

# Innovations

## Driving towards Sustainability: An Integrated Bibliometric and Thematic Analysis on Electric Vehicles and Purchase Intention

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**Abstract:** *Electric vehicles are constantly gaining importance as the environmental issues become the topic of major global concern. Unlike conventional means of transportation, it relies on rechargeable batteries and become sustainable alternative. EVs offer multiple benefits such as zero emission, reduced dependency on fossil fuel, low operational costs and improved energy efficiency which ultimately promote sustainability. This study conducted a bibliometric analysis by using 204 research articles published between the years 2014 to 2024. For this purpose, data were retrieved from the Scopus database and was analysed with bibliometric tools like VOS viewer and Bibliometrix in R to identify major trends, influential authors, collaborative networks, and future trajectories in the research landscape of electric vehicles and purchase intention. This study contributes to the existing literature by mapping the intellectual landscape of EV researches and highlighting underdeveloped areas and thereby offering valuable guidance to scholars and practitioners working toward the global transition to clean mobility. The findings disclose that the research in this domain is continuously increasing specially after 2020 and China's plays a dominant role in terms of publications, authors as well as affiliation's contribution, global citation and collaboration network to advance the academia of electric vehicle. Thematic mapping further revealed that purchase intention, electric vehicle adoption, perceived risk, perceived value, and environmental concern are the prominent areas that remain underexplored, indicating potential for future research.*

**Keywords:** *Electric Vehicles, EVs, Environmental issues, Purchase intention, Sustainability, Bibliometric analysis*

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### Introduction

Now-a-days electric vehicles (EVs) have emerged as most prominent alternative for global automobile industry, indicating a shift from traditional fuel vehicles to more sustainable and energy-efficient vehicles. It helps to reduce oil

dependence, air pollution and leads to significant health as well as environmental advantages, hence considered as effective alternative (Wu et al., 2019). EVs has potential to reduce CO<sub>2</sub> emission (Mersky et al., 2016; Asamer et al., 2016; Zhang and Yao, 2015; Bickert et al., 2015; Khoo et al., 2014). It is environment friendly as they are powered by electricity which ultimately helps to reduce greenhouse gases emission, improve air quality, and reduce the use of fossil fuel.

Climate change and environmental degradation continue to pose serious issue on ecosystems at global level. This constant arising environmental issue has positioned sustainability at the forefront. Among various sectors, transportation significantly contributes to greenhouse gases emission and environmental degradation (Statista, 2025). In India, the transport sector contributes approximately 12% of total emissions and road transport being the dominant source due to its heavy reliance on fossil fuels (IEA & NITI Aayog, 2023). Though the transportation sector has facilitated mobility, trade, and urbanization but also brings challenges like air pollution, noise pollution, climate change and depletion of fossil fuel. Before the arrival of electric vehicle this sector is completely depend upon fossil fuel. The fuel used in conventional vehicles significantly responsible for greenhouse gases emissions (Da Silva et al., 2022; Andersson & Borjesson, 2021; Huo et al., 2012). According to (Cifuentes-Faura, 2022) Transportation sector plays major role in fighting against climate change and environmental issues. Reducing environmental impact of this sector is significant for meeting international sustainability standards like the Paris Agreement and the United Nations Sustainable Development Goals (SDGs).

In this context, EVs are forward-looking solution for creating more cleaner and resilient urban settings. EVs have potential to transform transportation systems by lowering emissions, cutting operational costs, and seamlessly integrating transportation system with renewable energy sources. Global EVs adoption has risen in recent years due to technological improvements, government incentives and growing environmental concern among consumers and businesses. As adoption of EVs at global level is growing continuously, the academicians interest in this research area is also increasing alongside. Researchers from various field of study such as like engineering, economics, environmental science, social science and policy studies continuously making their contribution to expand the existing literature of this domain by examining and evaluating EVs performance, feasibility and Societal implications. This growing trend of research underscores the necessity to conduct bibliometric analysis. The bibliometric analysis is performed to identify the most influential authors, institutions, countries, journals who made their contribution in particular research area. It helps to understand patterns of collaboration among research constituent and knowledge dissemination. Furthermore, bibliometric analysis also reveals emerging research themes thereby guiding future research in particular domain.

## Research Questions

In order to systematically explore the existing literatures following research questions are framed:

- What are the publication trends in the research domain of EVs and purchase intention between the years 2014 and 2024?
- Which author, institution, journal and country have contributed the most to the research on EVs and purchase intention?
- What are the most globally cited documents and most frequently occurring keywords?
- What is the structure of collaboration or network pattern among research constituents this domain?
- What are the emerging topics and future research directions in EVs and purchase intention academic landscape?

