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Assessing adoption intention of electric vehicles in India: The mediating role of government policies

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The total number of vehicles is expected to be 2.5 billion by the year 2050. To stabilize the impact on environment, the automobile sector has shown various innovations by shifting from conventional vehicles to electric vehicles (EVs). However, there is less acceptance of electric cars in India, so this research paper explores the various factors affecting EV adoption intention. The key factors studied are price, environmental concern, infrastructure requirement, and knowledge of EV. This paper also shows that government policies act as a mediator between factors like price, knowledge of EV, and infrastructure requirement on adoption intention of EVs. This research paper presents insights for the decision-makers to understand the determinants and design the strategies for increased adoption intention of EVs.

Keywords: *automobile, electric vehicle (EV), adoption intention, environment, sustainability.*

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1. Introduction

Global warming due to the emission of carbon dioxide is among the significant problems for nations worldwide (Singh and Arneja, 2020). Fossil fuel combustion accounts for a greater influence on climate change by human beings. There is an increase in the emission by automobiles despite all the norms followed by the industry. Road vehicles account for nearly 80% of the emission (Creutzig et al., 2015; Sims et al., 2014). A strong relationship exists between the use of fossil oil for transportation and the emission of carbon dioxide. It has led to an increase in the temperature to undesired levels and contributes to polluting the overall environment (Rockstrom et al., 2009). It is a big responsibility for the current generation to leave behind a world where future generations can live a quality life (Greene, 2009).

The current population of India is 1.38 billion (Neill, 2021). It is the second most populated country in the world (US Census Bureau, 2021), with an approximate annual growth rate of 1.1% (The World Bank Data, 2019). Due to growing population there has been an increase in the number of vehicles on the road which deteriorates the environment. The only method to maintain the air quality is to shift from fossil fuel-based conventional vehicles to electric vehicles (EV) (PwC, 2018). The automobile sector has invested a large amount of money in manufacturing battery operated electric vehicles that are comfort-driven, have more driving range, and better charging options. The manufacturing is not only limited to the small car segment but also the premium car segment. This has helped increase the market share of electric vehicles by positively impacting the customers' minds (Haustein and Jensen, 2018). Nevertheless, the acceptance and demand for electric vehicles are not as expected (LaPedus, 2019). The manufacturers find it challenging to effectively market the product to the consumers due to the limited availability of infrastructure for charging the EVs (Haustein and Jensen, 2018).

Fossil fuel based vehicles are in use for over a century now. The shift from existing technology to newer technology (*i.e.*, EV) is difficult due to rigid mindsets (Chekima et al., 2016; Malhotra and Singh, 2016; Ozaki and Sevastyanova, 2011; Mau et al., 2008). Both manufacturers and governments have been trying to promote EVs. Governments have designed incentive policies to enhance EV acceptance (DeGroot and Schuitema, 2012). EV prices are higher in comparison to traditional cars. Price has always been one of the biggest challenges for marketers, and the automobile sector is not an exception. Although the cost of ownership might be comparatively low for EVs in the long run (Adepetu and Keshav, 2017), it is difficult for customers to compute and compare the overall costs of traditional and EVs (Lieven et al., 2011). Therefore, creating awareness among the masses about the benefits of EVs and making them purchase it; is a big challenge (Plotz et al., 2014).

The reports of the International Energy Agency show that the transport sector alone is going to account for at least 50% of the total conservatory gas emissions by 2030 (IEA, 2018). This assessment directs that the recent transport model needs a complete makeover by replacing it with a sustainable products model (Shalendar and Sharma, 2020). Sustainable or eco-friendly products are manufactured by an innovative process, and they are less harmful to the environment (Beise and Rennings, 2005), but their adoption rate is very low (Bodur et al., 2015; Prothero et al., 2011; McDonald and Oates, 2006). In order to boost the customer acceptance of sustainable products, it is essential to identify their underlying motivation (Testa et al., 2015).

