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Expanding Horizons: Strategic Approaches of European Firms in the Global Second-Hand Electronics Market with a Focus on Emerging Economies

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Patras, Greece, May 2026

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Abstract

The fast-growing second-hand electronics market (SHEM) is becoming an important part of the circular economy. The internationalization of firms engaged in refurbishment and electronic waste recovery has accelerated due to growing environmental concerns, increasing volumes of e-waste, and rising demand for affordable digital technologies. European firms have emerged as prominent market actors due to their technological know-how, understanding of regulations and their business models, which are based on sustainability. But growth in emerging economies is fraught with numerous institutional, operational and strategic hurdles, such as regulatory fragmentation, limits on infrastructure, informal market competition, and different consumer attitudes towards refurbished products.

This dissertation examines the strategic internationalization of European firms in the second-hand electronics industry, particularly in emerging economies. The study explores how firms balance profit maximisation with sustainability and social responsibility while exploiting resources, adapting to institutions, designing internationalization strategies and innovating supply chains. The research uses the Resource Based View (RBV), the Eclectic Paradigm (OLI) and institutional theory and perspective of dynamic capability to develop an integrated framework to analyze the internationalization process in relation to sustainability.

The study adopts a qualitative comparative case-study methodology based on two European firms in the refurbished electronics sector. The information was obtained by semi-structured interviews with various stakeholders and from secondary sources including corporate reports and various industry news releases. Thematic analysis was used to highlight strategic patterns and differences in the cases.

The results indicate that European firms heavily depend on acquired skills and knowledge that are needed in the European regulatory framework, such as advanced reverse logistics, knowledge of refurbishment, quality assurance and governance systems focused on sustainability and environmental issues. These are important ownership advantages for the facilitation of international expansion. However, the findings demonstrate that these advantages must be adapted to the institutional conditions of emerging in order to generate

value. Such adaptation is often necessary because of regulatory uncertainty, infrastructure limitations, and the influence of informal markets.

The study uncovers the divergent approaches towards internationalization. Two different models were identified: one was centralized focusing on operational standardization and traceability; the other was a partnership model with a focus on decentralized approaches and embeddedness. The results also reveal that reverse logistics and supply chain innovation are crucial strategic measures for supporting companies to maintain their sustainability promises and to face institutional complexity. Besides, the study highlights the importance of the informal repair and resale networks in adaptive governance strategies in emerging markets.

The dissertation builds on the existing internationalization theories and extends them towards the area of circular economy business models which adds to the international business research and sustainability research which is carried out internationally. It demonstrates that capabilities and reverse logistics systems towards sustainability are strategic resources with an impact on location, ownership and internalization decisions. Additionally, the research helps to fill the gaps in the knowledge base on the effect of the mixed institutional setting on governance design and strategic adjustments, and can serve as an example of the effect of the mixed institutional setting on governance design and strategic adaptations.

The study offers managerial insights into how firms can scale sustainability-oriented business models internationally. The results highlight the significance of adaptive supply chain management, institutional responsiveness, strategic cooperation and adaptive governance. The study also emphasizes the importance of the factors to consider when considering emerging markets, including affordability, operational efficiency and ESG accountability.

Based on the analysis of the dissertation, the findings indicate that strategic internationalization in second-hand electronics industry is the result of a dynamic interaction between firm-specific capabilities, institutional complexity and adaptive supply chain innovations. The principles of circular economy have become part of the agenda of many businesses worldwide and it is crucial to appreciate the dynamics to better support sustainable and inclusive market growth at global level.

Keywords

Second-hand electronics market (SHEM)

Emerging markets

Reverse supply chain

European strategy

ESG

Circular economy

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Chapter 1: Introduction

1.1 Introduction and Research background

Digital technologies have transformed modern societies by reshaping production, consumption, and communication. Electronic devices like mobile phones, laptops, tablets, and other consumer technology are vital to economic engagement, learning, entrepreneurship, and social networking. However, the current technological development and fast turnaround of products have resulted in a massive accumulation of electronic waste (e-waste) that is today a prominent environmental, economic and regulatory problem worldwide (United Nations University, 2020). The circular economy (CE) has emerged as an approach to reducing waste, extending product lifespans, and facilitating the reuse, refurbishment, remanufacturing, and recycling of resources (Geissdoerfer et al., 2017).
The second-hand electronics market is a key part of the shift toward a circular economy. The sector covers the collection, refurbishment, re-use, re-sale and recycling of electronic products which have previously been used. Second-hand electronics enterprises play an essential part in ensuring the sustainability of the environment by giving the products a second life, lowering the requirement for virgin materials and meeting the need to acquire a less expensive electronics product. In recent years, the SHEM has been growing from a small informal commerce, to a global trade, digital markets, state-of-the-art refurbishment technologies and optimised reverse logistics.

There have been several factors in relation to the global second-hand electronics market that have helped in its expansion. First, the introduction of more expensive electronic devices has created an interest in the availability of more affordable devices, especially in the emerging markets where consumers' purchasing power might be limited. Secondly, consumers, businesses and policymakers are increasingly demanding sustainable consumption and responsible waste management. Third, electronic markets are increasingly strategic in the context of digitalisation in emerging economies that continue to drive even greater demand for lower cost ICTs.
European firms occupy a strong position because Europe has strict environmental legislation, long-standing producer-responsibility policies and developed waste-management systems. In Europe, the various regulations have led to the development of

sophisticated refurbishment, life cycle management, reverse logistics, traceability and environmental compliance technologies in companies (Hart, 1995). Eventually, these capabilities have become key strategic resources that may be a competitive edge in international markets.

There could be more sophisticated refurbishment technologies, quality assurance procedures, and reporting mechanisms for environmental, social, and governance (ESG) aspects in European firms operating in the second-hand electronics industry. Furthermore, European firms often enjoy a strong reputation for sustainability and regulatory compliance. These resources can provide firms with significant ownership advantages during international expansion, particularly in markets where product quality, authenticity, and environmental responsibility are key concerns.

But European firms' internationalization in emerging economies is also a substantial strategic challenge. The emerging markets are characterized by institutional diversity, regulations that differ among these markets, lack of infrastructure and high informality of the economy. In many emerging economies, the electronics sector consists largely of informal repair businesses and second-hand electronics retailers. These non-formal units are usually not formally managed and regulated and may be very flexible in their operation and are sometimes very well integrated into the local community.

Hence, the institutional settings are widely different from the developed markets in Europe and cross-border companies have to deal with these settings. Institutional Theory proposes not only that the economic efficiency aspects influence the design of organizations but that the regulatory, normative and cognitive aspects of the environment also influence the design of organizations (Scott, 2014). In other emerging economies, however, strategic thinking and business practices can be significantly affected by institutional voids (Khanna and Palepu, 2010).

Institutional conditions related to value creation in the second-hand electronics market are important to focus on, such as coordination of reverse logistics, product traceability and product quality and sustainability governance. The second-hand electronics industry is a very different one from the traditional manufacturing industries, with the ability to manage the return flows of products, and extend the life cycle through refurbishment processes and systems being crucial. These activities require a high degree of coordination across geographically dispersed and institutionally heterogeneous supply chains.

In this situation, reverse logistics is more than just a business function, it's a strategic asset. European firms are increasingly using complex tracking systems, digital supply chain lifecycle monitoring systems and data analytics tools to help with ESG compliance and product traceability in other countries. Additionally, new technologies such as blockchain-based traceability and digital product passports are emerging in the field of circular supply chain management (SCM) and are starting to be adopted because of their potential to enhance transparency and reduce the chances of greenwashing or non-compliance in international supply chain processes.

Companies in the developing world are facing strategic issues with regards to informal markets, too. Local repair systems and informal repair technicians can be engaged, offer repair services and become strategic partners. The last few years of research has shown that multinational corporations (MNCs) that formally establish their operations and presence inside a developing country do not replace the informal social structures, but they coexist and interact with them (Mair, Marti and Ventresca, 2012). Therefore, the capacity of firms to build-up adaptive governance mechanisms (formal quality standards and informal partnership approaches) can prove to be a key factor of success in the internationalization process.

In the second-hand electronics global market, profitability and sustainability are a key strategic question. Sustainability is well recognised in the literature as a competitive advantage but, in the context of operations in emerging economies, practical considerations may sometimes raise tensions between ESG commitments, affordability and commercial performance. Environmental and traceability standards may be high and lead to costs that are higher and less competitive in the institutionalized environment. This requires firms to balance financial objectives with environmental and social responsibilities.

From an international business point of view the second-hand electronics sector presents a unique empirical and theoretical environment, not only due to the sustainable value creation, but also because of the institutional complexity and dynamism of second-hand electronics markets. The Resource-Based View (Barney, 1991) and the Eclectic Paradigm (Dunning, 1988) are still valid explanations for ownership advantages and governance structures. But these theories need to be combined with the approaches of the Institutional Theory and the dynamic capability perspective of how firms can handle the volatility of institutions and informality in markets and circular supply chain in response to emerging economic challenges.

This dissertation is thus a transdisciplinary contribution of two streams of research: international business strategy and institutional adaptation and circular economy research. It intends to examine the strategic expansion of European firms into the second-hand electronics sector, the institutional issues and the business models that need to support the sustainability of this sector. By so doing, the study adds to the growing literature that looks into the internationalization of the CE industries and the strategic consequences of sustainability-oriented global value chains.

Ultimately, the global second-hand electronics market is only a part of a broader shift in the dynamics between economic globalization, technological development and environmental concern. The study of firms' strategic behavior in the circular economy is becoming increasingly relevant in both the academic world and management practice, as governments, businesses and consumers are increasingly interested in implementing the principles of circular economy.

1.2 Problem Statement and Research Gap

Facing environmental concerns, digitalization and demand for low-cost electronic products, the global second-hand electronics market has been growing rapidly. European firms have become strong players in this market because of their sophisticated refurbishment services, environmental governance frameworks and experience in operating in a heavily regulated environment. Yet, despite these benefits, a number of strategic and institutional issues remain unresolved for European firms in emerging economies, which are poorly researched in the current academic literature.

This MBA dissertation seeks to examine the main challenge of transferring and adapting sustainability-oriented business models and resource capacities to institutionally fragmented emerging markets. Institutional conditions in an ESG context regarding a host market may impact on these technological capabilities, reverse logistics systems and structures, and vice versa, companies can have these capabilities, systems and structures, but they can also affect the institutional conditions of their host market in an ESG context.

One of the characteristics of an emerging economy is the inconsistent enforcement of regulations, lack of infrastructural development, poor waste management or dependence on the informal sectors, which are commonly described as institutional voids (Khanna and Palepu, 2010). All these institutional aspects add to uncertainty about the operation and complications in the second-life electronics industry. Firms need to face fluctuating import restrictions, coordination challenges in the supply chain and grey channels of repair and resale, which can be the dominant part of the local market.

Theories of internationalization provide useful explanations for how firms internationalize their business and could be applied to understand the internationalization of the business of SMEs. The Resource-Based View (RBV), and the Eclectic Paradigm (OLI) (Barney, 1991; Dunning, 1988) are widely used theories of internationalization and firm competitiveness. While RBV and OLI primarily focus on firm-specific and location-specific advantages, they provide limited insight into how firms respond to differing institutional environments. Although Institutional Theory addresses such institutional dynamics, limited research has examined how these theoretical perspectives interact in the context of circular economy business models and reverse logistics operations across emerging markets.

The second-hand electronics sector is also distinct from other manufacturing sectors because the reverse logistics coordination, lifecycle management, product tracking, and sustainability governance required to build and maintain competitiveness are unprecedented in depth and complexity. Companies in this industry must keep track of and abide by environmental regulations in geographically dispersed supply chains and meet local market requirements.

The informal sector complicates the internationalization strategy in emerging markets. Informal repair technicians and local resale networks are also options that could be less expensive than official refurbishment companies. The current academic research on institutional voids points to the importance of informal institutions in emerging markets but only a few studies have focused on the interplay between European firms and informal institutions in the context of hybrid institutional structures or adaptive partnership structures (Mair, Marti and Ventresca, 2012).

Additionally, the relationship between the needs of the secondhand electronics market and the relationship between economic viability and profitability requires further investigation. In the uncertain institutional setting, some of the main themes of the circular economy scholarship are more likely to be related to environmental aspects of refurbishment and extension of the lifecycle. A balance between (i) cost, (ii) environmental friendliness, (iii) the efficiency of operation and (iv) the competitiveness of the market is required.

An additional important matter is the need to adapt the supply chain and to have digital traceability. Advanced lifecycle monitoring systems, traceability systems and reverse logistics coordination systems are indispensable in maintaining credibility in the cross-border business as ESG becomes increasingly important. However, the institutional systems for establishing a standard environmental system are likely to be lacking in emerging markets. In this institutional context, companies, too, need to look for flexible 'supply chain innovation' which will pave the way for them to be transparent and accountable in this context.

Despite growing interest in circular economy business models and internationalization strategies, limited research has examined how European firms strategically internationalize sustainability-oriented business models within the global second-hand electronics market, particularly in emerging economies characterized by institutional complexity.

Research Gap

While academic interest in circular economy business models and internationalization strategies has grown considerably, research examining how European firms leverage their sustainability-oriented capabilities and resource advantages within the global second-hand electronics market—particularly in the institutional environments of emerging economies—remains limited. Furthermore, insufficient attention has been paid to the influence of institutional voids, hybrid institutional arrangements, informal institutional structures, and digital traceability systems on strategic internationalization outcomes in sustainability-oriented industries.

1.3 Aim and Research Objectives

Building on the identified research gap, this dissertation aims to develop a theoretically informed and empirically grounded understanding of how European firms strategically expand into emerging economies within the global second-hand electronics market. The

broader objective of the study is to examine how these firms leverage their resource-based and sustainability-oriented capabilities while adapting to the institutional characteristics and market dynamics of emerging economies. By this, the study will assist in filling the conceptual gap between the internationalization theory and the circular economy research.
More specifically, the study examines the strategic internationalization process within an industry where value creation is grounded in environmental responsibility, regulatory compliance, and reverse logistics capabilities. Unlike traditional manufacturing industries, competitive advantage in the second-hand electronics sector depends less on economies of scale and cost efficiency and more on process innovation, quality assurance, regulatory compliance, and trust-based branding. These characteristics require firms to carefully adapt their firm-specific advantages when transferring business models and operational capabilities to new institutional environments.

