Jurnal Manajemen Keuangan Publik
Volume 8, No.1, (p.15-30)
e-ISSN: 2581-1207

Understanding the Impact of Incentive Policy and Social Attribute to Enhance the Consumers' Purchase Intentions towards BEVs: TPB Explained

Pringgo Syahputro[1*], Dedi Abdul Hadi[2]
Indonesia National Single Window Agency, Jakarta[1,2]
pringgo.syahputro@insw.go.id[1*], dedi.abdul@insw.go.id[2]

*corresponding author

Keywords: ***financial incentive, tax, subsidy, electric vehicle, sustainability***

ABSTRACT
The government of Indonesia has its ambition to reduce carbon emissions as it is one of the largest emitters in the world. The number of four-wheeled vehicles is also estimated to increase as the economy grows rapidly. The action to deal with carbon emissions is to switch to renewable energy and electrification. In addition, Indonesia has a massive nickel reserve in the world. The government aims to not only reduce carbon emissions but also to attract big players in Battery Electric Vehicle (BEV) industry to invest in Indonesia. The study of BEVs adoption in Indonesia is still limited. It is essential to understand the consumer's perception of incentive policies and social attributes to know which policies are better and why. Causal research was applied to test the hypotheses by using SEM-path analysis provided by AMOS. The study found that the strong predictors of purchase intentions towards BEVs are the perceptions of financial incentive and convenience policies, and attitudes towards BEVs. Indonesian consumer tends to do not consider environmental concerns and social norms. The novelty of this study is to incorporate perceived usefulness as a mediator. The respondents might not be actual BEV owners and have no experience using BEV. They also might not experience and understand some policies well. This study aims to provide information for the government as policy maker on which policies are better and why, in relation to enhance the consumers' intention to purchase BEVs.

Kata Kunci: Insentif Finansial, Perpajakan, Subsidi, Kendaraan Listrik, Keberlanjutan

ABSTRAK
Pemerintah Indonesia mempunyai ambisi untuk mengurangi emisi karbon karena Indonesia merupakan salah satu penghasil emisi terbesar di dunia. Jumlah kendaraan roda empat juga diperkirakan akan meningkat seiring pesatnya pertumbuhan perekonomian. Tindakan untuk mengatasi emisi karbon adalah dengan beralih ke energi terbarukan dan elektrifikasi. Apalagi Indonesia mempunyai cadangan nikel yang sangat besar di dunia. Pemerintah tidak hanya bertujuan mengurangi emisi karbon tetapi juga menarik pemain besar di industri *Battery Electric Vehicle (BEV)* untuk berinvestasi di Indonesia. Kajian mengenai adopsi BEV di Indonesia masih terbatas. Penting untuk memahami persepsi konsumen terhadap kebijakan

insentif dan atribut sosial untuk mengetahui kebijakan mana yang lebih baik dan alasannya. Penelitian kausal diterapkan untuk menguji hipotesis dengan menggunakan analisis jalur SEM yang disediakan oleh AMOS. Studi ini menemukan bahwa prediktor kuat purchase intentions towards BEVs adalah *perceptions of financial incentive dan convenience policies*, dan *attitudes towards BEVs.* Konsumen Indonesia cenderung tidak mempertimbangkan *environmental concerns* dan *social norms.* Kebaruan penelitian ini adalah memasukkan perceived usefulness sebagai mediator. Pada akhirnya, variabel ini berhasil memediasi pengaruh *perceptions of financial incentive on attitudes towards BEVs*. Responden mungkin bukan pemilik BEV sebenarnya dan tidak memiliki pengalaman menggunakan BEV. Mereka juga mungkin belum memahami dan memahami beberapa kebijakan dengan baik. Penelitian ini bertujuan untuk memberikan informasi kepada pemerintah selaku pengambil kebijakan terkait kebijakan mana yang lebih baik dan mengapa, hubungannya dengan memperkuat *consumers' intention* untuk membeli BEV.

JEL CLASSIFICATION: H20

How to cite: Syahputro, P, Hadi, D.A., (2024). Understanding the Impact of Incentive Policy and Social Attribute to Enhance the Consumers' Purchase Intentions towards BEVs: TPB Explained. Jurnal Manajemen Keuangan Publik, 8(1). p.15-30.

Jurnal Manajemen Keuangan Publik
Volume 8, No.1, (p.15-30)
e-ISSN: 2581-1207

INTRODUCTION

Global warming has been a hot issue for several last decades due to its negative impact on the not only environment, but also the economy, and society. In the context of GDP, Indonesia is considered one of the largest top 20 economies in the world. As an emerging country with stable growth in the world, Indonesia was no longer an oil exporter and still put a high dependence upon fossil fuels (International Energy Agency, 2022). With its growing economy, Indonesia's demand for energy supply has arisen. The total energy emission is exceeding its total energy demand. Indonesia is the world's 9th largest emitter of CO2 in 2021 as it produced 600 million tons of CO2 (International Energy Agency, 2020). Indonesia's ambition to achieve zero emissions by 2060 as it is mandated in Paris Agreement, makes an urgent action by establishing energy efficiency, switching to renewable energy, and sustainable electrification (International Energy Agency, 2020). Transportation sector contributes high number on energy demand especially in passenger cars and trucks. It will dominate the 60% of the total energy demand (Setiawan et al., 2022). By 2030, transportation is expected to contribute 53% of the national carbon emissions. Thus, transportation sector is one of the priorities of Indonesian government to reduce the carbon emissions. OECD (2018) stated that it is vital to encourage consumers to adopt electric vehicles (EV) to achieve the goal of reducing emission. By establishing energy efficiency, switching to renewable energy, and more sustainable electrification, Indonesia is expected to be able to reduce 80% of the emissions in 2030 (International Energy Agency, 2020). The usage of two-wheeled vehicle is still dominating the transportation fleet in Indonesia. However, this number is predicted to decline as the income per capita of Indonesian people arising. A better public transportation will also contribute to the decline of the usage two-wheeled vehicle. Therefore, cars and trucks are predicted to dominate the transportation fleet. The energy consumption of these vehicles is predicted to nearly 60% of the national energy demand in transportation sector in 2030 (Setiawan et al., 2022).

