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# Navigating Consumer Adoption Trends for Electric Vehicles in Southern India: A Case Study

Dr. H. S. Abzal Basha
Assistant Professor, Department of Management Studies
G. Pullaiah College of Engineering & Technology
Kurnool -518002, Andhra Pradesh, India

Mr. L V V. Nagaraju
Assistant Professor, Department of Management Studies
G. Pullaiah College of Engineering & Technology
Kurnool -518002, Andhra Pradesh, India

**Today, international community is struggling with a critical issue i.e., environmental pollution, with toxic emissions from internal combustion engines being the primary cause of air pollution. To address the adverse effects of fossil fuel emissions and combat environmental issues, electric vehicles (EVs) are being vigorously promoted around the world. Governments are offering incentives to encourage the switch to EVs. However, previous studies have identified several barriers that hinder consumer adoption, including the high cost of electric vehicles, limited charging infrastructure, range anxiety, and time constraints. In response, the Indian government has set an ambitious target of having "only electric vehicles" on its roads by 2030. Currently, electric vehicles (EVs) are becoming more and more prevalent in India. By 2023, sales are expected to grow by 50% to 1.5 million units, accounting for 6.38% of total vehicle sales. This is a significant increase from 2021, when electric vehicles accounted for just 1.75% of sales. However, the electric vehicle industry in India still faces several challenges, including charging infrastructure, range, and cost.**

**This study explores consumer electric vehicle (EV) adoption trends in Southern India, which is characterized by unique cultural, economic, and infrastructural factors by applying mixed approach which unite surveys and interviews with potential consumers; we identify the key drivers and barriers to electric vehicle adoption. Our results reveal a complex interplay of factors influencing consumer behavior, including environmental concerns, economic considerations, and social norms of consumers of Southern India.**

**This article examines the key factors influence the electric vehicle purchase decision of Indian car owners in Southern India. The study uses structured equation modeling (SEM) to analyze the data and shows that attitude (AT) plays a significant mediating role in EV adoption. The results suggest that consumers' attitudes towards electric vehicles have a significant impact on their likelihood of adopting this environmentally friendly technology. This highlights the importance of removing perceived barriers and leveraging positive perceptions to encourage adoption.**

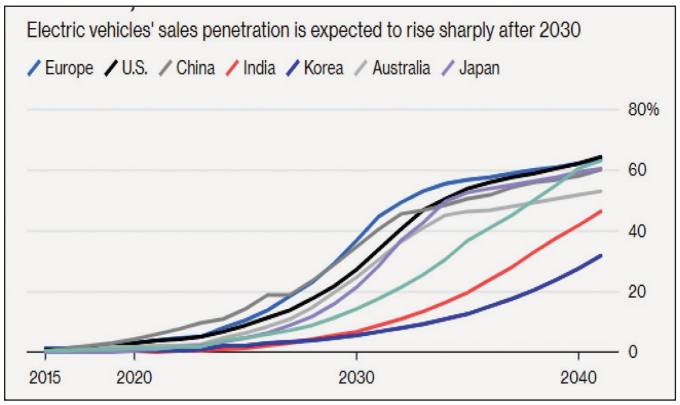
***Keywords: Perception of Economic Benefits, Environmental Concern, Social Influence, Self Image, Attitude and Behavioural Intension***

*"Plans to protect Air and Water,*
*Wilderness and Wildlife are in fact plans to protect Man."* -
***Stewart Udall***

## INTRODUCTION

The automobile industry, over a century old, is on the cusp of a significant transformation. The surge in fossil fuel prices and growing concerns about environmental impact has prompted a shift in individual transportation habits. The industry, long dominated by internal combustion engines are progressively in transition mode in the direction of electric vehicles (EVs). EVs are powered by electric motors, fuelled by rechargeable batteries or portable energy storage devices, offering improved energy efficiency, reduced greenhouse gas (GHG) emissions, and decreased noise levels.