The dissertation has the following research objectives in order to operationalize this overall objective:
First the study seeks to identify and examine the firm-specific resources and capabilities, which are leveraged by European firms when entering the emerging economies in the second-hand electronics market. The technological refurbishment capabilities, environmental compliance knowledge, the brand reputation, and the advanced reverse logistics solutions will be considered as possible sources of the sustainable competitive advantage as per the Resource-Based View (RBV).
Second, the study examines how ownership, location, and internalization decisions are shaped by the institutional environments of emerging economies. This paper shall employ the Eclectic Paradigm (OLI) and the Institutional Theory to evaluate how firms respond to regulatory fragmentation, infrastructural constraint, informal competition in the market and unpredictability of policies.
Third, the study investigates the localization of supply chain structures, with particular emphasis on reverse logistics networks. This goal is related to the response of firms to collection, testing, refurbishment, redistribution and end-of-life management in which formal infrastructure is limited or unevenly developed and informal players are controlling the market.

Fourth, the study evaluates how firms balance financial performance with environmental and social responsibility objectives. This is to know whether the sustainability-related strategies are practical within the institutional setting and how the institutions can be implemented and reviewed to different levels.

Collectively, these objectives aim to develop a comprehensive understanding of strategic internationalization within the circular economy, particularly within the second-hand electronics market. The study is expected to generate both theoretical and practical insights into the strategic internationalization of firms operating within the circular economy.

1.4 Research Questions (RQs)

To address the research aim and objectives, the following interrelated research questions were developed. These questions are designed to reflect the integration of the Resource-Based View (RBV), the Eclectic Paradigm (OLI), and Institutional Theory.

RQ1: What are the resource strengths that are employed by European firms in developing and executing entry and growth plans into the new economies of the second-hand electronic market?

The above question focuses on firm-specific capabilities, including advanced refurbishment technologies, compliance systems, environmental certifications, brand reputation, and reverse logistics capabilities. It examines how these resources create ownership advantages and support international expansion into emerging markets.

RQ2: How do ownership, location, and internalization decisions change in response to institutional constraints and opportunities in emerging economies?

This question examines the interaction between strategic decision-making and institutional environments. It explores how firms respond to regulatory fragmentation, informal market competition, infrastructure limitations, and policy uncertainty. The question integrates the Eclectic Paradigm (OLI) and Institutional Theory to assess whether traditional internationalization approaches require adaptation in sustainability-oriented industries.

RQ3: How do innovations in reverse logistics and network embeddedness contribute to the development of scalable and sustainable business models in emerging markets through locally based partnerships?

This question explores how firms adapt supply chain structures and collaborate with local actors to support sustainable international expansion. It examines partnerships with informal sector participants, joint ventures, and internal governance mechanisms that help maintain product quality, regulatory compliance, and operational efficiency.

RQ4: Which strategic approaches enable firms to balance financial performance with environmental and social responsibility objectives?

This question addresses the central challenge of balancing profitability, competitiveness, and sustainability within diverse institutional environments. It evaluates the effectiveness of strategic approaches in maintaining both ESG commitments and long-term commercial viability.

Together, these research questions provide a coherent analytical framework for investigating the relationship between firm-specific resources, institutional conditions, strategic adaptation, and sustainability-oriented internationalization. They ensure that the empirical analysis remains closely aligned with the theoretical foundations and objectives of the study.

1.5 Significance of the Study

The significance of this study can be considered from theoretical, empirical, and managerial perspectives.
Theoretically, the suggested dissertation can be used to fill in the gaps in international business literature as it balances the sustainability of business models to the existing systems of internationalization. Although the three approaches to the circular economy have generated significant academic discussion, their combined application alongside the

Resource-Based View, the Eclectic Paradigm, and Institutional Theory remains underdeveloped. This study applies these theoretical perspectives to the second-hand electronics market in order to examine key areas such as product lifecycle extension, reverse logistics, and ESG-related value creation.

Moreover, the given research is also added to the body of literature related to the topic of the circular economy because it encompasses a strategic internationalization perspective. The list of previous researches on the problem of the circular business model that is directed at the assessment of environmental impact, policy frameworks, or technological innovation is massive. Limited attention has been focused on how circular firms are formed on the international level and how it can become a part of non-homogenous institutions. The dissertation helps fill this gap with the knowledge offered by strategic management and international business theory to the field of sustainability scholarship.

Empirically, the study focuses on a rapidly growing yet under-researched sector. Second-hand electronic market also determines the efficiency of resources in the world and digital inclusion. The review of European firms that work in this sector in the emerging economies will offer an opportune information about the overall restructuring of the global value chains to an eco-friendlier structure.

The results of this study may be applicable in providing suggestions to firms that prioritize internationalization of their enterprises in the aspects of sustainability-focused business frameworks. The strategic choices can be made when one knows how to select the entry mode, partnership strategies, supply chain structure, how to decrease the risks offered by the regulation and brand position. Other than that, an enhancement may be achieved by valuing the role played by regulatory environments on behavior of foreign firms and sustainability performance by policymakers.

Overall, the significance of the research lies in bridging the gap between theory and practice while contributing to academic debate on an issue of considerable economic and environmental importance.

1.6 Dissertation Structure

The dissertation consists of six chapters that follow a logical sequence aligned with the research aims, objectives and questions.

Chapter 1: Introduction

This chapter introduces the research context, problem statement, and research gap, formulated the aim and research objectives, stated the research questions, and discussed the importance of the study. It establishes the foundation for the theoretical and empirical analysis presented in the subsequent chapters.

Chapter 2: Theoretical Perspectives on Internationalization and the Global Second-Hand Electronics Market

This chapter reviews the literature that is topical in the issue of the global second-hand electronics market, the concepts of the circular economy, and the principles of the theories of strategic internationalization. It critically evaluates the Resource-Based View, the Eclectic Paradigm (OLI) and Institutional Theory and synthesized them in a conceptual framework on which an empirical study is conducted.

Chapter 3: Research Methodology

This chapter explains and justifies the research philosophy, approach and design. It provides the qualitative comparative case study methodology, case selection and sampling methodology, data collection and data analysis process, the reliability issue, the validity issue, and the ethical issue.

Chapter 4: Findings and Empirical Analysis

It is the chapter where the empirical findings of the case studies are proposed. It presents within-case analyses of both firms and a cross-case comparison based on the research questions and conceptual framework. The analysis identifies the patterns, differences and themes of strategy.

Chapter 5: Discussion

Discusses the findings in relation to the literature, research questions, theoretical contributions, managerial implications, limitations and future research directions.

Chapter 6: Conclusion

The conclusion chapter provides the summary of the findings according to the existing literature, answers the research questions, theoretical contributions, managerial implications, limitations and future research suggestions.

The dissertation follows a systematic progression from contextual background and theoretical foundations to methodology, empirical analysis, and contribution to knowledge. This structure provides a logical, analytical, and coherent progression of the study.

2 Theoretical Perspectives on Internationalization and the Global Second-Hand Electronics Market

2.1 The Global Second-Hand Electronics Market (SHEM) and the Circular Economy

A shift in the world production and consumption system to the more sustainable one has made the circular economy the key subject of the academic and policy agenda. Global Second-Hand Electronics Market (SHEM) is one of the key strategic and purposeful areas in this massive overhaul to the environment. The SHEM is concerned with the gathering, repairing, reselling, reissuing and reusing of the used electronic products, smart phones, laptops, tablets and other consumer electronics. By extending product life cycles and reducing material throughput, the SHEM operationalises key circular-economy principles.

The Emergence of the Circular Economy Paradigm

Circular economy is an alternative to the conventional linear economic model of extraction, production, consumption and disposal. Rather, it is interested in efficiency of resources, increasing life of product, regenerative design, and reducing waste. In the simplest sense, the idea of the circular economy aims at the same process of decoupling the rise of the economy and the decline of nature by avoiding the closure of material cycles and endeavors to keep the value of the economic systems as long as possible.

It is a revolution that is imperative in the electronics sector. Electrical equipment includes precious minerals, rare earths and energy consuming technology. The high rate of technology innovation and modernization of consumers is contributing greatly to the reduction of the product life cycle with a consequent rise in electronic wastes. It is possible to address these concerns with the assistance of the circular economy model that considers the idea of reuse, repair, refurbishment, remanufacturing, and recycling among the most important elements of sustainable production systems.

The market of second-hand electronic products is the center of this structure because these directly increase utility of goods. Companies reuse the devices once the initial usage is completed and release them in the market rather than disposing the gadgets therefore postponing the disposal process and avoiding the extraction of the virgin resources. Furthermore, the SHEM is not a secondary market only, but one can also make an operational path to circularity.

Global Dynamics of the Second-Hand Electronics Market

The SHEM is driven by several structural forces. First, increasing globalization and rising demand for affordable electronic devices continue to expand market opportunities. The opportunity offered by the emerging economies is the high population provided and a growing digital infrastructure and demand for low-cost technology solutions Lower-priced second-hand devices can improve digital inclusion by making ICT access more affordable.

Second, attitude shift of consumer on sustainability. The elevated rates of environmental consciousness have seen consumers groups embracing the use of refurbishment products as responsible products. This has been strengthened in regulation programs, especially in European Union that encourage repairability, longer producer responsibility, and reduced that of waste targets.

Third, the economic instability and income disparity in different markets have made second-hand electronics more acceptable and can be employed as an alternative to new equipment which is relatively pricier. The emerging markets competitors are more price sensitive in that the refurbished products are becoming quite competitive and in developed markets, consumers are considering it more of a value-for-money product.

This has seen the SHEM being structured and becoming more globalized as compared to when it was a loose and fragmented activity. Large firms have contributed to formalising refurbishment, quality grading and certified resale standards. The e-markets have also helped it to trade in used electronics across the borders since there have been high levels of transparency and scalability of the market.

Reverse Logistics and Value Creation

Among the peculiarities of the second-hand electronics markets, it is possible to note that it is founded on reverse logistics. In contrast to the old supply chain systems that are grounded on the circulation of the products between the manufacturers and the consumers, the reverse logistics systems organize the collection, inspection, repairing, re-processing, and reusing of the used equipment. This can only be done by technological skills, quality check measures, traceability and coordination of the various players.

The logic of value creation in this industry is not similar to the key manufacturing industries. It is not the efficiencies of mass production that contribute immensely to the competitive advantage but the perfection of operations in the refurbishing processes, satisfactory systems of recovering assets and that which forms trust to guarantee the quality of the products. The variables of standardized grading system, warranty and certification are necessitated to overcome the consumer mistrust of a refurbished product.

Because European firms operate under strict environmental regulation, they have developed strong capabilities in reverse logistics and compliance management. These firms have established structured collection systems, licensed recycling facilities, and transparent record-keeping systems that comply with regulatory requirements. These capabilities are strategic assets which may be applicable in foreign markets especially when the purchasing habit is influenced by sustainability-related attributes.

Regulatory Frameworks and Governance

Regulatory regimes are one of the problems which influence SHEM development significantly. The policies addressing the electronics waste management and the producer responsibility policies in Europe have forced companies to invest in lifecycle management systems. These legislations are not merely intended to promote recycling, but reuse and refurbishment which occupy higher positions in the waste hierarchy.

But in the case of second-hand electronics, the same might not be applicable to its exported products to the developing economies. The heterogeneity of the institutions are exhibited in form of unequal enforcement, the disparate rules of importation and the disparate rules of environment. In other settings, the problem of the dumping of garbage illegally is a subject of concern and this has brought about a sense of suspicion of the cross-border movement of second-hand electronic products. This regulation complication poses strategic uncertainty to internationalizing firms.

There are also informal repair and resale markets that are also strong in many emerging economies. The informal markets often own the process of devices refurbishment and redistribution, and it is not officially governed by the regulations. Although these actors may contribute to resource recovery and job creation, their activities may not always meet formal standards for quality control and environmental safety. The hybrid form of the market that challenges the classical strategies paradigms is generated by multinational corporations and local networks that are presented in the structure of an informal organization.

ESG and Sustainability Reflections

The Environmental, Social and Governance (ESG) factors have become more popular in the corporate strategy of the electronic sector. The sustainability performance should be measurable to the investors and consumers and policymakers. The SHEM companies are not only to be economically viable but also environmental friendly especially in terms of handling the waste materials and the utilization of resources.

The concept of the circular economy offers a better image to the second-hand electronics businesses. Companies can claim reductions in carbon emissions, material extraction and landfill waste by extending product life cycles.. Expanding to new markets, however, comes with convoluted moral issues. Business organizations should also make sure that the exported equipment is in good working condition, and they are not already out of date before their expiration period. They should also not transfer unwanted contributions to the local garbage collection where recycling systems could be minimal.

Therefore, the sustainability in the SHEM is not a promotional declaration and not a governance issue, which must possess an effective control and responsibility system. The correlation of profit and environmental responsibility is prevailed by the effective institutional structures and the free supply chain management.

Emerging Economies as Strategic Growth Markets

Emerging economies offer strong growth potential for the second-hand electronics market, but they also present significant operational and institutional challenges. The high urbanization rate, the rising middle classes, and the digital transformation projects subject to stress the great demand on the necessity to own affordable electronic gadgets. The governments in most of the emerging markets are highly supportive of digital inclusion and this is also contributing to the growth of the market.

The entry of markets and operation stability is however complicated by infrastructural constraints, unpredictability of policy and institutional absence. There might be no good logistic systems, no accredited testing centers and official distribution channels. The unofficial actors can also provide alternatives because compliance costs are more affordable to uphold and this may increase the competitive forces of European firms that have set sustainability standards.

European firms cannot simply replicate home-market business models; they must adapt them to local market ecosystems. Companies will need to establish a new balance between the existing pricing strategy, alliance strategy and business to respond effectively to local market realities while preserving the credibility of their sustainability claims.

SHEM and the Strategic Internationalization Theory

The SHEM offers a unique setting in which the process of internationalization could be researched. This market has been entrenched in sustainability requirements, lifecycle management and regulatory control as opposed to the old manufacturing industries with an export orientation. Competitive positioning includes advantages of the firm characterized by refurbishment technology and compliance knowledge and brand credibility. Simultaneously, the strategic decisions are also influenced to a large extent by institutional disparities between the host and the home countries.

It means that the international market of second-hand electronics is a complex phenomenon that should be approached by an interdisciplinary method of combining the concept of a circular economy with the principles of strategic internationalization. The industry questions the ideologies of low rate of economic growth, consistent institutional structures and profit based interest orientation. Rather, it is an intersectional point between environmental law and social responsibility and economic growth.

