Chinese Foreign Direct Investment (FDI) in the Electric Vehicle (EV) Industry of Central and Eastern Europe (CEE).

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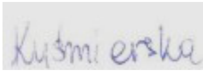
Signature: 

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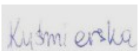
Signature of the author: 

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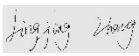
Signature of the supervisor: 

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Abstract

The thesis examines how strategies employed by recipient-country governments influence Chinese foreign direct investment (FDI) in the electric vehicle (EV) industry in Central and Eastern Europe (CEE). The study is situated in the context of China's growing interest in the CEE region, driven by industrial policy priorities, the search for new markets, and increasing trade frictions between China and the European Union. As the EV sector has become strategically important for both climate policy and industrial competitiveness, it also constitutes a key area of interaction between Chinese investors and European host countries.

The thesis argues that host-country supply-side policies decisively shape the scale, structure, and strategic significance of Chinese FDI in the EV industry. Instruments such as investment incentives, tax relief, infrastructure provision, regulatory clarity, administrative capacity, and political signalling influence investment decisions by affecting expected returns, perceived risks, and implementation timelines. At the same time, these policies reflect a country's compliance with EU regulatory frameworks, its openness toward Chinese capital, and its broader industrial strategy for the development of the EV sector.

The analysis adopts a qualitative comparative case-study approach, focusing on Poland and Hungary. Despite similar economic backgrounds, EU membership, and established automotive industries, the two countries have attracted Chinese EV-related FDI with markedly different outcomes. Poland, while offering a range of supply-side incentives and benefiting from EU subsidies, has primarily attracted medium-scale investments concentrated in component manufacturing and mid-level segments of the EV supply chain. In contrast, Hungary has emerged as the primary European hub for Chinese EV investments, including large-scale battery manufacturing and vehicle assembly projects. This outcome is linked to a coordinated policy framework combining financial incentives, administrative capacity, infrastructure readiness, and consistent political signalling toward Chinese investors.

The findings confirm that supply-side policies of host countries are crucial determinants of Chinese FDI in the EV industry. More importantly, the analysis demonstrates that differences in policy design and credibility translate into distinct qualitative investment profiles, shaping whether host countries attract lower value-added activities or more advanced stages of production. By examining the interaction between national industrial policies, EU regulatory constraints, and Chinese investment strategies, the thesis addresses a gap in the existing literature on Chinese FDI in Europe and contributes to a better understanding of how government policies influence investment outcomes in strategic industries in the CEE region.

Key Words: Chinese FDI, EV industry, CEE, supply-side policy, Hungary, Poland.

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Chapter I Introduction

Electromobility has become a pivotal component of global climate and industrial strategies. Electric vehicle (EV) sales are increasing at a dynamic rate. The International Energy Agency (IEA) has indicated that record sales of 17 million units were achieved in 2024, constituting approximately 20% of the automotive market (IEA, 2025). In Asia, particularly China, is a major contributor to the development of trends within this industry. Conversely, Europe is relying on EVs to achieve ambitious climate goals, with plans to introduce a minimum of 30 million EVs by 2030 (IEA, 2025). The transition towards green mobility has resulted in the strategic direction of investment being directed towards the production of EVs and the supply chain for batteries (Szunomár, 2024).

In parallel, China's role as an investor and producer within the EV sector has increased drastically. The government's policy agenda is oriented towards the promotion of the domestic EV market, with a particular emphasis on the establishment of a well-developed supply chain, encompassing all components from batteries to the finished product, i.e. EVs. Chinese automotive manufacturers (e.g. BYD, NIO and Xpeng) and battery manufacturers (e.g. CATL) are concentrating their efforts on identifying new export markets. The emergence of Chinese electric vehicle manufacturing facilities within the CEE region is a significant development. BYD has invested in the first large EV factory in Hungary, and Leapmotor has commenced the assembly of EVs at the Stellantis plant in Poland (Oertel & Kratz, 2024). The construction of EV battery plants by Chinese companies (for example, projects by CATL, Sunwoda, and Eve Energy) is also planned in the CEE region, thereby confirming the importance of the EV sector as a new testing ground for Chinese investments (Moldicz, 2025).