Figure-1: Projection of Electric Vehicles




**Source:** Adopted from Bloomberg Opinion

## THE CURRENT STATE OF ELECTRIC VEHICLES IN INDIA

In the fiscal year 2023-24, India experienced a remarkable surge in its automotive sector, selling nearly 4 million cars. This figure represented 16% of the total vehicle sales in the country for the period, reflecting the sustained demand and growth within the industry. Among these sales, the electric vehicle (EV) segment demonstrated significant progress, underscoring a pivotal shift in consumer preferences and policy direction toward sustainable transportation.

The electric car market, although still a small fraction of the overall automotive sales, showed substantial growth. During FY 2023-24, India saw the sale of 90,468 electric cars, marking a staggering 91% increase from the previous fiscal year. This growth is indicative of a broader acceptance and interest in electric vehicles among Indian consumers, driven by factors such as environmental concerns, government incentives, and advancements in EV technology.

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India is accelerating its efforts to combat pollution and reduce its carbon footprint, with a strategic goal to transition to electric vehicles (EVs) by 2030. The government is urging car manufacturers to switch to EV production, a move that promises to significantly reduce the country's oil import bill by US$60 billion, decrease emissions by 37%, and minimize reliance on foreign fuel imports. This shift will not only mitigate the impact of volatile crude prices and currency fluctuations but also pave the way for a more sustainable and environmentally friendly transportation sector.

To address the challenges hindering EV adoption, the government is exploring the battery swapping model, which has shown partial success in Israel and China. However, this approach faces significant hurdles, primarily the variability in battery size and power across different manufacturers and models, such as Maruti Alto and Honda City. This complexity requires a standardized vehicle design to accommodate uniform batteries, a difficult feat to achieve. Alternatively, battery leasing could help reduce ownership costs. Nevertheless, the widespread availability of charging infrastructure across cities remains a major unresolved challenge, necessitating innovative solutions to ensure seamless EV integration.

India's transition to electric vehicles (EVs) is a pressing necessity in the near future, driven by the urgent need to combat rampant urbanization and alarming pollution levels in several cities. These cities are bearing the brunt of unchecked growth, resulting in severe environmental degradation, with vehicular emissions being the primary culprit. The shift to EVs is crucial to mitigate the devastating impact of pollution and create a sustainable future for urban India.

The Government of India has set an ambitious target: all cars on Indian roads will be electric by 2030. In support of this vision, the Society of Indian Automobile Manufacturers (SIAM) released a white paper in 2017 projecting that electric vehicles (EVs) will comprise 40% of new car sales by 2030 and reach 100% penetration by 2047, a milestone year that coincides with India's centennial celebration of independence. This concerted effort aims to revolutionize the country's automotive landscape, driving sustainable growth and a cleaner environment for future generations.

## REVIEW OF LITERATURE

There is an extensive research has been endeavoured worldwide to understand the factors influence consumer in adopting electric vehicles (EVs).

Many researches has confined to explored vary attributes, including the cost of EVs, driving range per charge, battery recharge time, availability of charging infrastructure, and battery cost.

Additionally, range anxiety and the impact of financial and non-financial incentives have been explored. Table 1 provides a summary of some of the key studies focused on these key attributes, shedding light on the complex factors shaping consumer behaviour in the EV market.

The table below presents a systematic review of the literature, outlining the key variables and attributes investigated in previous research endeavors.