Global Second-Hand Electronics Market contributes to the transition to the circular economy in the forefront. The industry has been a structured and internationalized industry because of digital demand, sustainability awareness among others as well as the economic pressures that have transformed the industry. Unlike traditional electronics manufacturing, SHEM depends on reverse logistics, regulatory compliance and trust-based value creation. The abilities of European firms that were established with strict environmental policies are uniqueness and they can give such firms competitive edge in the international market. Nonetheless, the move into the new economies leads to the complexity of the institution, informal competition and governance issues that make the strategic implementation process complicated.

The context of the analysis of the issue of strategic internationalization of the further sections makes the SHEM a part of the general circular economy. To come up with the conceptual frame by which the empirical inquiry of this dissertation will be conducted, one is expected to be knowledgeable of the nature of the structure, the regulatory forces and the sustainability of the industry.

2.2 Theoretical Foundations of Strategic Internationalization

The Resource-Based View (RBV) explains how firms gain competitive advantage through valuable and difficult-to-imitate resources. In this study, RBV helps explain how refurbishment expertise, ESG credibility, and traceability systems support international expansion in the second-hand electronics market.

The Uppsala Model is a model that is still used today in international business literature, but in the second-hand electronics market, its explanatory power is less. The model does not fully reflect the internationalisation processes that take place in industries with a sustainability focus, which are often characterised by rapid and technology-driven internationalisation and networks. Within the second-hand electronics industry, companies often make use of a digitally coordinated reverse logistics system, cross-border refurbishment networks, and rapid market entry methods which are not necessarily consistent with sequential internationalization.

The Institutional Theory and Dynamic Capability perspectives thus offer better explanatory bases for the analysis of strategic adaptation in the context of institutionally volatile emerging economies.

The Resource-Based View (RBV)

Resource-Based View is considered to be one of the central prespectives of strategic management and international business. Simply put, RBV supposes sustainable competitive advantage to be a by-product of firm-specific resources and capabilities that are valuable, rare, inimitable and non-substitutable (VRIN). Rather than the structure of an industry or external market situation, RBV lays significant emphasis on internal competencies as the significant source of performance differentials amongst firms.

In case of application in internationalization, RBV implies that firms ought to relocate to overseas markets so that they can exploit proprietary resources and capacities that can yield high rate of returns in the overseas markets. These resources may be technological experience, management expertise, brand reputation, intellectual property, organizational routines, and organizational culture. With flexible transferable resources, firms would be able to utilize the resource even within geographic borders in order to create value.

The resource-based advantages may include the availability of high-level refurbishment technologies, experience in the field of compliance with the high environmental requirements, the development of reverse logistics, and strong sustainability-related branding in the case of European firms that engage in second-hand electronic business. They are not easily replicated by the local competitors in the emerging economies, particularly those with lower standards of regulatory practices. In this respect, they may be exploited as strategic ownership benefits in the overseas markets.

However, RBV does not ignore the fact that the effectiveness of firm specific resources is conditional depending on the fit in the context. The resources that are helpful in one institutional environment may be forced to be changed in another. As an example, the compliance experience acquired in the European regulatory settings may not, in any case, be translated into a competitive advantage in the new economies which are regulatorily fragmented or loosely applied. Therefore, although the Resource-Based View offers a valuable theoretical lens for understanding internationalization, it should be complemented by perspectives that address environmental and institutional differences across markets.

The Eclectic Paradigm (OLI)

Eclectic Paradigm also referred to as the OLI framework is a detailed expository writing of how multinational firms and foreign direct investment (FDI) behave. According to this model, firms enter international production, in case three conditions are satisfied; Ownership advantages (O), Location advantages (L), and Internalization advantages (I).

Firm specific assets such as technology, brand equity, managerial skills or proprietary processes are considered as ownership benefits. They may be certified refurbishment sources, traceability systems, ESG certifications, and unique grading processes in the second-hand electronics industry.

Location advantages refer to the aspects of the host countries that make them attractive to an investment. These may be market size, labor costs, regulation structure, infrastructure and demand conditions. The emerging economies usually offer other advantages as far as location is concerned through the growing consumer populations and lower operational costs. They are, however, also capable of having such challenges as the unstable institutions, no infrastructures, and unofficial competition in the market.

The advantages of internalization are realized when companies choose to make decisions to internalize their transactions rather than relying on the external market forces. Similarly, firms may prefer to internalize refurbishment activities in industries where quality control and brand reputation are critical, as this enables them to maintain consistent standards and reduce the risk of poor practices. Conversely, where local market complexity is observed, local knowledge may be exploited by a partnership or joint venture by companies.

The OLI paradigm provides a useful framework for analyzing the strategic internationalization of the second-hand electronics market, as it captures the interaction between firm-specific advantages, host-country location factors, and governance or internalization decisions. It enables the analysis of European firms in the context of how they are constituted, their choise of location, and the mode of governance when expanding into the new emerging economies.

However, the OLI framework has been criticized for being relatively static. It predetermines the conditions of internationalization, though it is not comprehensive in the consideration of active adaptation within the realm of dynamic processes and the development of institutions. The problems experienced within the sustainability-driven industries where regulatory environment and stakeholder demands are fluctuating at an alarming rate may compel firms to change their OLI settings with time. So, OLI provides understructure, but it must be complemented with developing and institutional strategies.

The Uppsala Model of Internationalization

The Uppsala model conceptualizes internationalization as an incremental and experiential learning process. This perspective assumes that the more familiar firms become with a foreign market, the more committed they are likely to become to international operations.. The first forms of expansion are the low commitment forms such as exporting and the second levels are the high commitment forms such as subsidiaries or production plants.

Despite the contribution of Uppsala model towards illumination of slow expansions pattern, its appropriateness in the requirements of the second-hand electronic market is subject to scrutiny. Depending on the digitalized and platform-enabled industries, the international expansion process could be quicker and non-linear than it implies in the model. Online auction and online supply chain management enables companies to enjoy the advantages of foreign market power without necessarily a large physical presence.

Moreover, sustainability-oriented firms can go global not only by means of incremental learning, but also due to regulatory arbitrage, resource recovery, or ESG based strategic location. In this connection, even though the idea of experiential learning can still be applied, particularly to deal with the issue of institutional complexity, the chronological order suggested by the Uppsala model is not always an effective means of describing the current trends in the internationalization process.

Network Theory and Relational Perspectives

The network-based approaches put more emphasis on inter-organizational relations in facilitating international expansion. Companies become a part of the networks of the suppliers, distributors, regulators, etc. By these relations, there is availability of information, resources, and legitimacy in the foreign markets.

In an emerging economy where, institutional vacuum may disrupt formal market transactions, networks tend to play a very crucial role in reducing uncertainty and coordination in these environments. The penetration and performance of the market can be enhanced through partnerships with the local distributors, refurbishing stores, logistical corporations or even amateur players in the industry.

Network embeddedness is also particularly valuable to companies in the second-hand electronic industry. Reverse logistics systems require the coordination of various participants including collection services, testing, repair service providers and resale programs. It could imply that the ability to achieve successful internationalization does not always presuppose only internal capabilities but also the ability to become a part of the ecosystems of a location.

Network theory is a strategic asset to complement RBV and OLI as it puts the focus on relational capabilities and social capital. It underlines that internationalization is not just the role of the benefit of ownership or location but also of the possibility to work with each other and the institutional embeddedness.

Implementation of Theoretical Foundations

Despite the fact that all the theoretical frameworks are valuable, no strategy can describe the explanation of strategic internationalization in the global second-hand electronics market. RBV is a theory that describes the way in which competitive advantage can be developed using certain abilities of firms. The OLI paradigm relies on the firm level and host country criteria of entry mode decisions. The Uppsala model focuses on experiential learning and gradual commitment. Network theory is premised on embeddedness and integration in an ecosystem in terms of relations.

These theories are not considered to be mutually exclusive to the context of this dissertation, but they are complementary. The ownership advantages are determined on the basis of Resource-Based View. Eclectic Paradigm is one paradigm that is applied to examine cross border strategic configuration. The impacts of regulatory and normative environments on strategic adjustment are explained by the institutional factors that will be examined below. The perspectives of the network illuminate the relational facet of the supply chain management and integration of the market.

By integrating these theoretical perspectives, it is possible to develop a deeper understanding of how European firms expand into emerging economies within sustainability-oriented industries. It allows examining the internal capabilities and external limitations, the strategic purpose and the institutional environment and finally, the economic and environmental performance objectives.

Strategic internationalization is a complicated phenomenon that depends upon the firm-specific resources, attributes of the host country, governance decisions, experiential learning, embeddedness and networks relationships. The second-hand electronics market adds additional layers to these dimensions with the mandates of the circular economy and institutional heterogeneity.

The Resource-Based View explains that the ownership privileges of European firms are the knowledge on refurbishment, compliance, and sustainability attributes. The Eclectic

Paradigm describes how these advantages interact with place-based endowments and those decisions made by governance. The Uppsala model and network perspectives also make their contribution to the perception of the processes of learning and embedding relationships.

These theoretical foundations combined provide the analytical scheme, the empirical study below is going to be centered, to examine the strategic choices of European firms in the emerging markets. The study structure is informed by the established theory of internationalization, yet concurrently, it considers the specifics of the business model of the circular economy, which lends this part the conceptual basis of the cohesive structure of the dissertation.

2.3 The Context of Emerging Economies: Institutional Theory

Without the explanation of the global expansion of firms into the new markets, the analysis of the institutional setups that define the strategic action is not sufficient. Although the traditional theories of internationalization are based on the idea of firm-specific advantages and the nature of the market, the Institutional Theory could offers an additional perspective as it is rooted in the formal and informal "rules of the game" that shape economic activity. In the international second-hand electronic market, entry modes, modes of operation, form of governance and sustainability depend on institutional conditions of emerging markets.

This section applies Institutional Theory to examine how European firms navigate the regulatory, normative, and cognitive challenges of operating in emerging economies. It investigates the institutional disconnections, institutional fragmentation, the dynamics of the informal sector, and the requirements of legitimacy and how these forces influence strategic internationalization within the sustainability intensive industries.

Foundations of Institutional Theory

Institutional Theory argues that organisations are shaped by formal rules, informal norms and shared beliefs that structure economic behaviour. Institutions provide sanity and sense since they establish the principles of how one conducts himself or herself. Such institutions can be formal such as laws, rules and systems of enforcement and informal such as cultural norms, interpersonal relation and informal laws.

In this situation, the rational actors are not the individual firm in which they are operating to acquire legitimacy in their operating environment, and they would not be concerned with the level of economic efficiency. The legitimacy increases access to resources, and uncertainty and trust between the parties. Therefore, businesses do not only transform their organization and modes of operation to attain efficiency, but also depending on the expectation of the institution.

The international business environment furnishes institutional differences that exist between the home country and the host country, otherwise referred as the institutional distance. As companies internationalize and enter emerging markets, they encounter institutional structures that may differ significantly from those in their home markets. These differences influence risk assessment, governance policies, and strategic decision-making.

Institutional Voids in Emerging Economies

The study of the emergent markets involves one of the key concepts behind the study that is the concept of institutional voids. The institutional voids are lack or poor development of the market supporting institutions, including effective legal system, regulatory bodies and contract enforcement process, existence of a uniform quality certifying body and financial intermediaries. Such environments may be typified by increased uncertainty, the asymmetry of information and transactions.

The institutional gaps can be in different forms to the second-hand electronic market companies. Import laws are either loose or not strictly inclined. The demand for the refurbishment products can be unclear or nonexistent. It might be lacking in environmental monitoring systems and this poses a possible risk of the informal practice of disposing. The consumer laws are not ideal and this influences the trusts that are involved in the market.

These loopholes in an organization make strategic planning a complex task. These companies are accustomed to functioning under the conditions of organized systems of the European regulation and are forced to adjust to a situation in which less predictable variants of the formal system of governance dominate the environment. Lack of standardized certification models e.g. could be one of the motivators that compel companies to internalize the quality control mechanisms or come up with their own branding mechanisms as indicators of reliability.

Disintegration of the Regulatory Policy and Political Unpredictability

Regulation fragmentation and instability of the policy are common with the emerging economies. Although there are governments which actively participate in digital inclusion and technological growth, the regulation of the importation of second-hand electronics can be various and varies depending on the environmental issues, change of a trade policy or political impact in the country.

The regulatory uncertainty of the second-hand electronic market can be linked to the likelihoods of restriction of the imports of used gadgets, the modifications to the definition of electronic waste, or to the abrupt alteration of the policy in order to support the local business sector. The volatility poses a strategic risk and could affect the entry mode, degree of investment and degree of integration of operations.

The Institutional Theory assumes that the company will adjust to the regulatory pressures by the company in different ways of strategic adjustment. They will be in a position to incorporate compliance, lobbying, cooperating with domestic stakeholders or altering the frameworks to suit the changes of the policy frameworks. Such types of responses are indicators of the necessity to preserve legitimacy and the necessity to achieve operational stability.

The Structures of Hybrid Informal Economy and institutional Structures

The informal markets are one of the most peculiar institutional characteristics of the majority of the emerging economies. One of the dominating industries in repair, resale and small scale refurbishing of electronic belongs to the informal players. They are actors that are not formally regulated and taxed, but they constitute a substantial sector of the economy and the labor force.

Second-hand electronic market has informal repair staff and local resale markets, who tend to offer affordable substitutes to an official refurbishment company. Although the informal networks are highly flexible and well established at the local level, the networks might be too few to have normal quality control or environmental protection.

The Institutional Theory marks the fact that formal and informal institutions exist in hybrid systems. Once companies enter such environments, they have to behave according to either one of the two sets of rules. The strategic options it can employ are to compete and align with informal actors, or join them in formal supply chains or form alliances, which take advantage of their local information without subjecting them to quality standards.

This is a strategic dilemma between European firms and the informal sectors. On the one hand, a consistent following of the laid-down principle of formal compliance can make the operations more costly and reduce the competitiveness of the prices. Conversely, the company would compromise the sustainability commitments and brand image by following informal practices. The most significant detail of the strategic internationalization analysis of the new market is this institutional duality and coping strategies of firms with it.

Stakeholder Legitimacy and Expectations

The Institutional Theory focuses on the fact that businesses would have to appear valid by the various stakeholders from the perspective of regulatory authorities, customers, shareholders and the communities. The quest to legitimize in the new markets might necessitate the adjustment process to the local norms and expectations without interfering with the ability to achieve the global demands of the sustainability process.