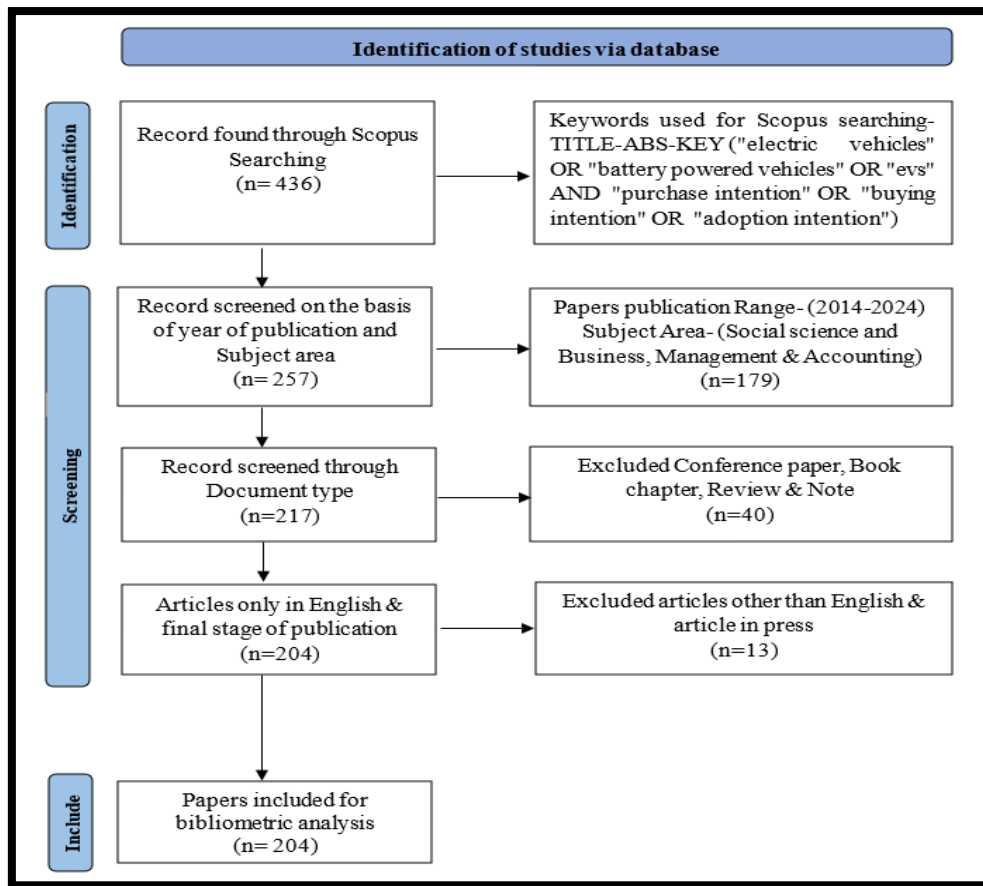
## Aim of the Study

This bibliometric study on electric vehicles and purchase intention is conducted to identify key trends, most influential authors, prolific journals, leading institutions, most productive countries, collaborative networks and future trajectories in this research area.

## Research Methodology

In recent year, bibliometric analysis is most widely used method for quantitatively measuring the intellectual structure and growth of a research field by examining already published literature. To achieve variety of goals, such as recognizing new trends in article, measuring journal performance, pattern of collaboration, and research elements as well as studying the intellectual architecture of particular area within the existing literature academicians use bibliometric analysis (Ragazou et al., 2022; Passas et al., 2022; Donthu, Kumar, Pandey, & Lim, 2021a; Verma & Gustafsson, 2020). For this study, data were obtained from SCOPUS database which is known for its reliability due to extensive coverage of peer-reviewed journals and articles. The search was conducted in the month of July 2025. A structured search strategy was applied for focused retrieval of literature by combining relevant keywords and Boolean operators (AND, OR). Total 436 articles were retrieved out of which 204 were selected for analysis after applying filters. Biblioshiny and VOS viewer software were used to perform analysis of this bibliometric data.

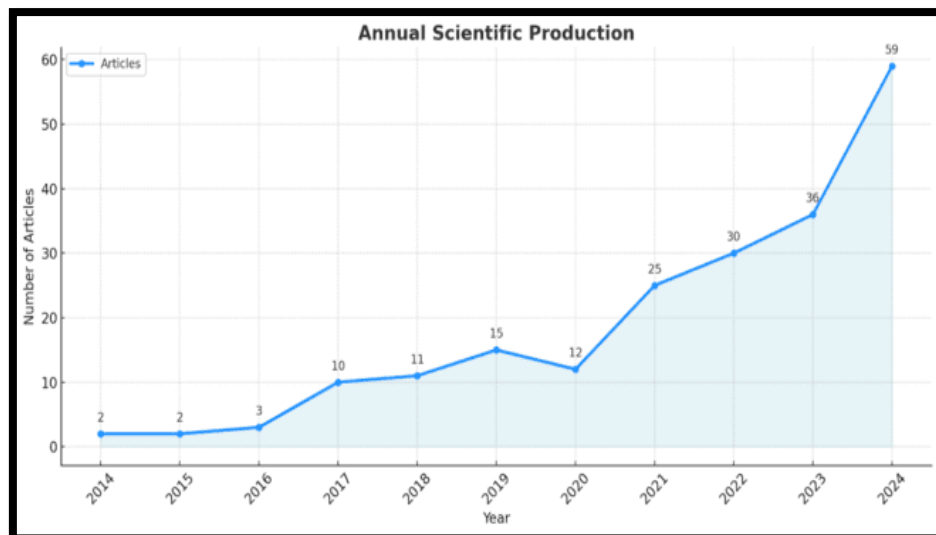
For RQ1, we performed annual scientific production analysis (publication trend analysis). To answer RQ2, author's, institution's, journal's and country's productivity analysis is conducted through Bibliometrix in R. To get insight into RQ 3, we carried out citation and word analysis in biblioshiny. For RQ 4, we performed network analysis by using VOS viewer and to answer RQ 5, thematic map and thematic evolution are used to identify emerging topics and future research directions.



**Figure 1: PRISMA flowchart for inclusion and exclusion criteria**

## Result of Bibliometric Analysis

### Publication trend by year

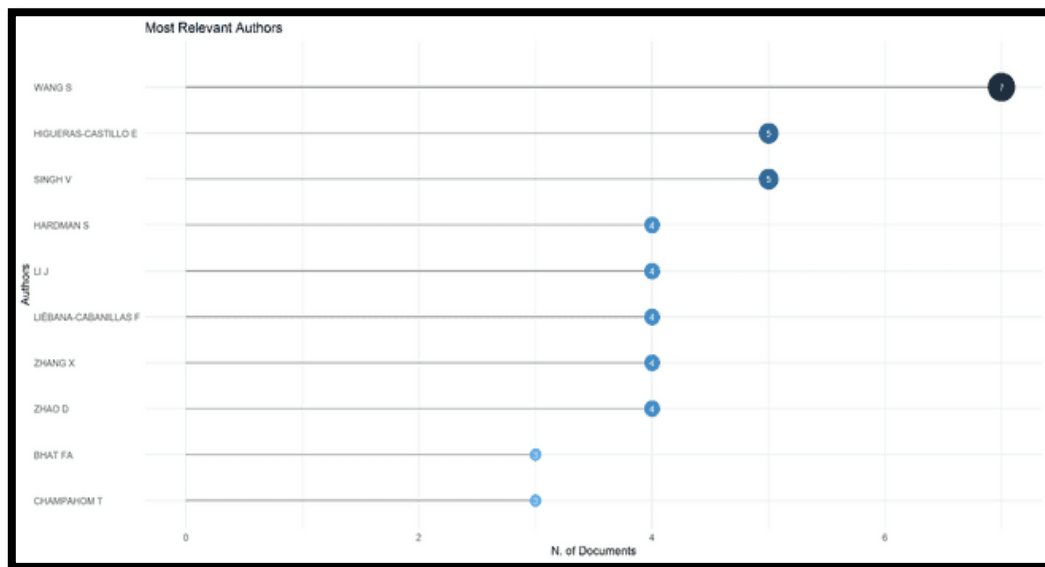


**Figure 2: Publication trend by Year**

Figure 2 shows the publication trend of electric vehicles and purchase intention from 2014 – 2024. This bibliometric analysis of 204 publications reveals that there is gradual but notable increase in the number of scholarly articles, reflecting the growing academic interest in underlying topic. For better understanding, we

divide the time span between 2014 – 2024 into three phases. The first phase is considered as “Initial phase” as the number of publications were 2 (2014), 2 (2015), 3 (2016). The second phase is called as “Growth Phase” as the number of publications during this period were 10 (2017), 11 (2018), 15 (2019), 12 (2020). The third phase is “Expansion Phase” as the number of publications were 25 (2021), 30 (2022), 36 (2023) and 59 (2024). Thus, we can conclude that after 2020 there is continuous increase in scholarly publication in this research area.