Table-1: Most Researched Variables and Attributes

| Referred Reviews | Variable of the Study | Select Attributes |
|---|---|---|
| Plötz, Funke, Jochem and Wietschel (2017), Bahamonde-Birke and Hanappi (2016), Rasouli and Timmermans (2016), Barth, Jugert, and Fritsche (2016), Beck, Rose, and Greaves (2016), Helveston et al. (2015), Mabit, Cherchi, Jensen, and Jordal-Jørgensen (2015), Valeri and Danielis (2015), Adepetu and Keshav, (2015), Peters and Dütschke (2014). | Driving range | Technology |
| Moon, Park, Jeong, and Lee (2018), Rasouli and Timmermans (2016), Axsen, Bailey, and Castro (2015). | Charging time | |
| Wang, Li, and Zhao (2017), Valeri and Danielis (2015), Bockarjova and Steg (2014), Glerum, Stankovikj, Thémans, and Bierlaire (2014), Jensen, Cherchi, and Mabit (2013) Chorus, Koetse, and Hoen (2013). | Charging station Financial Incentives | Infrastructure Policy |

**Source:** Anil Khurana et al., (2019), A Study on the Adoption of Electric Vehicles in India: The Mediating Role of Attitude, sage Publications, 24(1) 23–34, 2020, DOI: 10.1177/0972262919875548.

## STATEMENT OF THE PROBLEM

Despite the growing importance of sustainable transportation and the increasing popularity of electric vehicles (EVs) globally, Southern India lags behind in EV adoption, hindered by limited charging infrastructure, high upfront costs, and lack of consumer awareness. As a result, the region faces significant environmental and health impacts from traditional fossil fuel-based vehicles, including air pollution and greenhouse gas emissions. To address these challenges and unlock the potential for EV adoption in Southern India, it is essential to understand the complex factors influencing consumer behavior and preferences, develop effective strategies to navigate these trends, and identify opportunities for stakeholders to collaborate and drive the transition to sustainable transportation in the region."

a. Some potential research questions to explore:

b. What are the primary barriers to EV adoption in Southern India?

c. How do consumer perceptions and preferences influence EV adoption in the region?

d. What are the most effective strategies for increasing EV adoption in Southern India?

e. How can stakeholders collaborate to develop the necessary infrastructure and support systems for EVs in the region?

f. What are the potential environmental and health impacts of increased EV adoption in Southern India?

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## NEED AND SIGNIFICANCE OF THE STUDY

The transition to electric vehicles (EVs) is crucial for mitigating climate change, improving air quality, and enhancing energy security. Southern India, with its large population, rapid urbanization, and growing middle class, presents a significant opportunity for EV adoption. However, the region's unique cultural, economic, and infrastructure characteristics pose significant challenges to widespread adoption. Despite the Indian government's ambitious targets for EV adoption, the current market share of EVs in Southern India is negligible. The lack of understanding about consumer behavior, preferences, and perceptions regarding EVs in this region hinders the development of effective strategies to promote adoption.

This study aims to bridge this knowledge gap by investigating the consumer adoption trends for EVs in Southern India. The research will explore the factors influencing consumer behavior, identify market segments with high potential for adoption, and develop strategic recommendations for stakeholders to navigate the complex landscape of EV adoption in the region. The findings of this study will contribute to the development of targeted policies, marketing strategies, and infrastructure development initiatives, ultimately facilitating the transition to sustainable transportation in Southern India.

## SCOPE OF THE STUDY

The present study is confined to explore the consumer adoption of electric vehicles in Southern India. Furthermore, the study has under taken to assess trends of consumer behaviour, preferences, and perceptions regarding EVs in this region to explore the reality of consumer adoption of electric vehicles Southern India, including the states of Andhra Pradesh, Karnataka, Kerala, Tamil Nadu and Telangana. And also the study is limited to assess the various components like;

a. Perception of Economic Benefits
b. Environmental Concern
c. Social Influence
d. Self Image
e. Attitude and
f. Behavioural Intension