Tulus Pangapoi Sidabutar (2020) found that the expensive purchasing cost is the one of obstacles for consumers to adopt EV. Thus, several countries have produced its own government intervention as a policy tool to increase the adoption of EV itself. UK has invested 300 million dollars to develop EV infrastructure and to subsidize consumers and the manufacture of EV. China has given EV purchase tax exemption. China has also given VAT and road toll exemptions for EV (S. Wang et al., 2018). In UK, policies related to tax purchase exemption and feebate policies was the most effective tools in reducing emission (Shafiei et al., 2018). Indonesia has produced several legal instruments on incentive policy to promote the adoption of EV. Indonesia Presidential Regulation 55/2019 promotes fiscal and nonfiscal incentives as its ambition to reduce gas emissions by 29% by 2030 (Setiawan et al., 2022). Ministry of Finance of Republic of Indonesia also launched fiscal incentives such as tax holiday, super deduction program up to 300% for research and development of EV, VAT exemption on import and capital goods for EV industry (Ministry of Finance, 2023a). Indonesian government also gives 0% on VAT on luxury goods (Government Regulation 74/2021) and reduction/exemption of import duty for Incompletely Knock Down (IKD) and Completely Knock Down (CKD) through partnership agreements. EV in Indonesia is also given discount on annual vehicle ownership tax and vehicle registration tax (transfer of title tax) through the regulation of Ministry of Internal Affairs 1/2021. The latest legal instrument is VAT discount for passenger electric cars and buses through the regulation of Ministry of Finance 38/2023. VAT will be borne by the Indonesian government with minimum local content requirements. In Jakarta, the capital city of Indonesia, EVs are also exempted from odd-even plates number. Convenience such as the availability of charging infrastructure network is also essential determinant of EV adoption (Gunawan et al., 2022). The access of information related to EV and its infrastructure is also vital to the EV adoption (Broadbent et al., 2019).

Besides environmental concerns, Indonesia would like to attract big players on EV industries as it is one of the biggest markets for EV. Indonesia also has one of the biggest nickel reserves in the world. Nickel is the main element for EV battery. Thus, by accelerating its market to purchase EV, Indonesia plan to attract investment in the ecosystem of EV as soon as possible to compete with its biggest automotive industry, Thailand. By encouraging its people to switch to EV, this set of incentives also aim to obtain efficiency on fossil fuel subsidy (Ministry of Finance, 2023b; Ministry of Industry, 2022).

Several research have been conducted related to the EV adoption, but it is still limited in Indonesia compared to the studies of low carbon emission vehicles. The study of (Setiawan et al., 2022) has investigated the policy impact on EV production but it didn't elaborate more with consumers' social attributes especially for the characteristic of Indonesian market. Putri & Gunawan (2020) also examined the antecedents of adoption intention of EV. However, the policies were just being moderating variables. It didn't measure the incentives policy as the main driver of EV adoption. The study of Utami et al., (2020) only assessed the technical factors. Gunawan et al. (2022) has examined the predictors of EV adoption with its perceived risk but didn't incorporate consumer's perceptions towards incentive policies. The previous study mentioned before has focused to the functions of the policies itself and ignored the perception of consumers towards the policies. This research further seeks the answer of the question about the impact of incentive policy perceptions and consumer social attributes by combining both literature framework extended from X. W. Wang et al. (2021). Therefore, the objective of this study is to explore better which policies are effective and why to enhance Indonesian consumers' purchase intention towards BEVs. This study aims to provide the information on which the government's policies are meaningful for the consumers and those which are not.

LITERATURE REVIEW

According to the theory of planned behavior (TPB), government incentive policies can stimulate the consumers perception taking into account to the benefit that consumers will obtain from the government (Ajzen, 1991; X. W. Wang et al., 2021). Therefore, it is necessary to construct a perception, attitude, and behavior framework to examine the purchase intention of battery electric vehicles (BEVs). The consumer awareness also plays significant factor on purchase behavior of BEV (X. W. Wang et al. 2021). According to Mitra & Pal (2022), Indonesian people are considered to have clear social norms. Some Asian countries tend to have face consciousness as their unique characteristic on purchasing behavior (Ngoc et al., 2023). Gunawan et al. (2022) found that environmental concern plays significant role on purchase intention especially towards sustainable product.

This study is to extend the conceptual framework brought by X. W. Wang et al. (2021). X. W. Wang et al. (2021) found that there is no effect of perceptions of financial incentive policies on attitude towards BEVs. On other hand, Zhang et al. (2018) found that financial incentives makes the purchasing cost lower and attract consumers. Shafiei et al. (2018) also found that government subsidy gives advantages to the consumer as they reduce the ownership cost. Prior study such as Gallagher & Muehlegger (2011) found that sales tax incentives significantly contribute to the demand for hybrid vehicle. Chandra et al. (2010) also found that tax discount and tax exemption would support electric and hybrid vehicle market share. However, Higueras-Castillo et al., (2019) also found that incentives has no effect on attitude. There are different findings on the effect of perceptions of financial incentives on attitude towards BEVs. Therefore, the novelty of this research is to discover further about the relationship between these variables by using perceived usefulness as a mediator.

The theory of planned behavior (TPB) examines the consumer's perceptions can affect the attitude and purchase intention of a particular product (Makanyeza et al., 2021). Ajzen (1991) defined TPB as the social and psychological effect such as consumers knowledge,

Jurnal Manajemen Keuangan Publik
Volume 8, No.1, (p.15-30)
e-ISSN: 2581-1207

subjective norms, environmental concern, and attitude toward a particular product. TPB gives beneficial to predict the consumers' interest on adopting something (Gunawan et al., 2022). TPB also opens into construct extension. Thus, this study can measure the consumers' perception toward policies (Zhang et al., 2018).