This state of affairs has given rise to a new geopolitical dynamic between China and the EU, characterised by heightened tensions. Concerns are being voiced with regard to the issue of competitiveness. The European Union (EU) has instigated an investigation into the subsidies provided by the Chinese government to domestic producers, with a view to ascertaining the impact on European companies and their competitiveness (Szunomár, 2024). The European Commission (EC) has been advocating for enhanced screening mechanisms and regulatory frameworks pertaining to foreign direct investment (FDI), incorporating provisions for local technology transfer and employment policies (Oertel & Kratz, 2024). In order to maintain a balance between the openness to foreign capital and the protection of domestic markets, EU countries' governments also undertake internal benefit-cost analyses. For instance, Poland has demonstrated its support for tariffs on Chinese EV imports, while concurrently establishing a national framework to promote EV technologies. In contrast, Hungary, a country that has historically welcomed Chinese investment, has shown a marked increase in its receptiveness to Chinese EV projects including i.e. BYD factory or battery production (Éltető et al., 2023).

In view of the escalating geopolitical tensions, it is worthwhile to pose the following research question: The present study seeks to explore the following question: **How far is the Chinese FDI in CEE's electric vehicle industry shaped by the recipient country's government policies**? This is a pivotal question, as it establishes a connection between global investment processes and flows with decision-making at the national level. A number of studies have previously concentrated on the size and direction of Chinese FDI to Europe or on the EV sector itself. However, there has been a relatively limited analysis of the impact of national policies (subsidies, regulations, investment screening, creation of support institutions) on the inflow of these investments. In parallel, comparative case studies of vastly different strategies towards China are rarely included in the literature concerning FDI and technological improvement. In practice, the divergent approaches to Chinese projects (for example, the positive attitude adopted by Hungary in contrast to the more reserved approach of Poland) suggest that institutional and political factors can exert a significant influence on decision-making (Éltető et al., 2023).

1.1 Chinese FDI in the Global Context

Before 1979, the degree to which China engaged in outward FDI was negligible. This was due to the prevailing perception that such investment was considered expendable and did not contribute meaningfully to national development when compared with domestic investment (Zhan, 1994). Initially the outward FDI was predominantly concentrated in the nearby markets such as Hong Kong, Macao, and neighbouring Southeast Asian economies. In 1979, the People's Republic of China initiated a policy of encouraging outward FDI, a measure that was regarded as a necessary step in the process of integrating the border "open policy". The initial increase of outward FDI was primarily focused on securing raw materials, supporting export activities, and fostering economic ties with adjacent countries. In this pioneering phase, the majority of projects were trade-supporting operations or small-scale joint ventures (Zhan, 1994). These were often funded in equipment and technical know-how rather than cash, reflecting Beijing's cautious stance toward capital outflows and its desire to limit risks from inexperienced firms operating abroad. Approval procedures, which had initially been highly centralized under the auspices of the Ministry of Foreign Trade and Economic Cooperation, underwent gradual relaxation through a series of provisional regulations in 1985, 1989, and 1993 (Zhan, 1994).

The early 2000s witnessed a period of increased liberalisation with regard to general trade openness within the context of China (Mortimore, 2000). The Chinese state proactively promoted trade liberalisation by encouraging state-owned enterprises to invest internationally, as outlined in the "Go Global" policy that was adopted during the 10th Five-Year Plan (2001–2005) (OECD, 2021). Following its accession to the World Trade Organization (WTO) in 2001, China became a full member of the global trading body. The introduction of the "Go Global" policy and the decision to become a member of the WTO by the Chinese government were motivated by the objective of prioritising the secure acquisition of natural resources, with a particular emphasis on developing countries (ECLAC, 2023). For instance, Chinese FDI in Latin America surged to over $15 billion in 2010, with the vast majority concentrated in natural resource extraction (Mortimore, 2000). Simultaneously, Chinese companies pursued strategic assets in developed markets through mergers and acquisitions, seeking advanced technologies and internationally recognised brands (as exemplified by Lenovo's 2005 purchase of IBM's PC division) to enhance their global competitiveness (Morrison, 2019). By 2010, China had accounted for approximately 5% of global flows of FDI, thus becoming the world's fifth-largest investing country (Gallagher et al., 2013).