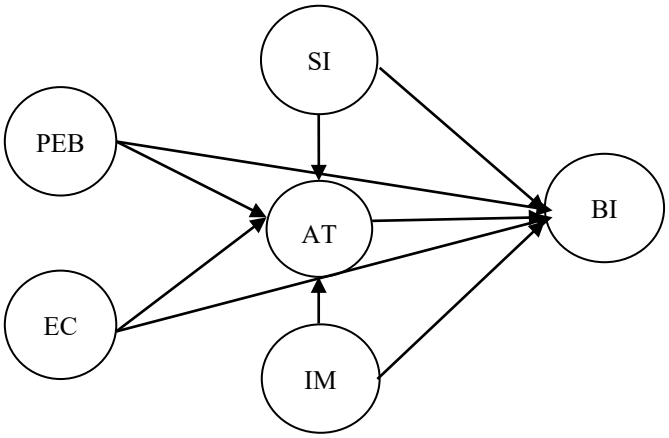


**Figure-2:** Proposed Model for Electric Vehicle Adoption

## OBJECTIVES OF THE STUDY

1. To identify the key factors influence consumer adoption of EVs in Southern India,
2. To examine the potential market size and growth rate of EVs in Southern India,
3. To evaluate the relation among identified key factors and EV adoption in the region.

**Perception of Economic Benefits:**

The higher upfront cost of electric vehicles (EVs) compared to their conventional counterpart poses a significant barrier to adoption. However, research suggests that offering incentives can effectively mitigate this hurdle and boost EV acceptance. Furthermore, the lower operating and maintenance costs of battery electric vehicles (BEVs) make them an attractive option, ultimately driving their adoption. Kumar et al. (2022)[1] Consumers' perception of economic benefits, such as reduced fuel costs and lower emissions, plays a crucial role in their willingness to adopt EVs. Zhang et al. (2020)[2] Perceived economic benefits, including government incentives and lower maintenance costs, significantly impact EV adoption. Caulfield et al. (2018)[3] 75% of EV owners consider fuel cost savings a significant economic benefit. Peterson et al. (2017)[4] Consumers' perceived economic benefits of EVs influence their purchase decisions. Hidrue et al. (2013)[5] Consumers perceive electric vehicles (EVs) as having lower operating costs compared to conventional vehicles (CVs).

**H 1:** There is a significant relation between Consumer's Perceived Economic Benefit and Behaviour Intention in adoption of an EV.

**Environmental Concern:**

Environmental concern, defined as an individual's awareness of environmental issues and their willingness to take action to address them, plays a important role in determining consumer behavior. Numerous studies have consistently shown that the environmental benefits of electric vehicles, such as reduced greenhouse gas emissions and improved air quality, significantly influence consumer intentions to adopt electric vehicles. In fact, research has found that environmental concerns are a key motivator for many consumers considering the purchase of an electric vehicle, highlighting the importance of addressing environmental problems in the automotive industry. Kumar et al. (2022)[6], this study examines the environmental impacts of electric vehicle adoption, including greenhouse gas emissions and air pollution. Zhang et al. (2020)[7] the authors investigate the environmental benefits of electric vehicles, including reduced carbon emissions and improved air quality. Caulfield et al. (2018)[8] this survey of electric vehicle owners finds that environmental concerns are a key motivator for adoption. Peterson et al. (2017)[9] the authors analyze the environmental impacts of electric vehicles, including emissions and resource depletion. Jenn et al. (2015)[10] this review of literature on electric vehicle adoption highlights environmental concerns as a key factor in the decision to purchase an electric vehicle. Hidrue et al. (2013)[11] the authors investigate the willingness of consumers to pay for

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electric vehicles and their attributes, including environmental benefits.

**H 2:** There is a significant relation between Consumer's Environmental Concern and Behaviour Intention in adoption of an EV.

**Social Influence:**

Social influence is a profound concept that encompasses the impact of peer pressure, subjective norms, neighbors, and cultural forces on individual behavior. It recognizes that people seek validation and approval from their social circles, including family, friends, and relatives, for their actions and decisions. Wang et al. (2022)12 this study explores the social influence of family and friends on electric vehicle adoption, highlighting the significance of social norms and peer pressure. Liu et al. (2020)13 the authors investigate the impact of social influence on electric vehicle purchase intentions, finding that social media and online reviews play a crucial role. Zhang et al. (2019)14this research examines the effect of social influence on electric vehicle adoption in China, emphasizing the importance of government incentives and social norms. Jensen et al. (2018)15 the authors analyze the social influence of neighbors and community on electric vehicle adoption, highlighting the role of local social norms. Peterson et al. (2017)16 this study investigates the impact of social influence on electric vehicle adoption, finding that subjective norms and social identity play a significant role.