Broadbent et al., (2019) mentioned several government interventions in the form of incentives policy such as government support on information access regarding recharging infrastructure, annual ownership and registration tax discount, the ease payment, and convenience for consumers to find recharging station, can affect the consumers attitude. Broadbent et al., (2019) found that the access for online information about technical and practical aspects and personal experience of BEV can help potential buyers to overcome their fear and doubts about accepting new technology such as BEVs. Government information about a particular product is proven to encourage the adoption of green cars in Swiss (X. W. Wang et al., 2021). It also encourages consumers' attitude to purchase green product. Zhang et al. (2018) found that incentive policies are one of strong predictor that affect consumers when purchasing EV. Hong et al. (2012) found that annual incentive tax is twice more effective than initial lump-sum incentive to attract BEV potential buyers in South Korea. The probability of consumer choice towards BEV rose by 14% due to the tax incentives. Financial incentives are one of determinant to stimulate consumers' demand towards a product (Clinton & Steinberg, 2019). Higueras-Castillo et al., (2019) stated that incentive policy such as tax incentives, legislative and economic policies, and tax reduction and exemption can affect consumers' attitude towards their intention to purchase BEV. S. Wang et al., (2018) found that the convenience policies such as odd-even plate number exemption, special parking space, and allowance to use bus lane, affect consumers' attitude and the purchase of BEV. Incentive policies are the most relevant predictor when purchasing EV (Zhang et al., 2018). According to these theories, therefore this study proposes:

H1. Perceptions of financial incentive policies have a positive effect on purchase intentions towards BEVs;

H2. Perceptions of information provision policies have a positive effect on attitudes towards BEVs;

H3. Perceptions of information provision policies have a positive effect on purchase intentions towards BEVs;

H4. Perceptions of convenience policies have a positive effect on attitudes towards BEVs;

H5. Perceptions of convenience policies have a positive effect on purchase intentions towards BEVs;

X. W. Wang et al., (2021) found that there is no considerable effect of perceptions of financial incentive policies on attitude towards BEVs. However, Zhang et al., (2018) found that perception is the foundation for building attitude. The finding of Higueras-Castillo et al., (2019) also supports the finding of Zhang et al., (2018) that incentive policies stimulate the popularity of EV and affect the attitude towards EVs. Incentive policies cut the purchasing cost of BEV which can attract consumers. It also increases the consumers' perceived economic advantages as they help to cut the purchasing cost (Shafiei et al., 2018; Zhang et al., 2018). New technologies are expected to give usefulness to people. By adopting BEV with its incentive policies, consumers can purchase BEV at affordable rates. BEV also gives advantages on reducing the transportation expenditures due to the exemption of odd-even plate number policy, allowance of using bus lane, and dedicated parking space. It also gives perceived benefit such as consumers' travel efficiency and living quality improvement (S. Wang et al., 2018). Technology is considered as useful thing. Consumers' perceived usefulness has a positive direct effect on attitude (S. Wang et al., 2018). Incentives policies give economic and environmental benefits, and it leads to consumers' positive attitude

(Gunawan et al., 2022). Therefore, according to these theories, this study proposes a hypothesis as the novelty, as follows:

H6. Perceived usefulness mediates the effect of perceptions of financial incentive policies on attitudes towards BEVs;

Social attributes contribute a significant role in the context of new technology adoption (X. W. Wang et al., 2021). There is still limited study that examined the social attributes on purchase intention of BEV. Indonesian consumers have its unique characteristic, thus this research aims to conduct an examination of the effect of social attributes variables such as their concerns towards the environment, norms, and face consciousness. X. W. Wang et al., (2021) stated that environmental concern affects consumers' attitudes and intentions. Environmental concerns such as reducing the carbon emissions and promoting sustainable and renewable energy has encouraged consumers on adopting EVs (S. Wang et al., 2018). By adopting EV, consumers perceive environmental advantages than can be understood by the consumers themselves which leads them to have positive attitude and to purchase EV (Gunawan et al., 2022; Zhang et al., 2018). Afroz et al., (2015) also found that environmental awareness has an effect on purchase of EV.

Norms are subjective and it is defined as the pressure perceived by someone from their important people or groups. Social norms are defined as the perception of someone or groups about approval or disapproval towards a behavior performed by another person or group (Ajzen, 1991; Zhang et al., 2018). The more people have a better understanding or evaluation towards BEV adoption, the less pressure they give to the person, and the more people tend to have intention to purchase BEV. Consumers who have better evaluation tend to have better attitude toward BEV. Ajzen (1991) found that subjective norms are the one of antecedents to predict person's intention.

Face consciousness is defined as person's effort to maintain a good face/reputation and avoid negative impression from people surrounding (X. W. Wang et al., 2021). Juan Li & Su (2007) found that face consciousness affected person's attitude and purchase behavior. The study of X. W. Wang et al., (2021) found that face consciousness has a positive effect on consumers attitude and purchase intentions towards BEVs. Therefore, from theories above, this study proposes:

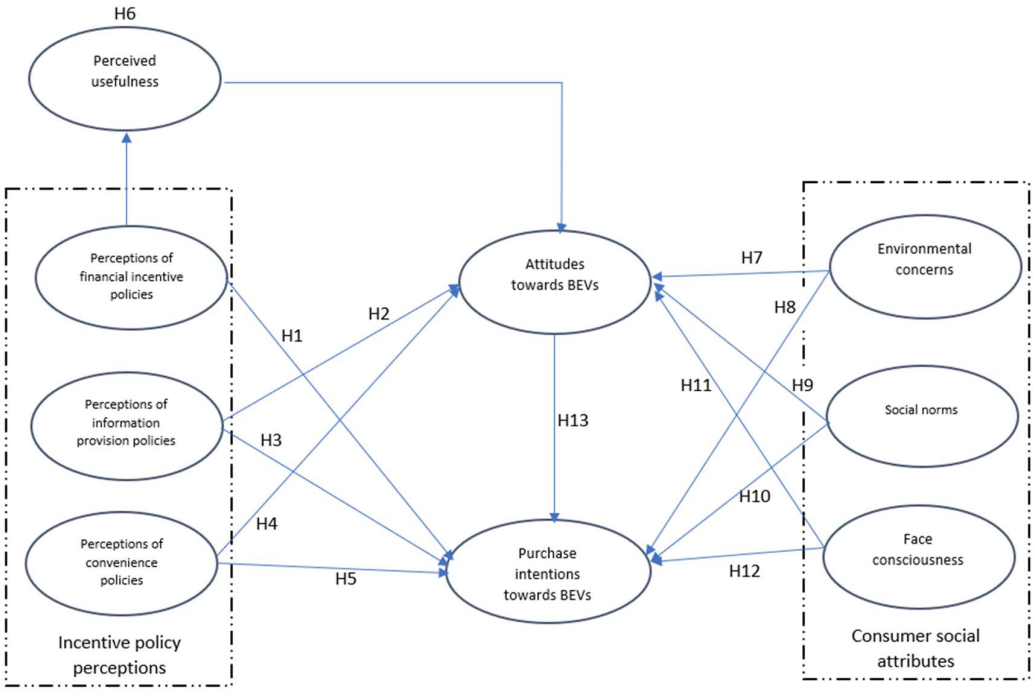
H7. Environmental concerns have a positive effect on attitudes towards BEVs;
H8. Environmental concerns have a positive effect on purchase intentions towards BEVs;
H9. Social norms have a positive effect on attitudes towards BEVs;
H10. Social norms have a positive effect on purchase intentions towards BEVs;
H11. Face consciousness has a positive effect on attitudes towards BEVs;
H12. Face consciousness has a positive effect on purchase intentions towards BEVs;

