Electrifying Ethiopia: Analyzing the Opportunities, Challenges, and Influencing Factors in Electric Vehicle Importation

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By: Winta Gebreab Gebreyesus

ID No. GSE/0968/15

Advisor: Hailemariam G. (Ph.D)

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Declaration

I, the undersigned, declare that the thesis entitled “Electrifying Ethiopia: Analyzing the Opportunities, Challenges, and Influencing Factors in Electric Vehicle Importation” is my original research work and has not been presented for a degree of any other university. All sources of materials used for the thesis have been properly acknowledged. It is offered for the award of the degree of Master of Science in International Business from Addis Ababa University

Name of candidate: **Winta Gebreab Gebreyesus**
Place: **Addis Ababa University, Ethiopia**
Date of Submission: **July/2025**
Signature: _____

Statement of Certification

This is to certify that the thesis prepared by Winta Gebreab entitled: Electrifying Ethiopia: Analyzing the Opportunities, Challenges, and Influencing Factors in Electric Vehicle Importation and submitted in partial fulfillment of the requirements for the degree of master of science in International Business compiles with the regulation of the university and meets the accepted standards with respect to originality and quality.

Chair Person	**Signature**	**Date**
Dr. Zedalem G/tsadik Internal Examiner	Signature	8/8/25 Date
Dr. Mesfin Workneh External Examiner	Signature	8/8/25 Date
Hailemariam G. (Ph.D) **Advisors'**	**Signature**	08 / 08 / 2025 **Date**

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List of Abbreviation and Acronyms

DOI	Diffusion of Innovation Theory
EEA	European Environment Agency
EVs	Electric Vehicles
ICEVs	Internal Combustion Engine Vehicles
IEA	International Energy Agency
NEF	New Energy Finance
SPSS	Statistical Package for Social Sciences
TAM	Technology Acceptance Model
UNEP	United Nations Environment Programme

Abstract

The aim of this study to assess the opportunities, challenges, and influencing factors in electric vehicle importation in Ethiopia. Based on a quantitative research design, primary data were gathered from 350 EV importers from the population size of 3,004 through structured questionnaires. Descriptive statistics and multiple linear regression analyses were used to examine determinants affecting EV importation by using SPSS Version 26 statistical tools. The findings of the study indicates that the economic factors, policy & regulatory, technological & infrastructure, consumer awareness, and market dynamics were determines the Ethiopian EV importation. The positive their regression coefficient for each covariates were mean that electric vehicle importation were increases for each response variables increases, with other factors held constant. While environmental factors were not statistically significant effect on EV importations in Ethiopia based on the dataset. The most notable findings indicate that economic factors play the biggest role in raising EV imports, and the biggest obstacles are infrastructure shortages in areas of insufficient charging stations, irregular supply of electricity, and lack of repair workshops. This study adds to the existing scholarship on sustainable development by offering pragmatic recommendations to policymakers and industry players seeking to leapfrog the link between EV importation and those all factors to enable Ethiopia's transformation technology, also it must also have longer-term consideration and more inclusive stakeholder engagement.

***Keywords**: Electric Vehicles, Importation, Renewable Energy, Policy, Infrastructure, Consumer Awareness*

CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

Ethiopia's fast-growing economy and population have taken the nation to a crossroads in its development path (Central Statistical Agency of Ethiopia, 2022; World Bank, 2020). The transport infrastructure that constitutes the backbone of rural and urban transportation is currently dominated by foreign fossil fuel-guzzling internal combustion engine automobiles (ICEVs). The economy is stretched by the price of fuel imports, which exposes it to the vagaries of the international price of oil. The sector is also one of the largest causes of environmental degradation, especially in urban centers like Addis Ababa (African Development Bank, 2019; International Energy Agency [IEA], 2020).

The international automobile sector has seen a paradigm shift in recent years, the greater part of which has been fuelled by technological innovation, increased environmental awareness, and the favorable government policies for EVs in most developed and rising economies (IEA, 2021; Bloomberg NEF, 2020). EVs have a string of benefits, including lower running costs, lowering greenhouse gas emissions, and the ability to charge up with the utilization of renewable energy sources. Ethiopia, endowed with huge renewable energy resources like hydroelectric power, possesses a strategic potential to build an independent and sustainable transport network through increasing the utilization of EVs (World Bank, 2019; Ministry of Water, Irrigation and Energy [Ethiopia], 2020).

However, importing EVs is not easy into Ethiopia. The infrastructure in the country is not conducive yet to a mass transition to electric vehicles. The electricity supply also lacks high distribution and reliability in the rural towns, although it is based mainly on renewable energy. The lack of a strong charging facility makes importing EVs even more difficult (African Development Bank, 2021; United Nations Environment Programme [UNEP], 2018). The initial high costs of electric vehicles, inadequate consumer information, and poor government incentives also constitute considerable market entry barriers.

Additionally, the emerging electricity dynamics of electric mobility are yet to be formalized in full within Ethiopia's regulatory and policy framework. Existing car policies focus primarily on

traditional cars, with minimal consideration of the unique prospects and demands that electric vehicles (EVs) present. The absence of an enabling policy environment could yet further undermine the prospects for electric mobility being successfully assimilated into the country's transport system (African Development Bank, 2021; UNEP, 2018).

Environment is also an important one to weigh. Although reliance on hydroelectric power in Ethiopia offers the chance to import electric vehicles (EVs) and minimize carbon emissions, the sustainability of doing this is founded on effective water resource management, which is currently more vulnerable to climate change (World Resources Institute, 2021; European Environment Agency [EEA], 2020). The environmental impact of electric vehicles, such as battery procurement and end-of-life disposal, also needs to be carefully researched in order to ensure that the shift towards EVs does not generate new environmental concerns (EEA, 2020).

It is fitting that the opportunities, challenges, and drivers of the electric vehicle import market in Ethiopia are subjected to critical evaluation in light of such complexity. The intent of this study is to offer a comprehensive evaluation of the infrastructure, economic, regulatory, and environmental drivers which drove the development of electric mobility in the country. In doing so, it aims to provide valuable information that will lead legislators, corporate managers, and the public as a whole through the transformation to a more sustainable transport system.

1.2 Statement of problem

Ethiopia has a very good opportunity to switch to a cleaner and greener transport system through importing electric vehicles. Ethiopia can power EVs in a sustainable manner and decrease its dependence on fossil fuel due to its richness in clean energy sources, particularly hydropower. Around the world, importing EVs is recognized as an effective method of lowering climate change, lowering urban air pollution, and enhancing energy security (IEA, 2023). As seen by nations such as China, Norway, and Germany, EV promotion policy, large-scale infrastructure investments, and economic incentives can have the ability to promote EV imports, lower greenhouse gas emissions, and bring about economic advantages in terms of creating green industry jobs (UNEP, 2022; Mamo, B. G., 2024). Ethiopia has the potential to leverage its strategic location and renewable energy resources to embrace EVs in its transportation sector in this favorable setting, spurring economic progress and environmental stewardship.

However, Ethiopia is faced with several significant challenges that make it a challenge to effectively import EVs. Among the greatest is the lack of infrastructure, where no charging facilities are available or there is an inconsistent supply of electricity. Therefore, it is challenging to operate EVs (Mamo, B. G., 2024). Additionally, there is a high upfront cost of EVs with extra import duties and poor local assembly capability, which deters consumers. The policy foundation on which importation of EVs is based is also not well articulated, and there are no clear incentives in the way of tax relief, subsidies, or infrastructure investment to encourage the use of EVs (IEA, 2023).

The absence of technical knowledge and public consciousness is another key impediment. Consumers in general are still uninformed about the economic and environmental advantages of EVs, and governments and businesses lack experience in managing the distinctive supply chains for EVs, including servicing and battery recycling (UNEP, 2022). In addition to the costs of EVs being even less affordable are international forces such as increasing demand and price for resources required such as lithium and cobalt, which can even drive Ethiopia further from the international EV market (IEA, 2024).

This research will attempt to identify the likely solutions and strategic actions that will cut through Ethiopia's EV import blockade in a bid to resolve these challenges. The suggestion was to come up with policies that will spur the acquisition of electric vehicles, such as reducing import duties and offering subsidies. To develop a secure grid for EVs, investments in charging infrastructure, utilizing Ethiopia's renewable energy resources, have also been highlighted in the report. For enabling technical capability and educating consumers, public campaigns and capacity-building measures have also been proposed. Ethiopia can take steps towards realizing its vision of a green, sustainable transport system supportive of its economic and environmental aspirations by overcoming these challenges.

1.3 Objective of the Study

1.3.1 General objectives

The general objective of this study was to assess the opportunities, challenges, and influencing factors in electric vehicle importation in Ethiopia.

1.3.2 Specific objectives

The specific objectives of this study were:

- To analyze the challenges faced in the importation of electric vehicles in Ethiopia.
- To investigate potential opportunities for enhancing electric vehicle importation in Ethiopia.
- To determine the factors influencing the importation of electric vehicles in Ethiopia.

1.4 Significance of the Study

This research is of important relevance to Ethiopia's development by offering solution-driven results to guide policy-making. In demystifying the regulation and infrastructure shortfalls, it empowers policymakers with means of how to facilitate the integration of electric vehicles, thus meeting Ethiopia's environmental and sustainable development goals. Economically, it emphasizes how the deployment of EVs is capable of creating growth, jobs, reducing the importation of fossil fuels, and constructing a green energy economy, thereby advancing the country's vision of self-reliance as well as industry diversification.

The study was also emphasizing technological and environmental progress. It shows that EVs can mitigate urban air pollution and greenhouse gases emissions necessary to fight climate change. The study encourages investment in transport and energy infrastructure, spurs technological innovation and business opportunities for domestic companies and partnerships with global producers. This places Ethiopia strategically in an open market for EVs while driving sustainable urban transport.

In addition, the study is bridging knowledge gaps by addressing affordability, infrastructure, and social acceptance issues, thus enhancing public awareness and EV technology acceptance. Academically, it bridges a vital literature gap in the context of EV importation into the developing world and contributes contextually. Such contributions make Ethiopia ready to shift toward electric mobility as it goes through economic, environmental, and technological development.

1.5 Scope of the study

The investigation of evidence on the prospects, challenges, and determinants of importation of electric vehicles in Ethiopia is the overall aim of this study. The importation of EVs into the nation's transport system is affected by various factors such as consumers' awareness, economic, regulatory, environmental, and infrastructure. Through the citation of the correlation between government policies, the importation of renewable energy, and the degree of technological preparedness, the research considers drivers and barriers.

The time frame for the study is limited to near and forthcoming EV importation trends, with emphasis on data, policies, and practices within the last five years (circa 2020–2025). It is during this period that one can examine current efforts and forthcoming developments expected in terms of Ethiopia's inclusion of EVs.

Geographically, the research aims at urban centers, specifically Addis Ababa, where the car concentration and air pollution are highest and thus make electric mobility most evident. Urban planning and developing considerate policy and infrastructural factors that affect EV importation into Ethiopia, the research also considers impacts at the national level.

This research follows a quantitative method, in terms of the scope of methodology. A normal questionnaire is employed in order to collect primary data from importers. Findings are also supplemented and verified by secondary data from original national and international sources, such as reports of the Ethiopian government, the IEA, and UNEP. Statistical analysis, theme coding, and model estimates are employed to comprehend data and make useful inferences.

1.6 Limitation of the Study

Although existing research offers thorough analysis of EV importation opportunities, obstacles, and drivers in Ethiopia, some significance should be given to mentioning a few limitations for appropriate interpretation of the results. In terms of the scope of content, the research focuses largely on technological, policy, economic, and environmental issues. However, since cultural and behavioral phenomena that are the cause of long-term trends of importation, e.g., changes in consumer way of life and social norms, were not researched on a large scale, explanation of EV importation's socio-psychological drivers can be limited.

Cross-sectional data gathered at the same moment supports the study's scope of time range. Its temporal character may make it difficult to capture changing patterns and long-term effects of market changes, legislation, or consumer behavior over time with Ethiopia's EV environment changing. The study spatial scope is urban locations, specifically Addis Ababa, with relative concentration of EV-related facilities and activities. Due to differences in road infrastructure, electricity access, and economic conditions across less resourced or rural regions, the outcome may not be generalizable to the nature of opportunities or challenges of EV importation in the given location.

Even if a quantitate design had been conducted, study methodology is also limited by instruments used. Social desirability bias or response error might be evoked by using self-reported survey data.

1.7 Outline of the Study

The research has been organized into five chapters. Chapter one contains an introduction to the study that comprises background, statement of the problem, objectives, significance, scope, and limitations. Chapter two contains literature on electric vehicles that comprise global trends, challenges, and opportunities that comprise theoretical review, empirical review, and conceptual Framework and research hypothesis. Chapter three is a research methodology used in the study, such as research design, data collection, and analysis methods. Chapter four contains the results and discussions, and chapter five concludes the study by suggesting recommendations to policymakers and further research suggestions.

CHAPTER TWO

RELATED LITERATURE REVIEW

2.1 Introduction

The chapter conducts a critical literature review whose aim is to construct a theoretical and empirical background for analyzing the potentials and challenges of importing electric vehicles (EVs) for the case of Ethiopia. To complement the current research, the review analyzes the theories underlying EV importation, makes empirical observations, and identifies research gaps. As a framework to guide the research exercise, a conceptual framework is also constructed.

Electric vehicle imports are highly known globally as a revolution in curbing greenhouse gas emissions, enhancing energy security, and fostering green urban transport. Ethiopia is uniquely positioned to initiate a transition towards electric vehicles since it has a wide range of renewable energy sources as hydropower. The nation is confronted with poor policy frameworks, low consumer awareness, and poor infrastructure. To give a general picture of the challenges and opportunities of importing EVs in Ethiopia, this review discusses theoretical concepts, empirical data, gaps in research, and conceptual frameworks.

2.2 Theoretical Review

The importation of electric vehicles (EVs) can be explored with theories of international trade like the Comparative Advantage Theory and Eclectic Paradigm. The Comparative Advantage Theory, as first theorized by David Ricardo, dictates that nations import products that are not produced competitively or efficiently by their own nations, which include technologically sophisticated EVs, typically produced in nations with advanced motor vehicle industries (Krugman & Obstfeld, 2018).

Ethiopia, with no established automobile manufacturing sector, then resorts to importation as it attempts to respond to the need for EVs. Moreover, Dunning's (1980) Eclectic Paradigm describes the incentive of foreign electric vehicle companies to export to Ethiopia. It describes that multinational companies will export goods to nations such as Ethiopia if there are favorable government incentives (e.g., tax holidays), locational advantages in terms of strategy, and market potential. They make it possible to put in context the policy-related and structural determinants

of EV importation in emerging economies such as Ethiopia.

Support from the government and policy frameworks are highest in facilitating the uptake of electric vehicles. For instance, the number of electric vehicles in industrialized nations has increased significantly owing to strict control of emissions and money incentives (Zaino, R., et al, 2024). Ethiopia's potential to import electric vehicles aligns with global plans for decarbonization (IEA, 2023).