The global financial crisis of 2008 signified a pivotal moment for Chinese FDI in Europe. In the late 2000s, there was a marked increase in the number of mergers and acquisitions (M&A) and greenfield projects undertaken by Chinese companies across European countries. An analysis of Chinese outward FDI in Europe reveals a tripling of investments from 2006 to 2009, followed by a further increase to approximately €7.4 billion by 2011 (Dudas & Dudasova, 2022). While this represented a comparatively modest proportion of Europe's aggregate inbound FDI stock, it nevertheless indicated the initiation of a substantial increase in Chinese outbound investment directed towards advanced economies. It is evident that over half of all Chinese FDI flows to Europe since 2000 took place after 2008, reflecting an almost exponential rise during the 2010–2016 period. Indeed, Chinese FDI in the EU increased by 77% in 2016, reaching a peak of approximately €37 billion that year (Hanemann & Huotari, 2017). This surge coincided with a sharp decline in global investment flows after the financial crisis, highlighting how China became an important new source of capital while Western investors pulled back.

1.2 Chinese Investment in Central and Eastern Europe

To consolidate its position within the CEE region, China has implemented a novel collaborative framework, known as "16+1". In 2012, China launched a regional platform involving 11 EU member states and 5 Balkan states with a view to deepening trade, investment and infrastructure in the region (Grieger, 2018). It was initiated by the Chinese government as an initiative that is complementary to European integration. The objective of this framework was to highlight the concept of "United and Prosperous Europe", even though the format was focused more on bilateral deals with each country rather than multilateral trade agreements (Weidenfeld, 2018). The concept was subsequently intertwined with the Belt and Road Initiative (BRI), which was launched in 2013 and emphasised the significance of the CEE region for China's ambitions to enhance connectivity with Eurasia (Garlick, 2023). It is noteworthy that most of the CEE countries have formally endorsed the BRI. This move was interpreted as a reflection of the region's high expectations for the influx of Chinese capital and infrastructure projects, with the potential to stimulate economic development and enhance regional connectivity (CMS, 2020). The establishment of new frameworks has prompted China to revise its "going out" strategy, and the objective of this revision was to enhance China's integration into global economic systems and, consequently, to bolster its international influence (Zeneli, 2017).

The investment strategy pursued by China in the CEE has been driven by a combination of economic and strategic factors. Chinese firms are attracted to the region due to its market potential and proximity to a large Western European customer base, utilising the CEE as a gateway to the EU single market (facilitated by the EU membership of many host countries within the region) (Szunomár, 2016). A supplementary factor is the relatively low production costs, due to the fact that labour in the CEE can be 40-60% cheaper than in Western Europe, despite the presence of a similarly skilled workforce (Szunomár, 2016). Another advantage of the CEE region is its geographical location and connection to the BRI. Through the BRI, the Chinese government has addressed the region's significant infrastructure requirements by financing new highways, railway connections, and energy projects, thereby enhancing Eurasian connectivity (CMS, 2020). These projects have not only physically opened markets for the import of goods but have also enhanced the region's overall economic presence. Moreover, apart from seeking market and efficiency, Chinese companies have engaged in strategic asset acquisition in the CEE region by acquiring local industrial firms and technology (Szunomár, 2016). Major manufacturers, including telecoms giants such as Huawei, as well as various automotive and appliance makers, have set up production and R&D operations in countries such as Hungary and Poland, taking advantage of lower costs and access to the wider EU market (Szunomár, 2016).