Attitude is defined as positive or negative evaluation towards their behavior. Attitude, social norms, and behavioral control are the predictors of behavioral intention (Zhang et al., 2018). While intention is person's willingness to try a particular product related to their behavior (Ajzen, 1991). The theory of planned behavior (TPB) examined that the better the consumers' evaluation, the better possibility to have purchase intention. TPB also examined that consumers' attitude is a strong predictor of behavioral intention (Zhang et al., 2018). S. Wang et al., (2018) and Gunawan et al., (2022) also stated that attitude has a positive effect on purchase intention. Therefore, from these theories, this study proposes:

H13. Attitudes towards BEVs has a positive effect on purchase intentions towards BEVs.

Jurnal Manajemen Keuangan Publik
Volume 8, No.1, (p.15-30)
e-ISSN: 2581-1207

Figure 1. Conceptual Framework



RESEARCH METHOD

Causal research was applied to be the design of this research which investigate the causal relationship between variables (Sekaran, U., & Bougie, 2016). Online questionnaire with 5-point Likert scale was distributed to respondent that measures their perceptions with a scale of 1 to 5 (strongly disagree to strongly agree). Therefore, this study collected primary data. This study utilized nonprobability sampling as its design sampling. Sekaran, U., & Bougie, (2016) stated that nonprobability sampling is used when there is no possibility of the respondent to be chosen as a sample. The technique of sampling that this study employed is purposive sampling. Therefore, the targeted respondent of this study is those who have the information related to this study (Sekaran, U., & Bougie, 2016). Owners of non-battery electric car are the criteria of the respondent that this study set. Non-battery fueled car can be in the form of as gasoline (petrol), diesel, hybrid, or plug-in hybrid car. The owners of non-battery-fueled car are expected to not have any experience with BEV but they already have an experience of using non-battery-fueled vehicle. The sample size that required for this study is a minimum 5 to 10 times the number of indicators (Hair et al, 2018). This research comprises 31 indicators therefore the minimum number of respondents should be 155. This study was distributed online, and it comprised 176 respondents, however only 161 respondents were eligible for this study. First, this study conducted Confirmatory Factor Analysis to measure the validity of the test by setting 0.45 as the cut-off of factor loading according to (Hair et al, 2018). Second, this study conducted reliability test by using Cronbach's Alpha based on 0.60 cut-off according to the theory of

Ghozali (2007) in Syahputro & Masnita, (2022). Third, this study conducted model fit test to measure its research model fitness according to Hair et al, (2018). Lastly, this study conducted the hypotheses test based on Structural Equation Modelling (SEM) path analysis by using AMOS. To measure the mediation variable, this study used Sobel test according to MacKinnon et al., (1995).

RESULT AND DISCUSSION

161 eligible respondents were involved in this study. Male respondent dominates this research (80.7). Majority respondent age ranges from 31-35 years old (21.7%). Most of respondents are bachelor's degree (54.7%). Government worker dominates on this study (87%) with income per month ranges from IDR 10.000.000 to 20.000.000 (57.8%). Most of respondents have 1 private car on their family (75.8%) and most of them stay in Greater Jakarta (65.8%). The details of respondent's profile can be seen in Table 1.

Table 1. Profil of Respondents

Category	Frequency	Percent (%)
Gender		
Male	130	80.7
Female	31	19.3
Age		
17 – 25 years	8	5
26 – 30 years	33	20.5
31 – 35 years	35	21.7
36 – 40 years	32	19.9
41 – 45 years	13	8.1
46 – 50 years	18	11.2
Above 51 years	22	13.7
Education		
Junior High School	1	0.6
Senior High School	1	0.6
Associate's degree (Diploma)	12	7.5
Bachelor's degree	88	54.7
Master's degree	53	32.9
Doctoral degree	6	3.7
Occupation		
Government worker	140	87
Private worker	9	5.6
Students	2	1.2
Educational worker	3	1.9
Self-employed	3	1.9
Others	4	2.5
Income per month (IDR)		
< 10.000.000	24	14.9
10.000.000 – 20.000.000	93	57.8
20.000.000 – 30.000.000	27	16.8
30.000.000 – 40.000.000	11	6.8
40.000.000 – 50.000.000	5	3.1
Above 50.000.000	1	0.6

Jurnal Manajemen Keuangan Publik
Volume 8, No.1, (p.15-30)
e-ISSN: 2581-1207

How many cars do your family have?		
1	122	75.8
2	30	18.6
3	6	3.7
≥4	3	1.9
Domicile		
Greater Jakarta (Jabodetabek)	106	65.8
Java Island non-Greater Jakarta	37	23
Outside Java Island	18	11.2
Total	**161**	**100**

First, this study conducted a test to measure the validity of each indicators item. According to Hair et al, (2018), the validity test uses 0.45 factor loading cut-off with minimum respondent of 150. If the factor loadings are above 0.45 therefore the indicators are valid. Second, this study measured the reliability of the indicators by using the theory of Ghozali (2007) in Syahputro & Masnita (2022). If each variables have Cronbach's Alpha ≥0.60 therefore the variables are reliable. The result of validity and reliability test are seen in Table 2.

