.2.3, government initiatives aimed at expanding charging infrastructure will reduce range anxiety and make EVs a more affordable option for a larger segment of the population. This infrastructure development is crucial for sustaining growth, especially in rural and less-developed areas.

The second most important development for this market is the growing trend of consumers turning to domestic electric vehicles. It is shown in 4.2.8, hypothesis 8 was accepted, many people are willing to choose domestic EVs. Chinese manufacturers are increasingly focusing on improving battery technology, driving range, and vehicle safety, which are critical factors for consumer adoption. These advancements are helpful to build trust and confidence in domestic brands, making them more appealing to a broader range of buyers. As a result, the preference for

locally produced EVs is expected to grow in the coming years.

Other factor that are also important but less certain includes environmental awareness. In 4.2.4, hypothesis 4 is not strongly supported by my primary research, people's opinion are quite different, this difference suggests that, although environmental awareness is important, it is not yet a decisive factor for many consumers when choosing an electric vehicle. It is clear that efforts to raise awareness about the environmental benefits of EVs, along with the broader implications of climate change and air pollution, need to be strengthened. However, until such awareness becomes more widespread, the influence of environmental consciousness on EV adoption will likely remain secondary to other considerations.

Section 7 - Evaluation

To evaluate this project there are several key limitations that must be considered. First, the limited sample size poses a significant challenge to the validity of the findings. A small sample size can skew the results, reducing the representativeness of the conclusions drawn. This limitation makes it difficult to generalize the findings to the broader EV market in China, especially given the diverse and rapidly evolving nature of the industry.

Second, the uneven sample structure further complicates the reliability of the study. If the sample does not accurately reflect the full spectrum of consumers, regions, or market segments, the analysis may overlook important trends or overemphasize certain aspects of the market. For instance, focusing too heavily on urban consumers might miss critical insights about rural adoption, while ignoring smaller or emerging brands could result in an incomplete picture of the competitive landscape.

Lastly, predicting the future of a market as dynamic as the Chinese EV industry is completely uncertain. The rapid pace of change in political, social, economic, and technological spheres adds layers of complexity to any forecast. Over the next five years, unforeseen developments could significantly alter the trajectory of the market, making it difficult to be certain about any predictions made today. New government policies, shifts in consumer behavior, technological breakthroughs, or unexpected economic events could all have a profound impact on the EV market in ways that are impossible to fully anticipate.

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Evaluation of references

I evaluate the literature using the CRAAP method. The CRAAP method is a useful framework for evaluating the quality of literature. First, Currency assesses whether the information is up to date and still relevant to the current context. Relevance considers how closely the source aligns with the specific research topic or question. Authority examines the credibility of the author or organization behind the information, ensuring they have the appropriate expertise. Accuracy evaluates whether the content is reliable, free from errors, and supported by well-cited evidence. Finally, Purpose looks at the intent behind the source, determining whether it aims to inform objectively or presents a biased or promotional viewpoint. By applying these criteria, researchers can effectively judge the credibility and appropriateness of a source for their work.

Appendix A

4.2 - Results by questions

4.2.1 - Question 3 - Relative low price is an essential determinant when you consider buying an electric car