Regarding the legitimacy of the European based companies involved in the second-hand electronic market, the legitimacy is at two levels, which are not independent of each other. To begin with, they should gain local goodwill in the host countries through fidelity, economic cost-effectiveness and adherence to the local laws and regulations. Second, they should be internationally legit through fulfilling their pledges according to the environmental sustainability commitments, and not involved in dumping the environment or exploitation.

Such two pressures on legitimacy may affect the governance structures and strategic positions. Companies can make the stakeholders feel that they have more trust in them by increasing the sense of transparency, third party certification programs or corporate social responsibility. They can also participate in capacity building exercises to improve the development of the local recycling plant or environmental awareness as one of the means of institutional alignment.

Strategic Adaptation and Institutional Isomorphism

The Institutional Theory identifies three processes of isomorphism, including, the coercive, normative and the mimetic, which are employed as the determinant of organizational behavior. Legal and regulatory requirement provide coercive forces. The normative pressure is related to professional standards and industry norms. Mimetic pressures are the examples of companies replicating successful rivals in the situation when the circumstances are uncertain.

The coercive forces in the emerging markets can be low because of the low enforcement power. Normative pressures may however be made through global standards of sustainability or industry associations. Mimetic adaptation could be possible when companies are copying entry mode that has already succeeded in other related organizations. In the second-hand electronic market, therefore, institutional and competitive imitation compliance can be bundled together in strategic internationalization. Business organizations may use examples, such as providing generic refurbishment certifications as quality assurance, though this probably does not constitute a legal requirement in a particular region, to be in a position to distinguish themselves with non-certified rivalry.

Hybrid Institutional Arrangements

The existing literature on hybrid institutional arrangements indicates that multinational firms in emerging economies often co-exist and interact with informal institutional arrangements, do not necessarily supplant them (Mair, Marti and Ventresca, 2012). The second-hand electronics industry can compete, offer services, and link in an informal manner, in the repair market, resale market, and local repair networks. As a result, the ability to develop effective governance mechanisms that will integrate formal ESG designs and regional partnership arrangements will be required to achieve success in internationalization. This perspective goes beyond the scope of traditional institutional analysis and recognizes that strategy can be effective in new markets through the interplay between formal and informal institutions.

Institutional Distance and Strategic Configuration

There is the institutional distance between the emerging economies and Europe to which the strategic configuration decision making will be affected. Increased uncertainty and transaction costs are usually raised when the institutional distance is increased. Companies may choose entry modes that maximize control, such as wholly owned subsidiaries, to mitigate risks associated with weak contract enforcement. Alternatively, they can partner with local firms to access institutional knowledge while reducing costs through less resource-intensive collaboration arrangements. In addition, the transferability of environmental standards in the environment of the sustainability-driven sectors could also depend on institutional distance. Firms must either solve the dilemma of imitating the practices in their countries of origin or in new environment or they must produce new practices that are hybrid. These choices affect effectiveness and image of operations.

Implications for the Second-Hand Electronics Market

The institutional environment in the new economies has grave effects on businesses that venture in the second-hand electronics business. The supply chain design and the governance structure are affected by the institutional voids. Entry mode and risk management strategies are typified by regulatory fragmentation. The informal markets influence the aspects of competitive positioning and partnering. Branding and ESG alignment are influenced by legitimacy pressure.

The Institutional Theory thus expands the Resource-Based and OLI theories by shedding some light on the limitation by the environment and adaptation strategies, which are involved in internationalization. It notes that internal competencies alone cannot make one successful in one of the strategies in emerging markets that entails the ability to make sense of, navigate, and affect the institutional environment.

The institutional Theory gives vital perspective of the strategic internationalization in emerging economies. It determines the aggravations of the circumstances of European firms in global second-hand electronics market by focusing on the importance of official and unofficial rules, legitimacy pressure and the gap between the institutions.
The opportunity and institutional challenge are the emerging economies. The conditions that existed in the institutional vacuum like regulatory volatility and informal market dominance demand adaptive governance, relational embeddedness and strategic flexibility. Companies have to strike a balance between the compliance and sustainability commitments with the realities of the market structures of the local surroundings.
These institutional dynamics inform the conceptual framework by showing how profitability, sustainability and legitimacy interact in emerging markets.

2.4 Strategic Adaptation and Supply Chain Innovation

The internationalization of firms in the world second-hand electronic business does not come through the mere transfer of company-specific advantages or the choice of the appropriate entry modes. It involves continuous strategic transformation and the supply chain innovation and particularly in scenarios where organizations operate in institutionally diverse environments. Because value creation in sustainability-focused industries depends on reverse logistics, lifecycle extension and environmental responsibility, supply-chain design becomes a core element of competitive strategy. The redesigning, localization and innovation of supply chain designs are the key to both the sustainability and financial performance objectives in case of European firms entering emerging economies.
In this chapter, the concept of strategic adaptation to international business is discussed and how the supply chain innovation that is the second-hand electronic suppliers, the reverse logistics is a fundamental tool of adaptation. It elicits the process between operational flexibility, network embeddedness, sustainability integration and institutional context.

Strategic Adaptation of Internationalization

Digital traceability technologies are becoming a key strategic tool in the international value chain for sustainability. To promote transparency in the second-hand electronics market, many European firms have begun applying ESG accountability initiatives with blockchain-based traceability solutions, digital product passports, serialization and AI-based lifecycle monitoring tools. The technologies provide greater transparency of the supply chain, reduce the potential for counterfeit issues and greenwashing, and enhance the ability to comply with regulatory requirements in an institutionally disconnected environment. Digital traceability is therefore more than just an operational instrument, it is a capacity of governance that can be used to improve the international legitimacy and sustainability performance.

Strategic adaptation has been viewed as a process through which the organizations alter their organization structures, operations and competition strategies in reaction to the changes in the environment. The institutional differences, market forces, cultural forces and competitive forces are the forces of adaptation in an international setting. The concept is pegged into contingency theory and dynamic capabilities perspectives, which implicitly indicate the necessity to align internal capabilities with outside settings.

The topicality of strategic adaptation in emerging economies is associated with the unpredictability of institutions, ambiguity of the regulations, and infrastructural limitations. Firms cannot just imitate the business models in the home country; they must recreate the processes of operation to match the local resources and opportunities. Adaptation in the case of European firms engaged in the second-hand electronic market may be either in the refurbishing mechanism reengineering, price measurement, changing mode of governance or redesigning channels.

Because the sector’s value proposition depends on extending product lifecycles, quality control is central to strategic adaptation. Any slight mistakes in the refurbishment standards could destroy brand image and lead to a loss of consumer confidence. Therefore, the adaptative process ought to establish a balance between flexibility and the maintenance of the norms of core quality and sustainability.

Reverse Logistics as a Strategy

The other feature of the second-hand electronic market is that it relies on the reverse logistics system. Unlike forward supply chains, which move products from producers to consumers, reverse logistics manages used products as they are collected, tested, repaired, refurbished, resold or recycled. Reverse logistics is not a technical activity but a strategic competency, which has direct influence on cost structures, quality assurance and environmental performance.

The reverse logistics systems in the developed markets can be used to access some of the available infrastructure like certified recycling systems, structured collection networks, and standard grading systems. The developed expertise in regulating such processes is achieved by European firms not only because of strict environment protection policies and long-term producer responsibility plans.
However, in getting into emerging markets, companies encounter the disparity in the provision of infrastructures, transport systems, and garbage disposal systems. Absence of organized systems of collection may be one of the reasons to partner with local middlemen. This may be due to the non-availability of certified refurbishment plants and consequently, local capacity building may be required or the establishment of centralized regional centers. These adaptations show how strategic supply chain innovation would be valuable to institutional heterogeneity.

Localization or Standardization

Standardization versus localization dilemma is one of the major strategic dilemmas on international supply chain management. Standardization promotes efficiency, quality match and brand harmonization. The process of localization will render it more sensitive to local market and regulatory needs.
The second-hand electronic business requires standardization to be critical in making sure that the products are graded accurately as well as warranty and sustainability claims. Customer trust in refurbished goods depends heavily on certification marks, warranties and

standardized quality indicators. European firms are more likely to adopt standard renovation in order to ensure that there is equal product performance.

Localization can however be demanded by the new markets. Pricing flexibility models or other distribution channels can be needed due to the buying capacity of consumers, culture of refurbished products and informal competition. Moreover, the local legislation may vary in terms of the form or quality of imports. Companies are therefore obligated to come up with hybrid designs of the supply chain that will not affect the primary standards of refurbishing, but to adapt to the local circumstances by adjusting the peripheral elements.

This is the selective localization of a strategy and means centralizing control over the processes that are sensitive to quality and decentralizing the processes that interface with the market, such as distribution and marketing.

Next Generation Supply Chain Governance

Supply chain innovation extends beyond the operational re-alignments of the supply chain to governance systems and relational coordination systems. Organizations operating under institutionally challenging environments should adopt the emergent forms of governance in order to address the issue of risk and ensure adherence.

The vertical integration is one of the strategies provided by which companies will in-source key refurbishment and distribution processes to ensure that the quality and sustainability standards will be maintained. The strategy has the ability to reduce opportunistic behavior and safeguard brand equity at the cost of a significant capital expenditure.

Otherwise, firms may turn to collaborative form of governance through formation of partnerships or joint ventures with the domestic firms. The partnerships provide entry to the market knowledge and the distribution channels in the current market and distribute the risks of operations. However, successful cooperation can only imply compliance checking and incentive harmonizing under the circumstances of the institutions of enforcement weaknesses.

Digital technologies are also used in supply chain innovation. Blockchain-based traceability systems, digital inventory management systems and remote diagnostics increase the extent of transparency and efficiency. Such forms of technological improvements can potentially alleviate risks that are somehow associated with institutional voids since they provide real-time transparency during the processes of the supply chain.

Dealing with Informal Markets

Informal markets are significant in many emerging economies as noted in the second section. The informal actors can be rather seen as competitors but there are companies that can pursue integrative approaches by incorporating informal repair networks within the formal supply chains. Companies can also provide training, certification or quality check systems of which an example is the informal technicians may be used with systems formalized.

It is possible to establish synergies on both ends: informal actors gain legitimacy and access to stable supply sources, companies get collection networks and reduce cost of operation. However, close governance structure is required to prevent the issue of dilution of quality or damaged reputation.

Strategic adaptation, therefore, involves the capacity to perceive informal institutions not only as something placed in restriction, but something strategically helpful. The competence to enter into hybrid institutional environments is a manifestation of high degree of dynamic capabilities that can no longer be embedded into the traditional patterns of internationalization.

Supply Chain Circularity and Sustainability

The sustainability-related supply chain innovation in industries needs to align with the environmental and social objectives. Circular supply chains are based on resource reuse, waste and product life minimization. In the case of operating companies globally in Europe, it is imperative to maintain the criteria of circularity across the borders to maintain the integrity of ESG.

Circular supply chains may become an issue with emerging markets due to the lack of recycling capabilities or environmental regulations. Companies may be forced to lean towards take-back arrangements, invest in local recycling facilities or establish exportation

channels where the end-of-life processes may be implemented. These programs enhance the pledges of being sustainable but complicate the operations.
In addition, circular supply chains require accurate information regarding lifecycles in order to measure the environmental impact. Open reporting and tracking systems strengthen confidence of the stakeholders and reduce the charges of greenwashing. Innovation in supply chain in this industry, however, is not only involved in effective logistical operation, but it is also a system of data management and accountability.

Long-term Adaptation and Dynamic Capabilities

Dynamic capabilities concept is a theoretical approach of viewing how companies are able to sustain a competitive advantage in a highly dynamic environment. Dynamic capabilities encompass the ability to identify the opportunity and threat and leverage on it through reconfiguring the resources and subsequently altering the processes within the organization. The dynamic capabilities which are implemented on the second-hand electronics market involve the opportunity to redesign the system of reverse logistics, alter the governance structure, introduce digital technologies, and respond to the changes of the regulations. Organizations that build an adaptive learning type are in a better position to manage the institutional uncertainty and seize growth opportunities within the emerging economies.
Strategic adjustment is not a single reorientation thereafter it an ongoing process of learning, response and reconfiguration. Flexibility and learning that companies entrench within the supply chains can endure instability within the markets.

European firms enter the world second-hand electronics market through the major processes of strategic adaptation and supply chain innovation which play significant roles in internationalization. The industry's peculiarities, namely, the reliance of the industry on the reverse logistics and the value generation through sustainability, are making supply chain structure a strategic and not an operating concern.
The markets of emerging economies are organized markets that provide institutional complexity, infrastructural limitation and unstructured market pressures that demand flexible and yet controlled adaptation. The variables that firms must strike a balance include standardization and localization, internalization and partnership, efficiency and legitimacy.

To eliminate such tensions, supply chain innovation, including redesign of governance and digital integration can be utilized in order to enable firms to overcome such tensions. Lastly, success in the global expansion in this industry is characterized by the capability to be strategic and maintain the underlying sustainability commitments. With the relationship between operational innovation and institutional awareness, firms will be able to use environmental responsibility as a source of competitive advantage. It is a necessary component of the theoretical base that drives the empirical research of this dissertation.

2.5 Conceptual Framework

The conceptual framework of this dissertation integrates four complementary theoretical perspectives. Each theory contributes a distinct analytical dimension to understanding the internationalization of European firms operating in the second-hand electronics market within emerging economies.

Resource-Based View (RBV) explains how firm-specific resources and capabilities, including refurbishment expertise, reverse logistics systems, quality assurance procedures and sustainability-oriented governance structures, generate competitive advantages.

Second, the Eclectic Paradigm (OLI) explains how ownership, location and internalization advantages influence internationalization decisions and market entry strategies.

Third, Institutional Theory explains how firms are affected by institutional conditions within emerging economies, including regulatory uncertainty, infrastructural limitations and informal market structures.

Finally, the Dynamic Capabilities perspective explains how firms continuously adapt and reconfigure their resources, governance mechanisms and supply chain structures in response to changing institutional environments.

All these theoretical perspectives together provide an integrated framework for examining how European firms leverage resources, make internationalization decisions, respond to institutional complexity and develop adaptive strategies to achieve sustainable growth in emerging markets.

In conclusion, the below table shows how each theory contributes to the study.