In India, the electric vehicles were first introduced in the year 1996, however, it could not catch the attention of the users (Etrio, 2021). In 2019, the government of India announced that the nation will go all electric by 2030 (Energyworld, 2019). For enhancing the EV adoption intention, all the stakeholders must work on the affordability by reducing the price through government incentives (Paylenko et al., 2019). These incentives will also assure the manufacturers who are making heavy investments to produce EVs (Cecere et al., 2018). There are many research studies about the economic, social, and technological aspect of the EVs. But there is a little work done on the

government intervention and any other regulatory body, specifically in the Indian context. Consequently, this research article intends to draw a significant attention from all the stakeholders involved in the manufacturing and distribution of the EVs.

Therefore, this research paper analyses the important drivers that affect EV adoption intentions. Furthermore, it will assess the mediating role of the government policies between drivers and adoption intentions.

2. Conceptual Framework and Hypothesis development

2.1 Price (PR)

The price of any product has a very substantial influence on consumer behavior. The consumer is very price-conscious and intends to buy products at a lower price (Balle, 2019). The price of gasoline and electricity changes from region to region, and it acts as an important variable that affects the intention to adopt EV (Vergis and Chen, 2015). However, the overall high purchasing cost of EVs compared to gasoline cars (Lieven et al., 2011) acts as a barrier for intention to purchase EV, but low operational cost favors it. People need to be educated regarding energy conservation by promoting EVs and the long-term savings behind the purchase of an EV. Though there are savings in the long term, however, a consumer does not value the long-term gains over high short-term expenses. They compare the price of EVs from conventional cars while making a purchase decision (Dumortier et al., 2015). People do not just require the affordable price of EVs but affordable maintenance too (Milad and Shariat-Mohaymany, 2021). This is corroborated by Singh and Arneja (2020), who established that higher prices and operational costs would negatively impact the adoption intentions of an EV. Therefore, measures taken on the EV price will definitely create an intention to buy it (Tamor et al., 2013). Based on the literature, it is hypothesized that:

H1: Price significantly impacts the EV adoption intention.

2.2 Environmental Concern (EC)

Environmental concern is the people's responsiveness to understand and appreciate the environmental problems (Khurana et al., 2020). It is not only about responsiveness but the degree to which people are willing to contribute further to solve these problems (Dunlap and Jones, 2003; 2002). Most consumer behavior studies signify that the growing concern of the individual towards the environment increases the intention to buy ecological products, recycle newspapers, and raise the issue at public forums (Rotaris et al., 2021; Kang and Park, 2011). Governments of many countries have shown their concerns towards the environment and have upgraded policies from time to time (OECD, 2007). Poortinga et al. (2004) indicated a positive and significant relationship between environmental concern and efforts to support environmental policy, which is also corroborated by Sajjad et al. (2020). People with serious environmental concerns have less inclination to buy fossil fuel cars. They perceive that it brings much ecological disturbance, and they would be motivated to buy EVs against the fossil fuel car (Dutschke and Peters 2014; Bockarjova and Steg, 2014), or they are willing to use public transport (Kahn, 2007). McDermott et al. (2015) put forward that environmental protection is an important criterion for attracting customers. However, Graham- Rowe et al. (2012) suggested that customers willing to purchase EV are not affected by the environmental protection alone. Moreover, the customers doubt the ability of battery operation in EVs. A battery may indirectly harm the environment during production and emitting pollution through damaged batteries (Axsen et al., 2012). Khurana et al. (2019) suggest that EV manufacturers focus on energy conservation and environmental protection because it can enhance the adoption rate. Therefore, we hypothesise that:

H2: Environmental concern significantly impacts the EV adoption intention.

2.3 Knowledge of EV (KE)

Knowledge is an essential ingredient that drives the behavior of a person. It is an important determinant of consumer behavior in addition to the demography of individuals (Guerzoni, 2010; Kerstetter and Cho, 2004; Goldsmith and Flynn, 1992; Von Hippel, 1986; Bettman and Park, 1980). The knowledge differs with respect to personal characteristics changes. It may be different in the young generation from that of the older generation. Similarly, the other characteristics' effect on the purchase decision will vary according to the knowledge of the EV (Egbue and Long, 2012). The awareness and knowledge about the EV significantly affect the intention to adopt EV (Asadi et al., 2021). The government should emphasise the conservation of energy, building up ecofriendly and sustainable products, such as EVs, and increasing the intention to buy them. The awareness of the Chinese consumer regarding the EV must be increased as the knowledge dissemination about EVs is low. (Yan et al., 2019). If this is the plight in a technologically sound nation like China, we also need to take note of it. Therefore, we hypothesize that:

H3: Knowledge of EV significantly impact the EV adoption intention.