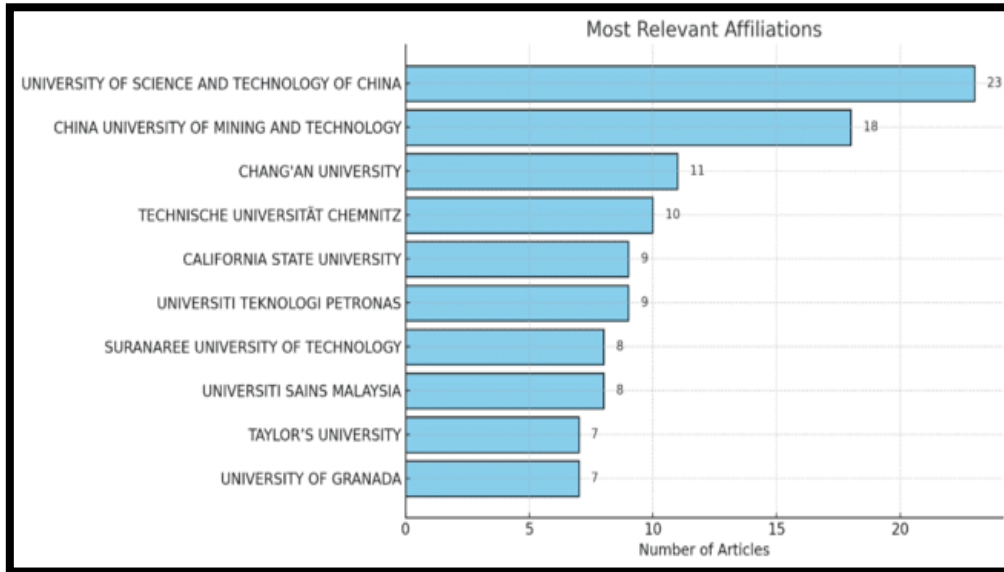
### Most Relevant Authors



**Figure 3-Publications by Author**

Between 2014 – 2024, a total 611 authors across the globe participated in the research field of electric vehicles and purchase intention. Figure 3 shows a visual ranking of the 10 most relevant authors based on the number of documents (publications) contributed by each. With seven publications, Wang, S. leads the field and come out as most prolific author, showing his strong and consistent presence in the academic research. Followed by Higuera-Castillo, E. and Singh, V. both contributing five papers, indicating their active involvement. Several other authors like Hardman, S., Li, J., Liébana-Cabanillas, F., Zhang, X. and Zhao, D. have published four documents each, forming a solid core of influential researchers. Meanwhile, Bhat, F. and Champahom, T. with three publications each, are also made meaningful contributions and try to establish their presence in present body of literature.

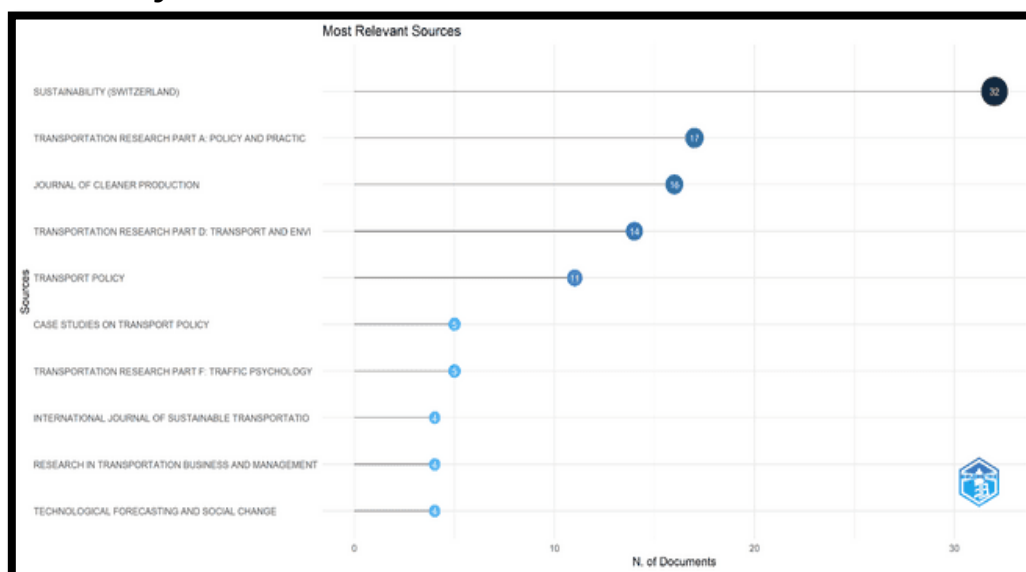
### Most Relevant Affiliation/Institution



**Figure 4: Publications by Affiliation/Institution**

Total 475 institutions have shown their interest among which Figure 4 highlights 10 most active institutions contributing to EVs research area, based on the number of articles published. Most of the institution represented in the figure belongs to China showing their major role in shaping the electric vehicle research landscape. Institutions from other nations such as Germany, Malaysia and Spain have also made significant contribution to the evolving body of knowledge. With 23 publications, University of Science and Technology of China is at top position indicating its strong, focus and ongoing commitment to advancing research in this area. This is followed by China University of Mining and Technology with 18 publications, Chang'an University with 11 articles, Technische Universität Chemnitz with 10 publications.