2.2.1 Introduction to Electric Vehicle Importation

Against the background of a global shift towards sustainable transport and reducing greenhouse gases, electric vehicles, or EVs, are becoming increasingly popular worldwide. Electric vehicles (EVs) do not emit tailpipe pollutants since they run on fuel cells or batteries and not on internal combustion engines. Improvements in battery technology, environmental pressure, and increased prices for fossil fuels have all propelled their global upsurge (International Energy Agency [IEA], 2023). Since their lower running and maintenance costs and environmental advantages, EVs are becoming more competitive over time, particularly when policy and infrastructure are favorable (Wang et al., 2022). Importation of EVs has prospects as well as problems in developing countries such as Ethiopia.

The Climate Resilient Green Economy (CRGE) program aligns with national plans for sustainable development. However, affordability issues, legislative lacking incentives, and poor infrastructure hindered collective adoption. EV importation in such markets typically most often represents an innovator activity by a couple of visionary firms or government organizations that are willing to assume the risk of innovation dissemination. Therefore, insight into what affects importation of EVs, including consumer behavior and regulations, is needed in designing effective national strategies (UNEP, 2022).

2.2.2 Historical Context of Electric Vehicles in Ethiopia

Ethiopia's transport sector has previously been dominated by internal combustion engine vehicles (ICEVs) and hardly given attention to the sustainable options. During the pre-2010s period, although climate problems and growing urban emissions in cities such as Addis Ababa promoted

discussion of sustainable transport, electric mobility was hardly discussed in Ethiopia's development discourse (FDRE, 2020). Still, with a robust hydropower base that generated over 90% of the electricity, policy incentives and EV infrastructure were not extensive (Ministry of Water and Energy, 2021).

In recent years, pilot schemes and private importers have started selling EVs in the market in Ethiopia, although with limited volumes. Global nongovernmental organizations and environmental startups have sponsored awareness initiatives, and a few urban businesses have experimented with electric motorbikes and three-wheelers (Mamo, B. G., 2024). The absence of EV national policy, however, has resulted in piecemeal action and poor integration into wider urban and transport planning regulations. Learning from the rest of Africa, including Kenya and Rwanda; emphasizes the need for integrated policy and infrastructure planning to meet greater EV penetration (Bimenyimana, S., et al., 2021; Dioha, M. O., et al., 2022).

2.2.3 Opportunities in Electric Vehicle Importation

There are numerous principal benefits for Ethiopia in importing electric vehicles. Firstly, EVs can potentially lower the country's reliance on petroleum imports, which are a critical component of foreign exchange expenditures. Ethiopia is blessed with plenty of renewable sources of energy, including solar, wind, and hydropower. These enable EVs to be powered in a clean manner, minimizing the carbon footprint of the transport sector (World Bank, 2020). This is in line with the broader aspirations of Ethiopia under the CRGE policy, which values low-carbon development options.

In addition, the importation of EVs facilitates industrial and economic development. The development of EV supply chains and servicing facilities can lead to investment in ancillary industries such as electronics, battery technology, and renewable energy and employment. As the cost of batteries decreases worldwide and new business models (such as leasing and battery swapping) gain popularity, EVs are opening up consumers' and fleet operators' doorsteps to increasing accessibility (BloombergNEF, 2022). Increasing concern of urban residents with climate change, then followed by a corresponding demand for cleaner technologies, needs a reactive base market from importers and dealers of EVs (Gruen, 2016).

2.2.4 Challenges in Electric Vehicle Importation

In spite of these prospects, numerous challenges confront Ethiopia in the EV import industry. Infrastructure is one of the greatest obstacles. Frequent disconnects of the national power grid and lack of rural electrification renders stable EV charging challenging (Bimenyimana, S., et al., 2021; Dioha, M. O., et al., 2022). Moreover, the lack of a master plan for upgrading the national grid and charging infrastructure undermines consumer confidence and private sector investment. It is also avoided by the large initial costs of EVs for customers and the absence of tax credits or subsidies (Mohammed et al., 2023).

Besides, the policy framework is yet to be set up. EVs are still non-competitive commercially through import duties and VAT, similar to ICEVs. Lack of harmonized rules in safety legislations, battery disposal, and charging networks also deters market entry. Lastly, there is also a serious lack of experts who can repair EVs, especially in rural areas. This lack involves a shortage of after-sales service and deters long-term possession. Consumer distrust that results from information deficiency, misinformation, and product availability also constrains market growth (Chuchu & Sefora, 2024).

2.2.5 Policy and Regulatory Framework

In an effort to encourage the importation of EVs, governments globally have made several controls on their statute books. They include direct subsidies for vehicle purchase, low import duties, tax exemption, and investment in charging points (IEA, 2022). Aggressive rollout of infrastructure and partnership with the private sector have helped countries like Norway and China make effective the transition of high percentages of their fleets to electric transport (Wang et al., 2022).

Ethiopia's policy actions are still fragmented. While the Ministry of Transport and Logistics acknowledged the significance of green mobility, it hasn't issued any incentives yet for EV importers such as tax relief, subsidy, or grants for infrastructure. The lack of a cut-and-dried regulation framework for battery recycling, emissions rules, or charging infrastructure generates investor doubt (MoT, 2022). As opposed to Kenya, where EVs are exempt from import duty and VAT, there is no Ethiopia policy yet that correctly differentiates between EVs and ICEVs

(UNEP, 2023). Therefore, the country needs an EV strategy at the national level to stimulate the private sector and align transportation objectives with the environment's requirements.

2.2.6 Factors Influencing EV Importation

There are a number of interconnected determinants that influence the importation of electric vehicles by Ethiopia. Economic incentives like the cost of cars, exchange rates, and access to funds are of importance. Customs levies and uncertainty of the exchange rate are the most commonly mentioned by exporters as the greatest challenge. The lack of preferential finance packages for EV purchasers, on the other hand, limits wider consumer participation (Mohammed et al., 2023).

Technological preparedness and infrastructure are also important. All these issues, for example, the stability of the grid, the number of charging points, and whether imported EVs are adaptable to the climate and geography of Ethiopia, need to be managed by importers (Mamo, B. G., 2024). Social and behavior factors, like customers' awareness, acceptance, and trust in shifting to EV technology, also influence importation. Market forces like the availability of foreign EV brands, local distribution outlets, and repair facilities also affect the viability of increasing EV importation. Last but not least, environmental interest and incentives from the government drive consumer demand and importer strategy (Zaino, R., et al, 2024).

2.2.7 Technological and Infrastructural Factors

There has been an enormous innovation in electric vehicle (EV) technology over the past decade. From the battery technology, for example, lithium-ion batteries, car rides have become much longer and charging faster (International Energy Agency, 2022). Ethiopia's charging infrastructure and unstable power grid are still a large stumbling block, though. From the observations, cities such as Addis Ababa are developing a consistent tendency towards the use of EVs, while rural towns offer real logistical difficulties to the installation of charging stations (UNEP, 2020).

Some of these hindrances can be eliminated by investing in renewable infrastructure. Solar-powered charging stations built into the existing grid have been estimated to significantly

increase sustainability and reliability (World Bank, 2021). That said, given the high costs of upfront infrastructure investment, public-private sector alignment and global donor support are required (African Development Bank, 2019).

2.2.8 Economic and Policy Considerations

The introduction of electric vehicles (EVs) in Ethiopia is highly constrained by economic factors including high import duty, uncertain exchange rates, and the unavailability of comparatively cheaper financing instruments. EVs are generally more expensive to buy than internal combustion engines, and customs tariff, value-added tax (VAT), and shipping fees further increase the cost (Mohammed et al., 2023). It is challenging for Ethiopian importers to get credit from banks as there are no specially designed loan products or government guarantees. Private importers are not only discouraged by such challenges, but consumer availability of low-cost EVs is also restricted. Unless subsidized financing or reducing import duties on EVs is implemented, the EV import market will be restricted and unappealing to local and foreign investors.

Policy-wise, there is also no master regulatory structure in Ethiopia to govern the importation of electric vehicles. Compared to nations such as Kenya and Rwanda, where EVs benefit from zero-rated import taxes and country EV plans, Ethiopian importers have a weak policy and little incentive (UNEP, 2023; IEA, 2023). Though the government is aware of the significance of green mobility and clean energy through programs such as the Climate Resilient Green Economy (CRGE) program, policies have failed to be framed in terms of facilitation mechanisms for imports. Lack of explicitly stated rules for customs clearance procedures, battery disposal standards, and fiscal incentives has discouraged importers. In order to promote EV importation, Ethiopia would have to implement coordinated fiscal and regulatory measures, including differentiated tariff regimes for EVs, infrastructure investment, and subsidizing importers and consumers.

2.2.9 Consumer Awareness and Market Dynamics

The acceptance of EVs is to a great extent dependent on the consumers' perception and awareness. Evidence suggests there are numerous reasons that impede EV adoption in the developing countries, one of which is restricted knowledge regarding the economic and

ecological benefits of EVs (Gruen, 2016). Governmental public awareness campaigns emphasizing the long-term economic and environmental benefits of EVs can modify the attitude of consumers in Ethiopia.

Moreover, the market forces play their part significantly. The entry of global EV players into the markets of the African nations has intensified competition and lowered prices a bit. In order to provide economically viable models that best suit to cater to the needs of the Ethiopian customer base, Ethiopian businesses can collaborate with international brands (Bloomberg NEF, 2022).

2.2.10 Diffusion of Innovation Theory

Rogers (2003) also came up with the theory of Diffusion of Innovations (DOI) to describe the ways that new technologies like electric vehicles become accepted in different populations. Major factors such as relative advantage, compatibility, trial ability, complexity, and observability play an essential role in adoption levels. Based on studies by Kim, M. K., et al. (2014), buyers' perceptions of the cost and environmental benefits of EVs are key drivers to their up-take in developed economies; in developing economies, on the other hand, the process of diffusion is greatly hindered by low infrastructure.

2.2.11 Technology Acceptance Model

Technology Acceptance Model (TAM) by Davis (1989) is most effective in studying the behavior of importers and stakeholders along the supply chain of electric vehicles (EV). In the context of EV importation, perceived usefulness is the economic and strategic advantage expected by importers such as lower costs of operation and compliance with global trends toward sustainability and perceived ease of use as the convenience and effectiveness of the importation process, i.e., customs, licensing, and readiness of infrastructure. If such processes appear to be overly complicated, expensive, or unpredictable, then importers would be discouraged from importing EVs.

Prior research on the African markets indicates that importers' confidence to engage or scale up in the business of EVs is deeply influenced by the perceived availability of enabling facilities, including charging points and maintenance services (Chuchu & Sefora, 2024). Ethiopian

importers, for example, are deterred by the absence of grid access on a continuous basis or after-sales servicing infrastructures. Therefore, enhancing transparency, eliminating red-tape problems, and implementing visible efforts in enhancing infrastructure can positively affect importer sentiments and cause overall involvement towards the transition towards electric mobility.

2.2.12 Sustainability Transition Theory

This conceptual approach is concerned with the shift from traditional systems to sustainable ones. Geels (2020) confirms that system transformation requires a triplet of policy, public, and technology support. In the case of electric vehicles, this would involve having full-fledged regulations, affordable technology, and massive public campaigns. Systemic support is the weakest link that squarely lies in the way of Ethiopia's transformation.

2.3 Empirical Reviews

The evidence base of studies on EV importation in Africa remains limited, but is rapidly expanding. South African findings confirm that production processes done locally and government incentives significantly raise importation levels (Lopes, C., & Kararach, G., 2019). Conversely, research undertaken in Kenya emphasizes the importance of quality charging infrastructure as well as public-private partnerships (Martins, J. O., 2025).

There is still limited empirical evidence in the case of Ethiopia. However, preliminary research shows that the primary importers are largely those living in urban areas that have higher incomes (Mamo, B. G., 2024). The evidence points to the call for comprehensive policies that indeed strike a proper balance among accessibility and affordability issues for a variety of demographic groups. The key insights into various factors influencing the efficiency and complexity of such a transformation are given by empirical research on electric vehicle importation in Africa. The research identifies distinctive regional characteristics that must be considered for proper implementation.

2.3.1 Infrastructure Challenges

From research conducted in Kenya, adding electric vehicles (EVs) to commercial fleets and public transport would reduce inefficiencies in electricity grids by utilizing opportunities of charging during off-peak hours. In contrast, increasing EV usage in private transport may pose a considerable risk of overloading the grid, raising the number of blackouts and accelerating the degradation of infrastructure. To counteract these adverse impacts, managed charging strategies need to be employed (Bimenyimana, S., et al., 2021; Dioha, M. O., et al., 2022). For Ethiopia, where maintaining the stability of the electrical grid is an ongoing concern, the implication here is that there needs to be strategic planning to enhance grid resilience.

2.3.2 Policy and Market Dynamics

The role of monetary and non-monetary incentives to drive the importation rate faster is established through a comprehensive examination of worldwide EV policies. Nations that are favored with subsidies, tax credits, and massive investments in infrastructure have much higher rates of importation. South African consumer surveys indicate that explicit government support and publicity campaigns are among the primary influencers of consumer decision-making in purchase behavior (Chuchu & Sefora, 2024). Such use of evidence-based policy interventions would be useful for Ethiopia.

2.3.3 Sustainability Impacts

Compared to traditional internal combustion engine vehicles, EV lifecycle analysis illustrates a virtual elimination of greenhouse gases, especially if the energy source is renewable. Rwanda is only one African country that has managed to incorporate renewable energy into electric vehicle technology, recording positive outcomes in lowered operating expense and environmental gain (Zaino, R., et al, 2024). These outcomes enhance the viability for Ethiopia to tap its enormous renewable energy resources.

2.3.4 Consumer Perspectives

Consumer disbelief in the affordability, variety, and omnipresence of required infrastructure of electric vehicles is a fundamental barrier, a series of studies from several emerging markets conclude. Consumer awareness of the long-term economic and environmental merits of electric

vehicles is essential. Targeted campaigns, for example, have made very significant positive contributions to consumer acceptance in South Africa, and this must be done in Ethiopia (Chuchu & Sefora, 2024).

2.3.5 Comparative Insights

Comparative analyses of EV importation in Africa and the global world have established that a lack of integrated supply chain structures and domestic capability for manufacturing is a major constraint for scalability. Foreign EV manufacturers partnering with Indian firms would relieve this constraint, since Kenya's first experiment with homegrown assembly units for electric motorbikes has worked (Bimenyimana, S., et al., 2021; Dioha, M. O., et al., 2022).

2.3.6 Opportunities for EV Importation

Importation of electric cars (EVs) offers great prospects for Ethiopia, especially in light of the fact that the nation depends greatly on clean energy sources like hydropower. Since more than 90% of electricity comes from renewable sources, Ethiopia is well-positioned to accommodate a clean and green EV system (IEA, 2023). Importation of EVs can significantly lower reliance on petroleum products, which at present forms a significant foreign exchange spending percentage. And in addition, there might be an opportunity to gain economic advantage through accelerating domestic industries engaged in EV servicing, battery distribution, and green charging infrastructure.

Other African nations' experiences also provide the prospect of using fiscal tools to boost EV importation. Kenya and Rwanda, for instance, have implemented duty exemptions on imports and VAT exemptions on EVs and associated equipment, in effect boosting EV import volumes (UNEP, 2023). Ethiopia can also spur the market through introducing specific tax incentives and facilitation of customs. These efforts would not only make the private sector drawn, but would also complement Ethiopia's Climate Resilient Green Economy (CRGE) strategy.