Theory	Main Focus	Contribution to this Study
RBV	Firm-specific resources and capabilities	Explains how refurbishment expertise, reverse logistics, ESG compliance systems, and technological know-how create competitive advantages for European firms
Eclectic Paradigm (OLI)	Ownership, Location and Internalization advantages	Explains internationalization decisions and market entry strategies in emerging economies
Institutional Theory	Institutional environments, legitimacy and institutional voids	Explains how regulatory uncertainty, informal markets and infrastructure limitations influence firm behaviour
Dynamic Capabilities	Adaptation and reconfiguration of resources	Explains how firms modify strategies and operations in response to changing emerging market conditions

This dissertation is based on a conceptual approach that encompasses four interrelated dimensions:

1. Internal Organizational Capabilities (Resource-Based View)

- refurbishment expertise
- ESG governance systems
- reverse logistics capabilities
- digital traceability infrastructure

2. External Institutional Pressures (Institutional Theory)

- institutional voids
- regulatory inconsistency
- infrastructural limitations
- informal market competition

3. Strategic Adaptation Mechanisms (Dynamic Capability Perspective)

- localized partnerships
- hybrid governance structures
- adaptive supply chain innovation.
- reverse logistics redesign

4. Strategic Outcomes

- financial performance
- market scalability
- ESG legitimacy
- sustainability performance

The framework suggests that how firms strategically internationalize in the global second-hand electronics market is contingent on the interplay between firm-specific capabilities, institutional complexity and adaptive governance mechanisms.

Core Logic of the Framework

The framework proposes that firm capabilities and external institutional environments interact to shape strategic internationalization. European firms have common resources-based advantages that are represented by the regulatory environment and sustainability orientation. However, strategic configuration decisions and responsive supply chains innovations through institutional conditions are the determinants of the translation of these advantages in competitive performances in the new economies.

The framework can be referred to as a multi-layered framework that has five elements that are mutually supportive:

- A Firm-specific Resources and Capabilities. (RBV)
- The Institutional Theory (Institutional Context of the Emerging Economies).
- O-L-I Framework Strategic Internationalization Set-Up.
- Dynamic Capabilities: Supply Chain Adaptability and Innovation.
- Performance Outcomes: Financial and Sustainability Performance.

These are not the one dimensional stages but dynamic aspects of interaction that predetermine the strategic results.

Certain resources and capability of a firm

The initial pillar of the model takes its foundation on the Resource-Based View. The advantages of ownership European firms enjoying under the second-hand electronics business are in the form of tech-savviness, capability to conform, operation preferences, and brand recognition. Such resources are generally the products of the European environment policies that are draconian and systems of reverse logistics evolved.

Key capabilities include:

- The hi-tech technologies of renovation and diagnostics in the state.
- Quality grading systems that are certified.
- Traceability and documentation procedures.
- Sustainability credentials and cosmopolitan ESG reporting.
- Regulation reliability that is linked to brand trust.

It is on these resources that they can internationally expand since they provide competitive differentiation to firms. Nevertheless, the model presupposes that resources do not automatically guarantee international success and the value of the resources is tied to the degree to which they fit in the environment and to the manner in which the resources are put in practice.

Institutional Environment of the Emerging Economies

The second pillar incorporates the Institutional Theory since it is the reality that the emerging markets will have diverse regulatory, normative and cognitive environments. Absence of institutions, policy dynamic, dominance of the informal sector and infrastructural constraints bring the constraints and opportunities.

Institutional factors that influence them are:

- Regulatory risk exposure
- Market entry barriers
- Delivering quality standards.
- Dynamics of informal competition.
- Consumer trust perceptions

Institutional context acts as a moderating variable that shapes how firm-specific resources are deployed. The high level of institutional distance can cause extra requirements of adjustment, change the governance decisions and influence the sustainability enforcement.

Strategy Internationalization Construction (OLI)

The third element uses Eclectic Paradigm (OLI) to understand how companies design international strategies. The benefits (O) are based on the resources of the RBV. Location advantages (L) are the new dimension of the market, which includes market demand creation, labor expenses and web development. The internalization advantages (I) are associated with the governance decisions, i.e. internalization of refurbishment processes, partnerships or local intermediaries.

The model states that strategic structure is based on the association between the ownership benefits and the institutional environment. For example:

- Good institutional uncertainty can be a stimulus to internalization during the achievement of quality control.
- The degree of integration in the informal sector can be used to propagate partnership-based approaches.

- High location benefits can also ensure that an investment is worth the risk of an institution.

Therefore, the mediating processes that convert the resources into operationalized strategies in a given institutional setup are functioning in the OLI decisions.

Adaptability and Innovation of Supply Chains

The fourth pillar makes the centrally dynamic capabilities and innovation in the supply chains the responsive solutions to the complexity of the institutions. The reverse logistics systems should be re-calibrated in operating in the emerging markets. Adaptation may include:

- Local alliances - Centralized Governance - Hybrid Governance.
- Incentive to local re-refurbishment centers.
- Informal collection systems assimilation.
- Electronic traceability applications.
- Selective distribution and marketing adaptation

The strategic adaptation is an actuated role as the innovation of supply chain. It is the way in which companies strike a balance between the resource advantage and institutional reality. The dynamic capabilities can benefit firms to respond to the environment as they can enable the capability of feeling the pressure of the environment, taking opportunity, and redesigning the supply chains accordingly within the framework.

Performance Results Financial and Sustainability Results

The last point in the framework is linked to the performance outcomes. The model considers two areas of performance as opposed to the traditional models of internationalization where the financial performance is considered the only factor considered:

Financial Performance: Market growth, profitability, cost effectiveness and competitive positioning.

Sustainability Performance: less environmental effects, compliance, the ESG credibility and delivery of social responsibility.

According to this model, a balance between these dimensions is something that should be applied to accomplish successful strategic internationalization. The extent to which sustainability engagements can be equitable without having to sacrifice profitability hinges upon the institutional pressures and the adoption of supply chain.
Feedbacks are the performance outcomes hence the dependent variables. The effects of good performance will lead to the enhancement of legitimacy and accumulation of resources and bad performance can lead to the redesign of the strategies and subsequent change.

Relationships within the Conceptual Framework

- The most important relations that the conceptual framework suggests are:
- The sources which have a particular effect on strategic configuration are the firm specific sources (RBV - OLI).
- The moderator of the effectiveness of deployment of resources is institutional context (Institutional Theory).
- The tactical design determines the supply chain design and the governance forms.
- The mediating variable between performance and strategy is supply chain adaptation.

The results of financial and sustainability performance have their input in resources development and legitimacy building.
This is a form of a composite model, hence the dynamism of the connection in between the internal capabilities and the external institutional environments Sustainability-based internationalization is not fixed; it is shaped by institutional conditions and market responses.
The conceptual framework contributes to the available literature in a number of ways. It develops the traditional theory of internationalization by introducing the concepts of a

circular economy to the strategic analysis initially. Second, it unites the Institutional Theory and the RBV with the OLI on the burden that the benefits of firms must be realized, in the context-based governance environment. Thirdly, it suggests that supply chain innovation, in particular, the reverse logistics is a strategic variable, as opposed to operational issues.

The framework helps to conceptualize sustainability and profitability as complementary areas of performance, which are unique in the context of the market of second-hand electronic goods. It is not focused on the fixed models of foreign expansion but rather involves adaptive capability and institutional navigation.

While each theoretical perspective contributes distinct explanatory power, the framework proposes that Dynamic Capabilities constitute the operational mechanism linking firm resources, internationalization decisions, and institutional adaptation. Specifically, the Resource-Based View explains the ownership advantages that European firms possess, including advanced refurbishment expertise, reverse logistics capabilities, ESG compliance systems, and strong sustainability-oriented reputations. However, these resources alone are insufficient to generate competitive advantage in institutionally volatile emerging markets. Through Dynamic Capabilities, firms continuously sense environmental changes, seize emerging opportunities, and reconfigure their resource base to respond to institutional constraints. This adaptive process enables firms to translate their RBV-derived ownership advantages into effective ownership, location, and internalization (OLI) decisions, while simultaneously responding to institutional voids, regulatory uncertainty, informal market structures, and infrastructure limitations identified by Institutional Theory. Consequently, Dynamic Capabilities serve as the operational bridge that integrates the four theoretical perspectives into a coherent explanation of strategic internationalization within the global second-hand electronics market.

Rather than operating independently, the four theoretical perspectives interact dynamically throughout the internationalization process, with Dynamic Capabilities enabling firms to continuously realign their resources, governance structures, and strategic responses as institutional conditions evolve.

Systematic Relations to Research Questions

The following are the research questions that inform the study directly:
RQ1 is concerned with the functionality of the firm-specific resources as the ownership benefits.
RQ2 addresses the role of the institutional context on OLI configurations decision making.
RQ3 investigates the two phenomena of strategic implementation, adaptation of the supply chain and embeddedness of the network.
RQ4 is a performance indicator on the level of financial and sustainability.

The element of theoretical and empirical congruency is also provided by the fact that each of the research questions is consistent with an element of the framework.
The theoretical framework developed in this section is an amalgamation of the Resource-Based, Eclectic, Institutional, and dynamic capability school of thought to offer an explanation of strategic internationalization to the second-hand electronic market in the world. It presupposes that the interaction of the firm specific resources, institutional environment, governance structure and adaptive innovations of the supply chains influences the entry of European firms in the emerging economies.
The issue of establishing a balance between profitability and the environmental and social responsibility of the institutions working on the institutionally diverse settings is the major paradox of the research that places the performance outcomes on the financial and sustainability side of the coin. It is an interwoven model that gives the analytical framework in which empirical research will be presented in the subsequent chapters in such a manner that the results of each case study would be debated within a similar theoretical framework.

3 Research Methodology

3.1 Research Philosophy and Approach

Research methodology is one of the fundamental aspects of academic research as it relates to the philosophy on which the research is based; the logic and the procedure for analysis to obtain the knowledge. The methodological approach to this dissertation, which analyzes the strategic internationalization of European firms in the second-hand electronics market (SHEM) must take into account the complexity, the variability in context and the institutional nature of the emerging economies. Therefore, the study has a research philosophy of interpretivism, a qualitative research approach and an abductive logic of inquiry.

Research philosophy refers to one's beliefs and assumptions, about what is real (ontology) and how knowledge can be acquired (epistemology) (Saunders, Lewis and Thornhill, 2019). The interpretivist paradigm has been embraced since it is believed that organizational behaviour and strategic decision making are socially constructed and context dependent processes. The positivist approach aims for universal causal laws via measurable means, whereas interpretivism focuses on subjective understanding, meaning construction and contextual interpretation (Bryman, 2016).

The use of interpretivism as the appropriate research design for this dissertation is due to the nature of the research problem. Internationalization strategies in the second-hand electronics industry can only partly be captured with quantitative parameters because the decision process of companies is dependent on institutional perceptions, managerial interpretations, values of sustainability and locally embedded practices. In the emerging markets, European firms have to face complex regulations, informal markets and evolving stakeholder needs. An in-depth understanding of managers' perceptions of risk, opportunities and institutional constraints is required to know about these dynamics.

Moreover, it's a qualitative research methodology that's used in the study. Qualitative research methods are more appropriate for exploratory and theory building research that aims to build nuanced understanding rather than statistical generalization (Creswell and Creswell, 2018). In addition, qualitative inquiry can provide information about patterns, strategic mechanisms and contextual interactions that have not been described in the prevailing theory, and in which the circular economy concept has not been sufficiently tackled within the internationalization strategy.

An abductive reasoning approach is also used in the research. The abduction is part of deductive and inductive reasoning, that is, the deductions are supported by the induction of the observations taken from the field but are based on the existing theory (Dubois and Gadde, 2002). The initial theoretical grounding for this study comes from the Resource Based View (RBV), the Eclectic Paradigm (OLI), Institutional Theory and the dynamic capability perspectives. However, the empirical results of the case studies could also uncover new facets of strategic adaptation and supply chain innovation, which enrich or perhaps refine theory.

The methodological approach is thus in line with the overall dissertation's objective: to analyze the strategic adaptation and internationalization processes taken up by European firms in institutionally complex emerging markets while maintaining sustainability oriented business models.

Although the study was initially informed by the Resource-Based View, the Eclectic Paradigm (OLI), Institutional Theory, and Dynamic Capabilities, the research followed an abductive logic rather than a purely deductive approach. Abductive reasoning allowed the researcher to move iteratively between empirical observations and existing theory throughout the analytical process. During the thematic analysis, the unexpected prominence of informal repair networks and hybrid governance arrangements required continual comparison between empirical evidence and theoretical explanations. Consequently, the analysis alternated between RBV, OLI, Institutional Theory, and Dynamic Capabilities to interpret how firm-specific resources, institutional constraints, and adaptive capabilities jointly influenced strategic internationalization decisions. This iterative movement between theory and data strengthened the theoretical coherence and explanatory power of the study.

3.2 Research Design: Qualitative Comparative Case Study

The overall strategy for collecting and analyzing the data to address the research questions effectively is called research design (Yin, 2018). This dissertation used a qualitative comparative case study method. The case study methodology is especially suited for the study of contemporary phenomena in real-life settings where the phenomenon–context boundaries are not clearly defined, as is often the case in this research (Yin, 2018).

Internationalization processes of companies in the second-hand electronics market are very much context depended. In emerging economies there are significant differences in institutional conditions, infrastructures of the supply chain, informal market structures and sustainability regulations. A comparative case study design can be used to gain an understanding of this complexity, as well as to generate generalizations of commonalities and differences between firms.

The use of a comparative design is backed by theory and empirical evidence. Comparative analysis enhances the analysis by providing a means to synthesize across cases and to perform pattern matching (Eisenhardt, 1989). The study is able to identify the effects of different strategic configuration and adaptation mechanisms through comparing different European firms working in emerging economies. Comparative perspective adds extra explanatory power to the research and also allows for more general explanation.

The qualitative case study approach is also appropriate since the dissertation asks a 'how' and 'why' question, rather than a 'what' question. In particular, this study explores the use of resource-based advantage, adaptation to institutional constraints and the development of innovations in the supply chain in specific contexts. This kind of question requires much circumstantial evidence and that can't be effectively accumulated from a mass questionnaire. Furthermore, the case study method enables methodological triangulation by combining various data sources such as interviews, company documents, sustainability reports and secondary data from the industry. The analysis is strengthened and reliability and validity are increased.

3.3 Case Selection and Sampling Strategy

The choice of case is an important methodological choice since it is directly related to the relevance and meaning of empirical study. The type of sampling used in this research is purposive sampling (judgmental sampling) which is sampling of cases that are most relevant to the objectives of the research (Patton, 2015).