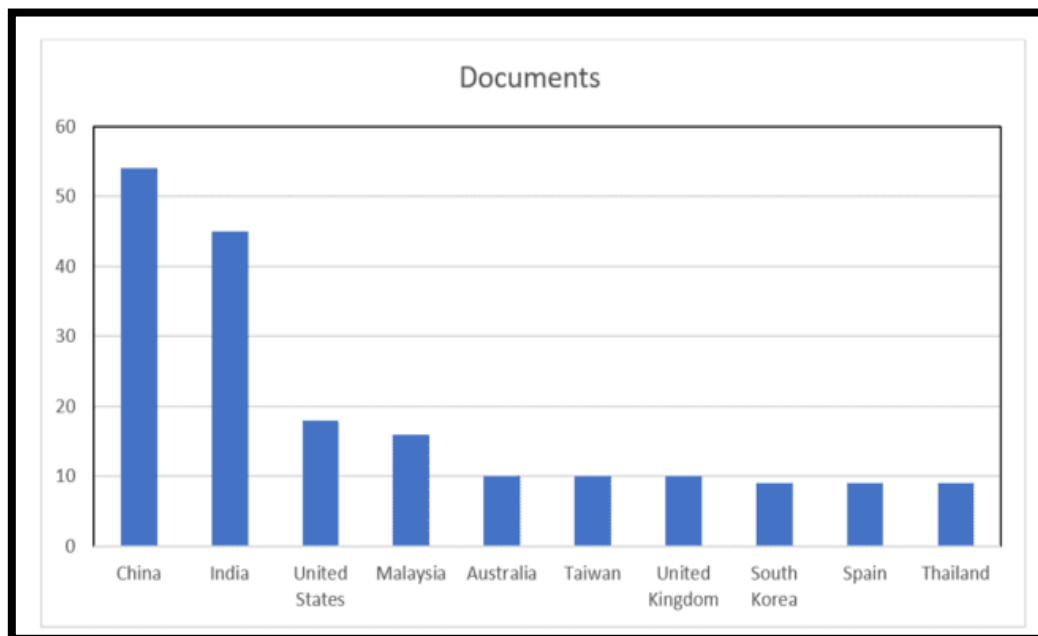
### Most relevant Journal



**Figure 5: Most Relevant Journal**

Figure 5 represents top 10 journals in the domain of electric vehicle. Total 89 journal published articles related to this research field. Among which Sustainability (Switzerland) is at top position with 32 documents indicates that environmental and societal aspects of electric vehicles are a key research focus. The second position was held by Transportation Research Part A: Policy and Practice (17 documents) representing the journal's significant role in disseminating research in this area. Other prominent journals include Journal of Cleaner Production (16 documents), Transportation Research Part D: Transport and Environment (14 documents), Transport Policy (11 documents), Case Studies on Transport Policy and Transportation Research Part F: Traffic Psychology (5 documents each), International Journal of Sustainable Transportation, Research in Transportation Business and Management Technological Forecasting and Social Change (each with 4 documents).

### Most Relevant Countries



**Figure 6: Publications by Country**

Figure 6 represents the distribution of document according to country. Total 45 countries have given their contribution in this research area among which China emerged as the most active contributor with more than 50 publications, reflecting its investments in battery technology, EV infrastructure, and sustainability initiatives. It also indicates country's high strategic focus on reducing carbon emissions, strengthening EV manufacturing base, and becoming a global leader in clean mobility solutions. India ranked second with more than 40 published documents, showing its rising academic and policy interest in the EV sector. This growing body of research is driven by target of net zero carbon emission till 2070 and government's programs like FAME (Faster Adoption and Manufacturing of Hybrid and Electric Vehicles). The United States and Malaysia emerged as



moderate contributors with 18 and 16 documents, respectively. Countries like Australia, Taiwan, United Kingdom, South Korea, Spain, and Thailand fall into the lower range, each contributed between 8 to 10 publications.

### Most Globally Cited Document

**Table 1: Globally Cited document**

S. No.	Author	Paper Title	Journal	Total Citations	TC per year
1	(Wang et al., 2014)	Predicting consumers' intention to adopt hybrid electric vehicles: using an extended version of the theory of planned behavior model	Transportation	587	58.70
2	(Degirmenci & Breitner, 2017)	Consumer purchase intentions for electric vehicles: Is green more important than price and range?	Transportation Research Part D: Transport and Environment	312	34.67
3	(Wang et al., 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	311	38.88
4	(Wang et al., 2017)	The impact of policy measures on consumer intention to adopt electric vehicles: Evidence from China	Transportation Research Part a Policy and Practice	295	32.78
5	(Han et al., 2017)	The intention to adopt electric vehicles: Driven by functional and non-functional values	Transportation Research Part a Policy and Practice	274	30.44
6	(Singh et al., 2020)	A review and simple meta-analysis of factors influencing adoption of electric vehicles	Transportation Research Part D Transport and Environment	268	44.67
7	(Huang & Ge, 2019)	Electric vehicle development in Beijing: An analysis of consumer purchase intention	Journal of Cleaner Production	267	38.14
8	(He et al., 2018)	Consumer purchase intention of electric vehicles in China: The roles of perception and personality	Journal of Cleaner Production	247	30.88
9	(He & Zhan, 2017)	How to activate moral norm to adopt electric vehicles in China?	Journal of Cleaner	234	29.25

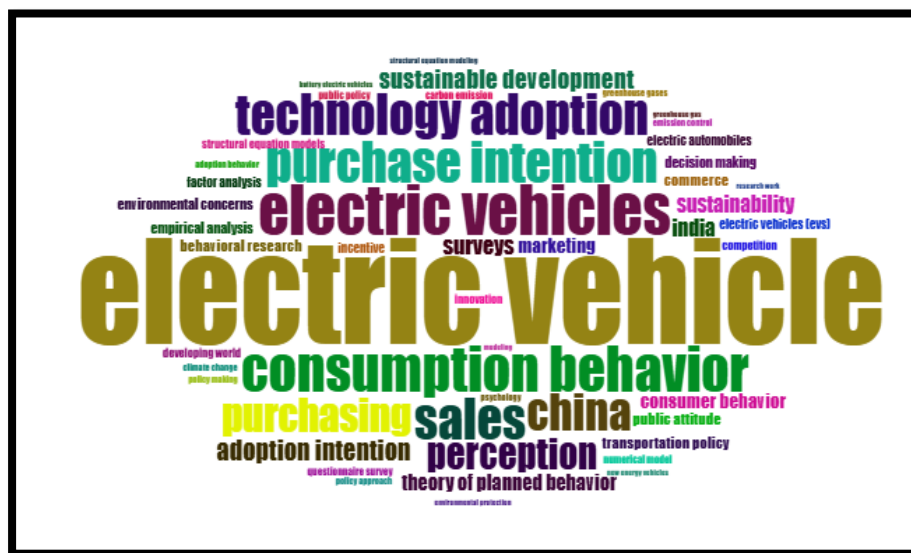


		An empirical study based on extended norm activation theory.	Production		
10	(Asadi et al., 2020)	Factors impacting consumers' intention toward adoption of electric vehicles in Malaysia	Journal of Cleaner Production	226	45.20