2.3.7 Challenges in EV and Importation

Despite the opportunities, Ethiopia has significant obstacles in importing electric vehicles. Importation is costly because of tariffs, customs charges, and bad logistics that make EVs

unfeasible in the majority of importers' financial perspective (Mohammed et al., 2023). The lack of a robust national EV import policy also generates uncertainty in customs law that discourages new market participants. Constrained access to credit and foreign currency allocation also inhibit importers' capacity to purchase cars from overseas producers.

Technical and infrastructural limitations also form a significant impediment. Agreed with Ferde Abebe et al. (2022), the absence of specialized garages, spare parts, and diagnostic centers discourages the viability of EV imports. Gebremedhin et al. (2023) also suggest that rural areas are subject to specific disadvantages by virtue of limited access to the grid and a lack of charging infrastructure. All these factors qualify the exposure risk for importers and constrain the scalability of EV imports to beyond large urban areas.

2.3.8 Policy Interventions and Global Lessons

International experience confirms that high-quality policy measures lie at the core of promoting electric vehicle imports. Norway and China are just some of the nations to have achieved quicker EV market expansion on the platform of multi-dimensioned policies ranging from tax credits to infrastructure facilitation and protection of local EV supply chains (Wang et al., 2022). Such policies have promoted the correct importation of EVs into local markets and ensured a welcoming environment for investments.

Instead, Ethiopia's policy environment is fragmented. Foreign investors and the nation's entrepreneurs are deterred from excessive tariffs, as well as by the absence of formal EV-focused regulation regarding customs treatment, licensing, or battery recycling. Ethiopia can take a lesson from Kenya, though, where public-private partnerships and focused policy reform have stimulated EV imports and attracted infrastructure investment (UNEP, 2023). Development of a focused national strategy for the importation of EVs first addressing fiscal, infrastructural, and regulatory deficits would be an important step towards creating a sustainable and competitive EV industry in Ethiopia.

2.4 Research Gaps

Although global evidence regarding EV importation increases, issues in regard to the unique opportunity and limitations of Ethiopian importation of EVs continue to be multi-faceted. Most

of the available literature uses high-income or industrializing nations, and consequently very little information is available for low-income nations such as Ethiopia with very different infrastructure, legal system, and socioeconomic framework (Bimenyimana, S., et al., 2021; Dioha, M. O., et al., 2022; Zaino, R., et al, 2024).

In spite of the increased research and policy attention towards the importation of electric vehicles in Ethiopia, past studies have generally addressed overall challenges as well as environmental impacts, with limited empirical studies delving into the intricate drivers of EV importation. For example, research such as Nigussie (2023) mainly evaluate the adoption of electric vehicles in Ethiopia by focusing on challenges and opportunities for clean mobility also consider the public awareness, policy and infrastructure constraints, but do not have an in-depth study of the regulatory, economic, market forces and technology determinants directly influencing EV import quantities. Furthermore, most of the analyses are not only based on determinants of importation of EV in general to importers and other stakeholders. Such implies a wide gap in between evidence-based policy suggestions based on inclusive.

In addition, while policy measures like tax credits and customs duty reduction for EV importation have been made to incentivize EV importation (U.S. Department of Commerce, 2023), what is unknown is the effectiveness, accessibility, and sustainability of such policies at the local level in the case of Ethiopia. There remains no comprehensive framework that systematically considers the interplay between infrastructural preparedness, market forces, and socioeconomic determinants influencing EV importation. Thus, the present study aims to address these gaps by providing a composite and context-oriented assessment of the challenges, opportunities, and determinants affecting the importation of electric vehicles to Ethiopia.

2.5 Conceptual Framework

Conceptual framework of the present study draws from empirical and theoretical information. Diffusion of EV importation in Ethiopia is founded on perceived relative advantage, compatibility with existing infrastructure, ease of use, and translucency of advantages, according to the Diffusion of Innovation Theory (Rogers, 2003). Support of the assumption that perceived usefulness and ease of use play a significant role in influencing importation behavior is supplied by the Technology Acceptance Model (TAM) (Davis, 1989).

The dependent variable, EV importation, is influenced by the six independent clusters of variables within this research: economic, policy, regulatory, technological and infrastructure, consumer awareness, market dynamics, and environmental. These paradigms offer an integrated perspective from which Ethiopia's preparedness and ability to embrace electric mobility can be judged. The paradigm is quantifiable, measurable, and is a strategic planning guide as well as a policy-making tool. The following conceptual framework has been constructed by the researcher for the research to facilitate its objectives.

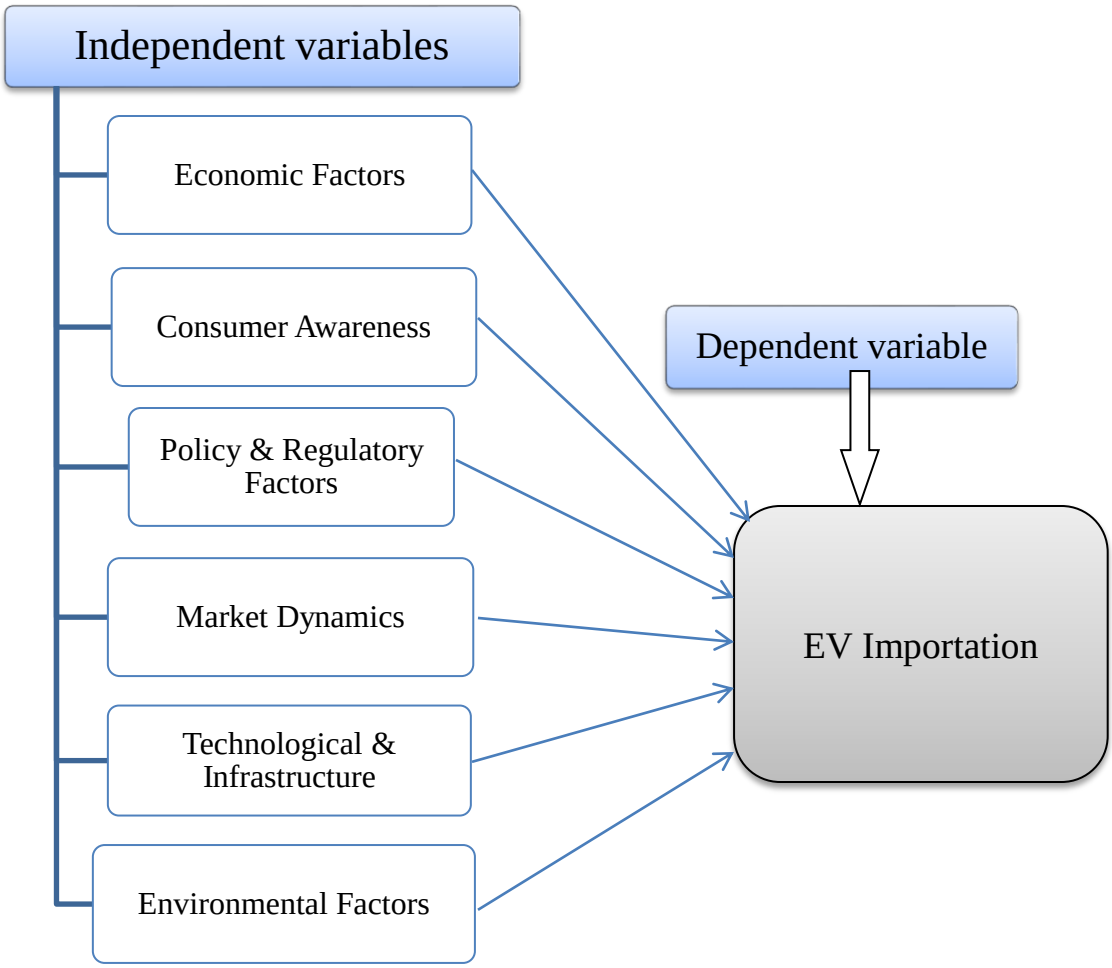


Figure 2.1: Conceptual framework for the Study (Source: Theoretical & Empirical Reviews)

2.6 Research Hypothesis

Based on the conceptual framework and reviewed literature, the study formulates the following hypotheses:

H_{01}: Economic factors do not have a statistically significant effect on EV importation in Ethiopia.

H_{02}: Consumer awareness does not have a statistically significant effect on EV importation in Ethiopia.

H_{03}: Policy & Regulatory Factors do not have a statistically significant effect on EV importation in Ethiopia.

H_{04}: Market Dynamics does not have a statistically significant effect on EV importation in Ethiopia.

H_{05}: Technological & Infrastructure do not have a statistically significant effect on EV importation in Ethiopia.

H_{06}: Environmental Factors do not have a statistically significant effect on EV importation in Ethiopia.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the methodology framework used in determining the opportunities, challenges, and determinants for importing electric vehicles into Ethiopia. It defines the research design, method, data sources, target population, sampling methods, variables, model specification and data handling, and validity, reliability, and ethics consideration.

3.2 Research Design

Descriptive and explanatory research designs were employed within the current study. The descriptive research design gives a complete description of the importation of electric vehicles in Ethiopia. The approach of this kind is dealing with the gathering and examination of information with the aim of acquiring knowledge on the causes of such occurrences without an attempt to prove apparent causal relationships. It allows for one to thoroughly examine the personality, traits, and views of those individuals who engage in EV importation.

Furthermore, the explanatory research design is effective in investigating the causal relationships that exist between the various factors affecting EV importation. The design assists in identifying the degree to which infrastructure, policy, economic, and consumer perception factors affect the import level of EVs in Ethiopia. The research offers a comprehensive analysis that unites the strength of descriptive insight with explanatory depth in comprehending the patterns of EV importation and the forces behind its success by uniting the two approaches.

3.3 Research Approach

This research utilized the quantitative research paradigm that utilizes survey data to assess consumer sentiment, infrastructure availability, and policy towards electric vehicle imports. Such methods enable a full understanding of the research problem.

3.4 Source of Data

The research has employed both the primary and secondary source of data to help in detailed analysis. Primary data are collected via questionnaires that are expertly crafted along with the

stakeholders, providing the prompt insights and opinions relevant to the research objective. These data provide instant awareness regarding the phenomenon of interest.

Backed by primary data, secondary data are gathered from authentic sources like government documents, international research, and various databases. These sources of data offer essential background information, history data, and comparative statistics that complement the primary data for enhancing the depth and validity of conclusions in the study.

3.5 Population and Sampling Procedure

3.5.1 Population

The target population of this research is Ethiopian importers of electric vehicles. Since they were directly engaged in the importation process, subject to regulation, and market forces influencing EV importation, they were selected with prudence. There is no evident official registration information, however, and individual EV importation was not registered for the population of EV importers in Ethiopia. Hence, the population in this study can be assumed to be all licensed importers who are at present handling or potentially handling importing EVs, like those who are presently handling vehicles (diesel, gasoline, and hybrid) and may expand into the EV business. By looking both at present and prospective importers, this method captures a whole picture of possibilities and challenges.

The Ministry of Trade and Regional Integration figures for registered car importers in Ethiopia indicated that there were approximately 3,004 prospective importers (accredited motor vehicle traders as well as companies with the relevant trade codes), but all may not be importing EVs.

3.5.2 Sample Size Determination

To determine the sample size, it is important to specify the precision of the estimation desired. When a study was being made, sampling error arises and it was controlled by selecting adequate sample size (ε =5%) and 5% level of confidence. According to Yemane (1967) the sample size determination was:

$$n = \frac{N}{1+N(e)^2} = \frac{3004}{1+3004(0.05)^2} = 353$$

Where:

- n: Sample size that was required to computed
- N: Population size taken it was given to be 3004
- e: Margin of error (5%)

Hence the sample size considered under the study was 353 respondents. And also they were selected by using convenience sampling techniques to address those focused on importing EVs.

3.5.3 Sampling Techniques

Multi-stage sampling was used in the study to deal with logistical constraints and responsiveness to the objectives of the study. Initially, given its target of EV-friendly infrastructure, policy centers for implementation, and concentration in Ethiopia's car importation framework, Addis Ababa was selected as a single site of study purposively. Second, 353 respondents were sample-sized by simple random sampling to the total population of 3,004 licensed car importers that the Ethiopian Business Licensing Office had furnished. This stage minimized bias among Addis Ababa's importing population and gave equal opportunity for entry. Finally, convenience sampling was applied in ranking respondents who were actively engaged in EV importing when collecting data.

3.6 Description of Variables

This study looks at Ethiopia's EV importation opportunities, obstacles, and determinants. As explained below, the variables are divided into dependent and independent variables.

3.6.1 Dependent Variables

Electric Vehicle Importation: Assessed in terms of the volume of EVs imported, interest among importers, and obstacles encountered during the importation process as measured on the 5-level Liker scale developed by (Ashok, B., et al., 2022) and applied by UNEP (2023).

3.6.2 Independent Variables

1. **Economic Factors**
   - Cost of EVs versus conventional cars.
   - Access to financial assistance (subsidies, tax relief).
   - Impact of import tariffs on EV prices.

- Import cost of EVs, including delivery and customs charges (Mohammed et al., 2023)

2. **Policy and Regulatory Factors**
   - Government incentives for EV importation (tax exemptions, infrastructure investments).
   - Regulation and facilitation of procuring licenses for importing EVs.
   - Public-private partnerships facilitating EV importation (Wang et al., 2022)
3. **Technological and Infrastructure Factors**
   - Charging station availability and accessibility.
   - Access of the electrical grid to serve EVs.
   - Presence of EV maintenance and repair facilities.
   - Technological ability to handle EV imports and parts required (Gebremedhin et al., 2023)
4. **Consumer Awareness**
   - General public consciousness of EV benefits (cost, environmental).
   - Perceptions regarding practicality, dependability, and price.
   - Willingness to transition from traditional vehicles to EVs (Chuchu & Sefora, 2024)
5. **Market Dynamics**
   - Presence of affordable EV models in the Ethiopian market.
   - Interest and willingness of importers to provide EVs.
   - Impact of worldwide supply chain shortage on EV availability.
   - Demand for EVs by Ethiopian consumers (Bloomberg NEF, 2022).
6. **Environmental Factors**
   - Integration of renewable energy into EV charging systems.
   - Perceived environmental advantage of EVs over gasoline-powered vehicles.
   - Sustainability concerns on recycling and disposal of the battery (Zaino, R., et al, 2024).

3.7 Data Processing and Analysis

3.7.1 Data Processing

The data processing process has several steps to ensure that it is accurate, consistent, and reliable. Quantitative information obtained from questionnaires has been verified for

completeness, cleaned of inconsistencies, and coded prior to entering into the SPSS version 26 statistical software. Missing values have been managed with suitable imputation methods to reduce bias and ensure data integrity. As a further validation on the data, cross-validation methods have been utilized, and descriptive statistics have been calculated to check for outliers and required transformations to satisfy model assumptions.

3.7.2 Data Analysis

This research utilizes a mix of descriptive and inferential data analysis to evaluate opportunities, challenges, and determinants for electric vehicle importation in Ethiopia. Findings are summarized into descriptive statistics such as mean, standard deviation, and frequency distributions. Data visualization tools, i.e., pie charts and bar charts, also display demographic traits of the respondents.