This question was asked as an agreement scale question with 1 being "strongly disagree" and 10 being "strongly agree" in order to show to what extent will price affect future growth of the EV market. The distribution of replies is shown below.
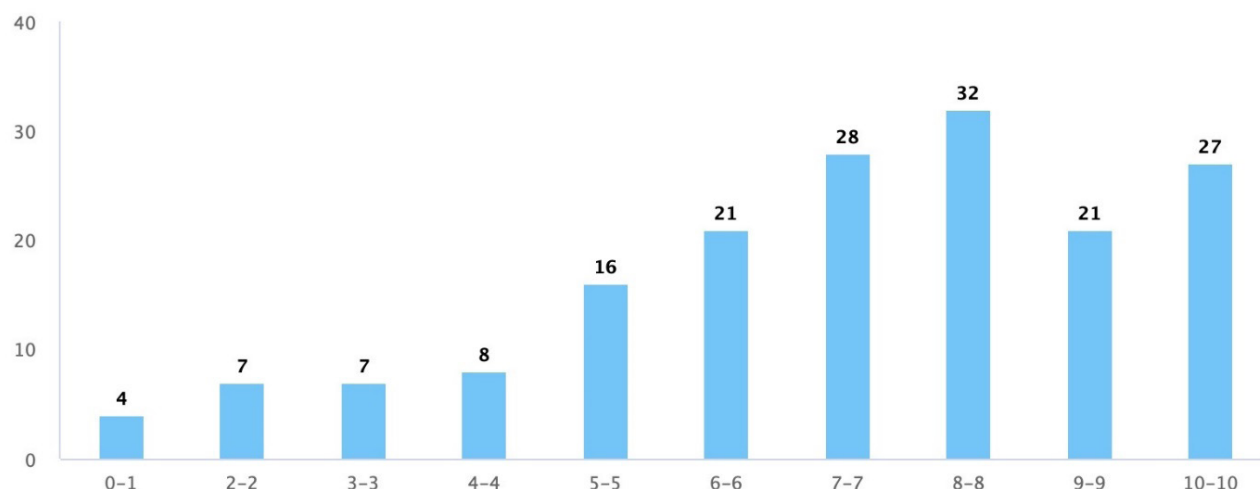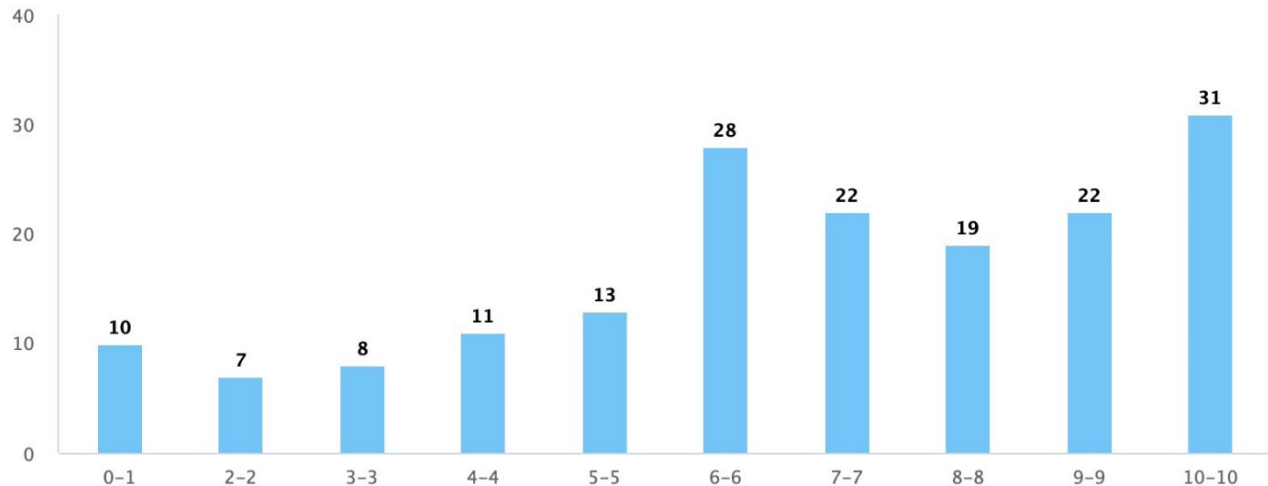

Figure 4

The mean response for this question was 6.94 and the mode was 8. The median was 7. The standard deviation

was 2.376 which means people's opinions are relatively divided.