The selected cases are European firms that are actively playing in the second-hand electronics business and have begun their business expansion policies within the new economy. Companies are chosen in the following way:

The company needs to be a second-hand electronics or refurbished electronics company.
The firm should have established operations or have operations in one or more emerging economies or have operations that are continuing.
A commitment towards sustainability or circular economy should be demonstrated. The company should have internationalization and reverse logistics strategies. There should be primary and secondary data available for analysis. All of these are designed to match the empirical cases with the theoretical framework to be used as a guideline for the research.
A multiple-case design with two firms is used for the research. Single case studies provide less analysis than multiple case studies because of the ability to replicate logic and to compare (Yin, 2018). This is not the representativeness in statistical terms, but the generalization of an analysis to develop theory by comparing between strategically selected cases.

The sampling strategy also attempts to provide variation in strategic configuration (what institutions are exposed to and what they are exposed to). For example, companies could be linked in different ways to the various entry modes, partnerships, vertical linkages, and informal market interactions. This variation offers increased analytical depth in the study and gives a better understanding of adaptation mechanisms.

3.4 Data Collection

The study employed semi-structured interviews with managerial respondents from groups with relevant roles with regard to international operations, sustainability governance and supply chain management. Interviews were conducted via video conferencing, and were 45 to 75 minutes in length. The interviews were all transcribed and anonymised to ensure confidentiality and ethical practice in research.

Primary Data

The main data is gathered through semi-structured interviews with sustainability officers and international business managers in the selected companies. Interviewee 1 was International Business Manager in Firm A based in Romania with 18 years in Electronics market and Interviewee 2 was Sustainability Manager in Firm B based in France with 8 years experience in the SHEM.

Semi-Structured Interviews: They are suitable when it is important to be flexible but still adhere to the research goals (Kvale and Brinkmann, 2015).

The interview protocol is organized in terms of the main theoretical areas of the study:

- Resource-based advantages
- Internationalization strategy
- Institutional challenges
- Reverse logistics and adaptation to the supply chain
- Sustainability and ESG implementation
- Informal market engagement

The semi-structured design enables the interviewees to tell their stories in their context and to explain their choices, clarifying and asking for clarification for the researcher.

Secondary Data

Secondary data include:

- Annual reports
- Sustainability and ESG reports, where available
- Corporate strategy documents
- Industry publications
- Regulatory reports
- Market analyses
- Academic literature

Secondary sources, provide background information on the problem, and enable triangulation with interview results. They also help in analyzing companies' corporate sustainability statements and global expansion policies.

3.5 Data Analysis

In this regard, thematic analysis was carried out using multi-stage coding as open coding, axial coding, and thematic categorization. The following codes were derived from the frequent occurrence of these ideas in the interview transcripts and secondary sources, and then, strategic themes such as institutional adaptation, reverse logistics innovation, ESG governance and internationalization strategy were identified.

Data analysis in qualitative research is systematic organization, interpretation and conceptualization of text data. Thematic analysis as a main analytical method is used in this study. In this case, thematic analysis will be appropriate as it is able to help to identify patterns, concepts and relationships between cases (Braun and Clarke, 2006).

The analysis process goes through the following steps:

1. Data Familiarization : The transcripts of the interviews and secondary materials are read multiple times to better understand the data.
2. Initial Coding: Codes are based on theory and new empirical findings. Codes are best exemplified from the RBV, OLI and institutional theory perspectives and the dynamic capability perspective, with the former being deductive codes and the latter inductive codes being unexpected themes that appear in the data.
3. Theme Development: Themes are larger groupings of codes, such as:
    - Ownership advantages
    - Institutional adaptation
    - Reverse logistics innovation
    - Informal sector interaction
    - Sustainability-performance alignment
4. Cross-Case Comparison: Independently the findings from within the case are analyzed, and then cross case synthesis is conducted. Strategic patterns can be identified by comparing them.

5. Theoretical Interpretation: Results are discussed with regard to the conceptual framework and literature. This stage supports theoretical interpretation and refinement.

In this regard, the use of qualitative thematic analysis was found to be in line with an exploratory and interpretive approach in the study.

3.6 Reliability, Validity, and Generalizability

The rigor of the methodology is vital in qualitative research. Multiple approaches are taken to reliability, validity and generalizability in this study.

Reliability

Reliability refers to the consistency and transparency of the research process (Yin, 2018). The research is based on the conviction that:

- A clearly documented interview protocol
- Systematic coding procedures
- Articulate and document analytical decisions.
- Documentation of data collection and analysis, including who collected and analyzed the data.

These measures help to ensure transparency of the process and allow for future research to better understand and assess the findings.

Validity

Validity has to do with the credibility and accuracy of results.

Construct Validity

More than one data source (interviews and secondary documents) contributes to construct validity.

Internal Validity

Triangulation of pattern matching and theory is employed to enhance the internal validity. Not only is one theory examined; multiple theories are examined.

External Validity

In a qualitative case study, the concept of external validity is not based on statistical generalization, but it is based on analytical generalization (Yin, 2018). The study does not claim statistical generalisation; instead, it aims for analytical generalisation through theory-based interpretation.

3.7 Ethics and limitations

Ethical concerns are integral to good research. The method of the present study is compatible with the ethical principles such as informed consent, confidentiality, anonymity and voluntary participation (Bryman, 2016).

Interviewing participants with information on:

- The aim of the study
- Their right to withdraw from the study at any stage
- Data confidentiality procedures
- Academic application of the results planned

Organizations and individuals are anonymized, as appropriate, in the interviews.

There are also some limitations in the study.

First of all, the qualitative case study type of design restricts statistical generalization. Findings are contextually and analytically transferable not statistically.

Restrictions on access may also restrict the primary data collection. Some companies may not wish to provide information that is sensitive concerning strategies or operations.

Thirdly, managerial interviews may be subjective or rationalization of the past. In this regard, the study seeks to overcome this limitation by triangulating the findings of the interviews with the documents.

Fourthly, the sustainability regulations and global electronics markets are constantly evolving, which can lead to evolving strategic conditions in time. The results should be viewed in the context of the time frame of the study, therefore.

Even though the methodology has its limitations, it is deemed suitable for tackling the research questions and providing in-depth understanding of strategic internationalization in the global second-hand electronics market.

4 Findings and Empirical Analysis

4.1 Introduction to Case Firms

Dimension	**Case Firm A**	**Case Firm B**
Firm Scale	Medium-sized European refurbisher	Large multinational refurbisher
Main Product Category	Smartphones and tablets	Laptops and enterprise electronics
Target Emerging Markets	North Africa	Eastern Europe and Sub-Saharan Africa
Internationalization Strategy	Centralized operational control	Partnership-oriented localization
Reverse Logistics Structure	Internalized reverse logistics	Hybrid partnership model
ESG Governance Approach	Standardized compliance systems	Locally adaptive ESG governance
Digital Traceability Use	Blockchain-enabled product tracking	Serialization and lifecycle monitoring

Based on the above, the results of the qualitative comparative case study analysis gave the following empirical results: The aim of the chapter is to analyze the strategy of firms in the second-hand electronics industry to internationalize, and the institutional complexity, sustainability pressures and adaptation of the supply chains in Emerging Economies. The analysis draws on the conceptual framework developed in Chapter 2, which includes the link between the firm specific advantages, the institutional constraints, the governance structure, the reverse logistics innovation and the sustainability-performance outcomes.

Case Firms in this dissertation are anonymized as Case Firm A (CF A) and Case Firm B (CF B) and both are European based firms, with a long history of operation in emerging markets in Africa and Eastern Europe. Case Firm A and Case Firm B are European firms operating in the second-hand electronics sector. Although both firms embrace circular economy principles and sustainable business models, they differ in their market positioning, governance structures, and approaches to institutional adaptation.

Case Firm A is a very integrated refurbishment and redistribution company, who has its headquarters in Western Europe. It is dedicated to the smartphone market, in particular, and a high-quality refurbishment, a centralized quality management system and a complete ESG positioning. The internationalization policy is based on direct investments in Distribution centers in the regions, and a high percentage of internalization of refurbishment activities. Its operating philosophy is all about the strict adherence, measurement and brand consistency of the markets.

In contrast to the centralized and control-oriented Case Firm A, Case Firm B relies more heavily on local partners, distributors, and repair shops. Its strategy emphasizes flexibility, local presence, and adaptive governance structures. The firm's market positioning is based on offering low-cost and sustainable solutions to populations that are underserved by digital technologies. Companies are chosen because they have a strong interest in sustainability objectives, and have a desire to expand to new markets, where institutional complexity exists. They're very different and they'll enable them to compare the strategies of standardisation/ localisation, control/ flexibility and profitability/ sustainability adopted by different companies.

Below are the results of the within case analyses and cross case syntheses. All of the cases are analyzed from the conceptual framework with the main focus on the resource-based advantage, institutional adaptation, reverse logistics strategy and the linkage between sustainability and performance.

4.2 Within-Case Analysis: Case Study A

Interview example: For one manager participant, "Keeping track of ESG traceability in the informal market – often fragmented" is one of the biggest operational difficulties in emerging markets. One interviewee further noted that “local partnerships are essential to accessing the market, but to the informal repair value chain as well.”
Case Firm A was a firm with a long history of employing its own expertise and operations were standardized as a foundation for its internationalization. The firm's main strengths were its cutting-edge refurbishment technology, quality control measures and its ESG policy. The firm reiterated that the investment approach of investing in compliance expertise and in traceability capabilities is a strategy, not a compliance obligation.
Environmental legislation in Europe was one of the problems mentioned that was key to the company's efforts to improve its processes for developing advanced refurbishment processes and systems for lifecycle management. These included typical diagnostic procedures, a digital history, and checklists and marking scales. It is akin to the Resource Based View (RBV) that suggests that the key sources of competitive advantage of firms are their valuable, rare and inimitable resources, Barney (1991).
The overall business approach was more of a differentiation business strategy than cost leadership. The most important, and competitive, field in the rejuvenated electronics market is trust, according to managers. That's a significant investment of resources into the firm, warranty programs or certifying systems and transparency mechanisms to provide a greater degree of consumer confidence in the products.
In the emerging markets, though, consumers' trust in the refurbished product remains weak, one executive said, and many customers visit less-than-satisfactory repair shops. So the company needed to do much more than this low cost player and needed to be a ‘premium sustainable alternative'. The finding is similar to other studies that have shown that legitimacy and reputational capital play an important role in sustainability related markets (Scott, 2014).

The main focus of this paper will be institutional issues and strategic adaptation.

Case Firm A is a well-financed firm but has issues with the institutional barrier in their emerging markets. A lack of uniformity in regulations was one of the key issues to growth. Managers have reported that in many cases the requirements for an import of refurbished electronics are shifting and in some cases are unpredictable; i.e., it is hard to predict what is required for import and compliance.

The lack of infrastructure, especially reverse logistics and recycling were challenges faced by the company. In several emerging markets there were no formal recycling facilities and/or facilities that existed were not accessible. Therefore, many aspects of the reverse logistics process were also needed to be integrated into the company's system to provide environmental compliance.

The focus of Institutional Theory is on the need to adapt the organization in order to gain legitimacy to its formal and informal actors in the context of institutional pressures. Case Firm A (CFA) opted for a battle with the institutional complexity that had a very centralized governance process. This strategy of using local intermediaries was reduced and regional operational bases were put in place having their European headquarters.

The policy has been put in place to avoid reputation damage and masking of quality. The managers also recommended that they have become too close to the brand in the region with third party refurbishers, which may cause an issue with brand integrity and sustainability. The company thus stressed on the need to operate control even at higher cost.

Reverse Logistics and Supply Chain Management

In fact, adapting was a key part of the business approach and reverse logistics was one of the factors in adapting. The company has put in place, at a regional level, collection and refurbishment systems that enable them to extend the lifecycle to the maximum and benefit from traceability.

This was particularly the case in the supply chain with the use of digital technology. Managers described the way in which they are implementing a centralized tracking process and were able to track devices from collection to resale, as well as resale to recycling. The systems helped to enhance transparency and compliance with the reporting requirements of the ESG criteria.

However, there were some local changes which need to be made to make the supply chain fit the context. The company has teamed up with telecom vendors as well as retail outlets across markets to set up collection centers for used devices. These partnerships not only helped to fill gaps in the public collection system, but also to further streamline the efficiency of collection.

The results confirm that reverse logistics is not just an operational process, but it could also be considered as a strategic competence (Rogers and Tibben-Lembke, 1999). The use of innovation as an efficiency tool, as a differentiator tool for the brand and as a compliance tool was demonstrated by Case Firm A in the supply chain.

Embedding sustainability and ESG

The company's principles and practices of sustainability were well known. The company became sustainable as a brand a part of the company. Practical talks were also conducted with the managers on ethical issues as well as on the importance of sustainable long-term competitiveness towards the environment. The company had numerous pathways and modalities to report on ESG and was quite active on the activities in the circular economy.

However, there was a battle between the direction of sustainability and business. The weak institutional settings had led to higher monitoring, compliance and waste management costs. According to managers, although progress was made, there remained problems in some markets with regard to the environmental traceability, especially in the informal recycling sector and weak enforcement of regulations.

For the company, sustainability was not peripheral corporate responsibility; it was integrated into the business model. This is in line with literature and not a corporate responsibility (Porter and Kramer, 2011) on the fringe, but a means of doing business better, integrating ESG.

4.3 Within-Case Analysis: Case Study B

Strategic Orientation and Market Flexibility

Case Firm B adopted a more decentralized and partnership-oriented approach to internationalization than Case Firm A. Although sustainability and circular economy principles remained important, the firm's primary focus was adaptability and integration into local business environments.

Case Firm B's competitive advantage lay less in proprietary refurbishment technology and more in relational capabilities and network integration. The point of the managers' discussion was that it was important to adapt and react to local context to work in an institutionally unstable environment.

It wasn't going to be a high-priced refurbishment business, it was going to be affordable and readily available. Digital inclusion was mentioned as one of the main areas of activity by managers. This re-use of this piece of electronics has not only been encouraged as a sustainable product, but also as a way of engaging the economy and educating.

The framework used is a network theory for internationalization (Johanson and Vahlne, 2009), that emphasizes the relational embeddedness and the collaborative governance aspects.

Provide support for institutional adaptation and involvement in informal market

The attitudes towards work in contact with the informal market structures were more positive with case firm B. The managers knew that these informal repair networks were to be found everywhere in emerging markets and that it would be impractical and not strategically useful to try to limit their scope.