For inferential analysis, multiple regression models and correlation analysis were conducted with EV importation as continuous dependent variables. The dependent variables were measured by the mean score of responses on Likert-scale (range from 1 = Strongly Disagree to 5 = Strongly Agree) in a bid to capture respondents' overall agreement with EV importation.

From the use of multiple linear regression, it is established in this study the degree to which independent variables like economic variables, policy environment, infrastructure availability, perception of customers, and market forces play a role in EV importation. Through this, there can be a clearer determination of the factors driving EV importation in Ethiopia.

3.8 Model Specification

To examine the extent of EV importation, two multiple linear regression models have been used, where each dependent variable is measured using the mean Likert-scale score from respondents' perceptions.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \varepsilon$$

Where:

$Y =$ Dependent variable (EV Importation)

$X_1, X_2, X_3, X_4, X_5 \; and \; X_6 =$ Independent variables (Economic, Policy, Infrastructure, Consumer Awareness, Market Dynamics, and Environmental Factors) respectively

$\beta_0 =$ Constant (Intercept)

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, and\ \beta_6 =$ The regression coefficient of each independent variable respectively

$\varepsilon =$ Error term

These models were allowed for a quantitative assessment of how different factors influence the extent of EV importation, providing actionable recommendations for policymakers and stakeholders.

3.9 Validity and Reliability

Validity and reliability are crucial for data collected in this study that examines the opportunity, challenge, and determinants of importation of electric vehicles in Ethiopia. The study uses a range of techniques to achieve reliability and validity of the data. Pilot testing is carried out on questionnaires to rule out ambiguity and refine questions. Triangulation makes findings more reliable by cross-verifying data from different sources.

Validity is the extent to which the measuring devices are measuring what they purport to measure. The questionnaire was crafted to closely relate to the objectives of the study and give necessary information regarding the specified independent factors and EV imports to determine the validity of the study. The questionnaire was thus scrutinized carefully to ensure it appropriately captured the study's purposes. Its content was assessed through export performance practitioners and a rigorous literature review. The process will guarantee data collected is an accurate representation of the phenomenon under study.

Reliability is the consistency and steadiness of the measurements employed to analyze the relationship between the inter-variables (Ghauri & Grönhaug 2005). After careful thinking through of the description of the problem, research goals, and relevant theories, the questionnaire was designed to facilitate ensuring an increase in reliability. The questions were regarding EV importation and the variables represented by the potential, challenges, and factors affecting EV importation in Ethiopia. In addition, internal quantitative tool consistency is assessed based on Cronbach's alpha and other statistical measures (Yin, 2021). Above were the statistical tests for Cronbach's alpha to ascertain reliability measures for this research based on data collected and the questionnaire under research for all variables.

Table 3.1: Reliability Statistics

Construct	No of Items	Cronbach's alpha
Electric Vehicle Importation	7	0.799
Economic Factors	8	0.842
Policy & Regulatory Factors	9	0.911
Technological & Infrastructure Factors	8	0.731
Consumer Awareness	9	0.749
Market Dynamics	9	0.923
Environmental Factors	9	0.825
Opportunities in EV Importation	5	0.713
Challenges in EV Importation	8	0.898

Source: Survey data result, (2025)

As it was indicated on the above table 3.1 the Cronbach's alpha coefficients that was calculated for each section of the questionnaire, it's the values ranged between 0.713 and 0.923, indicating high reliability for each section.

3.10 Ethical Consideration

Ethical concerns in the framework of this research had the highest regard for the well-being and rights of the participants. Informed consent has been maintained by direct communication of study goals, research procedures, and participants' rights before engaging them in study participation. Confidentiality was upheld strictly by anonym zing participants' responses to ensure protection of data privacy. Voluntary participation is fully assured in the current study, and participants can withdraw from the same at any time without any adverse consequences. In addition, ethical clearance has been received from relevant institutional review boards so that integrity of research is not impaired and ethical standards are maintained.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSIONS

This chapter is concerned with the dissemination of data gathered from respondents using questionnaire. The structured questionnaire is in terms of opportunity, challenge, and drivers for importation of electric cars in Ethiopia.

4.1 Response Rate of the Study

Table 4.1: Respondents response rate

Respondents	**Target**	**Obtained**	**Percent**
Response Rate	353	350	99.15%

Source: Survey data, 2025

Response rate refers to the proportion of completed and returned questionnaires to the number that was given to the respondents. In the study, 353 questionnaires were given out to the respondents and out of these, 350 were completed and returned, providing a 99.15% response rate adequate to carry out additional data analysis.

4.2 Respondents Characteristics

The four controlling variables of the respondents are demographic variables. They are gender, age group, Years in Importing EV, and Vehicles type currently import except EV. The entire data analysis was prepared based on such issues as per stipulated by the following table and descriptions.

Table 4.2: Demographic Characteristics of Respondents

Variable	**Category**	**Frequency (n)**	**Percentage (%)**
Gender	Male	203	58.0
	Female	147	42.0
	Total	**350**	**100.0**
Age group	18–25	34	9.7
	26–35	111	31.7
	36–45	115	32.9
	45–55	57	16.3
	56 and above	33	9.4
	Total	**350**	**100.0**

Years in Import EV	Less than 1years	70	20.0
	1–2 years	115	32.9
	2–3 years	101	28.9
	More than 3 years	64	18.3
	Total	**350**	**100.0**
Vehicles Type currently import in addition to EV	Gasoline	137	37.1
	Diesel	110	28.6
	Hybrid	74	20.0
	Electric alone	29	14.3
	Total	**350**	**100.0**

Source: Source: Survey data, 2025

Respondent demographic numbers show a sex split of 58.0% male and 42.0% female, to get varied opinions within this research. Since the majority of the respondents (64.6%) fall in the age category of 26-45 years, middle-aged stakeholders will likely be at the center of Ethiopia's importation of EVs since they will most likely be business decision-makers. Since the sector relies on experienced workers in their prime working years, youth respondents (9.7%) and aged respondents (9.4%) are underrepresented.

With business development stage, experience levels in importing EVs are biased towards initial involvement: 32.9% with 1–2 years, and 28.9% with 2–3 years. The fact that only 18.3% have experience of over three years explains why there are new EVs in Ethiopia. Most of the importers import the EV because there were more of those that only import EVs at (14.3%) that has a lower percentage, patterns of vehicle importation exhibit a continued dependency on gasoline (37.1%) and diesel (28.6%) vehicles, which is in addition to the study focus on challenges like such high prices and infrastructure shortages.

4.3 Summary Statistics of Descriptive Analysis

This part provides the results derived for all variables under study (Electric Vehicle Importation, Economic Factors, Policy and Regulatory Factors, Technological and Infrastructure Factors, Consumer Awareness, Market Dynamics, Environmental Factors, Opportunities in EV Importation, and Challenges in EV Importation). Results were provided on the basis of five point Likert scale in such a way that: 1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree and

5 = Strongly Agree.

To find the results under this descriptive statistics we need to utilize the following cut-off points to mean and standard deviation values on 5-point Likert Scale.

Table 4.3: Thresholds to interpret mean values

Mean Range	**Interpretation**
1.00 – 1.80	Strongly Disagree / Very Low
1.81 – 2.60	Disagree / Low
2.61 – 3.40	Neutral / Moderate
3.41 – 4.20	Agree / High
4.21 – 5.00	Strongly Agree / Very High

Source: Joshi, A., Kale, S., Chandel, S., & Pal, D. K. (2015).

Table 4.4: Standard deviation values cut points

Standard Deviation	**Interpretation**
≤ 0.5	Low variability – responses are consistent
0.51 – 1.0	Moderate variability
> 1.0	High variability – responses are dispersed

Source: Boone Jr, H. N., & Boone, D. A. (2012)

4.3.1 Electric Vehicle Importation

The following seven statements were listed to the respondents and their views based on five point Likert scale about the dependent variable Electric Vehicle Importation.

Table 4.5: Electric Vehicle Importation Response Analysis

S/N	**Electric Vehicle Importation**	Mean	Std.
1	The process of importing EVs is becoming more streamlined over time.	3.43	1.032
2	The demand for EV importation is increasing in my business circle.	3.46	0.956
3	I am satisfied with the current return on investment from EV importation.	3.50	0.978
4	In my opinion the importation of electric vehicles will grow rapidly in the next five years.	3.47	0.992
5	I plan to increase my importation of EVs in the near future.	3.52	0.974

6	Importation procedures (customs, licensing, compliance) are critical to my EV importation success.	3.47	0.989
7	The EV importation process in Ethiopia is generally predictable and business-friendly.	3.40	0.987
Average Mean & Standard Deviation		**3.46**	**0.987**

Source: Survey data, 2025

As evident from the result in Table 4.5, the majority of respondents support Ethiopia's importation of electric vehicles (EVs). Joshi et al. (2015) contends there is high consensus in the case of an overall mean score of 3.46 between 3.41 and 4.20. This would mean that all the stakeholders are in agreement that EV importing is emerging as a good and potential business opportunity for the country. Such an agreement would be a signal of enhanced optimism regarding the role of electric mobility to the transport industry in Ethiopia.

The most highly rated of the individual items was item "I plan to increase my importation of EVs in the near future" with an average rating of 3.52. This is in the "high agreement" category and suggests that a high proportion of importers will be likely to continue or increase their involvement in EV imports. Other remarks such as "I am content with the existing return on investment of EV importation" (M = 3.50) and "The EV importation market is growing in my business community" (M = 3.46), although, also show that stakeholders are already experiencing how lucrative and sought-after electric vehicles are becoming.

But with an average of 3.40, statements such as "The EV importation process in Ethiopia is generally predictable and business-friendly" ranked on the higher side of moderate consensus. This indicates that opinions regarding the ease and reliability of the EV importation process are more guarded or uncertain. Similarly, "The process of importing EVs is becoming more streamlined over time" its mean equals 3.43 shows just slightly greater confidence, implying that maybe things are becoming more streamlined but perhaps not so much that all importers are feeling it yet.

Standard deviations of response variation are in the "moderate to high variation" category, as described by Boone Jr, H. N., & Boone, D. A. (2012), and all fall within 0.95 to 1.03. This implies that while the opinions and experiences of the respondents are highly diverse, there is a

degree of general consensus as well. Geographical differences, institution support, individual firm models, or individual problems of every importer are all plausible explanations for this diversity.

The findings show that the majority of stakeholders agree that EV importation in Ethiopia has potential and is increasingly becoming increasingly pertinent. For the purpose of promoting greater and more stable confidence in the sector, it must improve administrative efficiency, policy clarity, and infrastructure support, as revealed through the moderate to high variability of response.

4.3.2 Economic Factors

The study required to assess Economic Factors that effect of EV importation under the study area. Eight statements were presented to the respondents and their views based on five point Likert scale. The results obtained were summarized and presented in the table 4.6 below.

Table 4.6: Economic Factors Descriptive Analysis

S/N	Economic Factors	Mean	Std.
1	The cost of importing electric vehicles is affordable for businesses.	2.78	1.052
2	Financial institutions offer credit or financing support for EV importers.	2.83	0.979
3	Currency exchange rates do not heavily impact the feasibility of EV importation.	2.67	1.021
4	Profit margins from EV importation are attractive compared to fuel vehicles.	2.88	0.976
5	Government subsidies reduce financial burdens for EV importers.	2.77	0.992
6	Currency exchange stability positively affects EV import decisions.	2.86	1.011
7	Import tariffs significantly affect the final cost of electric vehicles.	2.83	1.007
8	Importing EVs is financially viable despite the fluctuating global and local economy.	2.81	1.089
Average Mean & Standard Deviation		**2.80**	**1.016**

Source: Survey data, 2025

The descriptive statistical summary provided in table 4.6 above fully captures the economic determinants behind the importation of electric vehicles (EVs) in Ethiopia, as appears, showing a

high level of doubt among the stakeholders, as all responses fell below the midpoint (3.0) on a 5-point Likert scale. High standard deviation (SD = 1.016) indicates diversified experience among importers, and the mean average of 2.80 (within the "Neutral/Moderate" range as per Joshi et al., 2015) indicates diversified perceptions of economic viability.

Exchange rate volatility is one of the major impediments whose stakeholders strongly hold the perception that exchange rates do not influence viability (Mean = 2.67, SD = 1.021). This is supported by regression analysis findings that economic factors had a significant influence on the viability of imports ($\beta = -0.252$, $p < 0.05$). The high variation indicates uneven exposure to exchange rate volatility, particularly among importers based on foreign sources. Apart from that, importers identify uneven enforcement and unclear customs enforcement as impediments, which reflect mixed trust in fiscal policy. Impressions regarding government subsidies (Mean = 2.77, SD = 0.992) and tariffs (Mean = 2.83, SD = 1.007) likewise reflect mixed trust.

Generally, the low values of mean and high standard deviations reinforce that financial restrictions are the most important impediment to EV importation in Ethiopia. In order to allow the industry to thrive and achieve the national sustainability objectives, these obstacles must be eliminated through targeted fiscal policy such as stabilization of exchange rates, reduction in tariffs, and subsidized credits.

4.3.3 Policy and Regulatory Factors

The study establishes the effect of Policy and Regulatory Factors on EV Importation in Ethiopia. Nine statements were presented to the respondents and their views tested based on five point Likert scale.

Table 4.7: Policy and Regulatory Factors Descriptive Analysis

S/N	Policy and Regulatory Factors	Mean	Std.
1	The current government policy supports the importation of electric vehicles.	3.21	1.011
2	Customs procedures for importing electric vehicles are clear and efficient.	3.19	0.997
3	Regulatory frameworks are improving in favor of EV importers.	3.18	0.985
4	Government incentives (e.g., tax exemptions) encourage the importation of	3.22	0.945

	electric vehicles.		
5	Licensing and customs processes are manageable for EV importation.	3.06	1.018
6	There is adequate institutional support for importers of electric vehicles.	3.11	1.035
7	I believe the regulatory environment is favorable for EV importers.	3.21	1.023
8	Policies affecting vehicle importation, such as import duties and VAT, are manageable for electric vehicles.	3.26	1.012
9	Government partnerships with EV-importing companies enhance importation feasibility.	3.13	1.043
Average Mean & Standard Deviation		**3.17**	**1.008**

Source: Survey data, 2025

A mean score of 2.80 on the 5-likert scale and a high standard deviation (SD = 1.016) tell us that Ethiopian stakeholders strongly disagree with the economic forces driving the importation of electric vehicles (EVs). Price and competitiveness concerns of traditional vehicles are still present, as can be seen in quotations like "The cost of importing EVs is affordable" (Mean = 2.78) and "Profit margins from EV importation are attractive" (Mean =). The stakeholders are arguing that foreign exchange rates play little or no role in viability, contending that foreign exchange volatility exacerbates things.

Regulatory and policy moderation is extreme (Average Mean = 3.17, SD = 1.008), reflecting optimistic expectations tempered by inadequate processes. Stakeholders are annoyed by unbalanced implementation and institutional support failure (Mean = 3.11) but appreciate limited achievements like "Government incentives encourage EV importation" (Mean = 3.22). Unpredictable customs formalities (Mean = 3.19) and license hold-ups (Mean = 3.06), and other administrative hurdles, remain significant causes of irritation.