**H 3:** There is a significant relation between Consumer's Social Influence and Behaviour Intention in adoption of an EV.

**Self Image:**

The self-image of a consumer plays a significant role in the purchase of a product, as it influences their perception of how the product will reflect their identity and values. Consumers tend to choose products that align with their ideal self-image, and avoid those that contradict it. Wang et al. (2022)17 this study explores how consumer self-image influences electric vehicle adoption, finding that consumers' desire for a sustainable self-image drives their willingness to pay more for EVs. Liu et al. (2020)18 the authors investigate the impact of consumer self-image on electric vehicle purchase intentions, revealing that consumers' desire for a futuristic and innovative self-image plays a significant role. Peterson et al. (2018)19 this research examines how consumer self-image affects electric vehicle adoption, highlighting that consumers' desire for an eco-friendly self-image is a key motivator. Jenn et al. (2016)20 the authors analyze the role of consumer self-image in electric vehicle adoption, finding that consumers' desire for a technologically advanced self-image influences their purchase decisions. Hidrue et al. (2013)21 this study explores how consumer self-image influences willingness to pay for electric vehicles, revealing that consumers' desire for a prestigious self-image is a significant factor.

**H 4:** There is a significant relation between Consumer's Self Image and Behaviour Intention in adoption of an EV.

**Attitude:**

Evaluation of an individual's attitude may help to understand person's response relate to a stimuli. A consumer's attitude towards a product plays an important role in their purchase decision, with a positive attitude increasing the likelihood of purchase. A favorable attitude towards a product can lead to brand loyalty and repeat purchases, while a negative attitude can result in rejection and negative word-of-mouth. Zhang et al. (2022)[22] this study explores consumer attitude towards electric vehicles in China, discovered that environmental concerns and government incentives significantly influence positive attitudes. Liu et al. (2020)[23] the authors investigate consumer's attitude towards electric vehicles in the US, revealing that range anxiety and high prices are major barriers to adoption. Peterson et al. (2018)[24] this research examines consumer attitudes towards electric vehicles in Norway, highlighting that environmental concerns and economic benefits drive positive attitudes. Jenn et al. (2016)[24] the authors analyze consumer's attitude towards electric vehicles in the UK, finding that perceived benefits and perceived behavioral control influence intention to purchase. Hidrue et al. (2013)[26] this study explores consumer attitudes towards electric vehicles in the US, revealing that environmental concerns and energy security are significant factors in shaping attitudes.

Based on the discussed reviews the following hypotheses are formulated:

**H5:** There is a significant relation between Consumer's Attitude and Behaviour Intention in adoption of an EV.

**H6:** There is a significant relation between Consumer's Attitude, Perceived Economic and Behaviour Intention in adoption of an EV.

**H7:** There is a significant relation between Consumer's Attitude, Environmental Concern and Behaviour Intention in adoption of an EV.

**H8:** There is a significant relation between Consumer's Attitude, Social Influence, and Behaviour Intention in adoption of an EV.

**H9:** There is a significant relation between Consumer's Attitude, Self Image, and Behaviour Intention in adoption of an EV.

**Behavioural Intension:**

Behavioural intention refers to a consumer's plan or intention to perform a specific behaviour, such as purchasing a product or adopting a new technology. In the context of consumer behaviour, behavioural intention is a key predictor of actual behaviour, including adoption or purchase intention.

Psychological factors will play an important role in molding individual's intention towards the adoption of cleaner vehicles (Kahn, 2007; Ozaki & Sevastyanova, 2011; Peters, Gutscher, & Scholz, 2011). These factors encompass environmental concerns (EC), specific beliefs, social norms, and personal norms, which collectively influence intentions towards the adoption of cleaner cars. Moreover, the evaluation and experience of owning and using an electric vehicle (Attitide) also impact adoption intention.