2.4 Infrastructure Requirement (IR)

The infrastructure support required for EVs is also not available in India. Being expensive and unavailability of essential support systems like charging or replacing batteries, customers lose confidence in EV (Li et al., 2017). These problems can be overruled with the help of high-tech batteries and infrastructure development in the nation (Silvia and Krause 2016; Egbue and Long, 2012; Graham-Rowe et al. 2012). The lack of charging stations acts as a psychological barrier even though the car can be charged at home or the workplace (Figenbaum and Kolbenstvedt, 2016; Morrissey et al., 2016; Lieven, 2015). Hence, it is hypothesized that:

H4: Infrastructure requirement significantly impacts the EV adoption intention.

2.5 Government Policies (GP)

Many factors influence the purchase of an automobile, and it involves much capital at an individual level. Hence, customers always have an eye on the policies and initiatives of the states. The change in the behavior of the customer is stimulated with the help of the policies of the particular region (Steg and Vlek, 1997). These policies may be related to different emission norms or the use of alternate energy. To promote a particular behavior, meaningful incentives can positively impact the intention of the customer (De Groot and Schuitema, 2012). Governments in different countries have been offering incentives for buying EVs. The indirect cost of EVs is reduced by the government tax benefits, which attracts the purchase of electric vehicles (Ghosh, 2020). These incentives have been in the form of free road tolls, free parking in reserved areas, free charging, etc. These incentives fulfill the aspirations of people to some degree. Nevertheless, it is difficult for any government to satisfy everyone with a single incentive plan (Schuitema et al., 2010; DeGroot and Steg, 2009; Schade and Schlag, 2003). It is even more challenging to find which incentive schemes have the strongest or lowest influence on customers buying behavior (Eriksson et al., 2006; Bamberg and Rolle, 2003). The infrastructure available on the public and personal front are insufficient. People are willing to buy personal infrastructure for EV if there are good government policies, probably in the form of subsidies (Skippon and Garwood, 2011). It is also discovered that there is a lack of knowledge about government policies for electric vehicles, which impacts the intention to purchase an EV. Apparently, the government should also increase awareness and knowledge about EVs (Sovacool et al., 2019). Therefore, we hypothesized that:

H5: Government policies significantly impact the EV adoption intention.

After reviewing the extant literature, we found a relationship between government policies and other factors. Therefore, the study will also test the following hypotheses:

H6: Government policies have a mediating role between price and EV adoption intention.

H7: Government policies have a mediating role between Knowledge of EV and EV adoption intention.

H8: Government policies have a mediating role between infrastructure requirements and EV adoption intention.

H9: Government policies have a mediating role between environmental concern and EV adoption intention.

The conceptual model for the study is as shown in Figure 1.