4.3.4 Technological and Infrastructure Factors

The study required to establishing the effect of Technological and Infrastructure Factors on electric vehicle importation in Ethiopia. Eight statements were presented to the respondents and their views based on five point Likert scale. The results obtained were summarized and presented in the table 4.8 below.

Table 4.8: Technological and Infrastructure Factors Descriptive Analysis

S/N	Technological and Infrastructure Factors	Mean	Std.
1	Sufficient charging stations are available to support electric vehicles.	2.52	0.957
2	There are trained professionals to service imported electric vehicles.	2.46	0.971
3	The technology used in electric vehicles is compatible with local infrastructure.	2.53	0.997
4	Digital platforms help me track and manage EV imports effectively.	2.55	0.997
5	Maintenance tools for EVs are accessible and effective.	2.45	0.973
6	Technical standards support the smooth integration of EVs into the transport system.	2.54	0.950
7	Imported EVs are compatible with Ethiopia's electric grid and road infrastructure.	2.47	0.959
8	Importers can access the necessary software/hardware updates for EVs after customs clearance.	2.47	0.994
Average Mean & Standard Deviation		**2.50**	**0.975**

Source: Survey data, 2025

Descriptive analysis of the infrastructure and technical conditions influencing the importation of electric vehicles (EVs) by Ethiopia reveals drastic shortcomings in all the parameters examined. Principal stakeholders strongly point towards dissatisfaction with the existing EV-related infrastructure and technical support, with an average score of 2.50 (5 points Likert scale) and a significant standard deviation (SD = 0.975). All the statements receive a score of ≤2.60 and fall under the "Disagree/Low" category, capturing structural weaknesses that hinder EV importation. The low mean scores further indicate that technology and infrastructural barriers are the biggest hindrances to EV importation in Ethiopia. As positive as the situation is in the economic and policy fronts, this sector captures structural weaknesses requiring intervention.

4.3.5 Consumer Awareness

The study required to establishing the effect of Consumer Awareness on electric vehicle

importation in Ethiopia. The following nine statements were presented to the respondents' views based on five point Likert scale that summarized in the table 4.9 below.

Table 4.9: Consumer Awareness Descriptive Analysis

S/N	Consumer Awareness	Mean	Std.
1	Consumers are becoming more interested in electric vehicles.	2.99	1.092
2	Consumers in Ethiopia are aware of the benefits of electric vehicles.	3.88	1.032
3	The public has a favorable attitude toward the importation of electric vehicles.	3.01	1.025
4	Consumer awareness drives demand and influences importation.	2.94	1.024
5	Media and public campaigns effectively raise awareness about electric vehicles.	3.03	0.991
6	People are interested in purchasing electric vehicles to reduce fuel dependency.	3.01	0.962
7	Consumers are confident in the long-term performance and reliability of electric vehicles.	2.92	1.038
8	Consumer awareness has increased the demand for importing a variety of EV models.	3.01	0.983
9	Positive public perception of EVs encourages businesses to import more units.	3.07	1.036
Average Mean & Standard Deviation		**3.01**	**1.020**

Source: Survey data, 2025

Regarding the results of the consumer awareness survey (Table 4.9), Ethiopian importers have a moderate to neutral stance towards electric vehicle importation, in conformity with the identified market dynamics and sociocultural elements being presented as the key drivers. The results resonate with guarded optimism through plagued inconsistencies in public awareness and confidence, whereby mean ratings vary from 2.92 to 3.08. The results directly address research objectives to evaluate existing components and identify areas of growth.

From the above result the phrase "Consumers in Ethiopia have awareness of the benefits of EVs" received the maximum mean score (3.88), which shows that there has been some achievement in passing on information about EV benefits, e.g., reduced emissions and fuel-saving. This contradiction, however, points out that there are not sufficient public education programs that are

not turning awareness into demand. Uncertainty between consumer attitude and market forces is also brought out in the statement, "Positive public perception encourages businesses to import more units" (3.07). However, the lowest mean rating of 2.92 for "Consumers are confident in the long-term performance and reliability of EVs" is a manifestation of enduring apprehensions related to durability and maintenance, which comment on highlighting technical competence deficiency and insufficient infrastructure.

By examining the low standard deviations (0.962–1.092), there is evidence of heterogeneity in importers' perceptions. For example, differences in responses to the question, "People are interested in buying EVs to decrease fuel dependence" (3.01 ± 0.962), may be due to socioeconomic reasons or geographical differences in knowledge regarding EV technology that would be indicatives of Ethiopia's diversified market and urban-rural infrastructure cleavages. Neutral scores for "Consumer awareness drives demand" (2.94) and "Media campaigns effectively raise awareness" (3.03) substantiate the conclusion of the study that existing outreach efforts are too localized and small in scope to produce any perceptible impact.

The takeaway is that there is a transitional phase in Ethiopia's EV importing process. Importers value incremental gains, but non-significant findings indicate structural gaps in public education and trust. Such a finding warrants media collaborations, focused awareness efforts, and pilot tests establishing EV reliability. Rural perspectives are nonetheless limited by the cross-sectional design and urban-biased sample.

4.3.6 Market Dynamics

The study required to assessing the effect of market dynamics on electric vehicle importation in Ethiopia. Nine statements were presented to the respondents and their views based on five point Likert scale obtained in the table 4.10 below.

Table 4.10: Market Dynamics Descriptive Analysis

S/N	Market Dynamics	Mean	Std.
1	There is growing consumer interest in electric vehicles.	3.33	1.038
2	The demand for imported electric vehicles is increasing.	3.30	0.993
3	The resale value of imported EVs is promising in the local market.	3.29	1.029
4	Consumers prefer EVs for their long-term fuel savings.	3.27	1.005

5	Local dealers are beginning to stock more imported EVs.	3.25	1.039
6	Importing a variety of EV models helps meet customer preferences.	3.33	1.013
7	There is enough customer interest to sustain the EV import business.	3.30	0.986
8	Importers respond directly to consumer demand for advanced EV models.	3.23	1.015
9	Market trends influence the volume and type of electric vehicles being imported.	3.17	1.027
Average Mean & Standard Deviation		**3.27**	**1.016**

Source: Survey data, 2025

Based on the market dynamics survey (Table 4.10), there is cautiously optimistic to neutral perception in the electric vehicle (EV) importation situation in Ethiopia, indicating that there are challenges and opportunities to emphasize. With the mean score range of 3.17 to 3.33, the findings are in the direction of reservation in improvement in consumer demand and dealer action tempered by too little confidence in market trends and viability. This result easily points to underdeveloped EV demand drivers and market.

The variation in middle ranges in importers' perception is reflected by standard deviations (0.986–1.039). The evenness of attention to uneven urban-rural growth in Ethiopia is observed in variation of responses to the statement, "Local dealers are stocking more imported EVs" (3.25 ± 1.039), which could be explained by differences in regional vendor readiness. The increased awareness of EVs' cost effectiveness is further highlighted by the strong agreement with the findings that "Demand for imported EVs is growing" (3.30) and "Consumers prefer EVs for long-term savings on fuel" (3.27), but it requires further monetary incentives to accelerate importation as well as its utilization.

In brief, the transition of Ethiopia to electric vehicles is emphasized by the analysis of market dynamics. Even as respondents identify small wins, the low scores reflect structural challenges in ensuring good correspondence of local practices to global trends and long-term needs. The research supposes that maximizing market intelligence, instilling public-private partnerships, and offering diversified EV models responding to clients' needs. But cross-sectional proof and sample-biased to the cities limit what is known regarding rural market dynamics. Regional heterogeneity must be explored in further research more deeply, and longitudinal studies must be conducted to track Ethiopia's building a dynamic, inclusive EV market aligned with its

sustainability.

4.3.7 Environmental Factors

The study need to assess the effect of environmental factors on electric vehicle importation in Ethiopia. Hence the following nine statements that summarized in table 4.11 below were presented to the respondents' views based on five point Likert scale.

Table 4.11: Environmental Factors Descriptive Analysis

S/N	Environmental Factors	Mean	Std.
1	Importing electric vehicles contributes to reducing urban air pollution.	3.72	0.976
2	Importers are motivated by the long-term environmental benefits of EVs.	3.67	0.990
3	Promoting EV imports reflects a commitment to climate sustainability.	3.75	0.935
4	Environmental NGOs and institutions encourage the importation of EVs.	3.67	0.969
5	Public environmental awareness creates demand for imported EVs.	3.70	0.980
6	Importing EVs helps the country transition to green transport.	3.69	1.020
7	Public interest in clean energy supports EV importation.	3.70	0.917
8	Importers recognize environmental sustainability as a driving factor for importing EVs.	3.62	1.030
9	Environmental concerns in Ethiopia influence importers' decisions to bring in EVs.	3.62	0.961
Average Mean & Standard Deviation		**3.68**	**0.975**

Source: Survey data, 2025

Based on the above table 4.11 environmental considerations survey findings, stakeholders as a whole have an agreement on how EV imports contribute to the sustainability of Ethiopia. This is reflected through an emphasis on positive impacts of the environment as a significant force driving EV importation. Based on the significant mean ratings 3.62–3.75 on a 5-point Likert scale, most of the respondents agree that EVs allow pollution control, action on climate, and clean transportation. Apart from evaluating environmental incentives and policy possibilities, these studies explicitly address fossil fuel dependence.

Additionally, the highest mean rating (3.75) of the statement, "Demonstrating commitment to

climate sustainability through promoting EV imports," supports the positive association of EV importation and renewable energy potential and underscores stakeholders' recognition of EVs as a strategic means of keeping pace with world decarbonization initiatives. Strong support for arguments that "Importing EVs decreases urban air pollution" (3.72) and "The public interest in clean energy justifies EV importation" (3.70) also reflects increasing environmental awareness among customers and businesses, in favor of argument that Ethiopia can leverage EVs for clean mobility through its renewable energy sources, e.g., hydropower.

The research's case that Ethiopia's transition to EV is solidly grounded on sustainability objectives is adequately proved by the environmental factors study. The overall consensus among respondents indicates that there is a common perception of EV's role in curbing emissions, providing energy security, and the achievement of climate commitment. These findings are favorable to legislative policies promoting environmentally responsible transport like EV tax credits and renewable energy-fueled charging infrastructure investments. Yet the rural environment objectives are restricted in view of the cross-sectional design and urban-biased sample.

4.3.8 Opportunities in EV Importation

The study sought to assess the opportunities in EV importation in Ethiopia. Hence the following five statements were summarized and presented to the respondents views based on five point Likert scale.

Table 4.12: Opportunities in EV Importation Descriptive Analysis

S/N	Opportunities in EV Importation	Mean	Std.
1	Ethiopia has a large untapped market for EVs.	3.43	1.052
2	EV importation can position my business as a future leader in green mobility.	3.40	1.046
3	Government climate goals create a favorable business environment for EVs.	3.41	0.965
4	EVs align with global investment and donor trends in sustainability.	3.49	0.986
5	My business can gain long-term competitive advantage through early EV importation.	3.33	0.997
Average Mean & Standard Deviation		**3.41**	**1.009**

Source: Survey data, 2025

Survey findings regarding electric vehicle importation potentiality (Table 4.12) indicate moderate to strong level of agreement of Ethiopian importers. Mean scores of 3.33-3.49, the findings confirm the study's central argument Ethiopia's renewable energy resources, city consumer demand, and alignment with global sustainability frontiers offer vast opportunities for integration of EVs, although systemic constraints frame attendant progress.

One of the core problems of the study is Ethiopia's strategic potential in attracting foreign finance and cooperation is revealed by having the highest mean score (3.49) for the statement, "EVs align with global investment and donor trends towards sustainability." This is to be aligned with hydropower potential and global decarbonization to make it a regional hub for electric vehicles. Accordingly, surveyed awareness of rising city demand and opportunity for rural electrification and synergies between renewable energy and EV take-up is evoked in the medium level of support for the proposition that “Ethiopia has a large untapped market for EVs” (3.43).

Discussion of the study as evoked as it relates to Ethiopia's unparalleled potential to embrace green mobility and tackle energy security as well as economic diversification is as revealed here.

This apparent harmony of policy structures and business potential is again brought out by quotations like “EV importation can make my business a future green mobility leader” (3.40) and “Government climate targets offer a positive business climate” (3.41). Yet, the lower mean in “My business can achieve long-term competitive advantage through early EV importation” (3.33), that being the expression of the criticism of the study for the high upfront expenditures, infrastructural deficiencies, and uncertainties of the regulations discouraging early movers, indicates caution among the importers.

Middle ranks confirm that the potential is present but more vigorous infrastructure and government backing are required in order to be fully realized. Structural constraints such as high costs of importing and dispersed law are shown through the gap between global alignment (3.49) and competitive advantage (3.33). The recommendations of the thesis to increase EV models, foster public-private initiatives, and integrate EVs into Ethiopia's green industrialization policy are corroborated by emphasis on global trends and unexploited markets.

Opportunities analysis makes a strong evidence for the grand thesis contention. There is significant but unexploited EV potential in Ethiopia. The respondents are reluctant by structural constraints despite the recognition of the strategic position of the country in renewable energy,

urban demand, and world environment trends. This is a finding that asserts there must be integrated strategy that incorporates tariff reductions, incentivizing early adopters, and collaboration with foreign manufacturers and contributors. However, evidence on rural opportunities, such as off-grid EV applications for farm transportation, is constrained by the cross-sectional nature and urban-biased sample.

4.3.9 Challenges in EV Importation

The study sought to measure the challenges in EV importation in Ethiopia. Hence, the following eight statements were summarized and presented to show the respondents views based on five point Likert scale.

Table 4.13: Challenges in EV Importation Descriptive Analysis

S/N	Challenges in EV Importation	Mean	Std.
1	The high cost of EVs limits my ability to import more units.	2.87	1.007
2	Lack of charging infrastructure affects customer interest.	2.91	1.020
3	Regulatory delays complicate the import process.	2.94	1.051
4	Limited consumer awareness challenges EV market growth.	2.94	0.994
5	Importing EVs is difficult due to limited technical knowledge and services.	2.94	1.022
6	Infrastructure limitations hinder the safe and timely importation of EVs.	3.99	1.068
7	Importers face delays in customs clearance due to poor logistics.	2.94	1.007
8	Lack of proper warehousing affects EV handling post-importation.	2.89	1.028
Average Mean & Standard Deviation		**2.93**	**1.025**

Source: Survey data, 2025

Survey findings of the impediments of importing electric vehicles (Table 4.13) directly respond to the study research analysis of the impediments of EV uptake by pointing to serious systemic impediments deterring Ethiopia from adopting sustainable mobility. With mean scores between 2.87 and 3.99, the respondents strongly agree that regulatory, infrastructure, and economic impediments are significant deterrents. The problem statement of the study establishing high costs, inadequate infrastructure, and poor policies as the principal bottlenecks to Ethiopia's EV sector is validated by these results.

The biggest worry for the importers is economic barriers, with the lowest mean rating of 2.87 for "The high cost of EVs prevents me from importing more units.". This demonstrates the high cost of EVs compared to common cars, which affirms the thesis argument against the absence of subsidies, tax relief, and foreign fossil fuel vehicles reliance in Ethiopia. Unavailability of subsidies, tax relief, or funding raises the risk costs for financiers and consumers, which accords with economic determinants affecting the use of EVs negatively.