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Additionally, individuals consider the social approval or disapproval of their purchase decision, as reflected in subjective norms. Based on this review of literature, this study proposes a research model (Figure 2) that integrates these psychological factors to better understand the determinants of cleaner vehicle adoption.

## RESEARCH METHODOLOGY

Today, EVs are not widely available in the market and are not common on Indian roads. It's possible that prospective EV Customer and Consumers have never ever seen, driven, or charged one of these cars. People's acquaintance with these vehicles' features is limited.

The structured questionnaire was used to obtain the data. Information on constructs and their components was included in the created instrument. The questionnaire was divided into two sections.

The information pertaining to the respondents' age, gender, educational qualification, and income were the main focus of the first section. The model variables are measured in the second section of the questionnaire. One mediating variable, four independent variables, and one dependent were present. There were 26 items in the pilot research for 6 test variables.

**Source:** Anil Khurana et al., (2019), A Study on the Adoption of Electric Vehicles in India: The Mediating Role of Attitude, sage Publications, 24(1) 23–34, 2020, DOI: 10.1177/0972262919875548.

### Sample Size

The present has opted 272 valid responses. The select respondents were the present EV car owners. They were residents of the including the states of Andhra Pradesh, Karnataka, Kerala, Tamil Nadu and Telangana. Out of the 426 respondents approached, 272 responded. There were no missing data, and the responses were valid.

### Measurement

The demographic traits were measured by using categorical data in the primary section. A 5-point Likert scale—with 1 denoting strongly disagree and 5 denoting strongly agree—is used in the second section to measure the model variables. The data analysis tools utilized were AMOS version 21.0 and SPSS version 21.0. Structural equation model consists of two parts: the measurement model and the structural model. The measurement model is confirmed in the first stage of the two-stage structural equation model. The degree and route of the link are evaluated in the secondary phase.

### Data Analysis and Results

The reliability of 33 respondents was assessed using the pilot questionnaire. The range of Cronbach's alpha was 0.63 to 0.874, with an overall $\alpha = 0.889$. According to Hair, Anderson, Tatham, and Black (1998), a value of more than 0.6 is considered credible. There were 22 test items on the updated instrument. The study changed one question from EC and eliminated one each from AT. Of the 272 responders, women made up 29.14 % of the sample, while men made up the remaining 70.58%.

Every respondent was an Indian national who currently owned a car. The age and educational profile of the responders are displayed in Figures 3.

The present research applied SEM to predict the relationship among the four exogenous variables; PEB (Perceived economic Benefit), EC (Environmental Concern, SI (Social Influence), and IM (Self Image). The endogenous variables were BI with ATT as a mediating variable. Mediation offers a reliable interpretation of the causal effect.

Table-2: Reliability and Validity

| Construct | No. of Items | Cronbach's Alpha | AVE* (Construct Validity) |
|---|---|---|---|
| PEB | 4 | 0.722 | 0.398 |
| EC | 4 | 0.826 | 0.548 |
| SI | 4 | 0.662 | 0.350 |
| IM | 4 | 0.763 | 0.445 |
| ATT | 3 | 0.896 | 0.760 |
| BI | 3 | 0.910 | 0.770 |

**Source:** Primary Data Analysis.
**Note:** *Average variance extracted.

Table-3: Demographic Details of the Respondents

| Demographic Aspects | | Details of the Respondents | |
|---|---|---|---|
| | | No. of Respondents | Percentage (%) |
| Age | 20-30 years | 90 | 33.08 |
| | 31-40 years | 140 | 51.47 |
| | 41-50 years | 42 | 15.44 |
| | 51 years & above | 0 | 0 |
| | **Total** | **272** | **120** |
| Gender | Male | 192 | 70.58 |
| | Female | 80 | 29.14 |
| | **Total** | **272** | **100** |
| Educational Qualifications | Graduation | 62 | 22.79 |
| | Post Graduation | 90 | 33.08 |
| | Professional | 120 | 44.11 |
| | Any Other | 0 | 0 |
| | **Total** | **272** | **100** |
| Income | Less than 5 Lakh | 55 | 20.22 |
| | 5 - 10 Lakh | 83 | 30.51 |
| | 10 - 20 Lakh | 134 | 49.26 |
| | **Total** | **272** | **100** |