Tabel 2. The Result of Validity and Reliability Test

Variable	Indicator	Factor Loading	Cronbach' Alpha	Source
Perceptions of financial incentive policies	For adopting BEVs, …		0.939	X. W. Wang et al., (2021)
	direct subsidy from the government is attractive for me	0.868		
	discount from annual vehicle ownership tax and vehicle registration tax is valuable for me	0.949		
	exemption from sales tax on luxury goods is beneficial for me	0.920		
	discount from VAT is useful for me	0.947		
Perceptions of information provision policies	For adopting BEVs, …		0.866	X. W. Wang et al., (2021)
	information about its practicality and reliability is useful for me	0.831		
	information about its driving range is important for me	0.912		
	information about its charging time and battery life is helpful for me	0.915		
	information about its fuel consumption and its environmental performance are valuable for me	0.744		
Perceptions of convenience policies	It is important for me if BEVs are permissible to use High Occupancy Vehicle lanes	0.755	0.843	X. W. Wang et al., (2021)
	It is beneficial for me if BEVs are given dedicated park area facility	0.850		
	It is useful for me if BEVs are exempted from odd-even plates number policy	0.850		

	It is attractive for me if BEVs don't need to line up for physical inspection when paying vehicle ownership tax	0.848		
Perceived usefulness	BEVs contribute to reduce carbon emission and energy shortage problem	0.803	0.850	S. Wang et al., (2018)
	BEVs is useful for reducing my transportation expenditure	0.894		
	BEVs contribute to make my trip efficient and increase my living quality	0.932		
Environmental concerns	I think environmental problem becomes more serious these recent years	0.854	0.777	X. W. Wang et al., (2021)
	I think human should live in harmony with nature for sustainable development	0.876		
	I think we don't do enough action to save the scarce natural resources	0.645		
	I think everyone should be responsible to protect the environment	0.785		
Social norms	Most of my friends think that purchasing green product is the right thing	0.938	0.923	X. W. Wang et al., (2021)
	Most of my colleagues think that purchasing green product is the right thing	0.936		
	My family members think that purchasing green product is the right thing	0.921		
Face consciousness	By purchasing BEVs, …		0.823	X. W. Wang et al., (2021)
	it shows to people that I am responsible for the environment	0.810		
	It makes me easy to be accepted in my social environment	0.909		
	It enhances people's impression to me	0.856		
Attitudes towards BEVs	I think it is essential to use BEVs	0.940	0.900	X. W. Wang et al., (2021)
	I think that purchasing BEVs is the right thing	0.928		
	I support the government's actions on promoting more policies to encourage the purchasing of BEVs	0.875		
Purchase intentions towards BEVs	I am waiting for more brands and models of BEVs to be introduced in the market	0.913	0.897	X. W. Wang et al., (2021)
	I will purchase BEV in the future	0.926		

Jurnal Manajemen Keuangan Publik
Volume 8, No.1, (p.15-30)
e-ISSN: 2581-1207

	If BEVs have a good quality, I will recommend my friend to purchase one	0.895

The third step, it needs to conduct a goodness of fit test to measure that the model from the conceptual framework is considered fit before proceeding into hypotheses testing. Hair et al, (2018) mentioned that a model with minimum one good fit is considered as fit and eligible to proceed to hypotheses test. The model fit test of this research resulted in 6 Good Fits, 1 Marginal Fit, and 3 Poor Fits. Therefore, the hypotheses test could be conducted. The details of goodness of fit test as seen in Table 3.

Table 3. The Result of the Goodness Fit Test

TYPES	MEASUREMENT	VALUE	RECOMMENDED ACCEPTANCE LIMIT	CONCLUSION
ABSOLUTE FIT INDICES	*RMSEA*	0,076	≤ 0,08	***Good Fit***
	ECVI	6,035	Closer to its *Saturated value* than *independence value*	***Good Fit***
	RMR	0,114	≤ 0,05	*Poor Fit*
INCREMENTAL FIT INDICES	IFI	0,907	≥ 0,90 to 1	***Good Fit***
	NFI	0,824	≥ 0,90 to 1	*Poor Fit*
	TLI	0,891	≥ 0,90 to 1	Marginal Fit
	CFI	0,905	≥ 0,90 to 1	**Good Fit**
	RFI	0,798	≥ 0,90 to 1	*Poor Fit*
PARSIMONIUS FIT INDICES	CMIN/DF	1,935	1 - 5	***Good Fit***
	AIC	965,616	Closer to its *Saturated value* than *independence value*	***Good Fit***

Table 4. The Direct Hypotheses Test Result

Hypotheses	Estimate	p-value	Conclusion
H1. Perceptions of financial incentive policies → purchase intentions towards BEVs	0.184	0.002	Supported
H2. Perceptions of information provision policies → attitudes towards BEVs	0.295	0.004	Supported
H3. Perceptions of information provision policies → purchase intentions towards BEVs	-0.007	0.473	Not Supported
H4. Perceptions of convenience policies → attitudes towards BEVs	-0.012	0.433	Not Supported
H5. Perceptions of convenience policies → purchase intentions towards BEVs	0.144	0.009	Supported
H7. Environmental concerns → attitudes towards BEVs	-0.102	0.198	Not Supported
H8. Environmental concerns → purchase intentions towards BEVs	0.138	0.091	Not Supported
H9. Social norms → attitudes towards BEVs	-0.089	0.137	Not Supported

H10. Social norms → purchase intentions towards BEVs	0.099	0.078	Not Supported
H11. Face consciousness → attitudes towards BEVs	0.569	0.000	Supported
H12. Face consciousness → purchase intentions towards BEVs	-0.368	0.000	Not Supported
H13. Attitudes towards BEVs → purchase intentions towards BEVs	0.618	0.000	Supported