It has the highest mean value of 3.99 for "Infrastructure limitations hinder the safe and timely importation of EVs," and infrastructure shortcomings are the most critical one. Stakeholders underscore the critical shortage of reliable electricity infrastructure, repair facilities, and charging stations, particularly in big cities like Addis Ababa. This is consistent with the study's emphasis on infrastructure investments, including grid modernization and rural-urban charging corridors, as a prerequisite for sustainable integration of EVs.

Logistical inefficiencies and regulation contribute to issues. Red tape slows down, fragmented supply chains, and antiquated customs practices are exemplified by scores for "Regulatory delays complicate the import process" (2.94) and "Customs clearance delays due to poor logistics" (2.94). The results affirm the research call for reduced red tape regulations, computerized import flows, and public-private partnerships.

Ranked in moderate concurrence with "Limited technical knowledge and services" (2.94) and "Lack of proper warehousing" (2.89), technical and knowledge shortcomings are indicated. As a postulation of research on localized training initiatives and EV-related skills investment to establish a sustainable ecosystem, these also restate the same, substantiating Ethiopia's lack of technical know-how, logistics infrastructure, and trained man power. With an average score of 2.94 on "Limited consumer awareness hampers EV market growth," customer awareness remains a hurdle. This adds credibility to the thesis argument that collective education by the public is warranted to address fear for EV reliability, upkeep, and long-term benefits. Myths regarding the battery life and charging availability remain, which speaks volumes about just how much of an imperative awareness campaigns are.

The assessment of the issues unequivocally unveils the different setbacks to Ethiopia's EV projects, supporting the research call for an integrated strategy to fill gaps in infrastructure, law, and funding. Highlighted by the widespread degree of agreement among stakeholders, the

priority focus of policy realignments, including tax incentives on EVs, development of charging infrastructure, and collaboration with global manufacturers to enhance technical capability, is underscored. The urban-based sample was not as representative of rural concerns, such as access to off-grid energy. These results validate the hypotheses laid out within the thesis as well as provide policymakers with an idea of how to fast-track cleaner transport in Ethiopia.

4.5 Inferential Statistics Analysis

Inferential statistics analysis is an integral part of statistical investigation which allows the researcher to make conclusions about the population based on information obtained from a sample. The aim of this section is to present statistical methods applied in measuring variable relationships, hypothesis testing, and drawing conclusions with a specific level of confidence. Inferential statistics, such as correlation and regression analysis, enable the researcher to determine the significance of results and see whether patterns noticed in the data occur by chance or really represent effects in the population as a whole. Such analysis supports study conclusions based on facts.

4.5.1 Pearson Correlation Analysis

Table 4.14: The output of Pearson correlation

Independent Variable		Economic Factors	Policy & Regulatory	Technological & Infrastructure	Consumer Awareness	Market Dynamics	Environmental Factors
EV Importation	Pearson Correlation	.647**	.611**	.623**	.551**	.640**	.557**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000

Source: Survey data, 2025

Based on the findings in table 4.14 above, the Pearson correlation analysis shows that all six of the independent variables were statistically significant and positive correlation at 5% level of significance. Here the economic factor, Market Dynamics, Technological & Infrastructure, and Policy & Regulatory has stronger correlating with EV importation as their Pearson correlation values were 0.647, 0.640, 0.623, and 0.611 respectively. While the remaining two variables have moderate correlation with EV importation as it was shown on the above table.

4.5.2 Multiple Linear Regression Analysis

A helpful statistical technique of determining the relationship between one dependent variable and two or more independent variables is multiple linear regression analysis. To offer better insight into the determinants of the outcome variable, this subsection discusses the identification of how multiple predictors affect simultaneously. Multiple linear regression enables prediction-making, testing of theories, and control for confounding variables by examining the contribution of each predictor in direction and magnitude.

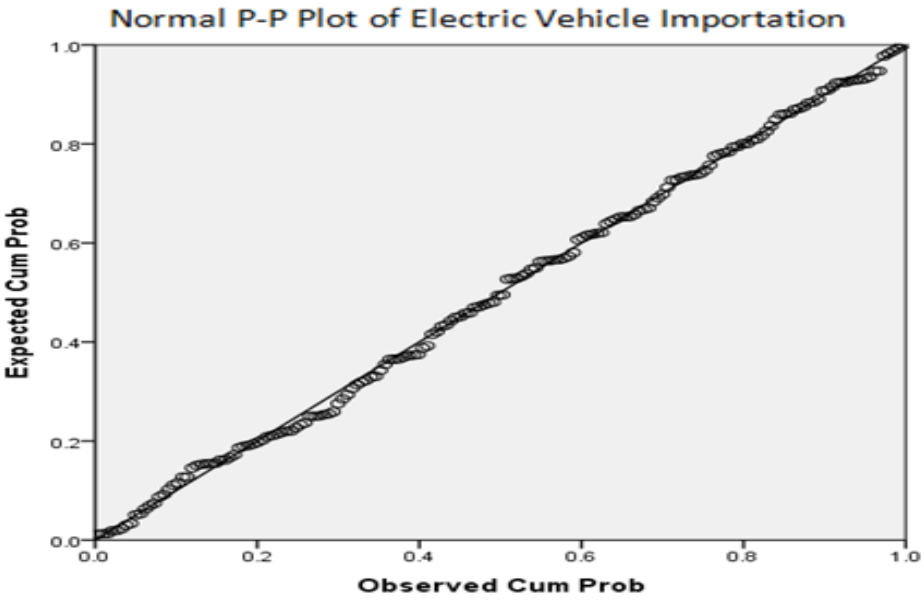
4.4.1 Diagnostic Tests

Before conducting this analysis we have to check the whole assumptions of regression analysis under the diagnostic test in the following manner.

a) Normality test

The distribution of residuals (errors) under a normal condition is a main assumption in linear regression studies. In their perspective, Ghasem and Zahediasl (2012) argue that this assumption ensures statistical inferences based on normality of error terms hold. One of the widely used graphical tests for this assumption is the P-P plot, in which the theoretical expected normal distribution cumulative probabilities are plotted on the x-axis against the observed cumulative residual probabilities on the y-axis and the results obtained were graphed in figure 4.1 below.

Figure 4.1: P-P plot for test of Normality test



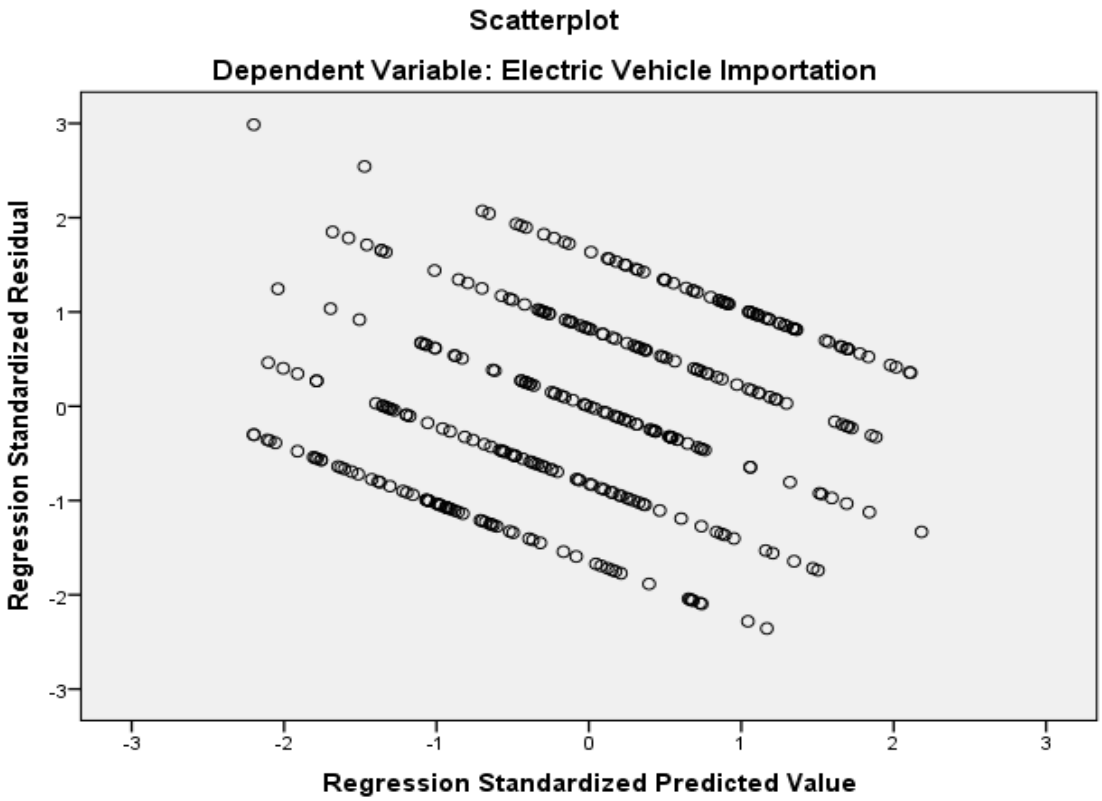
Source: Survey data, 2025

As can be observed from figure 4.1 above, ideal normality is the 45-degree diagonal line that most of the plotted points are closely following. It signifies an approximate normal distribution of the unstandardized projected values that resulted from the regression model of the study. The normality assumption required of proper regression analysis is therefore fulfilled.

b) Linearity test

The linearity test checks if there is a linear relationship between an independent and dependent variable when subjected to regression analysis. The assumption checks for the right model predictions and that there might have been a relationship between the variables that could have been explained by a straight line and could be tested through scatterplots of residuals with respect to predicted values. Thus, scatterplot results that are employed for determining two key assumptions of linear regression, e.g., linearity and homoscedasticity, were laid out in figure 4.2 below.

Figure 4.2: Scatterplot for Linearity and Homoscedasticity test



Source: Survey data, 2025

As seen in Figure 4.2 above, the residuals (y-axis) scatter at random around the zero horizontal line with no discernible pattern (no S-shape, curvature, or systematic trend, for instance). Linearity assumption is therefore satisfied and this guarantees that the linear model aptly captures the dependency between the dependent variable (EV importation) and independent variables (economic, policy, technological, etc.). No transformation of variables (such as log or polynomial terms) is needed for this analysis, due to no identifiable non-linear trends.

c) Homoscedasticity test

Homoscedasticity requires a homogeneous distribution of the error terms or even residual spreads across the data. The regression standardized predicted value can be utilized to investigate visually a standardized residuals scatterplot.

Figure 4.2 indicates that, along the range of forecast values, the residual pattern appears very level. Increasing forecast values are not preceded by any discernible "funnel shape" or compression/stretching of residuals.

Homoscedasticity assumption is therefore reasonably met. Standard error validity and hypothesis testing within the regression model are therefore ensured since the variance in the residuals is level along the range of prediction. With the sample size, moderate differences in spread (e.g., clusters thickening at certain points) are acceptable and do not break this assumption.

d) Autocorrelation (independent error) test

Autocorrelation test for any given observation the residual terms must be independent. This is tested with in the Durbin -Watson test, to test serial correlations of errors. The test statistic would be between 0 and 4 with value of 2 being such that the residual are uncorrelated. Value above 2 is indicative of negative correlation between successive residuals, and value below two is indicative of positive correlation (Parks et al., 2010).

Table 4.15: Autocorrelation test (Durbin-Watson)

Autocorrelation test	
Model	Durbin-Watson
	1.998

Source: Survey data, 2025

The value of autocorrelations test or Durbin-Watson test of this study is 1.998 which is close to two. Therefore, there is no problem of autocorrelation or it can be said that the errors (residuals) of the mode was independent.

e) Multicollinearity test

Multicollinearity is a statistical issue in which explanatory variables within linear models exhibit highly collinear relationships among themselves. It results in unstable estimates and artificially high variances that impact confidence intervals along with hypothesis testing. Variance inflation factors (VIF) measure the extent to which variance of estimated regression coefficients are inflated compared to when independent variables are linearly unrelated to one another. It's applied to measure the degree of multicollinearity (interdependence of independent variables) in a regression analysis.

Table 4.16: VIF Test of Multicollinearity

Model		Collinearity Statistics	
		Tolerance	VIF
1	Economic Factors	.859	1.164
	Policy and Regulatory Factors	.753	1.329
	Technological and Infrastructure Factors	.787	1.271
	Consumer Awareness and Attitudes	.859	1.164
	Market Dynamics	.820	1.220
	Environmental Factors	.861	1.162
a. Dependent Variable: Electric Vehicle Importation			

Source: Survey data, 2025

Hence, according to the results in table 4.16 above, all the variables have small VIF values which implies that there is no aproblem of multicollinearity since their VIF values were less than 10.

4.4.2 Fitness of the Model

To determine the relationship between explanatory variables and dependent variable, MLR was applied based on the model below.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \varepsilon$$

The R-squared value, also known as the coefficient of determination, measures the proportion of variation in the dependent variable that is explained by the independent variables in a regression model (Parks et al., 2010). In the context of this study, it indicates the extent to which the listed independent variables explain variations in Electric Vehicle Importation.

i. Model Summary

Table 4.17: The output of Model Summary

Model	R	R-Square	Adjusted R Square	Std. Error of the Estimate
1	0.861	0.741	0.730	2.082

Source: Survey data, 2025

The six independent variables (Economic Factors, Policy & Regulatory Factors, Technological & Infrastructure Factors, Consumer Awareness, Market Dynamics, and Environmental Factors) explain 74.1% variation of the dependent variable (Electric Vehicle Importation), according to

the R-squared value of 0.741. Other variables not included within the scope of this research explain the remaining 25.9% variation in EV importation.

Table 4.18: The ANOVA Table

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	518.7	6	86.45	163.11	.000[b]
	Residual	181.30	343	0.53		
	Total	700.00	349			

a. Dependent Variable: Electric Vehicle Importation

b. Predictors: (Constant), Environmental Factors, Economic Factors, Consumer Awareness, Technological and Infrastructure Factors, Market Dynamics, Policy and Regulatory Factors

Source: Survey data, 2025

Table 4.18 ANOVA results indicate that to what degree statistically significant overall is the regression model in describing the variability of Ethiopia's electric vehicle imports (EVs). Six predictors contained in the model are market forces, technology and infrastructure, knowledge of the consumer, economic concerns, environmental issues, and policy and regulatory forces. Together, the group of these factors has the F-statistic of 163.11 ($p < 0.001$) indicate that EV importation is highly predicted. As a study goal to research the numerous factors affecting Ethiopia's EV importation environment, this is corroborative of the notion that importation trends are driven by some group of economic, infrastructure, policy, and environmental factors.

ii. Multiple Linear Regression Coefficients

Table 4.19: Summary of Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% CI for β	
		β	Std. Error	Beta			Lower	Upper
1	(Constant)	.411	.240		1.710	.088	-.062	.884
	Economic	.235	.050	.235	4.737	.000	.137	.333
	Policy & Regulatory	.105	.053	.105	1.987	.048	.001	.210
	Technological & Infrastructure	.201	.050	.201	4.052	.000	.103	.298

	Consumer Awareness	.093	.050	.093	1.874	.032	.005	.190
	Market Dynamics	.163	.051	.163	3.218	.001	.064	.263
	Environmental	.066	.052	.066	1.265	.207	-.036	.168
a. Dependent Variable: Electric Vehicle Importation								

Source: Survey data, 2025

In the output from Table 4.19, the regression model revealed that all except Environmental factors were statistically significant at the 5% significance level and their regression coefficient were positive, meaning that Electric Vehicle Importation were increases by 0.235, .201, 0.105, 0.093, and 0.163 units respectively, for each one-unit change in those independent variables, with other factors held constant. Additionally, the 95% confidence intervals for these of the covariates do not include zero, confirming their significant impact on EV importation. While Environmental factors were not statistically significant effect on EV importations in Ethiopia based on the dataset.