**Source:** Primary Data Analysis

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Table-4: Factor Loading

| S.No | Measured Indicator | Construct Factor | Factor Loading |
|---|---|---|---|
| | **Perception of Economic Benefits** | | |
| 1 | I will save on fuel expenses, as running cost should be lower in case of an electric vehicle | PEB | 0.742*** |
| 2 | The maintenance cost for an electric vehicle will be less | PEB | 0.607*** |
| 3 | Overall cost of owning an electric vehicle will be low due to government incentives | PEB | 0.677*** |
| 4 | I am fully familiar with economic benefits offered by the electric vehicle | PEB | 0.607*** |
| | **Environmental Concern** | | |
| 5 | want to adopt an electric vehicle because of increased air pollution | EC | 0.727*** |
| 6 | The Electric vehicle can contribute to the environment for saving the future generation | EC | 0.815*** |
| 7 | I am familiar with environmental benefits offered by the electric vehicle | EC | 0.630*** |
| 8 | I want to conserve the environment using the electric vehicle over the conventional vehicle | EC | 0.778*** |
| | **Social Influence** | | |
| 9 | People will react positively when they see an electric vehicle on the road | SI | 0.722*** |
| 10 | I think I am more likely to adopt an electric vehicle if my friends and relatives adopt it | SI | 0.546*** |
| 11 | People whose opinions are important to me find electric vehicles good. | SI | 0.643*** |
| 12 | Possessing an electric vehicle would be a status symbol for me. | SI | 0.641*** |
| | **Self Image** | | |
| 13 | Driving an electric vehicle fits my style | IM | 0.747*** |
| 14 | Driving an electric vehicle will reflect my personality | IM | 0.741*** |
| 15 | Eco-friendly people will opt an electric vehicle | IM | 0.466*** |
| 16 | My knowledge about electric vehicle will improve my image | IM | 0.654*** |
| | **Attitude** | | |
| 17 | I am favourably inclined to switch to an electric vehicle | AT | 0.752*** |
| 18 | Driving an electric vehicle will be a wise decision | AT | 0.901*** |
| 19 | It makes sense to use an electric vehicle instead of a conventional vehicle | AT | 0.818*** |
| | **Behavioural Intension** | | |
| 20 | I would like to recommend adoption of an electric vehicle to others | BI | 0.878*** |
| 21 | I would like to speak favourably about the electric vehicle to others | BI | 0.921*** |
| 22 | I would like to definitely adopt an electric vehicle | BI | 0.847*** |

**Source:** Primary Data Analysis.

**Note:** ***Significant at 0.1% level of significance.

Table-5: Fit Indices Confirmatory Factor Analysis

| Fit Indices | Recommended | Observed | Result |
|---|---|---|---|
| CMIN/df (minimum discrepancy as indexed chi-square) | Less than 5 | 1.796 | Acceptable fit |
| CFI (comparative fit index) | More than 0.9 good fit 0.8–0.9 borderline fit | 0.937 | Good fit |
| GFI (goodness of fit index) | More than 0.9 | 0.876 | Marginally missed |
| PNFI (parsimonious normal fit) | More than 0.5 | 0.730 | Acceptable fit |
| RMSEA (root mean square error of approximation) | Less than 0.08 for adequate fit 0.08–0.1 for acceptable fit | 0.061 | Acceptable fit |