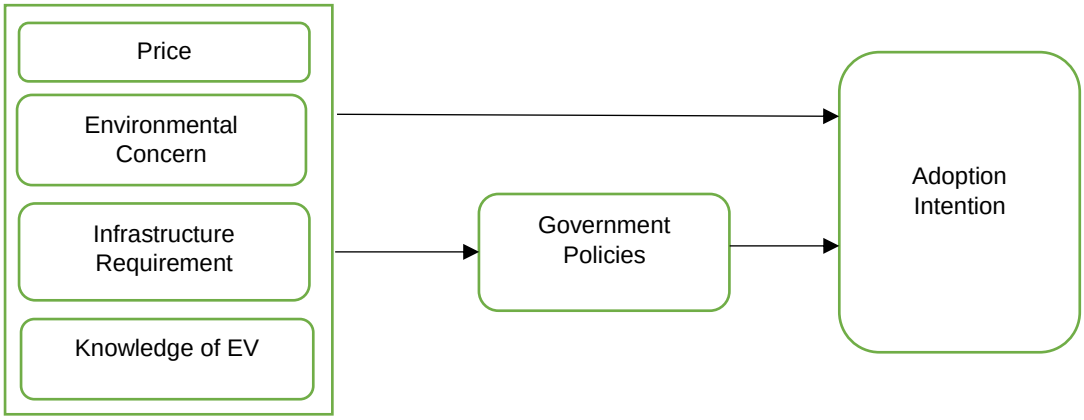

Figure 1. Conceptual framework

3. Materials and Methods

The study is based on a questionnaire survey approach. Overall, 399 responses were received at a response rate of 30.69%. The responses were obtained on a voluntary basis between July and December 2020 with assured anonymity to all respondents. The minimum sample is also in line with the N:q ratio (i.e., the observations to the parameter ratio). The ideal ratio for N:q is 20:1 (Kline, 2015) or 10:1 (Schreiber et al., 2006). For the current study, the value of 'N' is 399 and 'q' is 25. The N:q ratio is 15.96:1; therefore, the sample size is acceptable. The survey was divided into two parts. The measurement scales used were ordinal in nature. The first part of the survey was about the 'environmental concern' (EC), which was classified into the four-item scale (Ramayah et al., 2012; Gadenne et al., 2011; Fujii, 2006; Kim and Choi, 2005), the 'price' (PR) which was classified in five-item scale (Degirmenci and Breitner, 2017), 'government policies' (GP) which were classified into the five-item scale (Mathur, 2019), 'knowledge of EV' (KE) were classified into four-item scale (Degirmenci and Breitner, 2017; Garbarino and Johnson, 1999), 'infrastructure requirement' (IR) was classified in four-item scale (Haustein and Jensen, 2018; Haustein and Hunecke, 2007) and 'adoption intention' (AI) was classified in four-item scale (Han et al., 2010; Kim and Han, 2010). The survey's second part contained structured close-ended questions regarding demographic characteristic, which includes age, the current number of vehicles, annual driving distance, gender, and occupation. A five-point Likert scale was used to collect the data where '5' represented strongly agree, and '1' strongly disagree. Participation of the respondents was voluntary as no incentives were given for participation. Judgement and convenience sampling techniques were used for the study. A pilot survey of 30 questionnaires was done, and due modifications were made according to the feedback of the respondents.

4. Results

The reliability of the observed variables was checked to confirm that the variables were internally consistent (Hair Jr. et al., 2017). To measure the reliability and validity of the data, several statistical tests were performed. One more criterion to judge the internal consistency is composite reliability which is considered superior to Cronbach's alpha. If the value of composite reliability is equal to or more than 0.7, then measures are internally consistent (Hair Jr. et al., 2017, Nunnally and Bernstein, 1994). The Cronbach's alpha value (0.711) and Composite reliability value are above the threshold limit, indicating that the observed variables are internally consistent. The Cronbach's alpha value was also calculated for individual parameters and all the values were greater than 0.7 (Table 3). The content validity was done in the pilot survey with the help of three experts. For a large sample, the construct validity was checked with the help of convergent validity and discriminant validity. Convergent validity refers to the extent to which the variables are inter-related (Hair Jr. et al., 2017). Convergent validity is checked with the help of the average variance explained (AVE), as shown in Table 1. If the value of AVE is equal to or greater than 0.5, it means that the variable is explaining a minimum of fifty percent of the variance in the construct (Fornell and Larckel, 1981). To measure the discriminant validity, the inter-construct correlation is used to calculate the mean squared variance. The value of mean squared variance is less than the average variance extracted, which indicates that the discriminant validity holds. KMO and Bartlett's test is used to identify the amount of variance explained by the variables. The value of KMO is greater than 0.70, and Bartlett's value of significance is less than 0.05; therefore, the data is suitable for factor analysis. Due consideration was maintained to ensure that the data's normality and linearity are under the permissible limits. The data was checked with the help of mean values, standard deviation, correlation, kurtosis, and skewness. The values of skewness and kurtosis came under the acceptable range -2 and +2 (George and Mallery, 2010). The descriptive statistics revealed that majority of the respondents were between 26 to 35 years of age. 72.43% of the respondents owned at least one vehicle and they travel maximum 20,000 KMs per year. 67.15% respondents were male and almost 70% were salaried. The detailed descriptive statistics are presented in Table 2.