In addition, the multiple linear regression also indicates the impact of major factors on EV importation. Economic ($\beta = 0.235$, $p<0.00$) and Technological & Infrastructure ($\beta = 0.201$, $p<0.001$) are the strongest predictors, based on the model. The research emphasis on Technological & Infrastructure (such as road alignment and energy goals' battery terminals) and economic issues (such as unaffordable prices and tariffs) as the driving forces of EV importation is evidenced by these results. Additional monetary incentives (such as subsidies) and leveraging Ethiopia's climate commitments may actually drive importation quite strongly, as expected by the high, positive coefficients.

The findings also indicate that the significance of future consumer demand and market trends is corroborated by the strong significant positive impact of Market Dynamics ($\beta = 0.163$, $p = 0.001$) and Consumer Awareness ($\beta = 0.093$, $p = 0.032$). The statistically significant, though limited, role of Policy & Regulatory Factors ($\beta = 0.105$, $p = 0.048$) testifies to the necessity of stronger, EV-targeted regulations and also indicates limited improvement in governance structures. However, the Environmental factors ($\beta = 0.066$, $p = 0.207$) do not come out statistically significant.

The study is enabled by the regression findings' overall-system design: A multi-faceted intersection of market dynamics, consumer awareness, Technological & Infrastructure, and economic factors of EV importation. While legislative and infrastructure changes must be introduced, these are less material in their immediate impact as in the current circumstance. To facilitate importation velocity, policymakers need to channel their energies towards consumer consciousness drives, Technological & Infrastructure, and incentives (tariff decrease). To track shifting dynamics in Ethiopia's EV market, future research should track indirect influence of infrastructure and conduct longitudinal analysis.

Table 4.20: Decision of Hypothesis Testing

H_0	Claims	Decision
H_{01}	Economic factors do not have a statistically significant effect on EV importation in Ethiopia.	Rejected
H_{02}	Consumer awareness does not have a statistically significant effect on EV importation in Ethiopia.	Rejected
H_{03}	Policy & Regulatory Factors do not have a statistically significant effect on EV importation in Ethiopia.	Rejected
H_{04}	Market Dynamics does not have a statistically significant effect on EV importation in Ethiopia.	Rejected
H_{05}	Technological & Infrastructure do not have a statistically significant effect on EV importation in Ethiopia.	Rejected
H_{06}	Environmental Factors do not have a statistically significant effect on EV importation in Ethiopia.	Accepted

4.6 Discussions of the Findings

The results of the study illustrate the intricacy of EV importing business in Ethiopia. Although there is high to moderate stakeholder interest in embracing EV, evidence of analysis shows that existing structural and contextual constraints prevail. The results are in line with theoretical models focusing on infrastructure, user attitude, and regulation as the sources of technology acceptance, e.g., Diffusion of Innovation Theory (Rogers, 2003) and Technology Acceptance Model (Davis, 1989).

According to this study the economic factors were also stated to have a substantial impact on importing EVs. Most respondents disagreed or were neutral concerning the effects of tariffs, currency stability, finances being available, and EVs being affordable. The findings agree with previous studies (e.g., Mohammed et al., 2023) that demonstrate how the initial expense of EVs, coupled with their inaccessibility to financial benefits and foreign exchange limitations, are strong preventions. They verify the suggestion of well-targeted fiscal reforms and add strength to the argument that financial limitations impact negatively on EV importation.

The findings of this research indicated that the evaluations of the policy and regulatory settings were not entirely consistent. While others of the applicants recognized minimal government support improvements, most of them agree that existing policies and rules are not enough to stimulate EV importation. UNEP (2023) affirms Ethiopia's absence of specific EV policies, such as unclear licensing processes, the absence of interagency coordination, and poor import incentives. The conclusion is simple: in the absence of a solid and supportive legislative climate, EV market penetration will remain uneven and lagging.

The survey findings placed a high priority on infrastructure and technology concerns. Technological upgrades, maintenance facilities, technological compatibility, and charging station availability were all unacceptable to the respondents. The results point towards the urgent requirement for EV maintenance infrastructure construction and grid reinforcement. This makes the argument advanced by (Bimenyimana, S., et al., 2021; Dioha, M. O., et al., 2022) that renewable energy-powered charging networks and grid resilience will be necessary in order to effectively integrate EVs into Africa.

Consumer awareness was a problem and a challenge. Although admitting that awareness of the advantages of EVs is gradually growing, the respondents were negative towards the expense, reliability, and maintenance of EVs. These results are in agreement with Davis's (1989) Technology Acceptance Model, which assumes the importance of perceived usefulness and usability of technology. They further call for gaps in public education and market visibility, which call for combined protests and campaigns to raise awareness.

Market dynamics analysis indicates a general upward trend. Importers experienced increased demand for EVs and reported more local dealership activity. Supply chain shortages and the

absence of a variety of EV models continue to be issues, however. These results are in line with prior empirical findings in Kenya and Rwanda, where government-sponsored programs and foreign manufacturer partnerships facilitated greater market access (UNEP, 2022).

Environmental factors, according to importers' data that we used, do not play an important role in EV importation. Public pressure for more environmentally friendly transport and a perception by EV importers that EV importation promotes Ethiopia's climate agenda were not found among most of the respondents. This contradicts the theory of sustainability transition (Geels, 2020) that argues that transition success is enabled through the alignment between environmental governance, technological development, and public opinion.

In summary, results indicate that the imports of EV by Ethiopia are determined by interconnected economic, infrastructure, policy, market, and environmental factors. There are various strengths which include the presence of plenty of renewable energy resources and increasing urban demand even though there still exist a lot of issues waiting to be addressed, especially concerning infrastructure and capital. Rapid transition to electric mobility has to overcome these challenges with large-scale policy measures and planned investments.

CHAPTER FIVE
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary of Major Findings

This research examined the opportunities, challenges, and influencing factors in electric vehicle importation in Ethiopia. Using quantitative analysis through 350 respondents from EVs importers, the research established the key determinants driving and hindering the country's smooth transition towards electric mobility. The findings indicate that although the importers are moderately optimistic concerning the growth of EV imports, there are still prevailing structural and policy issues. Important challenges were observed to be economic in nature, including high initial costs, low financial incentives, and exchange rate volatility. The stakeholders confirmed that to some degree, the government has been able to simplify licensing and offer tax breaks, with an average improvement in policy and regulation support. Nevertheless, development is still hindered by administrative redundancy and the lack of specific EV-supporting regulations.

Infrastructure and technological preparedness were found to have a significant impact on EV imports. The absence of charging stations, and the lack of maintenance workshops were regularly cited as being strong limitations. The nation's renewable energy capacity and public interest in sustainability, however, were determined by the stakeholders to be most driving force for EV importation, and Technological & Infrastructure factors registered the most marks. Consumer awareness, despite the behavior preparation gaps and doubt, was generally positive.

Finally, Ethiopia has strong strategic and Technological & Infrastructure strengths to import EVs; however, policy, economic, and infrastructure bottlenecks are currently slowing down the rate of importation. Empirical evidence for the need to harmonize the national initiatives in these vital domains is provided by the findings of this study.

5.2 Conclusions

According to the study, Ethiopia stands at a critical juncture in whether to import electric vehicles. Although the renewable energy sources in the country can drive mass importation of

EVs, institutional barriers are still there to be addressed with priority in the face of consumer demand.

Most potential importers and buyers are discouraged by economic considerations such as the expense of EVs, reduced credit availability, and high import tariffs. Regardless of how far they have come, regulatory regimes remain mostly adapted to the internal combustion engine car and do not give EV importers adequate clear incentives. Real operational problems in terms of technological and infrastructural readiness persist, such as the absence of general charging stations and maintenance facilities.

However, there is an opportunity here as well because Ethiopia's climate commitment and its infrastructure and technological considerations environmental advantages of EVs are very complementary. The poor legislative push from the government and growing private sector action in green mobility confirm that, when there is an integrated and evidence-based process, one can make progress. The study concludes that even though electric car importation is in its infancy stage, it is possible to enlarge its scope to a great extent with policy interventions, investment in infrastructure development, boosting consumers' awareness, and market development interventions.

5.3 Recommendations

Based on the findings of the study, the following recommendations are proposed for all concerned bodies:

- As the findings of the study indicate, economic factors are statistically significant and have positive impacts on the importation of electric vehicles. Hence, duties and other fees on EVs must be reduced or eliminated by the Ministry of Finance and Economic Development with the advice of the Ethiopian Revenue and Customs Authority. The financial institutions would have to be incentivized to provide credit lines and low-interest loans to EV importers and buyers.
- Importation of electric vehicles was strongly impacted by policy and regulatory considerations. The Ministry of Transport and Logistics has to create and execute a national electric vehicle policy with clear importation procedures, regulatory conditions,

and fiscal incentives for EVs in the immediate future. This will increase the transparency and investor confidence of the EV industry.

- EV importation was positively and significantly linked to infrastructure and technological determinants. In order to facilitate EV users and importers, the Ministry of Water and Energy and the Ethiopian Electric Power must invest in the establishment of electric vehicle charging stations and increasing the size of the country's grid, especially urban regions and strategic highways.

- It was also found that consumer perception and awareness positively and significantly influenced importation of EVs. The Ministry of Transportation and the Environmental Protection Authority should, therefore, collaborate with universities, civil society organizations, and the media to introduce public awareness campaigns that focus on the operating, cost, and environmental benefits of EVs.

- Findings in this research supported that market forces were statistically significant in EV importation. Thus, the technical support is advocated for private sector players and regional trade bureaus to allow them to coordinate consumer marketing and regulatory processes and establish varied and affordable EV dealerships.

5.4 Future Research Consideration

- This research was limited to the capital city of Addis Ababa where most of the EV importers operate. Due to this, future research should expand the geographical scope of the research to include rural towns and regional hubs in an attempt to analyze the prospects, challenges, and readiness of EV importation in different environments in Ethiopia.

- The research employed systematic questionnaires and was quantitative. As such, future researchers should deploy qualitative methods such as focus groups or interviews in a bid to obtain in-depth information from key stakeholders such as local EV users, energy providers, and government regulators.

- The research left out other relevant stakeholders in the EV case, including financiers, green groups, and energy regulators, simply because of focusing on importers. Accordingly, by considering legislators', utilities', consumers', and urban planners' opinions, future research needs to be more inclusive in terms of stakeholders.

- The effects of technical factors such as battery recycling facilities and preparedness for car upkeep were not comprehensively investigated. Empirical analysis must analyze the technical and operational problems to deployment of EV, including grid compatibility, service facilities, and environmental battery waste management.

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Addis Ababa University

College of Business and Economics

Department of Management

Appendix I: Questionnaire Questions

Dear Respondent, My name is Winta Gebreab, master's student from Addis Ababa University, School of Graduate Studies, pursuing a Master of Science in International Business. As a partial fulfillment for the award of this degree, I am required to conduct a research work entitled Electrifying Ethiopia: Analyzing the Opportunities, Challenges, and Influencing Factors in Electric Vehicle Importation. I would be so grateful if you spend few minutes of your time to complete this questionnaire. I assure you that any information you provide have been used strictly for academic purposes only and absolutely confidential.

Please note that: No need of writing your name; Please read each statement carefully and answer all questions as much as you can; For descriptive statements, please respond in accordance with the categories provided under each section, put your answer tick (√) in the corresponding boxes.

The researcher would like to thank you in advance for your time in giving the responses.

Yours Sincerely,

Winta Gebreab

Section I: Demographic Information

Please select the appropriate response for each question:

1. Gender	Male ☐ Female☐
2. Age	18-25 ☐ 26-35 ☐ 36-45 ☐ 46-55 ☐ 56 and above☐
3. Years in Import EV	Less than 1years ☐ 1–2 years ☐ 2–3 years ☐ More than 3 years ☐
4. What type of vehicles do you currently import in addition to EV?	Gasoline ☐ Diesel ☐ Hybrid ☐ Electric only ☐

Section II: EV Importation (Dependent Variables)

Indicate how much you agree or disagree with the following assertions using a Likert scale of 1 to 5, with Strongly Disagree (SD) = 1, Disagree (D) = 2, Neutral (N) = 3, Agree (A) = 4, and

Strongly Agree (SA) = 5. For each statement, please check the box (cell) that most accurately reflects your level of agreement (√) or mark (x).

S/N	1. Electric Vehicle Importation	1	2	3	4	5
1.1	The process of importing EVs is becoming more streamlined over time.					
1.2	The demand for EV importation is increasing in my business circle.					
1.3	I am satisfied with the current return on investment from EV importation.					
1.4	In my opinion the importation of electric vehicles will grow rapidly in the next five years.					
1.5	I plan to increase my importation of EVs in the near future.					
1.6	Importation procedures (customs, licensing, compliance) are critical to my EV importation success.					
1.7	The EV importation process in Ethiopia is generally predictable and business-friendly.					

Section III: Independent Variables for EV Importation

S/N	2. Economic Factors	1	2	3	4	5
2.1	The cost of importing electric vehicles is affordable for businesses.					
2.2	Financial institutions offer credit or financing support for EV importers.					
2.3	Currency exchange rates do not heavily impact the feasibility of EV importation.					
2.4	Profit margins from EV importation are attractive compared to fuel vehicles.					
2.5	Government subsidies reduce financial burdens for EV importers.					
2.6	Currency exchange stability positively affects EV import decisions.					
2.7	Import tariffs significantly affect the final cost of electric vehicles.					
2.8	Importing EVs is financially viable despite the fluctuating global and local economy.					

S/N	3. Policy and Regulatory Factors	1	2	3	4	5
3.1	The current government policy supports the importation of electric vehicles.					
3.2	Customs procedures for importing electric vehicles are clear and efficient.					
3.3	Regulatory frameworks are improving in favor of EV importers.					
3.4	Government incentives (e.g., tax exemptions) encourage the importation of electric vehicles.					
3.5	Licensing and customs processes are manageable for EV importation.					
3.6	There is adequate institutional support for importers of electric vehicles.					
3.7	I believe the regulatory environment is favorable for EV importers.					
3.8	Policies affecting vehicle importation, such as import duties and VAT, are manageable for electric vehicles.					
3.9	Government partnerships with EV-importing companies enhance importation feasibility.					