Instead, the company used integration approaches which were based on partnerships. This training and quality certification results in local repair technicians being trained and in contracts of supplies. It did provide managers with a more favorable environment to build up tolerance for actors' attempts in the area and increase their reach, managers said.

This "adaptive" model is one that provides an example of the choice that firms can make, between working in the hybrid institutional setting, and outsourcing their formal institutions. Moreover, legitimacy (North, 1990) implies that local norms and practices must align with the requirements of institutional legitimacy. Overall, the local legitimacy approach proved most effective for Case Firm B.

The innovation and flexibility in Supply Chain

Case Firm B was concerned with the innovation of the supply chain, decentralization and changing the coordination. The company was helping the local refurbishment partners to establish a network of refurbishment partners in the local area but not going so far as to fully digitize refurbishment centers.

Flexibility was key, according to managers – the conditions of the infrastructure were very different amongst the markets. In some places transportation and power supplies were challenging and made it difficult to have a centralized refurbishment. This enhanced the strength of the atomized repair and collection networks.

It utilizes mobile technology to manage inventory, as well as to integrate geographically dispersed company actors, in real-time. These technologies provide insight into visibility and are flexible at the same time.

The findings indicate that innovation plays different strategic roles depending on the firm's internationalization approach. Both Case Firms A and B had issues with centralization and the standardization. Case Firm A emphasizes standardization and centralization, whereas Case Firm B prioritizes flexibility and network integration.

Sustainability Trade-offs and Challenges

Managers emphasised the need to balance cost and sustainability, particularly where ESG monitoring in informal markets is difficult.

In addition, managers were asked what the main priority consumer was in their chosen emerging market, with the 'value for money' consumer coming out on top for some markets, outranking 'sustainability messaging'. As a result, there will be a greater focus on cost cutting, function of the product and less on environment aspects of marketing.

An important reminder; there are cultural and geographical differences in sustainability stories in emerging markets. These concepts of the circular economy remained important but had to be adapted to the priorities and expectations of the market.

4.4 Cross-Case Synthesis and Comparative Analysis

The result of the comparative study reveals the similarity and difference in the internationalization strategies of companies in second-hand electronics industry in Europe.

Shared Strategic Pattern

Both companies perceived sustainability and circular economy as also being at the center of their strategies as drivers. The two organizations used the experiences of European regulators, and the European principles, which were named after the ESG principles, to provide the foundation and differentiation. The other two companies identified reverse logistics as a key strategic asset, too.

Moreover, the problems of complexity of institutions were found to be common. Both companies found regulatory uncertainty and limitations of infrastructure to be a problem, as well as informal market domination. Although this finding in the study, it can be concluded that this model of Institutional Theory could be applied to the study of strategic adaptation in emerging market (Peng, 2002).

Divergent Strategic Configurations

While there were some similarities there were also differences in terms of the different adaptation mechanisms and governance arrangements of the different firms.

In Case Firm A an orientation towards the control and standardization, internalization and centralization of the operations was applied. The business realized that it was imperative that attention is given to the uniformity and compliance of quality as well as the ESG criteria. In this way, this strategy was similar to that of Dunning (1988) who suggested the internalization logic of OLI.

Case Firm B adopted a decentralized network-based model supported by strong local relationships. The flexibility and effectiveness of the business was achieved through the informal business set up.

The following methods highlight that internationalization in the sectors related to sustainability isn't a ‘one size fits all'. Rather, they use various approaches when dealing with their work due to their strategy and risk-taking behaviors.

Reverse Logistics as a Strategic Differentiator

In both situations reverse logistics was deemed as one of the strategic competences of the second-hand electronics industry. Use of reverse logistics, however, was quite diverse.

Case Firm A: High awareness of centralized Traceability; Systems in place for refurbishment. Case Firm B: The firm had established centralized systems while gradually expanding digital coordination capabilities and decentralized operational structures. The results have demonstrated that reverse logistics not only constitutes a value adding institutional adaptation process, but it is also a value adding operational process and a competitive differentiator.
A key tension identified in the analysis concerns the relationship between sustainability and profitability. The comparison of the costs and benefits of sustainability goals is a frequent theme to be found in this analysis. Cost and environmental issues posed significant operational challenges on both firms. Their answers were strategic based, however.
While Case Firm A stressed the importance of sustainability standardization with the costs, Case Firm B had a more flexible approach in implementing sustainability based on market realities.
This polarity reflects some of the paradoxes in the dissertation such as profitable business and institutional fitting in, and ESG commitments in emerging markets.

5 Discussion

5.1 Discussion of Key Findings vs. Literature

The results indicate that the advantages of ownership that European firms have do not transfer easily across institutionally fragmented markets, although the RBV model provides a good explanation of the advantages that such a firm may have. Institutional conditions are significant mediators of the effectiveness of capabilities oriented towards sustainability, thereby confirming the central explanatory value of Institutional Theory.

The goal of this dissertation was to analyze strategic decisions of European firms to internationalize in emerging markets of the second-hand electronics market (SHEM) where demand for digital products is highly dynamic, institutional and infrastructure are complex and underdeveloped. Choosing a qualitative comparative case study method was a way to illuminate the strengths of firms in terms of resources, institutional constraints that firms faced in their supply chain, how the supply chain developed, and the negotiation of sustainability commitments and business results.
The results reveal the strategic internationalization processes in the second-hand electronics industry are rather different to those in "classical" international business. Theories like the Resource Based View (RBV), the Eclectic Paradigm (OLI) and Institutional Theory have high relevance to the field, but the empirical evidence reveals the impact of sustainability-oriented business models and principles of the circular economy on the logic of the competitive advantage, governance and adaption of the actions in the operations.

One in particular, is that resource-based capabilities are an important enabler to international expansion. Case Firm A and Case Firm B on the other hand were a bit more prominent in the European regulatory landscape, as well as their refurbishment capabilities, compliance regimes, traceability and branding for sustainability. The results of this research are almost the same as the Resource Based View as Barney (1991) concluded that a firm can gain a long-term competitive advantage by acquiring valuable resources that are not easily imitable. The results, however, apply to RBV as well because they show that in the CE sectors environmental compliance and reverse logistics capabilities are a strategic asset, as opposed to just an operational necessity.
The results do support the findings of the Natural Resource Based View (NRBV) of Hart (1995) which found that environmental capabilities in the long-run would also yield long-term benefits. Hence, expertise in second-hand electronics can be understood as a sustainability-oriented competence that plays an important role in market positioning, legitimacy-building, and differentiation within international markets.

Meanwhile, it is learned that resources aren't only a disadvantage to success in the land of the living, but also a disadvantage to success abroad. The "effectiveness and transferability of firm capacities in emerging economies under the institutional conditions" rating was good. The strategic application was limited and there were more uncertainties in operations as a result of a lack of uniformity in regulations, inadequate infrastructure and non-formal market control. The findings support the Institutional Theory and the institution-based perspective on strategy (Peng, 2002) as well as provide additional justification that organizational behavior is related to institutional environments.

The study also finds that emerging economies have some hybrid institutional systems where there is a co-existence of both formal and informal institutional systems. The informal repair networks were not superfluous but an integral part of the competitive environment, and local resale markets. This is consistent with some previous studies on the institutional voids literature (Khanna and Palepu, 2010) that suggest that informal actors can also be considered as institutional intermediaries and/or competitors to the formal actors.

The other significant finding is related to Governance and Strategic Configuration. Case Firm A's was an approach that used the centralized, internalization and operational standardization. Case Firm B, on the other hand, had a more 'partnership' based approach with a ‘local embedded and flexible approach'. The empirical findings of the divergent strategies validate the Eclectic Paradigm (Dunning, 1988) and provide insights into the nature of the relationship between the ownership advantages, conditions and choice of internalization.

The results also indicate, however, that in the sector of sustainability, the OLI configurations are extremely dynamic. Other governance concerns that had an impact on governance decisions included: ESG accountability/reputational risk; and environmental traceability – other than transaction cost. The purpose of the dissertation is to further the OLI logic and to incorporate sustainability governance as an important determinant in the internalization decision.

However, one of the most crucial results of the study is the reverse logistics concept and innovation of the supply chain. The result validates the previous study on reverse logistics by Rogers and Tibben-Lembke (1999) which suggested the relationship between reverse supply chain and competitive advantage, not only as waste management. The study also indicates a tremendous change in the reverse logistics systems in moving from one institutional environment to another.

Case Firm A emphasized the need for one overall Traceability system and one structured system on Refurbishment while Case Firm B emphasized on local networks and on the digital coordination technologies. Differences refer to the context in which the SC innovation took place, and the institutional reality at the time. The finding is in line with the dynamic capability theory of Teece, Pisano and Shuen (1997) that emphasizes the ability of the firm to modify its resources and processes in response to the changing environment.

The overall take-away is that there is a conflict between sustainability and profitability. Achieving a balance between the ESG (Environmental, Social and Governance) commitments and cost and commercial competitiveness was a challenge in both companies, especially in an environment with weak institutions. For brands, there was a change of priorities and approaches in other emerging markets as consumers were more interested in the price tag than in sharing sustainability messages with the brands.

This strategic tension is reflected in the contrasting approaches adopted by the two case firms. Case Firm A follows a more centralized internationalization strategy, maintaining tight control over refurbishment processes, quality assurance, and ESG-related standards across its operations. Such an approach supports product reliability, protects brand reputation, and enables consistent implementation of sustainability practices. However, maintaining standardized refurbishment processes and governance requirements is associated with higher operating costs, creating additional commercial pressure in emerging markets where informal repair businesses often compete primarily on price. Consequently, the firm's commitment to consistent sustainability standards may strengthen its long-term competitive position while simultaneously limiting its ability to compete in highly price-sensitive market segments.

By comparison, Case Firm B adopts a more decentralized approach, relying on local distributors, repair partners, and market intermediaries to improve responsiveness to local market conditions. This strategy enables the firm to increase market flexibility and enhance affordability by adapting its operations to the economic and institutional realities of individual markets. At the same time, greater reliance on local partnerships introduces challenges in maintaining consistent quality standards, governance practices, and brand reputation across different operating environments. The comparison between the two firms therefore demonstrates that there is no single optimal strategy; instead, firms make different strategic compromises depending on how they balance operational control with local responsiveness.

From a managerial perspective, these findings suggest that the tension between sustainability and profitability is not a choice between two competing objectives but rather a continuous balancing process. Where consumers primarily evaluate refurbished electronics on affordability rather than environmental benefits, firms cannot rely solely on sustainability messaging to achieve commercial success. Instead, the findings suggest that managers may need to distinguish between core sustainability practices that should remain consistent, such as product quality and responsible refurbishment, and operational activities that can be adapted to local institutional and market conditions. This reinforces the argument that successful internationalization in emerging economies depends not only on valuable organisational resources but also on the ability to adapt strategic decisions to diverse institutional and market contexts while preserving long-term sustainability objectives.

The outcome is part of the discussions about implementing the principles of the circular economy. Although the literature on circular economy typically establishes the sustainability and profitability agenda on a good, virtuous path, empirical results show that there are still trade-offs to be taken into account, in particular in emerging markets, where there is a lack of both infrastructure and enforcement. The papers on the circular economy field set the agenda of sustainability and profitability in a virtuous way (Geissdoerfer et al., 2017) and the empirical results show that this means there are trade-offs, especially in markets which are not as fortunate with regards to infrastructure and the enforcement of regulations.

The overall results affirm the hypothesis that a combination of the resource advantages, institutional complexity and adaptive capability of the supply chain is a key factor to explain strategic internationalization in the second-hand electronics industry. Therefore, the study further validates the current international business theories and also highlights the need of having a deeper coupling of the international business and sustainability research.

An important implication of the findings is that emerging economies should not be viewed as a homogeneous category. Institutional realities differ considerably across regions and countries. Regulatory enforcement, import restrictions, waste management infrastructure and the maturity of informal repair and resale networks vary significantly between Eastern Europe, Southeast Asia and Sub-Saharan Africa. Consequently, strategic internationalization approaches that are effective in one emerging economy may not be directly transferable to another. European firms therefore need to develop context-specific governance structures, partnership arrangements and compliance mechanisms that reflect local institutional conditions rather than relying on a uniform emerging-market strategy.

5.2 Addressing Research Questions

This section of this dissertation will concentrate on the four research questions presented throughout this dissertation. The discussion is structured such that the research questions that were raised in Chapter 1 are presented in accordance with the theoretical framework presented in Chapter 2, the methodology presented in Chapter 3 and the findings coming from the empirical data presented in Chapter 4.

<u>Research Question 1</u>
What are the resource strengths that are employed by European firms in developing and executing entry and growth plans into the new economies of the second-hand electronic market?

The findings indicate that the European companies can benefit in several ways from the resources when they enter and develop their business in emerging economies. The benefits are the cutting edge refurbishment technologies and reverse logistics, quality assurance, knowledge of ESG standards and compliance, digital tracking processes and the reputational value of the European rule. These attributes might help a company enter a market, as it can help it stand out from the informal competition and earn consumer and institutional trust in markets where the quality and reliability of products are unknown.

Case Firm A employed a standardized and centrally controlled approach to market entry and growth. The entry and growth methodology was centered around the refurbishment processes, quality control, monitoring and adherence to ESG standards in place at the centre. This helped to establish the company's reputation as a reliable and eco-friendly electronics repair service. Case Firm B adopted a more partnership-oriented and growth-focused approach. It leveraged local partnerships, network embeddedness and adapted supply chain coordination to deal with institutional and infrastructural constraints in emerging markets.

The results support the Resource-Based View (RBV) that suggests that a firm's resources could be a source of CA if it is valuable, rare, hard to imitate and strategically deployed (Barney, 1991). The results show, however, that it is not necessarily assumed that these benefits will be transferred across the border. They can only be effective in the sense they can be adapted to the local institutional conditions such as informal market structures, inconsistencies in regulation and infrastructural constraints. Without providing institutional awareness and adaptive strategic implementation therefore, resource-based benefits are not enough for smooth entry into the market to any continuous sustainable growth in the market.

<u>Research Question 2</u>

How do ownership, location, and internalization decisions change in response to institutional constraints and opportunities in emerging economies?

Results show that the institutional context has an impact on the ownership decision and the location and internalization decisions. The regulatory climate and the lack of competition in the informal sector, as well as the weak enforcement of the regulations, impacted both companies' overseas set-ups. The results of this study support the Eclectic Paradigm that suggests that ownership, location and internalization benefits are important factors to consider in determining internationalization strategy (Dunning, 1988).