Figure 2. Structural Equation Modelling (SEM) Output

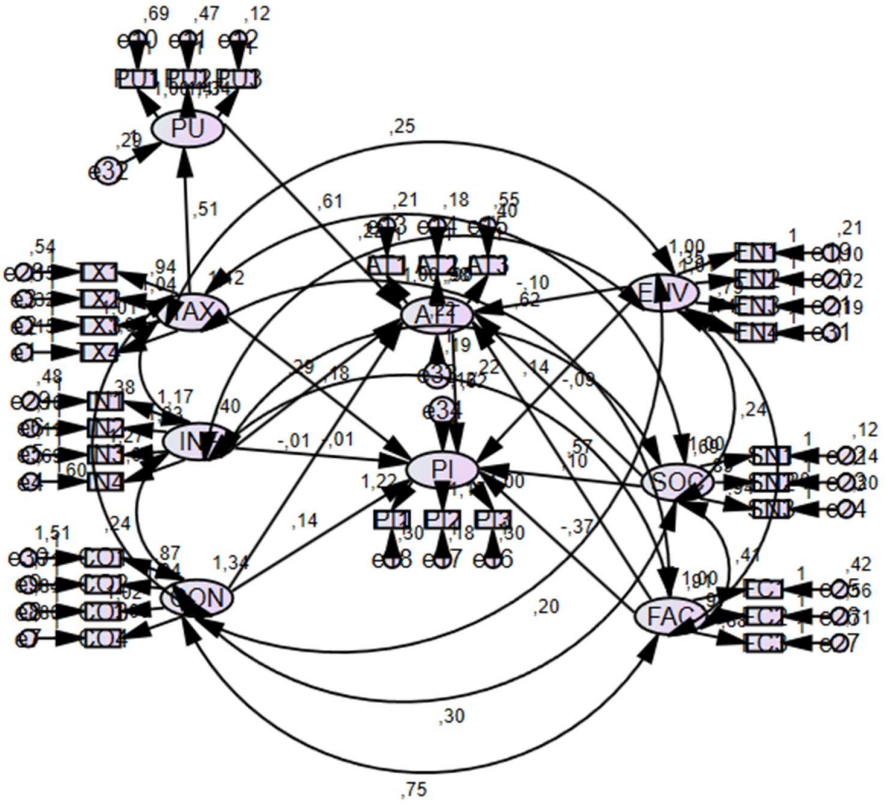


Table 5. The Mediation Hypotheses Test Result

Hypothesis	**Test Statistic**	**p-value**	**Conclusion**
H6. Perceptions of financial incentive policies → Perceived usefulness → attitudes towards BEVs	4.96306	0.00000	Supported

The test by using SEM has resulted that H1 has p-value of 0.002 ≤ 0,5 and positive estimate value therefore H1 is supported. It means that perceptions of financial incentive policies have a positive effect on purchase intentions towards BEVs. It supports the study of X. W. Wang et al., (2021) but contradicts with the finding of Asadi et al., (2021) and S. Wang et al., (2018). H2 has p-value of 0.004 ≤ 0.05 and positive estimate value therefore H2 is supported. Thus, it is proven that perceptions of information provision policies have a

Jurnal Manajemen Keuangan Publik
Volume 8, No.1, (p.15-30)
e-ISSN: 2581-1207

positive effect on attitudess towards BEVs. It supports the finding of X. W. Wang et al., (2021). The SEM test for H3 resulted in p-value 0.473 ≥ 0.05 thus H3 is not supported. This supports the finding X. W. Wang et al., (2021). Indonesian and Chinese consumer consider that perceptions of information provision policies have no effect on purchase intentions towards BEVs. SEM test resulted that H4 is not supported because its p-value 0.433 ≥ 0.05. Indonesian consumer tends to consider that their perceptions of convenience policies have no considerable effect on attitude towards BEVs. It also contradicts with the finding of X. W. Wang et al., (2021). H5 has p-value 0.009 ≤ 0.05 thus it is considered to be supported. Its estimate value also indicate that is has a positive effect. Unlike Chinese consumer, Indonesian consumer tends to consider that their purchase intention towards BEVs is affected by their perceptions of convenience policies. It also contradicts with the finding of X. W. Wang et al., (2021). H7 has p-value 0.198 ≥ 0.05 thus it is not supported. H8 has p-value 0.091 ≥ 0.05 therefore it is also not supported. X. W. Wang et al., (2021) found that environmental concerns have positive effect on attitude and purchase intention toward BEVs in Chinese consumer. In the contrary, Indonesian consumer tends to consider that environment concerns have no effect on their attitude and purchase intention toward BEVs. It also contradicts with the finding of Utami et al., (2020). H9 has p-value of 0.137 ≥ 0.05 thus it is not supported. H10 has p-value 0f 0.078 ≥ 0.05 thus it is also not supproted. Social norms tend to have no effect on attitudes and purchase intention toward BEVs in Indonesian consumer. Unlike Chinese consumer, X. W. Wang et al., (2021) found that social norms has a positive effect on attitudes towards BEVs. On the other hand, Chinese consumer tend to consider that social norms have no effect on purchase intentions towads BEVs. This supports the finding of X. W. Wang et al., (2021) that social norms have no effect on purchase intentions towards BEVs. But this finding also contradicts with the finding of Gunawan et al., (2022), Asadi et al., (2021) and Zhang et al., (2018). H11 has p-value of 0.000 ≤ 0,05 thus face consciousness significantly affects the attitudes towards BEVs. Its positive estimate value indicates that it gives positive relationship. H12 has p-value of 0.000 ≤ 0,05 but has negative estimate value (-0.368). It means that face conciousness has negative effect on purchase intentions towards BEVs. Therefore, H12 is not supported. H11 supports the finding of X. W. Wang et al., (2021) but H12 does not. H13 has p-value of 0.000 ≤ 0,05 and positive estimate value therefore H13 is supported. Thus, attitudes have a positive effect on purchase intentions towards BEVs. It supports the finding of Gunawan et al., (2022), X. W. Wang et al., (2021), Makanyeza et al., (2021), Asadi et al., (2021), and Higueras-Castillo et al., (2019).

To measure the mediation variable, a Sobel test was conducted to measure whether perceived usefulness successfully mediates the effect of perceptions of financial incentive policies on attitudes towards BEVs. As seen on Table-5, it has p-value 0.000 ≤ 0,05, therefore it is proven that perceptions of financial incentive policies have an effect on attitudes towards BEVs through perceived usefulness. According to the previous study done by X. W. Wang et al., (2021), it found that consumers' perceptions of financial incentive policies do not have any effect on attitudes towards BEVs. The novelty of this research finally finds that perceived usefulness successfully mediates the effect of perceptions of financial incentive policies on attitudes towards BEVs.