S/N	4. Technological and Infrastructure Factors	1	2	3	4	5
4.1	Sufficient charging stations are available to support electric vehicles.					
4.2	There are trained professionals to service imported electric vehicles.					
4.3	The technology used in electric vehicles is compatible with local infrastructure.					
4.4	Digital platforms help me track and manage EV imports effectively.					
4.5	Maintenance tools for EVs are accessible and effective.					
4.6	Technical standards support the smooth integration of EVs into the transport system.					
4.7	Imported EVs are compatible with Ethiopia’s electric grid and road infrastructure.					
4.8	Importers can access the necessary software/hardware updates for EVs after customs clearance.					

S/N	5. Consumer Awareness	1	2	3	4	5
5.1	Consumers are becoming more interested in electric vehicles.					
5.2	Consumers in Ethiopia are aware of the benefits of electric vehicles.					
5.3	The public has a favorable attitude toward the importation of electric vehicles.					
5.4	Consumer awareness drives demand and influences importation.					
5.5	Media and public campaigns effectively raise awareness about electric vehicles.					
5.6	People are interested in purchasing electric vehicles to reduce fuel dependency.					
5.7	Consumers are confident in the long-term performance and reliability of electric vehicles.					
5.8	Consumer awareness has increased the demand for importing a variety of EV models.					
5.9	Positive public perception of EVs encourages businesses to import more units.					

S/N	6. Market Dynamics	1	2	3	4	5
6.1	There is growing consumer interest in electric vehicles.					
6.2	The demand for imported electric vehicles is increasing.					
6.3	The resale value of imported EVs is promising in the local market.					
6.4	Consumers prefer EVs for their long-term fuel savings.					
6.5	Local dealers are beginning to stock more imported EVs.					
6.6	Importing a variety of EV models helps meet customer preferences.					
6.7	There is enough customer interest to sustain the EV import business.					
6.8	Importers respond directly to consumer demand for advanced EV models.					
6.9	Market trends influence the volume and type of electric vehicles being imported.					

S/N	7. Environmental Factors	1	2	3	4	5
7.1	Importing electric vehicles contributes to reducing urban air pollution.					
7.2	Importers are motivated by the long-term environmental benefits of EVs.					
7.3	Promoting EV imports reflects a commitment to climate sustainability.					
7.4	Environmental NGOs and institutions encourage the importation of EVs.					
7.5	Public environmental awareness creates demand for imported EVs.					
7.6	Importing EVs helps the country transition to green transport.					
7.7	Public interest in clean energy supports EV importation.					
7.8	Importers recognize environmental sustainability as a driving factor for importing EVs.					
7.9	Environmental concerns in Ethiopia influence importers' decisions to bring in EVs.					

Section IV: Opportunities in EV Importation

These items explore perceived advantages in the Ethiopian EV import context.

S/N	8. Opportunities in EV Importation	1	2	3	4	5
8.1	Ethiopia has a large untapped market for EVs.					
8.2	EV importation can position my business as a future leader in green mobility.					
8.3	Government climate goals create a favorable business environment for EVs.					
8.4	EVs align with global investment and donor trends in sustainability.					
8.5	My business can gain long-term competitive advantage through early EV importation.					

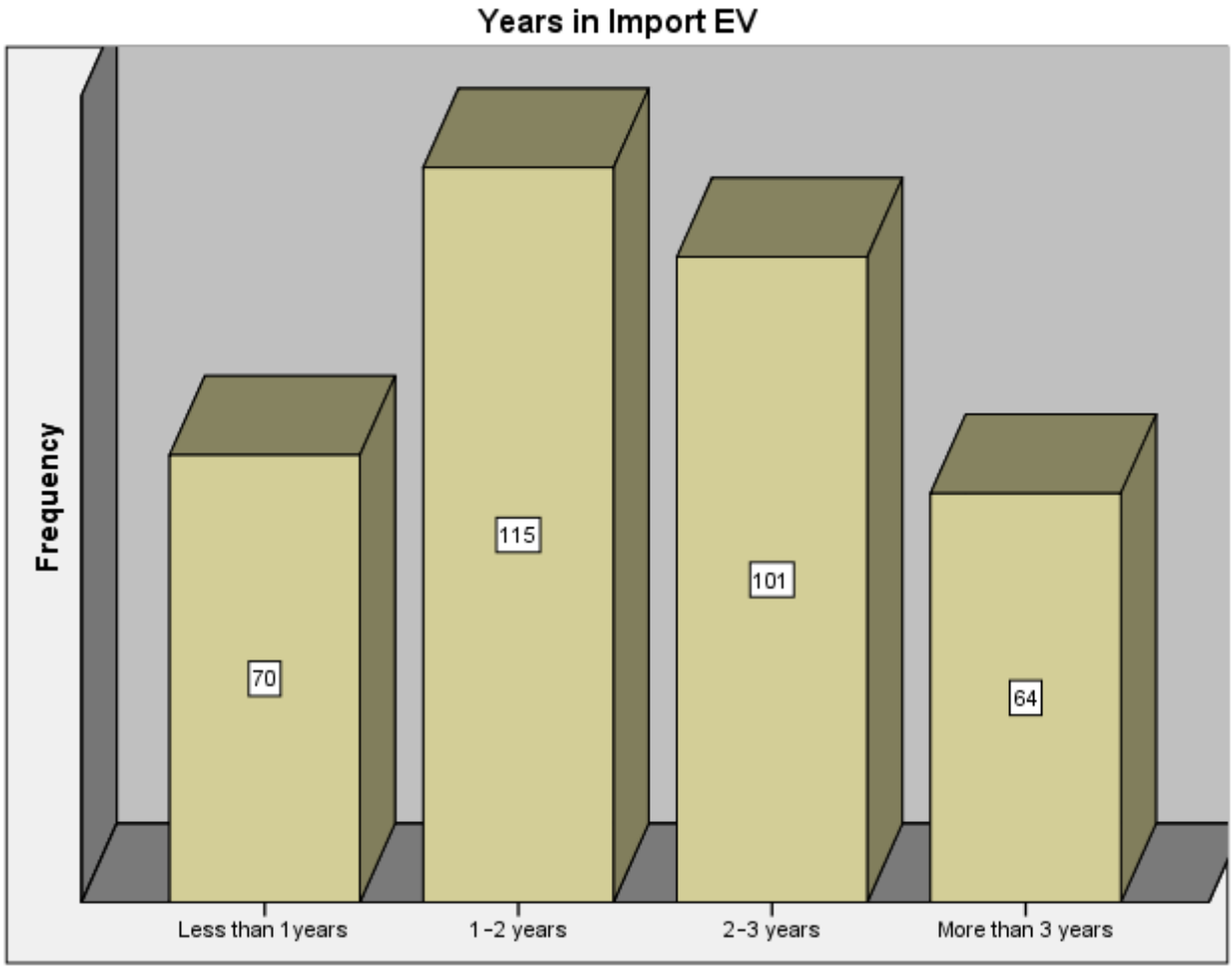
Section V: Challenges in EV Importation

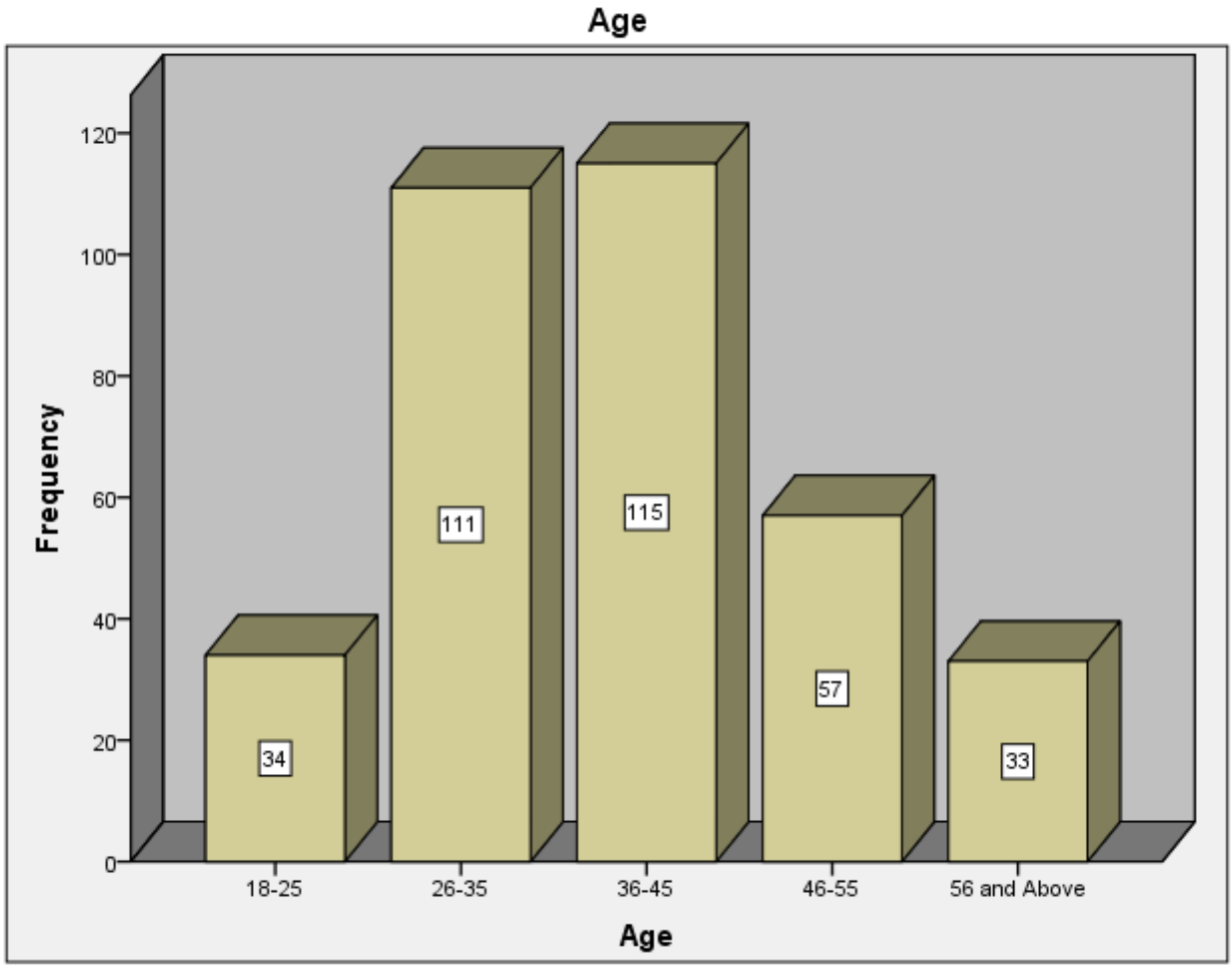
These items assess barriers faced by importers in Ethiopia.

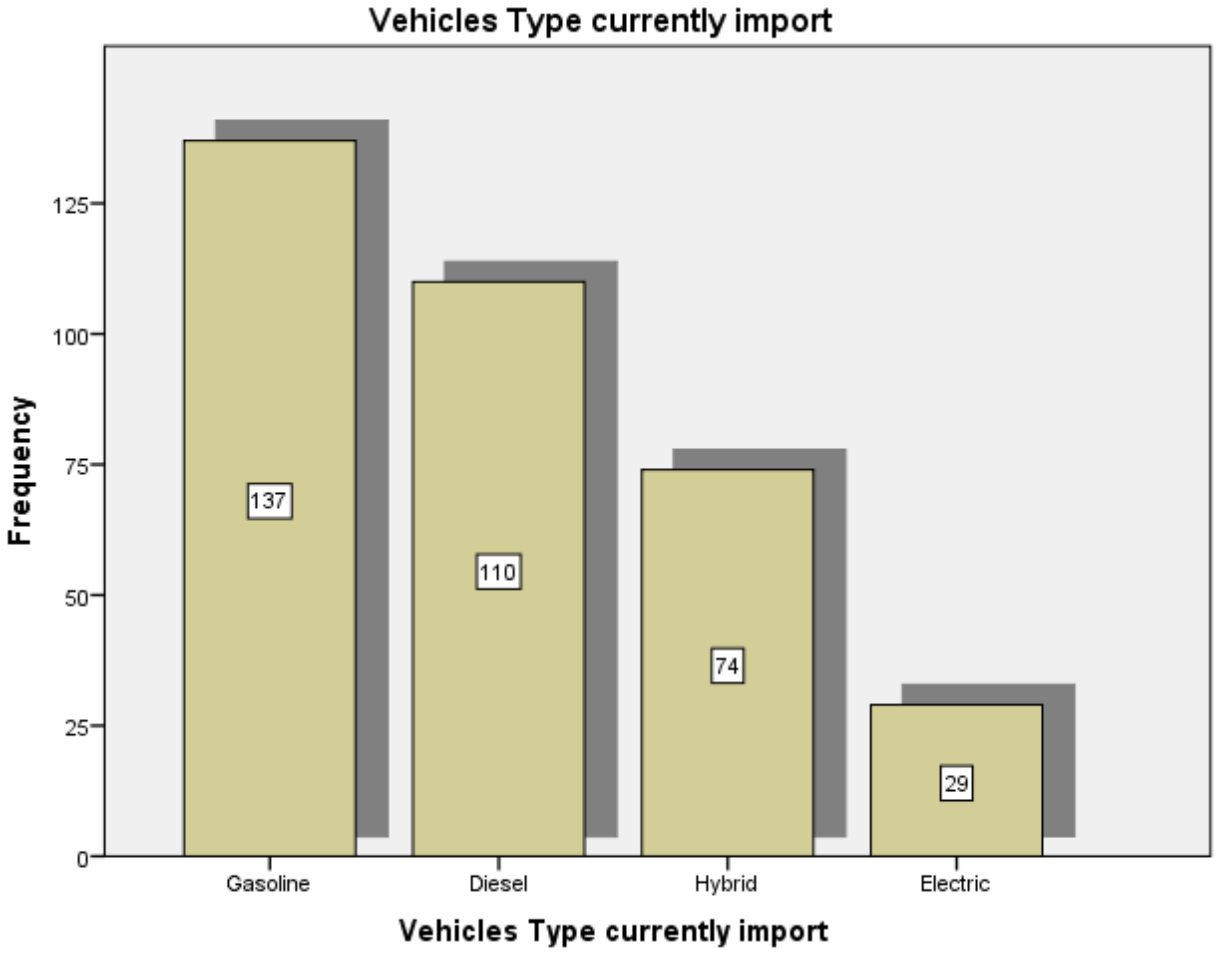
S/N	9. Challenges in EV Importation	1	2	3	4	5
9.1	The high cost of EVs limits my ability to import more units.					
9.2	Lack of charging infrastructure affects customer interest.					
9.3	Regulatory delays complicate the import process.					
9.4	Limited consumer awareness challenges EV market growth.					
9.5	Importing EVs is difficult due to limited technical knowledge and services.					
9.6	Infrastructure limitations hinder the safe and timely importation of EVs.					
9.7	Importers face delays in customs clearance due to poor logistics.					
9.8	Lack of proper warehousing affects EV handling post-importation.					

Thank you!

Appendix II: Some Graphical Outputs




Age
Frequency
120
100
80
60
40
20
0
34
111
115
57
33
18-25
26-35
36-45
46-55
56 and Above
Age


Vehicles Type currently import
Frequency
125
100
75
50
25
0
137
110
74
29
Gasoline
Diesel
Hybrid
Electric
Vehicles Type currently import