Table 1 identifies top 10 globally cited documents on electric vehicle and purchase intention out of 204 documents that is retrieved from Scopus database. The global citation received by these documents ranges between 587-226. The document of (Wang et al., 2014) titled “Predicting consumers’ intention to adopt hybrid electric vehicles: using an extended version of the theory of planned behavior model”, published in Transportation received highest citation of 587. The second position was taken by (Degirmenci & Breitner, 2017), who studied Consumer purchase intentions for electric vehicles: “Is green more important than price and range?”, published in Transportation Research Part D, received 312 citations. Notably, multiple studies from Journal of Cleaner Production also made their position in this list, including works by He et al. (2018), He and Zhan (2017), and Asadi et al. (2020), with citations ranging from 247 to 226.

### Word Cloud

A word cloud is a visual representation of words or terms that occurs frequently in a set of academic documents within its title, abstract and keywords. It helps the researcher to quickly identify the main themes, research trends, or frequently studied topics in a particular field or domain. The size of each word in the cloud reflects its frequency and relevance in the dataset.



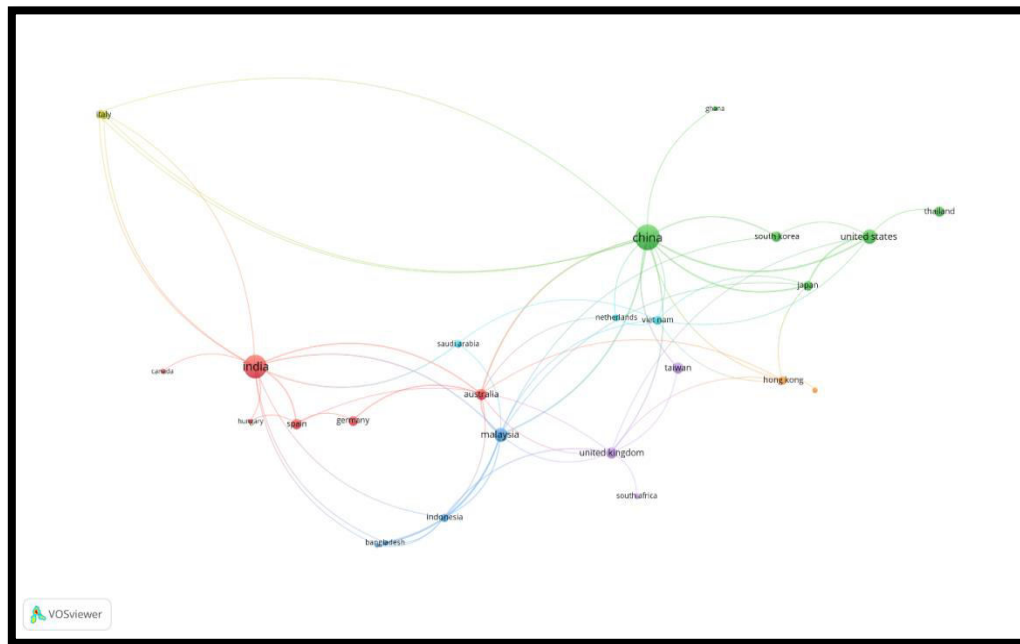
**Figure 7: Word Cloud**

Larger words appear more frequently and smaller word appears less often in the research article. Word cloud that is shown in figure 7 is generated by using software tools Bibliometrix (R). Electric vehicle appears as the largest word in the cloud, indicating that it is used more frequently and are relevant to the research area followed by electric vehicles, consumer behaviour, purchase intention,

sales, technology adoption, China, purchasing, perception, sustainable development, and so on. Words like Consumption behavior, purchase intention, technology adoption and Perception dominates the research landscape showing the role of consumer psychological aspect in adoption of electric vehicle. Words like Structural equation modelling, factor analysis, and theory of planned behavior suggest the importance of quantitative methods and theoretical frameworks in the domain.

## Result of Network Analysis

### Country's Co-Authorship



**Figure 8: Country's Co-authorship**

Figure 8 represents country's co-authorship. In bibliometric analysis, Country's co-authorship reflects intellectual relationship between researchers from different countries on scholarly publications. It shows international research collaboration and highlights which countries often work together in producing academic outputs.

**Table 2: Countries Co- Authorship Analysis**

S.No.	Country	Documents	Citations	Total link Strength
1	China	54	3659	22
2	Malasiya	18	580	14