4.2.2 - Question 4 - You will not choose to buy an EV if the range of it is still short.
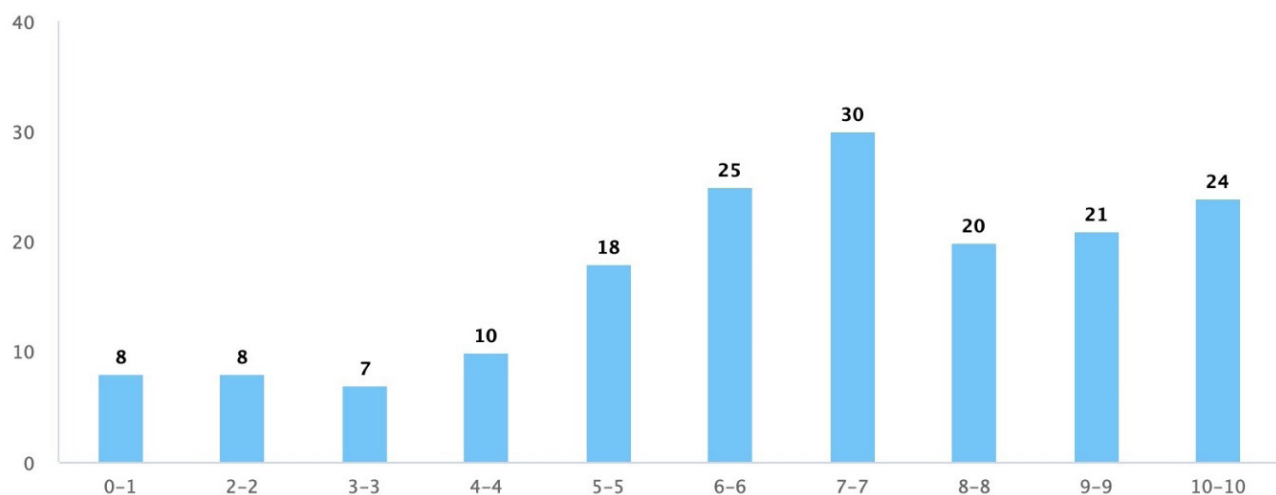

Figure 5

The mean response for this question was 6.57 and the mode was 10. The median was 7. The standard deviation was 2.680 which means people's opinions are relatively divided.

4.2.3 - Question 5 - You would like to see more charging facilities nearby your place before deciding to buy an EV

This question was asked as an agreement scale question with 1 being "strongly disagree" and 10 being "strongly agree" in order to show to what extent will technology like battery life affect future growth of the EV market. The distribution of replies is shown below.

This question was asked as an agreement scale question with 1 being "strongly disagree" and 10 being "strongly agree" in order to show to what extent will supporting facilities affect future growth of the EV market. The distribution of replies is shown below.
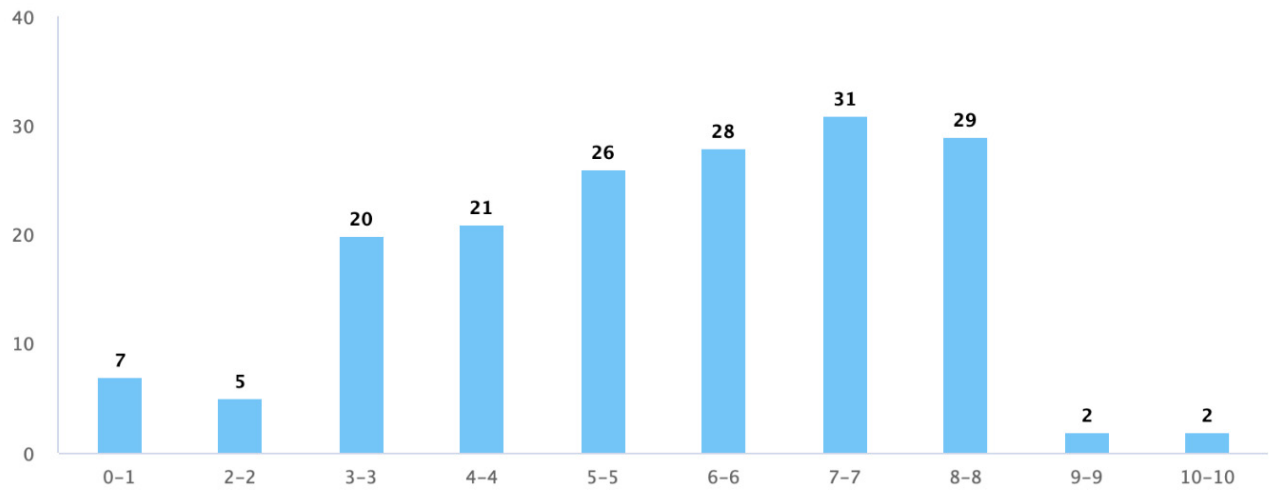