**Source:** Primary Data Analysis

Table-6: Hypothesis Results

| Hypothesis Number | Construct | SRW | Significance | Result |
|---|---|---|---|---|
| 1 | BI-PEB | -0.052 | 0.412 | NS |
| 2 | BI-EC | 0.190 | 0.071 | PS |
| 3 | BI-SI | 0.141 | 0.079 | PS |
| 4 | BI-IM | 0.271 | *** | Significant |
| 5 | BI-AT | 0.626 | *** | Significant |
| 6 | AT-PEB | 0.271 | *** | Significant |
| 7 | AT-EC | 0.678 | *** | Significant |
| 8 | AT-SC | 0.354 | *** | Significant |
| 9 | AT-IM | 0.189 | 0.003 | Significant |

**Source:** Primary Data Analysis

Figure-3: Confirmatory Factor Analysis

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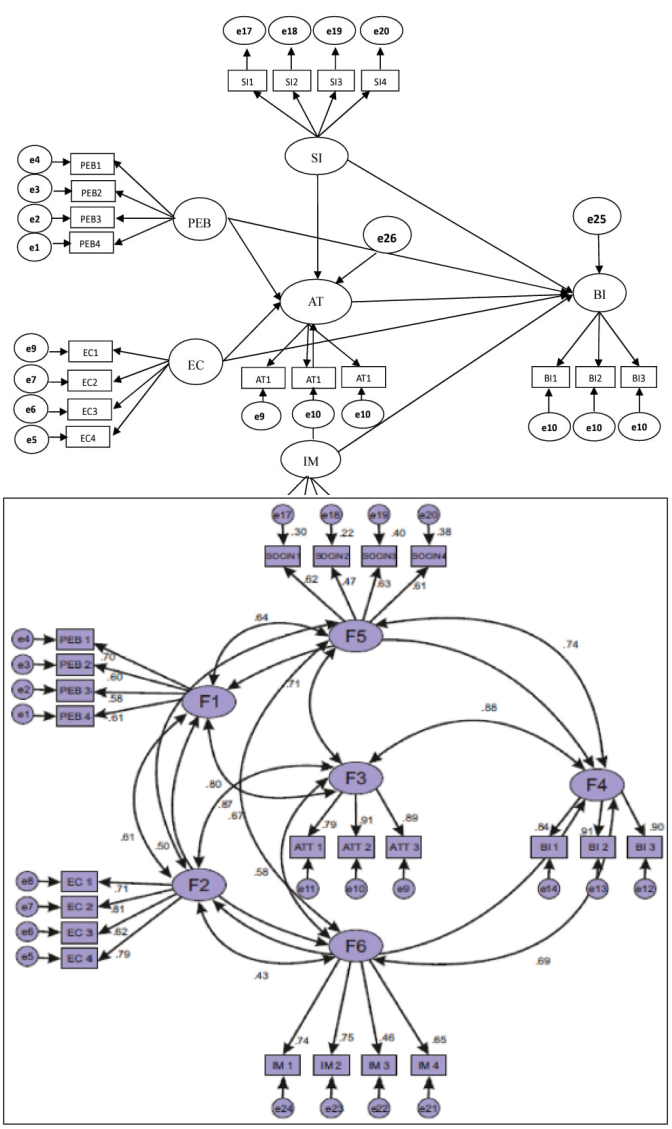


**Source:** Primary Data Analysis

Figure-4: Structural Equation Model

**Source:** Primary Data Analysis

The study found that PEB was not associated with BI in terms of electric vehicle adoption. Rather, it has a stronger positive impact on AT. Environment (EC) and SI are partial predictors of BI, but have a significant impact on AT. EC was a partial predictor of BI.

Hence, the present study confirms that Perceived Economic Benefits (PEC), Environmental Concern (EC), and Social Influence (SI) may affect Behavioural Intention (BI) through constitute of Attitude (AT) of individual, but Self Image (SI) has a direct effect on Consumers of Southern India in adopting the electric vehicles.

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