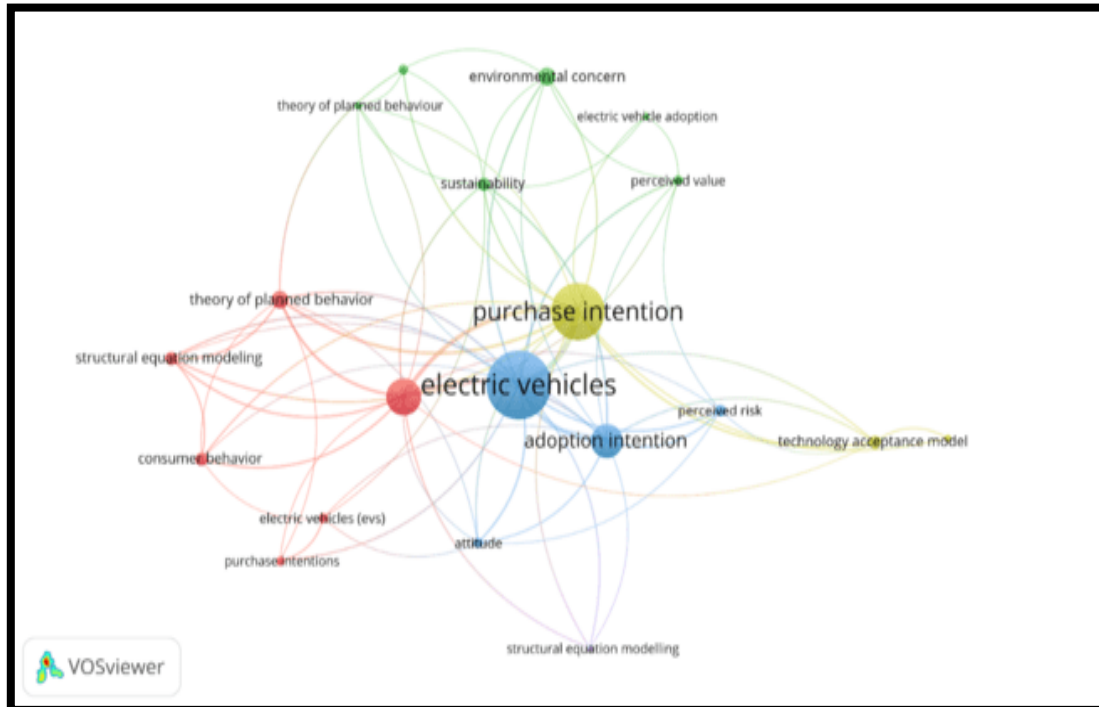
3	Australia	10	529	12
4	United States	17	941	11
5	India	46	1445	10
6	United Kingdom	10	437	10
7	Japan	8	177	9
8	Indonesia	6	32	6
9	Vietnam	7	270	6
10	Hong Kong	6	200	5
11	Saudi Arabia	5	257	4
12	South Korea	9	266	4
13	Spain	9	272	4
14	Germany	8	919	3
15	Taiwan	10	422	3
16	Italy	6	88	2
17	Thailand	9	86	1

The countries co-authorship analysis is shown in table 2, which reveals that China leads by a considerable margin, contributing 54 publications with a total of 3,659 citations and the highest total link strength of 22, showing its active international collaboration in this field. The countries to which China is collaborated are United States (4), Ghana (1), South Korea (2), Japan (3), Vietnam (1), Malaysia (3), Netherland (1), Taiwan (2), Hongkong (1), France (1), and Australia (3). Malaysia also emerges as a key contributor, producing 18 documents and earned 580 citations with total link strength of 14, indicating a relatively well-connected research community. The country to which Malaysia is connected includes South Korea (1), Japan (1), China (3), Vietnam (1), UK (1), Bangladesh (3), India (2), Australia (1) and Saudi Arabia (1). Australia contributed 10 documents with 529 citations and total link strength of 12 showing its higher networking despite of smaller contribution (documents). The collaborating countries with Australia are China (3), Netherlands (1), Hongkong (1), UK (1), Malaysia (2), India (2), Germany (1) and Indonesia (1). The fourth position was hold by United States contributing 17 documents and gained 941 citations with total link strength of 11. India is at fifth position contributing 46 publications, received citation of 1,445 with total link strength of 10. The India's lower link strength suggests that there is need of stronger global collaboration. Overall, this analysis reflects that China plays a central role, while other countries are building collaborative networks to strengthen their presence in electric vehicle research.

### Co-Occurrence Analysis of Keyword

Co-occurrence analysis is a method helps to examine how frequently certain keywords or terms appear together within a set of academic publications. Figure 9

represents co-occurrence of author's keywords. In this analysis, a threshold limit of minimum 4 occurrences is applied to filter out infrequently used keywords and focusing on the most significant terms. Out of 604 keywords only 30 keywords qualify the threshold limit. Finally, 20 keywords are selected after eliminating irrelevant keywords and grouped into 5 clusters to reflect major themes.



**Figure 9: Co-occurrence of authors keywords**

### **Cluster 1: Behavioural aspect of EV Adoption**

Total 6 keywords are appeared in this cluster named consumer behaviour, electric vehicle, electric vehicles(evs), purchase intentions, structural equation modeling and theory of planned behaviour, out of which electric vehicle is most occurring keywords. It occurs in 32 documents and having total link strength of 41. The second most occurring keyword is theory of planned behaviour. It occurs in 18 documents and having total link strength of 31. This cluster focuses on the role of theory of planned behaviour in determining consumer behaviour towards EV adoption.

### **Cluster 2- Sustainability and EV adoption**

This cluster came out with 6 keywords namely battery electric vehicles, electric vehicle adoption, environmental concern, perceived value, sustainability and theory of planned behaviour. The keyword environmental concern is the most occurring. It occurs in 13 documents and having total link strength of 9 followed by sustainability which occurs in 9 documents and having total link strength of 14.

This cluster concentrated on how consumer concern towards sustainability affects their decision regarding electric vehicle adoption.

### **Cluster 3- Psychological factors affecting EV adoption**

Total 4 keywords are shown in this cluster labeled adoption intention, attitude, electric vehicles and perceived risk, out of which electric vehicles is most occurring keywords. It occurs in 68 documents and having total link strength of 73 subsequent to adoption intention which occurs in 29 documents and having total link strength of 32. This cluster emphasizes on explaining the psychological mechanisms behind EV adoption.