Figure 6

The mean response for this question was 6.57 and the mode was 7. The median was 7. The standard deviation was 2.012 which means people's opinions are relatively divided.

4.2.4 - Question 6 - You will buy an EV for environmental concerns

This question was asked as an agreement scale question with 1 being "strongly disagree" and 10 being "strongly

agree" in order to show to what extent will environmental awareness affect future growth of the EV market. The distribution of replies is shown below.
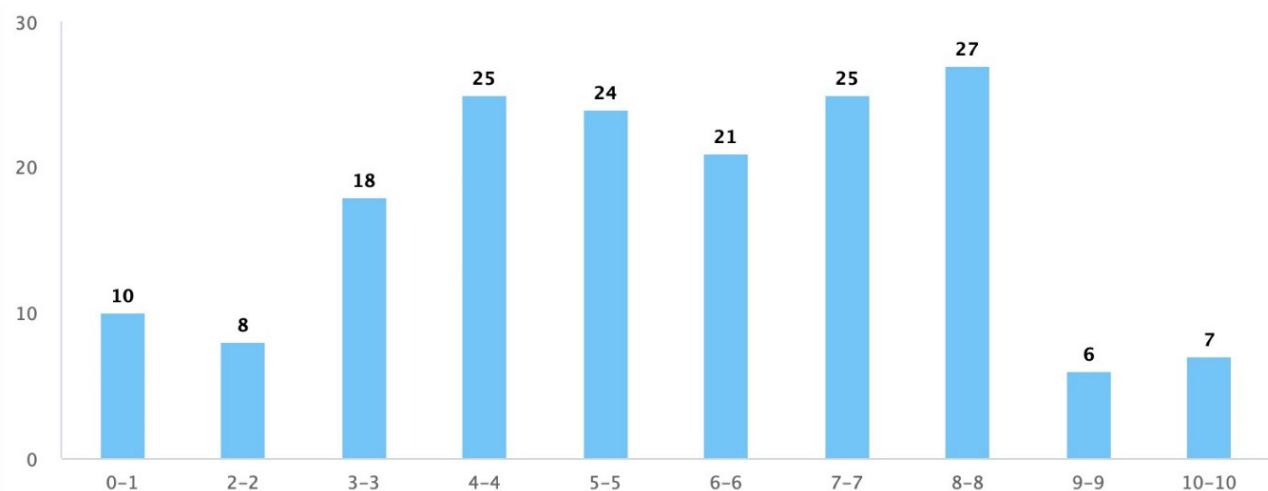

Figure 7

The mean response for this question was 5.52 and the mode was 7. The median was 6. The standard deviation was 2.065 which means people's opinions are relatively divided.

4.2.5 - Question 7 - You are worried about safety problems of EVs.