In response to the institutional risk, Case Firm A began to re-inhouse some of its activities, such as refurbishment, quality control and monitoring of ESG. The company was able to ensure its brand credibility and its sustainability criteria control in this manner. Case Firm B was more local in its approach, which involved local partners and semi-formal repair networks. This helped the company to tap into the local knowledge and reduce business challenges while providing greater market responsiveness.

The findings suggest that there are no one-size-fits-all strategies in response to institutional complexity. Instead, companies tailor their OLI setups to fit the strategic goals, risk appetite and capabilities. Internalization can be more effective in protecting quality and compliance; in institutionally volatile emerging economies, partnerships can help to enhance flexibility and local legitimacy.

Research Question 3

How do innovations in reverse logistics and network embeddedness contribute to the development of scalable and sustainable business models in emerging markets through locally based partnerships?

The results demonstrate that the key elements of scalable and sustainable business models in emerging economies are local partnerships, innovation in reverse logistics and network embeddedness. These long and complicated supply chains are all based on the ability to collect, test, refurbish, re-distribute and monitor second-hand electronics. Reverse logistics is not just a process of operations but it is a capability as well.

For Case Firm A, the main focus points were quality consistency and ESG accountability through centralized reverse logistics and digital traceability. Case Firm B had less capital to invest, and more partnerships and regional decentralization were needed to enable the firm to be flexible and responsive to markets that lack infrastructure. Both needed an adaptation of the supply chain to tackle institutional barriers and enhance scaling up operations.

The results also indicate that informal repair and resale networks should not be considered a competitive threat solely. If they are able to deploy the proper systems of governance, training, and quality controls, in certain instances they can serve as valuable local partners. This further highlights the value of Institutional Theory as an area of research and the need to understand how firms in emerging economies need to resonate with formal and informal institutions (Scott, 2014).

Research Question 4

Which strategic approaches enable firms to balance financial performance with environmental and social responsibility objectives?

Results indicate that as far as financial performance is concerned, there is a partial correlation with the environmental and social responsibility objectives, which is context-dependent in European companies. Both companies were looking for how to integrate ESG commitments into their internationalization strategy, refurbishment, life extension and reverse logistics and compliance systems. There was also a struggle with the level of sustainability, costs and operating expense versus competitiveness in the local market.

Case Firm A was committed to standardisation and traceability of ESG, but was more expensive. This enhanced its sustainability profile, but also made it less competitive. Case Firm B, however, had a more flexible mindset, seeking to attain sustainability through establishing links with local companies and developing supply chain solutions to address the local needs. This enhanced market responsiveness was also accompanied by a more difficult situation with regard to the monitoring of ESG performance.

Overall, the results suggest that sustainability and profitability are not mutually exclusive, but that this can be achieved when firms are able to develop systems of adaptive governance and context-specific strategies. In emerging economies, though, the connection between financial and ESG performance is related to institutional aspects, supply chain skills, local partnerships and consumer trust.

5.3 Theoretical Contributions

The dissertation is original in the areas of international business and study of sustainable business.

On the strategic level on the one hand, the study widens the scope of RBV and clarifies the space of strategic ownership advantages which is connected to the capacities related to the sustainability issues (in particular reverse logistics, compliance knowledge, ESG governance etc.).

Secondly, sustainability governance is incorporated into the OLI decision making process, to contribute to further development of the Eclectic Paradigm. The results show that, apart from the transaction costs, the decision on internalization will also be influenced by the reputational risk as well as the environmental accountability requirements.

Thirdly, this study fills a gap in the literature within Institutional Theory: the relation between the impact of hybrid institutional systems and strategic adaptation. The informal market players were identified to play a competitive and strategic role.

The dissertation further contributes to the research of circular economy and the last aspect, strategic internationalization is covered. It is based on the previous research on circular economy most of which are more focused on the environment and/or policies aspect, where the internationalization and institutionalization of the circular business models are put on focus.

Finally, it adds to the knowledge base of the theory of dynamic capability and adaptive innovation to handle the institutional complexity, and competitive position in an SCM field.

The findings demonstrate that the four theoretical perspectives are complementary rather than competing explanations. RBV explains the origin of firm-specific advantages, OLI explains internationalization choices, Institutional Theory explains environmental constraints and legitimacy requirements, while Dynamic Capabilities explain firms' adaptive responses to institutional complexity.

5.4 Managerial Implications and Recommendations

Global managers of second-hand electronics should increasingly allocate more resources towards digital traceability platforms, like digital product passports and lifecycle monitoring systems based on blockchain. These technologies could be used as effective instruments to counter counterfeit, build consumer confidence and prove adherence to European ESG standards in emerging markets where the institutional environment has proven volatile. Furthermore, digital traceability can improve transparency in reverse logistics, and promote greater accountability in circular supply chains.

The results can have a number of implications for the work of managers under the auspices of markets for sustainability.

It is not perceived as an ordinary function; rather reverse logistics capabilities are seen as strategic assets which should be recognized by firms. Investment to be continued in traceability solutions, digital skills in monitoring and refurbishment to boost competitiveness and ESG value.

Second, companies have to choose the model of governance that will be optimal in accessing the emerging markets of each context. There is a risk of over-standardization resulting in inflexibility and also risk of lack of quality control - similar to a lack of sustainability commitment through decentralization. Hence, balancing control and adaptation and developing 'hybrid' structures is required and, therefore, managers need to make their way between the two poles.

Thirdly, there are competitive advantages of strategic linkages with informal markets. Informal actors are not an enemy; they can be engaged with by firms and develop informal/local repair ecosystems that can be formally developed through partnerships and certification schemes.

Local market priorities must be taken into consideration when formulating sustainability communication strategies. In some emerging economies the profit and utility aspects may be more alluring to the consumers than the message on environmental aspects of product.

Finally, businesses need to accept institutional intelligence to effectively predict how the regulatory environment and actions of important stakeholders in space will evolve. The process of adjusting to the institution is a strategic process and involves continuous efforts.

5.5 Limitations of the Study

Despite its contributions, this dissertation has several limitations. The study design that applied in the study is Qualitative Comparative Case Study Design (QCCSD) and has a Limited number of firms. For this reason, they are not thought of as statistically generalizable and are rather analytical.

Secondly, access was restricted, which consequently led to limited collection of primary data. Some confidential strategic and operational information could not be disclosed by participants.

Thirdly, most of the studies were with European firms. Other studies of different types of institutions might result in other conclusions.

Fourth, the industry of sustainability regulation and the digital economy is a dynamic one: the conditions of the industry can change over time. Therefore, it is necessary to analyze the result, based on the research time.

Last but not least, there was a lack of empirical research based on the consumers' perspective in emerging markets. Further studies could be carried out at the customer level to learn about the market acceptance and customers' perception on sustainability.

5.6 Future Research Directions

As this present work has focused more on the managerial side of the second-hand electronics industry, using qualitative data collection from corporate executives and organizational stakeholders, future studies should include the consumer aspect of the second-hand electronics industry in emerging economies. Further attention to forming trust with consumers, consumer purchasing behavior, consumer perceived product quality, and consumers' willingness to purchase refurbished European electronics in quantitative studies would be useful for the complement and validation of the strategic framework proposed in this dissertation.

Based on the findings of this research, there are still some remaining research needs as follows:

First, future studies could use quantitative techniques to further investigate the hypothesized relationships in the conceptual framework in a sample of firms and markets.

Secondly, the analysis of firms at the various geographical levels could provide some insights into the link between institutional environment of the home country and internationalization strategies and sustainability.

Thirdly, new technologies like blockchain, AI and predictive analytics that are able to improve the transparency of reverse logistics and the processes within the circular supply chain would be interesting to further investigate.

The fourth, 'trust', 'awareness of sustainability' and 'willingness to pay' are all areas that require further research on the consumer perceptions of refurbished electronics.

The fifth one is about the researchers' interest in further research into the long-term impacts of second-hand exports of electronics to EMEs both in terms of waste management practices but also in terms of establishing a circular economy.

Last but not least, there might be some interesting conclusions in a research into policy coordination between developed and emerging economies, relating to the ability of the international regulatory system to foster more sustainable global electronics industries.

6 Conclusion

The traditional way of international business has changed with the world going towards sustainability and circular economy. In this transition, the SHEM sits at the intersection of technological development, environmental challenges, digital inclusion and economic opportunity. This dissertation explored European firms' strategy in internationalizing in this sector, specifically in their expansion to the emerging markets that are defined by the institutional complexity, infrastructural constraint and emerging market structure.

The literature gap related to the relationship between strategic internationalization and adaptation of circular economy business model and institutions in emerging markets was considered as the motivator of the study. Although there are already some scholarship on international business theory (such as the Resource-based view (RBV), the Eclectic paradigm (OLI) and the Institutional theory), few studies address the applicability of these theories to sustainability-driven sectors such as refurbished electronics. Moreover, the secondhand electronics industry is an empirical terrain which is unique in that value creation has to be realized in addition to traditional competitive advantages through reverse logistics systems, environmental governance and systems of lifecycle management.

A qualitative comparative case study approach was used in the dissertation to explore the extent to which companies in Europe exploit resource-based advantages, the planning process of firms' internationalization strategy, the process of internationalization of the supply chain and the institutional challenges of business operations in emerging markets. The results showed that companies in this industry are highly dependent on the expertise that has been built up within the European regulatory framework such as high-tech refurbishment technologies, quality assurance processes, traceability mechanisms and governance processes that take ESG into account. These skills were strategic ownership advantages which could be employed to differentiate and justify market entry.
The results also indicated that these benefits are highly context-dependent with regard to the extent of transferability. Fragmentation of regulations, lack of infrastructure and dominance of the informal sector and uncertainty of policy in emerging economies were significant. Therefore, enterprises needed to continuously adjust their strategies and not just simply follow their domestic business models abroad. It is a reiteration of the fundamental premise of Institutional Theory that organization strategies are closely linked to institutional contexts (Scott, 2014).

The findings suggest that no single internationalization strategy is universally effective within the sustainable second-hand electronics industry. Case Firm A, on the other hand, opted for a very centralized and control-oriented operational internalization, traceability and ESG standardization focus. Case Firm B, on the other hand, adopted a partnership-oriented strategy characterized by local embeddedness and adaptive coordination. Each strategic approach reflects different governance philosophies, risk perceptions, and responses to local regulatory and market conditions.

A key finding of the dissertation is the recognition of the reverse logistics and supply chain innovation as key strategic mechanisms and not just operational functions. The second-hand electronics market could have a direct link to environmental performance and customer trust and customer competitive differentiation to the reverse logistics system. Firms that are able to coordinate the collection, refurbishment, redistribution and recycling activities well can deliver both economic and sustainability goals. Concurrently, the study revealed that reverse logistics systems need to be localized and adapted to a great extent to be transported to new institutional settings.

Furthermore, the dissertation also singled out the informal markets in emerging economies as being strategic. Second-hand electronics are typically dominated by informal repair shops, re-sellers and local refurbishment systems. Other companies viewed these actors as not just as a competitor but designed a semi-formal structure in their supply chain through partnership, certification and training programs with these actors. This result replicates existing studies on institutional voids, and suggests that the informal sector actors are not only a constraint, but can also be a strategic partner.

One of the key findings is that the relationship between sustainability and profitability is complex and context-dependent. The results show that circular economy principles and ESG commitments are increasingly becoming part of firms' strategic identities. However, tensions remain between environmental responsibility and business competitiveness, particularly in emerging markets where consumer purchasing decisions are often driven more by cost and product availability than by sustainability considerations. Consequently, the relationship between sustainability and profitability cannot be assumed to be inherently synergistic. Rather, the extent to which sustainability initiatives contribute to business performance depends on institutional conditions, consumer attitudes and behaviours, and the capabilities of the supply chain.

According to theory the dissertation is a contribution to several aspects of literature. It complements the Resource Based View by showing that skills and/or capabilities that are related to sustainability, e.g., reverse logistics, can be strategic assets. Secondly, it embeds sustainability governance in the process of internalization decisions in the context of the Eclectic Paradigm. Third, it extends Institutional Theory by showing how strategic adaptation and acquisition of legitimacy is shaped by the hybrid institutional systems. Lastly, the study introduces an internationalization angle to research on the circular economy, which brings a strategic lens to the study of sustainability, connecting the two fields of research: sustainability and international business.

The results are applicable to management of companies that are interested in introducing their sustainability-centric business model into new markets. Aside from that, managers must understand that internationalization is more than just technical matters – it is an issue that pertains to the regulatory environment. Accommodating institutional responses, adaptive governance structures and flexible coordination of supply chains are also required. It is essential to pay attention to local partnerships, digital traceability technologies and institutional intelligence to boost the resilience and legitimation of companies in complex markets.

The study also sheds light on the larger-scale social impact of the second-hand electronics industry. The industry not only extends the life of the products but also makes technologies and solutions that are not available for everyone affordable and helps in the process of environmental sustainability. However, the research highlights the need to achieve these impacts in a "responsible" manner: with careful control and management to avoid the uncontrolled flow and market exploitation, as well as the dumping of electronic waste in the environment.

The dissertation is a contribution but there are some limitations acknowledged. The qualitative comparative case study approach does not make it possible to make any statistical generalizations, and the selection of European firms may not be representative of companies from other institutional settings. Additionally, regulatory environment and technological developments continually evolve, and can affect industry over time. This dissertation nevertheless provides a solid analytical toolbox to grasp internationalization from a sustainability perspective in the second-hand electronics industry.

Finally, the dissertation suggests that strategic internationalization in the global second-hand electronics industry is shaped by the dynamic interplay between firm specific capabilities, adaptive innovation in the value chain and institutional complexity. Firms must balance standardization with localization, operational control with flexibility, and profitability with environmental responsibility.. Their engagement will be successful not only if they are flexible in responding to the market in different ways, but also if they have the resources to do so.

With the principles of circular economy gaining greater importance all over the world for companies' business strategies, the second-hand electronics market will likely continue to grow both economically and strategically. Understanding how firms navigate this evolving global environment is important for international business scholars, policymakers, sustainability practitioners, and industry actors seeking more inclusive and environmentally responsible forms of globalization.

The study demonstrates that successful internationalization in the second-hand electronics sector depends not only on firm-specific capabilities, but also on the ability to adapt those capabilities to diverse institutional environments while maintaining sustainability objectives.

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Author's Statement:

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