China's growing presence in the region is having a growing geopolitical impact and prompting a mixed response from Europe. EU officials caution that the '16+1' diplomacy could undermine regional unity and cohesion (Garlick, 2023). This is evident in certain BRI projects, such as the highway in Montenegro and the Budapest- Belgrade railway, which have sparked concerns about debt burdens and non- compliance with EU regulations (Weidenfeld, 2018). Meanwhile, the anticipated flood of Chinese investment has largely failed to materialise. By 2020, the CEE region had absorbed only around 3% of Chinese FDI in Europe (Karásková, 2022). Underperformance against set objectives was coupled with fears of potential Chinese influence, leading to pushback against strategic Chinese initiatives. Between 2021 and 2022, the Baltic States withdrew from the '17+1' [2] initiative, reflecting overall frustration concerning unfulfilled Chinese promises. This also coincided with the EU taking a tougher stance on China. The rest of the EU has also adopted a more guarded approach, designating China a 'systemic rival' and tightening the screening of Chinese investments in strategic sectors (Helmut Schmidt Foundation, 2023).

1.3 Electric Vehicle industry – strategic importance and significance in Sino-European relations

Nowadays, electric vehicles (EVs) are recognised as pivotal to decarbonising road transport and enhancing energy security. The International Energy Agency (IEA) emphasises that EVs are the key technological solution to decarbonising road transport, which accounts for around 15% of global CO_2 emissions (IEA, 2025). Furthermore, sustainable EV growth could align vehicle emissions with the 2050 net-zero targets.

[2] The 16+1 initiative was renamed 17+1 after a new member joined to reflect the number of participating countries.

Under current international policies, the electrification of transport is projected to reduce emissions by around 1.8 Gt of CO_2 by 2035, as internal combustion engine (ICE) vehicles are phased out (IEA, 2024) China's growing EV market has already demonstrated its potential, with Chinese EVs accounting for around 35% of avoided transport emissions in 2023 (IEA, 2024). EVs also support energy security by reducing oil dependence, which has been a stated goal of China's EV initiative since 2001, and by enabling cleaner, electrified mobility (UNCTAD, 2021). In the EU, where transport accounts for around 25% of greenhouse gas emissions, 70% of which come from cars (European Commission, 2024), policymakers have mandated that all cars sold by 2035 must be zero-emission vehicles. Since these policies were introduced, the market has responded, with EVs already accounting for over 20% of new EU car sales (European Commission, 2024). Compared to ICE vehicles, EVs use less than one-third of the energy per kilometre, and thanks to cleaner grids and greater efficiency, their lifecycle emissions are roughly half those of ICE cars (European Commission, 2024).

The market for EVs has expanded significantly, although this growth has been rather concentrated geographically. In 2023, global EV sales constituted about 18% of new light-duty cars, rising to over 20% in 2024 (IEA, 2025). Sales are dominated by three regions: China, Europe, and the United States, accounting for around 95% of the market in 2023. China alone accounted for around 8.1 million new EV sales (a 35% increase on 2022) (IEA, 2024). This is particularly noteworthy as it was the first year after the national purchase subsidies were phased out. Although the Chinese EV market is maturing, it is still growing rapidly. Policies for new energy vehicles (NEVs) have recently shifted from providing stimulus to encouraging market competition. Europe is the second-largest EV market, and the adoption of EVs is accelerating. Combined, Battery Electric Vehicles (BEVs) and Plug-in Hybrid Electric Vehicles (PHEVs) exceeded 21% of new cars sold in 2023 (European Commission, 2024). However, it is important to note that Europe's EV expansion relies heavily on imports. Europe has become the main importer of EVs produced under the 'Made in China' initiative, accounting for around 10% of EU EV sales, thanks to relatively low tariffs and high subsidies in Europe (Sebastian, & Chimits, 2023). In response, the EU has started investing in building its own EV industry. The European Commission (EC) has introduced a new industrial action plan providing major funding to support EV battery manufacturing in the EU (Maczkovics et al., 2025). These market trends highlight intense competition: While China's state-led strategy has delivered massive scale and exports, Europe is struggling to grow its share of the global EV ecosystem through subsidies and innovation.