This question was asked as an agreement scale question with 1 being "strongly disagree" and 10 being "strongly agree" in order to show to what extent will safety concerns affect future growth of EV market. The distribution of replies is shown below.
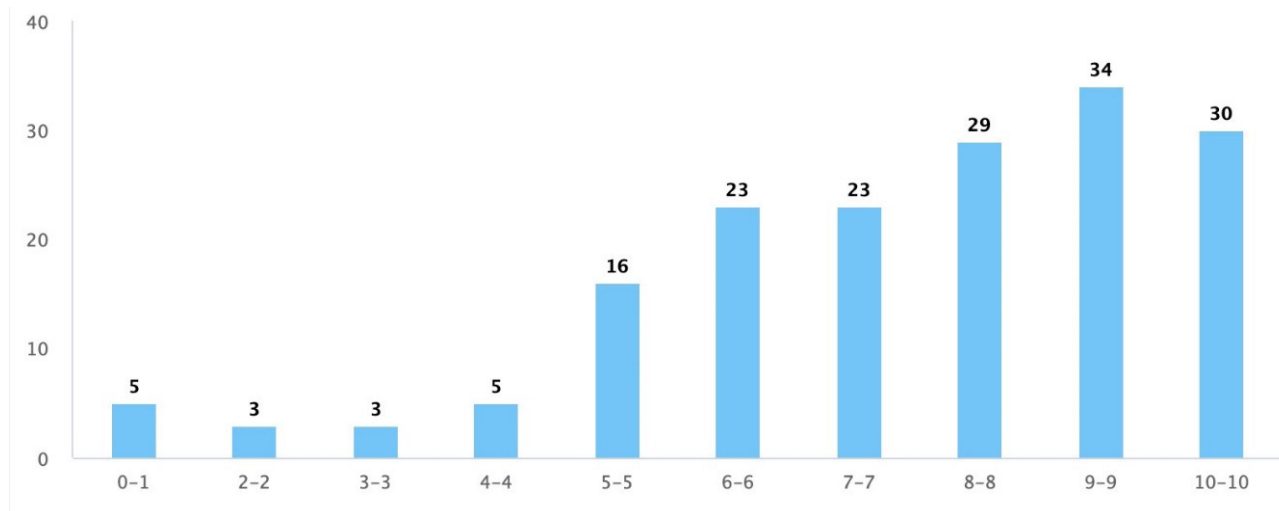

Figure 8

The mean response for this question was 5.39 and the mode was 8. The median was 6. The standard deviation was 2.352 which means people's opinions are divided.

4.2.6 - Question 8 - You welcome government provide further support for the EV market in the future.

This question was asked as an agreement scale question with 1 being "strongly disagree" and 10 being "strongly agree" in order to show people's attitudes towards government policies. The distribution of replies is shown below.
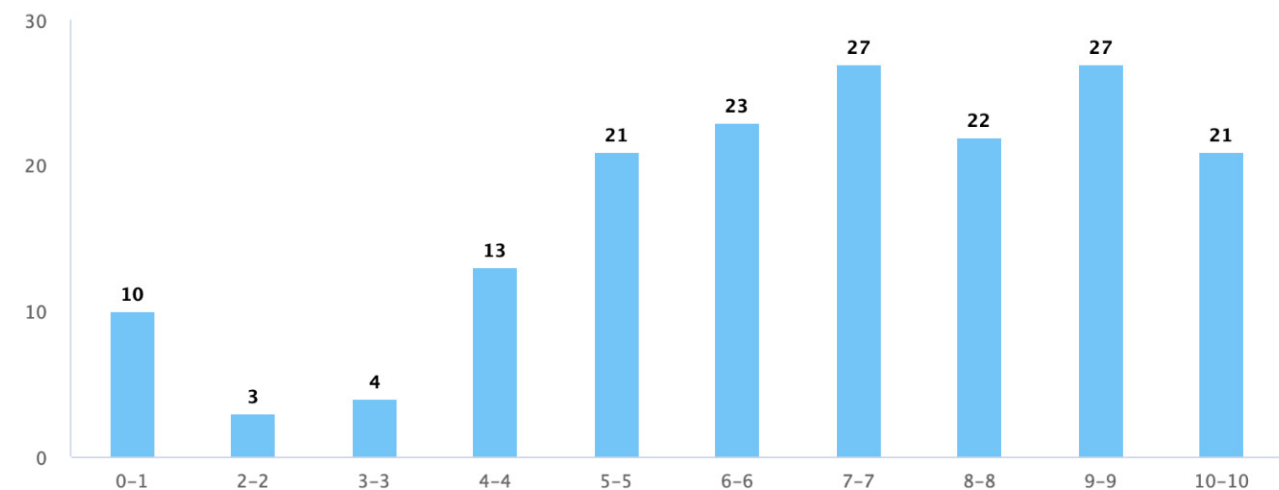
Figure 9