### **Cluster 4- TAM based adoption**

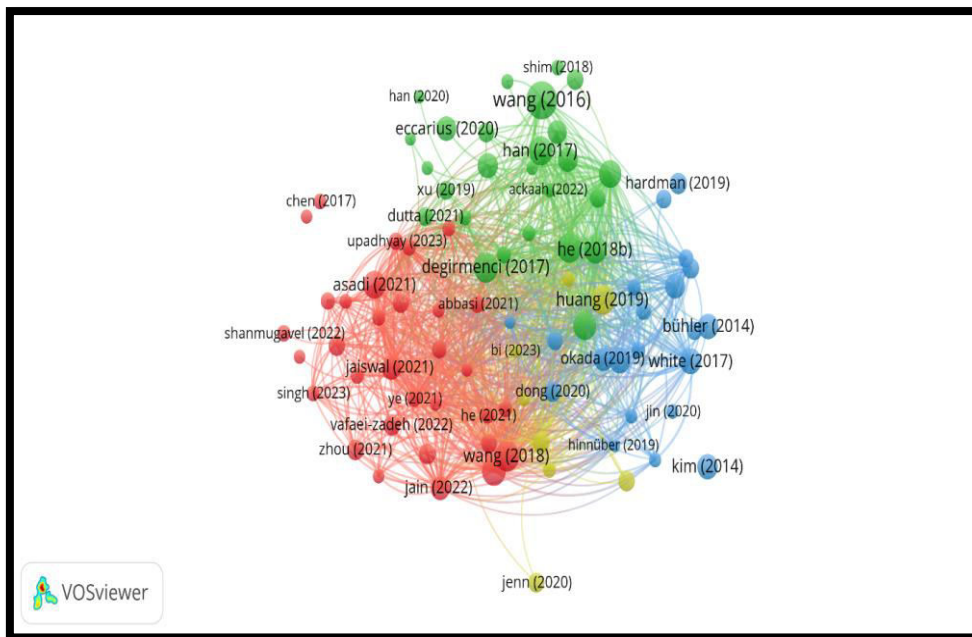
Total 3 keywords are identified in this cluster which includes new energy vehicles, purchase intention as well as technology acceptance model. Among these, technology acceptance models is most occurring keywords. It was found in 12 documents and having a total link strength of 26. This cluster centres on the application of the Technology Acceptance Model (TAM) to study consumer behaviour toward New Energy Vehicles (NEVs). It includes studies that primarily focus on understanding how users' perceptions—such as perceived usefulness, perceived ease of use, and behavioural intention—influence the adoption of NEVs.

### **Cluster 5- SEM**

This cluster is consisting of only one keywords namely structural equation modelling. Being multivariate statistical analysis technique, it helps to analyse structural relationships between variables.

### **Bibliographic Coupling of Articles**

Bibliographic coupling is a science mapping technique that is based on concept that when two articles sharing common references are also similar in their content (Kessler, 1963; Weinberg, 1974). It examines the connection between research constituents on the basis of their cited reference. The primary goal of bibliographic coupling is to uncover patterns of intellectual alignment and thematic similarities among research constituents. Figure 10 represents the bibliographic coupling of article in the area of electric vehicles. We set the minimum 25 citation must receive by document as a threshold limit. And out of 204 articles 87 meet the threshold limit. The analysis reveals four different thematic clusters:



**Figure 10-Bibliographic coupling of Articles**

#### **Cluster 1: EV Adoption through the UTAUT Framework**

This red colour cluster constitutes of 37% of articles and includes studies that explore EV adoption by using Unified Theory of Acceptance and Use of Technology (UTAUT) model in their study. These articles focus on variables such as performance expectancy, effort expectancy, social influence, and facilitating conditions to explain consumer adoption behavior. Key authors of these articles are (Manutworakit & Choocharukul, 2022), (Abbasi et al., 2021), (Jain et al., 2021), and so on.

#### **Cluster 2: Factors influencing EV purchase intention**

As shown in figure- 10, this cluster is represented by green color and constitutes of 25% of articles. The articles included in this cluster focuses on exploring the factors that affect consumer purchase intention. The core studies of this cluster were done by (Ackaah et al., 2021), (Bretones & Marquet, 2022), (Afroz et al., 2015) and so on.

#### **Cluster 3: Comparative studies on EV**

This cluster is presented by blue color and cover 24% of articles which centres on comparative studies that evaluate electric vehicle (EV) adoption across different geographical regions. Articles in this group aim to highlight variations in consumer behaviour, policy effectiveness, market readiness, and electric vehicles acceptance across different contexts. The core literature in this cluster includes authors like (Dai & Yang, 2023), (Hardman et al., 2016), (Habich-Sobieggalla et al., 2018), (Habich-Sobieggalla et al., 2019) and many more.

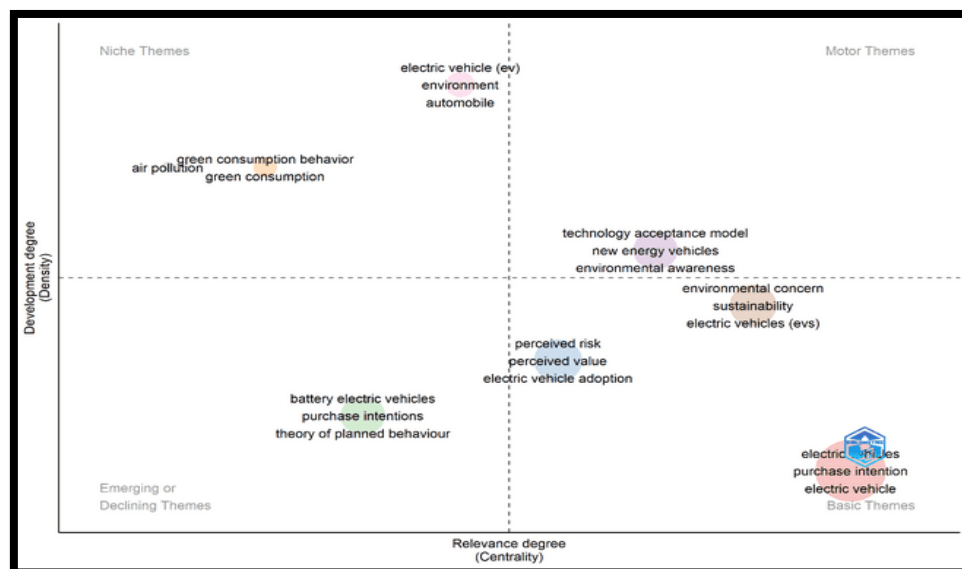
#### **Cluster 4: Policy and Incentives**

This cluster is constituted of 9% of articles and portrait by yellow color in figure 9. This cluster is primarily composed of studies that examine the role of government policies, regulatory frameworks, and financial incentives in promoting the adoption of electric vehicles (EVs). The articles in this group analyse how instruments such as tax rebates, purchase subsidies, infrastructure investments, and emissions regulations influence consumer behaviour and market penetration of EVs. The main studies of this cluster were done by are (Li et al., 2019), (Wolbertus et al., 2018), etc.

## Thematic Map and Evolution

### Thematic Map

In bibliometric analysis, thematic map is visual representation of keywords that helps to classify, evaluate and interpret research themes as well as future research direction in particular research domain. To create the map shown in figure 11, we use author's keywords. The map consists of four quadrants, each quadrant representing different theme (motor themes, niche themes, emerging or declining themes and basic themes) based on their centrality (relevance to the field) and density (development level). The upper right quadrant represents motor theme, which means they are well-developed and relevant for the field. The upper left quadrant represents niche theme which means they are well-developed but not relevant for the field because they are highly specialized. The lower left quadrant represents emerging or declining theme which means they are under-developed. The lower right quadrant represents basic theme which means they are under-developed and relevant for the field.