CONCLUSION

This research involved 161 respondents of non-battery fueled car owners in Indonesia. This study proposed 13 hypotheses. The result is perceptions of financial incentive policies has a positive effect on purchase intentions towards BEVs. Perceptions of information provision policies positively affects attitudes towards BEVs but it doesn't have effect on BEVs purchase intentions. Consumers also tend to do not consider that their perceptions of convenience policies can affect their attitudes towards BEVS but it positively affects BEVs

purchase intentions. Indonesian consumers also tend to do not consider that environmental concerns and social norms can affect their attitude and purchase intentions towards BEVs. This research also found that face consciousness of Indonesian consumers positively affects their attitudes towards BEVs however it doesn't affect BEVs purchase intentions. Indonesian consumers are also proven that their attitudes towards BEVs positively affect their purchase intentions towards BEVs. The novelty of this study finally found that perceived usefulness successfully mediates the effect of consumers' perceptions of financial incentive policies on their attitudes towards BEVs.

With regard to encourage Indonesian consumers' purchase intentions to adopt BEVs, this study recommend that the policymakers should focus on increasing consumers' perceptions of financial incentives policies, perceptions of convenience policies, and their attitudes towards BEVs. In terms of increasing consumers' perceptions of financial incentives policies, it is proven that direct subsidy from the government, discount on annual vehicle ownership tax and vehicle registration tax, exemption on sales tax from luxury goods, and discount on VAT are vital for encouraging consumers' intention to purchase BEVs. In term of increasing consumers' perceptions of convenience policies, this study recommends that it is essential for policymakers to consider allowing BEVs to use high occupancy vehicle lanes. Policymakers are also encouraged to consider providing dedicated park area for BEVs users and to exempt them from odd-even plate number policy, and to make sure that BEV consumers do not need to line up for physical inspection when fulfilling vehicle ownership tax. This study also recommends that policymakers should consider the consumers' attitudes towards BEVs as it is a strong predictor of purchase intentions.

Even though this research might give an insightful finding, however this study has several limitations. First, most of the respondents are government workers thus the data collected are considered to be homogenous. Syahputro & Masnita (2022) stated that to have a better study on consumer behavior, it should involve more heterogenous respondents. Therefore, future research might be better to involve more heterogenous respondents. Second, the targeted respondents are those who own non-battery-fueled cars, given they have no experience with BEVs. It might be not a potential buyer of BEVs or even actual BEV owners. X. W. Wang et al., (2021) stated that the influence of actual BEV owners on potential buyers are very vital. Thus, it is important for future research to conduct a study involving actual BEV owners. Third, some of the respondents involved in this research are from outside Greater Jakarta. They might do not have any experience with high occupancy vehicle lanes (e.g., Trans Jakarta busway). They also might do not have any experience with odd-even plates number policy. Therefore, future research might involve a greater number of respondents in Greater Jakarta or any other location that might be more representative. Fourth, this study only measured fiscal incentives in general. Even though it is sufficient to give an information on how to attract consumers' purchase intentions towards BEVs, however they might do not know how many percent of tax reduction/discount they will obtain to purchase BEVs. Therefore, future study might incorporate consumers' literacy or knowledge towards Government fiscal incentive regulations.

REFERENCES

Afroz, R., Masud, M. M., Akhtar, R., Islam, M. A., & Duasa, J. B. (2015). Consumer purchase intention towards environmentally friendly vehicles: an empirical investigation in

Jurnal Manajemen Keuangan Publik
Volume 8, No.1, (p.15-30)
e-ISSN: 2581-1207

Kuala Lumpur, Malaysia. *Environmental Science and Pollution Research*, *22*(20), 16153–16163. https://doi.org/10.1007/s11356-015-4841-8

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, *50*(2), 179–211. https://doi.org/https://doi.org/10.1016/0749-5978(91)90020-T

An Energy Sector Roadmap to Net Zero Emissions in Indonesia. (2022). *An Energy Sector Roadmap to Net Zero Emissions in Indonesia*. https://doi.org/10.1787/4a9e9439-en

Asadi, S., Nilashi, M., Samad, S., Abdullah, R., Mahmoud, M., Alkinani, M. H., & Yadegaridehkordi, E. (2021). Factors impacting consumers' intention toward adoption of electric vehicles in Malaysia. *Journal of Cleaner Production*, *282*, 124474. https://doi.org/10.1016/j.jclepro.2020.124474

Broadbent, G. H., Metternicht, G., & Drozdzewski, D. (2019). An analysis of consumer incentives in support of electric vehicle uptake: An Australian case study. *World Electric Vehicle Journal*, *10*(1), 1–15. https://doi.org/10.3390/wevj10010011

Cazzola, P. (2017). Global EV Outlook 2018. In *Global EV Outlook 2018*.

Chandra, A., Gulati, S., & Kandlikar, M. (2010). Green drivers or free riders? An analysis of tax rebates for hybrid vehicles. *Journal of Environmental Economics and Management*, *60*(2), 78–93. https://doi.org/https://doi.org/10.1016/j.jeem.2010.04.003

Clinton, B. C., & Steinberg, D. C. (2019). Providing the Spark: Impact of financial incentives on battery electric vehicle adoption. *Journal of Environmental Economics and Management*, *98*, 102255. https://doi.org/10.1016/j.jeem.2019.102255

Cozzi, L., Gould, T., Bouckart, S., Crow, D., Kim, T.-Y., McGlade, C., Olejarnik, P., Wanner, B., & Wetzel, D. (2020). *World Energy Outlook 2020*. *2050*(October), 213–250. https://www.oecd-ilibrary.org/energy/world-energy-outlook-2020_557a761b-en

Gallagher, K. S., & Muehlegger, E. (2011). Giving green to get green? Incentives and consumer adoption of hybrid vehicle technology. *Journal of Environmental Economics and Management*, *61*(1), 1–15. https://doi.org/https://doi.org/10.1016/j.jeem.2010.05.004

Gunawan, I., Redi, A. A. N. P., Santosa, A. A., Maghfiroh, M. F. N., Pandyaswargo, A. H., & Kurniawan, A. C. (2022). Determinants of Customer Intentions to Use Electric Vehicle in Indonesia: An Integrated Model Analysis. *Sustainability (Switzerland)*, *14*(4), 1–22. https://doi.org/10.3390/su14041972

Hair et al. (2018). *Multivariate Data Analysis, 8th Edn London: Cengage.[Google Scholar]*.