The rise of the EV industry can be seen as a deeply strategic move that has reshaped trade and supply chain dynamics. China's industry grew due to strategic industrial policies, including early subsidies tied to local production and limited access to foreign markets, which drove domestic champions and huge EV rollouts (Sebastian, & Chimits, 2023). Chinese companies are key players in strategic market segments (e.g., battery manufacturer CATL controls around 33% of the global EV battery market) (Sebastian, & Chimits, 2023). Since the surge in Chinese EV exports, Europe has absorbed approximately 40% of these exports. These numbers are so high that, for the first time in decades, the EU has become a net importer of passenger vehicles. As the automotive sector is crucial for Europe, accounting for around 7% of the EU's GDP and 10% of manufacturing jobs, policymakers have responded with defensive measures (Sebastian, & Chimits, 2023). The EC has opened a trade investigation into Chinese EV subsidies. The Commission is also drafting new rules to ensure EU-made content in batteries and prevent tariff circumvention (Maczkovics et al., 2025).

At the same time, the growth of EVs is intensifying the demand for critical raw materials and reshaping global value chains. UNCTAD reports that the battery minerals that underpin EVs, such as lithium, cobalt, and nickel, could see demand almost quadruple by 2030 (UNCTAD, 2024). Consequently, countries are pursuing resource strategies. For instance, Indonesia's 2020 ban on raw nickel exports compelled foreign car manufacturers to invest $22 billion in domestic processing by 2022 (UNCTAD, 2024). Likewise, the EU has moved to secure supply; its 2023 Critical Raw Materials Act identifies 47 strategic projects (with a total investment of around €22.5 billion) to boost the mining, refining, and recycling of battery metals (European Commission, 2024b). In short, the EV transition is not just about clean energy; it is also reshaping geopolitics. Trade patterns, industrial policy, and investment flows are being realigned as countries race to lead the EV era, ensure supply-chain resilience, and leverage the economic potential of zero-emission mobility.

Chapter II Literature Review

Over the past two decades, Chinese FDI in Europe has increased significantly. The majority of investments have been attracted by major European economic powers, including the UK, Germany, and France, thereby reinforcing the appeal of big Western economies (Zhang, Jiang, & Zhou, 2021). In reality, approximately 75% of Chinese FDI in Europe during the period 2005-2019 was located in the richer North and Western European countries, and only a small portion of the investment went to the CEE region or Southern countries (China Power Team, 2021). This geographical preference is also reflected in the existing literature, which predominantly focuses on Chinese investment in Western Europe. The research is primarily concentrated on the most prominent transactions and strategies employed by companies that have decided to invest in these economies. It documented the motivation of Chinese firms, including their market expansion motives, including strategic asset and technology seeking (Dryden, 2021; Zhang & Chen, 2023). A number of studies have also incorporated the role of initiatives such as BRI in the investment process (Li, 2021). Nevertheless, the majority of studies in this field adopt a firm-centric approach, emphasising the outcomes of Chinese enterprises (Alon, Anderson, Munim, & Ho, 2018).

It is important to note that there are certain limitations to the research that has already been conducted. A focus on particular firms' motivations and general economic outcomes suggests that the role of host countries' policies remains rather underresearched (Szunomár, 2020). The majority of existing literature on this subject has been limited to analysing the strategies employed by Chinese companies or to general factors determining foreign direct investment (market size, labour costs, etc.), without delving into how targeted policies on the part of the host countries may influence investment outcomes (Gammeltoft et al., 2018; Abu Dayeh & Janíčko, 2021). Moreover, the predominant focus of the literature on Western Europe has resulted in a comparatively limited understanding of the impact of Chinese investment in the CEE region (Rencz, 2023). Despite the existence of analyses addressing the impact of programmes such as "16+1", researchers have observed that studies on CEE are frequently fragmented (Szczudlik, 2019; Kratz et al., 2016). There is a scarcity of comparative, theory-based assessments, indicating a limited understanding of China's investment patterns in CEE and the potential influence of CEE governments' approaches on these investments (Abu Dayeh & Janíčko, 2021).