**Figure 11-Thematic map**



The detail of author's keywords in each quadrant are mentioned below-

First quadrant (upper right) - technology acceptance model, new energy vehicles, and environmental awareness.

Second quadrant (upper left) - green consumption behavior, air pollution, and green consumption, automobile, etc.

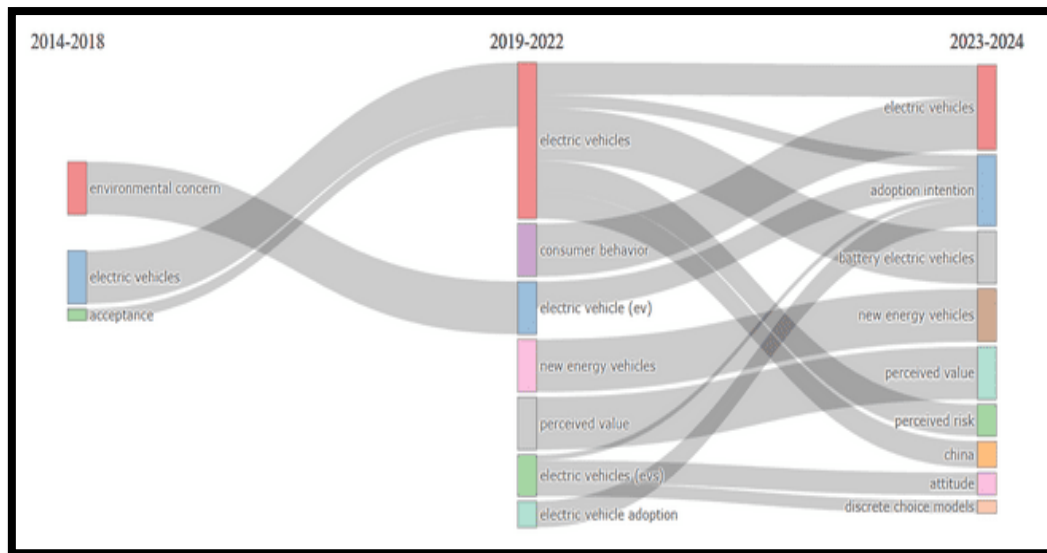
Third quadrant (lower left) - battery electric vehicles, theory of planned behaviour, and purchase intentions.

Fourth quadrant (lower right) - electric vehicles, purchase intention, electric vehicle adoption, perceived risk, perceived value, environmental concern, etc.

So, the researcher should focus on the basic theme's quadrant, located at the lower right of the thematic map, as they are relevant for the study but are underdeveloped that's why recognized as the most promising area for future research directions. It will guide scholars toward topics that are already influential but still need deep theoretical exploration and empirical validation.

### **Thematic Evolution**

Figure 12 shows the thematic evolution of key research themes based on author's keywords. To understand how research topics related to electric vehicles (EVs) have progressed over time. During 2014-2018 the research is concentrated on environmental concern, electric vehicles and acceptance. While between 2019-2022 the research is highly focused on themes like electric vehicles, consumer behavior, electric vehicle (ev), new energy vehicles, perceived value, electric vehicles (evs), and electric vehicle adoption and from 2023-2024 main research hotspots were electric vehicles, adoption intention, battery electric vehicles, new energy vehicles, perceived value, perceived risk, china, attitude and discrete choice models. It is witnessed that the research from 2014-2018 was revolved around understanding people's awareness of EVs and their impact on the environment. From 2019-2022 new research hotspots were added such as consumer behaviour, perceived value and electric vehicle adoption which means research is moving beyond general attitudes to deeper psychological and social factors. Between 2023-2024 few more areas were added like perceived risk, attitude, China and discrete choice model showing that more attention was given to regional trends (like China) and decision-making models.



**Figure 12-**Thematic Evolution

Overall, the thematic evolution shows that research has moved from general interest in EVs and environment concern to a more focused look at consumer psychology along with regional context.

### Conclusion

The present bibliometric analysis provides a comprehensive overview of the research in the domain of electric vehicle and purchase intention. The study highlights publication trends, most prolific authors, relevant journals, leading institutions, most productive countries, highly cited documents, collaboration pattern among research constituent and emerging themes between the period of 2014-2024. The analysis reveals a consistent upward trajectory in publication reflecting the growing global interest in this research area especially after 2020. The analysis identifies China's dominant role in advancing the academia of electric vehicle and purchase intention as the country excels in terms of publication volume, authors as well as affiliation's contribution along with high global citation and collaboration network. Out of 204 documents, 54 belong to China, Wang, S. is most prolific author contributed 7 documents; University of Science and Technology of China is the leading institution with more than 50 publications, with citation of 587. China also plays a central role in collaboration network with other countries. Sustainability (Switzerland), with 32 publications emerged as most relevant journal in this domain. As per word cloud, electric vehicle is most frequently used word. We also identify under researched area with the help of thematic map. The fourth quadrant of thematic map which is also known as basic theme quadrant represents relevant but under-developed area. It is considered as most promising area for future research directions as there is room for more detailed study. The themes that fall under this quadrant includes electric vehicles, purchase intention, electric vehicle adoption, perceived risk, perceived value, environmental concern, etc. The thematic evolution reveals that research in this domain has moved from general interest in EVs and environment

concern to a more focused look at consumer psychology along with regional context.

### **Limitation and Future Scope**

This bibliometric analysis has few limitations that need to acknowledge. For this study, data is retrieved only from SCOPUS database. So, it might possible that some relevant studies remain excluded as they are indexed in other databases. Therefore, it is recommended that future studies include data from more databases such as Web of Science, PubMed, or IEEE Xplore. Secondly, only two main keywords along with their synonyms are used. It is possible that we omitted some of relevant literature. So, future research can be done by using more keywords. Finally, our study includes research articles which belong to subject area of social science and Business, Management & Accounting. Since consumer electric vehicles and purchase intension is a multidimensional topic get affected by behavioural, social, economic, technological and regulatory factors, limiting the subject scope may lead to an incomplete understanding of this topic. It is advised to include a broader range of subject areas for more comprehensive overview.

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