Table 1: Convergent and Discriminant Validity

Factor	AVE	CR	MSV
EC	0.524	0.813	0.095
GP	0.540	0.778	0.095
IR	0.572	0.801	0.007
AI	0.528	0.765	0.087
KE	0.499	0.748	0.084
PR	0.491	0.742	0.071

Note: AVE: Average variance explained; CR: Composite reliability; MSV: Maximum shared variance

Table 2: Descriptive statistics

Attributes	Item	Frequency	Percentage
Age	18-25 years	111	27.74
	26-35 years	160	40.15
	36-45 years	67	16.79
	46-55 years	58	14.6
	56 years and above	3	0.73

Attributes	Item	Frequency	Percentage
Number of vehicles owned	None	0	0
	One	289	72.43
	Two	90	22.56
	Three	20	5.01
Average annual distance (in kilometres)	0-10000	140	35.04
	10000-20000	149	37.23
	20000-30000	50	12.41
	Above 30000	60	15.33
Gender	Female	131	32.85
	Male	268	67.15
Occupation	Student	55	13.87
	Salaried	280	70.07
	Homemaker	29	7.3
	Businessperson	35	8.76

Table 3: Factor analysis results

S. No.	Factors and items	Factor loading
1	**Environmental Concern (α = .709)**	
	EC1: I think environmental problems are becoming more and more serious in recent years	0.740
	EC2: I think we should live in harmony with the environment for achieving sustainable development	0.730
	EC3: I think we are not doing enough to save natural resources from being used	0.573
	EC4: I think individuals and society have the responsibility to protect the environment	0.807
2	**Government Policies (α = .749)**	
	GP1: Tax rebates of up to ₹1.5 lakh on loans to buy an EV is a good policy	0.642
	GP2: Customs duty exemption on lithium-ion batteries, will help lowering the price of EVs	0.798
	GP3: The plan to ensure the availability of at least one charging station in a grid of 3km x 3km is a good policy	0.733
3	**Infrastructure Requirement (α = .735)**	
	IR1: A lot of charging stations are required for uninterrupted journey	0.781
	IR2: While driving an EV, I will always be worried about running out of charge	0.763
	IR3: The need for charging makes EVs is very unpractical and inconvenient for daily use	0.718
4	**Adoption intention (α = .737)**	
	AI1: I am willing to adopt EV when purchasing a vehicle in the future	0.704
	AI2: I intend to adopt EV when buying a vehicle in the future	0.861
	AI3: I plan to adopt EV when considering a vehicle in the future	0.568
5	**Knowledge of EV (α = .745)**	
	KE1: I think I am aware about average time required to charge an EV	0.764
	KE2: Moving parts in EVs are fewer in number as compared to conventional vehicles	0.755
	KE3: I think I am well informed about EVs and their working mechanism	0.521
6	**Price (α = .713)**	
	PR1: Maintenance and fuel cost of conventional vehicle is higher as compared to EV	0.642
	PR2: EVs are priced higher than conventional vehicles	0.629
	PR3: The resale value of EV will be lower as compared to conventional vehicle	0.761

The factor analysis was performed using principal component analysis and varimax, as shown in Table 3. The factor analysis showed that all six factors have internal consistency. The six factors include price, infrastructure requirement, knowledge of EV, government policies, environmental concern, and adoption intention. After examining the validity and the reliability of the constructs, the proposed model with the designed hypothesis was analysed with the help of AMOS 21.0. The

acceptance and rejection of the hypotheses were based on the coefficients and the p values. The results are presented in Table 4 and Table 6. The results showed that there is an adequate fit in the model. The χ2value is 143.24, degree of freedom was 130, and the χ2/df was 1.102 (p-value = .202), CFI = 0.980, TLI= .974, IFI = 0.981, RMSEA = 0.027 (with low 0.90 = 0.000 and high 0.90 = 0.052).