Higueras-Castillo, E., Liébana-Cabanillas, F. J., Muñoz-Leiva, F., & García-Maroto, I. (2019). Evaluating consumer attitudes toward electromobility and the moderating effect of perceived consumer effectiveness. *Journal of Retailing and Consumer Services*, *51*(July), 387–398. https://doi.org/10.1016/j.jretconser.2019.07.006

Hong, J., Koo, Y., Jeong, G., & Lee, J. (2012). Ex-ante evaluation of profitability and government's subsidy policy on vehicle-to-grid system. *Energy Policy*, *42*, 95–104. https://doi.org/https://doi.org/10.1016/j.enpol.2011.11.053

Juan Li, J., & Su, C. (2007). How face influences consumption-a comparative study of American and Chinese consumers. *International Journal of Market Research*, *49*(2), 237–256.

MacKinnon, D. P., Warsi, G., & Dwyer, J. H. (1995). A simulation study of mediated effect measures. *Multivariate Behavioral Research*, *30*(1), 41–62.

Makanyeza, C., Svotwa, T. D., & Jaiyeoba, O. (2021). The effect of consumer rights awareness on attitude and purchase intention in the hotel industry: Moderating role of demographic characteristics. *Cogent Business and Management*, *8*(1). https://doi.org/10.1080/23311975.2021.1898301

Ministry of Finance. (2023a). *Dorong Pemanfaatan KBLBB, Pemerintah Luncurkan Program Insentif Fiskal*. https://www.kemenkeu.go.id/informasi-publik/publikasi/berita-utama/Dorong-Pemanfaatan-KBLBB

Ministry of Finance. (2023b). *Pemerintah Luncurkan Insentif Pembelian KBLBB Roda Empat dan Bus untuk Akselerasi Transformasi Ekonomi*. https://kemenkeu.kemenkeu.go.id/informasi-publik/publikasi/berita-utama/Pemerintah-insentif-KBLBB

Ministry of Industry. (2022). *Pemerintah Finalkan Aturan Insentif Kendaraan Listrik*. https://kemenperin.go.id/artikel/23790/Pemerintah-Finalkan-Aturan-Insentif-Kendaraan-Listrik

Mitra, A., & Pal, S. (2022). Ethnic Diversity, Social Norms and Elite Capture: Theory and Evidence from Indonesia. *Economica*, *89*(356), 947–996. https://doi.org/10.1111/ecca.12423

Ngoc, A. M., Nishiuchi, H., & Nhu, N. T. (2023). Determinants of carriers' intentions to use electric cargo vehicles in last-mile delivery by extending the technology acceptance model: a case study of Vietnam. *The International Journal of Logistics Management*, *34*(1), 210–235. https://doi.org/10.1108/IJLM-12-2021-0566

Putri, A. I. A., & Gunawan, J. (2020). Identifikasi Faktor-Faktor Yang Mempengaruhi Perceived Value Terhadap Niat Adopsi Mobil Ramah Lingkungan. *Jurnal Sains Dan Seni ITS*, *9*(1). https://doi.org/10.12962/j23373520.v9i1.50611

Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach*. John Wiley & sons.

Setiawan, A. D., Zahari, T. N., Purba, F. J., Moeis, A. O., & Hidayatno, A. (2022). Investigating policies on increasing the adoption of electric vehicles in Indonesia. *Journal of Cleaner Production*, *380*, 135097. https://doi.org/https://doi.org/10.1016/j.jclepro.2022.135097

Shafiei, E., Davidsdottir, B., Fazeli, R., Leaver, J., Stefansson, H., & Asgeirsson, E. I. (2018). Macroeconomic effects of fiscal incentives to promote electric vehicles in Iceland: Implications for government and consumer costs. *Energy Policy*, *114*(October 2017), 431–443. https://doi.org/10.1016/j.enpol.2017.12.034

Syahputro, P., & Masnita, Y. (2022). ACHIEVING HALAL BRAND EQUITY USING SOCIAL EXCHANGE THEORY TO COMPETE IN THE HALAL FOOD INDUSTRY. *Digital Business by Strategic Innovation for Economic Development*, 14–23.

Tulus Pangapoi Sidabutar, V. (2020). Kajian pengembangan kendaraan listrik di Indonesia: prospek dan hambatannya. *Jurnal Paradigma Ekonomika*, *15*(1), 21–38. https://doi.org/10.22437/paradigma.v15i1.9217

Utami, M. W. Dela, Yuniaristanto, Y., & Sutopo, W. (2020). Adoption Intention Model of Electric Vehicle in Indonesia. *Jurnal Optimasi Sistem Industri*, *19*(1), 70–81. https://doi.org/10.25077/josi.v19.n1.p70-81.2020

Wang, S., Wang, J., Li, J., Wang, J., & Liang, L. (2018). Policy implications for promoting the adoption of electric vehicles: Do consumer's knowledge, perceived risk and financial incentive policy matter? *Transportation Research Part A: Policy and Practice*, *117*(August), 58–69. https://doi.org/10.1016/j.tra.2018.08.014

Wang, X. W., Cao, Y. M., & Zhang, N. (2021). The influences of incentive policy perceptions and consumer social attributes on battery electric vehicle purchase intentions. *Energy Policy*, *151*(February). https://doi.org/10.1016/j.enpol.2021.112163

Zhang, X., Bai, X., & Shang, J. (2018). Is subsidized electric vehicles adoption sustainable: Consumers' perceptions and motivation toward incentive policies, environmental benefits, and risks. *Journal of Cleaner Production*, *192*, 71–79. https://doi.org/10.1016/j.jclepro.2018.04.252