The mean response for this question was 7.34 and the mode was 9. The median was 8. The standard deviation was 1.824 which means people's opinions are relatively concentrated, and the data for this question is relatively reliable.

4.2.7 - Question 9 - You are more willing to choose a brand with better reputation and popularity in the EV market

This question was asked as an agreement scale question with 1 being "strongly disagree" and 10 being "strongly agree" in order to show to what extent will brand awareness affect people's choices. The distribution of replies is shown below.
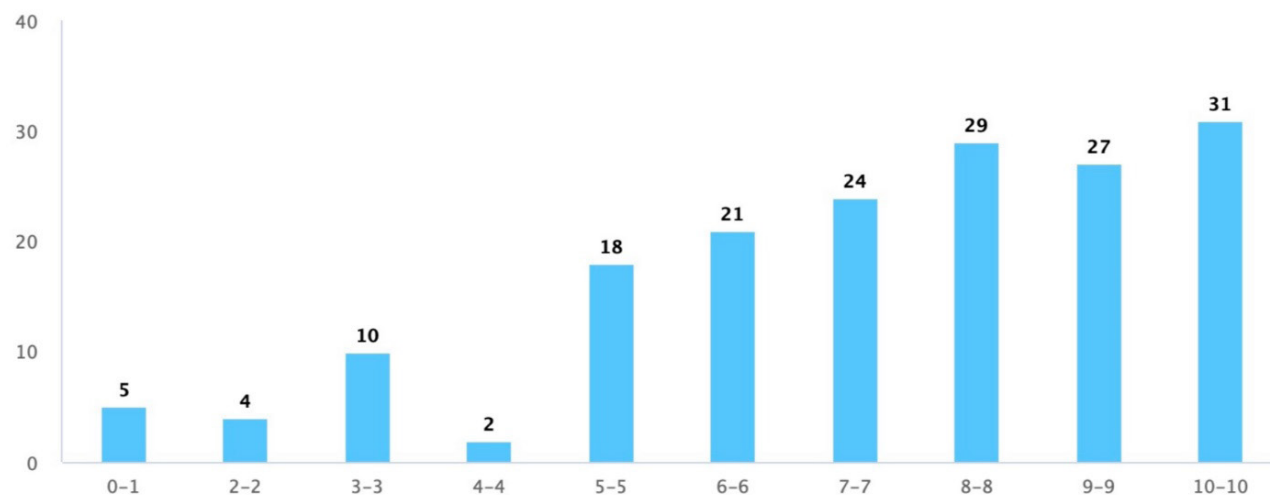

Figure 10

The mean response for this question was 7.12 and the mode was 10. The median was 8. The standard deviation was 1.747 which means people's opinions are relatively concentrated, and the data for this question is relatively reliable.

4.2.8 - Question 10 - You will choose to buy an EV from domestic Chinese manufacturer in the future

This question was asked as an agreement scale question with 1 being "strongly disagree" and 10 being "strongly agree" in order to show people's attitudes towards domestic EV brands and manufacturers . The distribution of replies is shown below.

Figure 11

The mean response for this question was 6.65 and the
mode was 7. The median was 7. The standard deviation
was 2.234 which means people's opinions are relatively
divided.