Table 4: Regression weights

Relationship			Estimate	*p*	Hypothesis verdict
PR	←	EC	0.328	0.013	NA
IR	←	EC	0.169	0.137	NA
KE	←	EC	0.322	0.016	NA
GP	←	EC	0.122	0.307	NA
GP	←	KE	0.236	0.036	NA
GP	←	PR	0.45	0.002	NA
GP	←	IR	0.259	0.019	NA
AI	←	PR	-0.035	0.803	H_1 not supported
AI	←	EC	0.071	0.539	H_2 not supported
AI	←	KE	0.047	0.66	H_3 not supported
AI	←	IR	-0.173	0.139	H_4 not supported
AI	←	GP	0.364	0.048	H_5 supported

Table 5: Regression weights for Demographics

Relationship			Estimate	*p*
AI	←	Age	0.105	0.143
AI	←	Number of vehicles owned	-0.156	0.045
AI	←	Average annual distance covered	0.001	0.99
AI	←	Gender	0.064	0.347
AI	←	Occupation	-0.032	0.631

Table 6: Mediating effect of Government Policies

Indirect effect	*p*	Direct effect	*p*	Mediation	Hypothesis verdict
PR → GP → AI	0.037	PR → AI	0.837	Full Mediation	H_6 supported
KE → GP → AI	0.049	KE → AI	0.691	Full Mediation	H_7 supported
IR → GP → AI	0.045	IR → AI	0.122	Full Mediation	H_8 supported
EC → GP → AI	0.137	EC → AI	0.588	No effect	H_9 not supported
		GP → AI	0.048	Direct effect	

In Table 4, it has been confirmed that environmental concern affects price (β= .328, p<0.05) and knowledge of EV (β=.322, p<0.05), however, it does not affect the infrastructure requirement (β= .169, p>0.05). Secondly, there is no direct effect of environmental concern on government policies (β= 0.122, p>0.05). Through this model, the role of government policies is checked on the adoption intention of EV. It is observed that government policies act as a mediator for price, knowledge of EV, and infrastructure requirement on the EV adoption intention. Since, PR, KE, and IR doesn't have direct impact on AI, however, all of them indirectly impacts AI through GP. Therefore, GP

acts as a full mediator between independent variables (PR, KE, IR) and dependent variable (AI). Rucker et al. (2011) stated that after finding a significant indirect effect, if there is no longer a significant direct effect of X on Y, means full mediation (X →Y effect). In contrast, if there remains a significant direct X → Y effect after controlling for the mediator, means partial mediation. The effect of price (β= .45, p<0.05) on government policies is stronger in comparison to the infrastructure requirement (β= .259, p<0.05) and knowledge of EV (β= .236, p<0.05). Government policies (β= .364, p<0.05) are the single factor having a positive impact on the adoption intention of EV. Other factors like price (β= -0.035, p>0.05), knowledge of EV (β= 0.047, p>0.05) and infrastructure requirement (β= -.173, p> 0.05) do not have a direct impact on adoption intention. The results of the path analysis have been presented in Figure 2.