The classical theories of FDI, including the OLI paradigm, have proven to be a valuable tool in comprehending the fundamental motivations behind corporate investment in foreign markets (Dunning, 1980). A substantial number of classical empirical studies concerning the determinants of FDI in Europe have indeed demonstrated that variables such as the openness of the economy and the labour cost have a significant influence in order to attract investment (Dorakh, 2020). In the context of Chinese FDI, there is frequently an underlying complex dynamic involving a combination of factors, including but not limited to technology seeking and political implications (Shaha et al., 2021). However, the supply-side policies implemented by the host countries constitute the subsequent pivotal element in any discourse on the attraction of investment. European countries commonly utilise a range of economic inducements, including investment incentives, tax reductions, subsidies, and infrastructure support, in order to compete for FDI projects (UNCTAD, 2021). In the context of emergent industries (such as the EV industry), the significance of targeted policy packages is particularly pronounced, as governments seek to cultivate domestic competencies (Tagliapietra et al., 2025).

Several governments in the CEE region have proposed substantial incentive packages with the aim of attracting manufacturers of electric vehicles and battery gigafactories (Aretera, 2022). In pursuit of its objective to become a hub for electric vehicle battery production, the Hungarian government has implemented regulatory simplification measures and provided substantial subsidies (Hungarian Battery Industry Strategy, 2024). The estimated state aid to major investors in the battery sector is €4.2 billion (approximately 2% of Hungary's GDP) (Hook, 2025). In a similar manner, Slovakia has secured the establishment of an electric vehicle factory from Volvo (a subsidiary of the

Chinese company Geely) by pledging a substantial support package, reportedly amounting to over €280 million for the development of industrial infrastructure (Turcsányi & Kachliková, 2024). The expanding literature on industrial policy in the EV sector highlights the necessity for targeted state intervention. The argument of scholars in this field, including Rodrik (2014) and Mazzucato (2018), is that markets are unable to generate the level of technological transformation required in the absence of active policy supply (e.g., targeted incentives, joint infrastructure investments and value chain coordination). Empirical evidence suggests a positive correlation between proactive investment promotion agencies and increased foreign direct investment inflows, as well as the implementation of high-tech projects (WAIPA & OCO Global, 2023). Nations with investment agencies of a high calibre, that is to say, those capable of providing professional services to investors, attract a significantly higher volume of FDI ideas (Morrissey & Udomkerdmongkol, 2012). At the same time, the state's capacity to implement investments in an effective manner (timely preparation of infrastructure, efficient obtaining of permits) and the integrity and stability of institutions are pivotal (Andrews, Pritchett, & Woolcock, 2019). In the absence of these factors, even appealing packages may be inadequate.

Moreover, research on political risk demonstrates that elevated levels of institutional uncertainty can result in increased costs for foreign investment. The combination of escalating expropriation risk and deficient institutions has been demonstrated to engender heightened political hazard, compelling investors to recalibrate their strategic approaches (e.g., opting for less hazardous forms of entry) (Henisz, 2000). Conversely, the reduction of trade policy uncertainty (e.g., China's accession to the WTO) has been demonstrated to result in a substantial increase in trade and investment, which, in turn, leads to reduced prices and enhanced consumer incomes (Handley & Limão, 2017). Moreover, within the context of EV, the repercussions of so-called "tariff jumping" are of significance. The imposition of countervailing or anti-dumping duties has been demonstrated to have a significant impact on producer motivation to relocate production. For instance, a favourable anti-dumping ruling by the US resulted in a 3%

surge in profits for local companies, contingent upon the absence of any declaration of foreign plant expansion. However, should investors announce plans to construct a factory on the site, these profits would be rendered moot (Blonigen et al., 2002). In general, high trade barriers and uncertainty (e.g., variable customs duties, protectionist measures) encourage manufacturers to locate closer to the market.