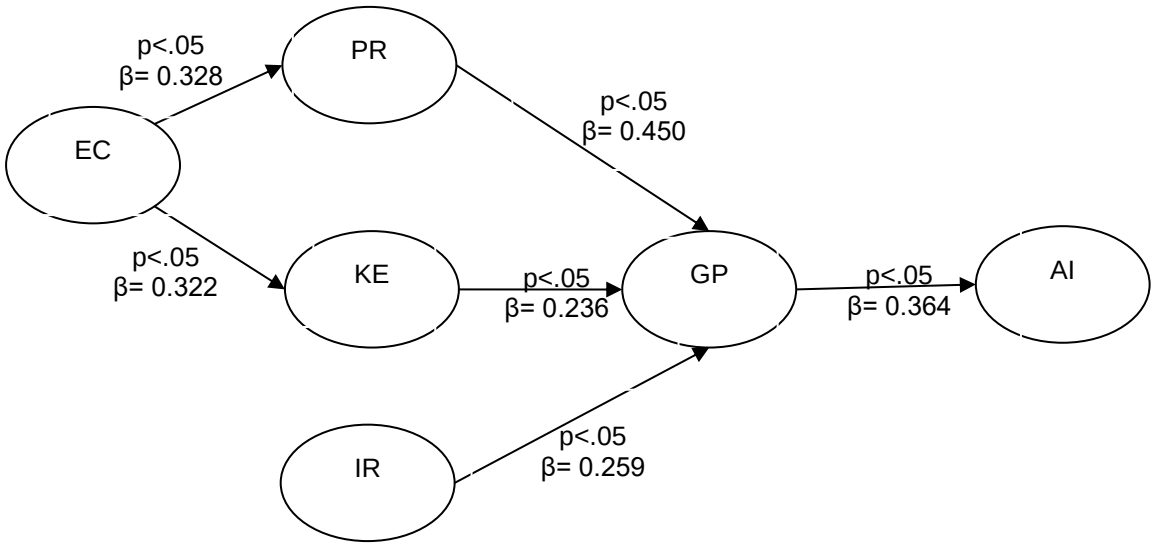

Figure 2: Results of the path analysis

The demographics show that the number of vehicles owned has a significant impact on the adoption intention of EV (Table 5). SPSS Amos was used to find the indirect effect of government policies on other factors. The p-value shows that government policies have a mediating role for the factors like infrastructure requirement, knowledge of EV, and price on adoption intention of EV.

5. Discussion

The three important parameters price, infrastructure requirement, and knowledge of EV impact the EV adoption intention through mediating role of government policies. This is in line with Wappelhorst et al. (2020), which says that policies by the government can help to remove the barrier of affordability, accessibility, and responsiveness. This research put forward that price plays a key role towards adoption intention. The price of EV is on the higher side as compared to the existing fossil fuel cars (Adepetu and Keshev, 2017). Hence, there is a need for government intervention to boost the EV adoption intentions (Sang and Bekhet, 2015; Helveston et al., 2015). The government can provide financial incentives and other benefits like subsidies, tax benefits, and free toll.

The respondents' perception of EV's infrastructure requirement is indifferent to the individual's environmental concern quotient. The EV adoption intention is not directly impacted by the infrastructure requirement, which is not in line with the previous researchers (Li et al., 2017). The perception about the infrastructure requirement impacts the government policies, which further impact the EV adoption intention. The results were corroborated by Song and Potoglou (2020), where infrastructure development was studied as a part of government policies. To stimulate the EV adoption intention, policies should be made to install charging infrastructure (Hall et al., 2020; Slowik et al., 2019; Nicholas and Hall, 2018). The charging stations should be at the workplace and at residence to curtail any uncertainty (Lieven 2015).

With economic development and the provision of credit facilities in the last two decades, the buying capacity has improved substantially, which has also given a major boost to the automobile sector. The increase in the knowledge about the EV through government incentives has a positive impact on adopting an EV (Jenn et al., 2018). Therefore, promotion campaigns and special facilities (e.g., free parking) may further drive people towards buying an EV. Environmental concerns impact EV adoption intention (Shalender and Sharma, 2020; Okada et al., 2019), but our study finds no direct relationship between these two parameters. Interestingly, environmental concern seems to have an impact on price and knowledge of EV. Furthermore, the number of vehicles that an individual holds affects the intention to purchase the EV (Zhang et al., 2011).

6. Conclusion and Implications

The results indicate that the government policies have a significant role in the determinants, including the price, infrastructure requirement, knowledge of EV, and environmental concern towards the EV adoption intention. This research paper puts forward that the price of EV has a more substantial impact on EV adoption intentions through the mediating effect of government policies in comparison to the infrastructure requirement and the knowledge of EV. Therefore, the government should take measures to create sufficient infrastructure and awareness by promoting EVs. It will drive the automobile market and thereby create a positive impact on the adoption intention of customers

Speed of change in technology creates unrest in the minds of the customers investing in new technology as they are never sure when the existing technology will become obsolete. If the policy framework is designed to keep the ever-changing technology aspect in purview, it will motivate the customers concerning the product life cycle. This can be done by imparting education about the environmental benefits of EVs. The promotion of EVs may be done through better exchange programs, extended warranties, and more indirect tax benefits. Furthermore, the awareness among the general public must be created through social media platforms to enhance the acceptability and adoption intention.

7. Future Research

The current research focuses on the impact of the price, infrastructure requirement, knowledge of EV, and environmental concern on EV adoption intentions mediated through government policies. However, there is a scope of further research that may include the psychological parameters of the individual, which may affect the intention to adopt and purchase an EV. People buy vehicles not only for mobility but also for social status. Therefore, the positioning of EVs must also be done to satisfy their emotions and ego. This research has considered the intention to adopt an EV; however, actual buying behavior will add more insights. Moreover, our preliminary data analysis also suggested association of environmental concerns with price and knowledge of EVs. Therefore, it is suggested to future researchers to consider these factors as well.

Competing Interest

We declare no competing interests.

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