Despite the existing literature on Chinese FDI in Europe, the combination of the CEE region, the nexus between the CEE region, the EV industry, and the host country industrial policy perspective remains underexplored. Existing studies predominantly characterise corporate strategies or present overarching factors that appeal to FDI, yet they fail to undertake a thorough examination of the substance and credibility of comprehensive policy packages (investment, fiscal, infrastructure) and their implementation in conditions of escalating trade uncertainty (tariffs). The present study will address this research gap. The primary objective of this study is to examine the impact of host country policies on the nature of Chinese FDI. The present study will draw parallels and differences between two significant CEE economies, Poland and Hungary, and analyse the policies introduced by each country, as well as their respective results in the context of attracting Chinese FDI.

Chapter III Theoretical Framework

Classical theories of FDI provide a foundational understanding of why firms internationalise, emphasising firm-specific advantages and market imperfections. However, these frameworks are inadequate in fully explaining the recent surge of EV investments CEE, a region in which policy design, institutional execution, and credibility play a decisive role. The present chapter thus proceeds in two steps. Firstly, it summarises and critiques the classical approaches to FDI. Secondly, it introduces a policy-centred, supply-side perspective that highlights how governments actively shape location advantages through targeted instruments. The lens is structured around five pillars: cost-side incentives and tax instruments; infrastructure and industrial land; skills and labour supply; state-aid design and execution capacity under EU rules; and policy credibility and stability, including political and trade-policy risk. The framework will guide the subsequent case analysis of EV FDI in CEE.

3.1 Foreign Direct Investment – classical theories

The classical theories of FDI motivation are based on the concepts of firm advantage and market imperfections. In the monopolistic advantage theory, Hymer advanced the argument that the mere differences in interest rates, as determined by neoclassical theory principles, were insufficient to provide a rationale for why firms establish subsidiaries abroad (Dunning & Rugman, 1985). Conversely, enterprises engage in FDI to leverage their distinct competitive advantages within an imperfect market environment (Li, 2023). Hymer's theory posits that multinational enterprises gain return on FDI by internalising their competitive advantages, such as technology, patents, or tacit knowledge, using managerial know-how, as well as by reducing competition with foreign rivals (Pitelis, 2016). The theory emphasises two motives: the accumulation of market power through the elimination of foreign business rivals, and the exploitation of unique assets for profit in foreign markets (Calvet, 1981). This suggests that businesses engaging in FDI can only succeed in the context of market imperfections that generate monopolistic advantages for the investing firms (Veeramani, Shukla, & Jamaleh, 2020).

Buckley and Casson have built on the monopolistic advantage theory (Hymer, 1976; Dunning & Rugman, 1985), creating the internalisation theory, which provides an explanation that FDI is a response to transaction-cost problems (Buckley & Casson, 1976; Williamson, 1975). Theory suggests that international intermediate input markets, particularly those centred on knowledge and technology, frequently exhibit imperfections or inefficiencies (Buckley & Casson, 1998). In instances where the price mechanism is unable to effectively coordinate complex transactions, such as the licensing of proprietary technology or the transfer of know-how, a firm may seek to mitigate market frictions by internalising production in a foreign subsidiary (Buckley & Casson, 2009). Furthermore, Buckley and Casson's application of the theory of the firm to international production demonstrated that in instances where markets for intermediary goods, such as patented knowledge or specialised components, are incompatible or costly, multinational corporations will internalise the exchange through foreign subsidiaries (Buckley & Casson, 2020). Consequently, an MNE establishes foreign subsidiaries to overcome the limitations of inefficient domestic markets while retaining control over proprietary knowledge and maintaining quality standards (Li, 2023; Pitelis, 2016). In essence, the internalisation theory posits that price mechanisms are ineffective in facilitating transactions efficiently. Consequently, the integration of intermediate goods and services across borders becomes imperative. This, in turn, prompts companies to undertake internal integration of their operations (Veeramani, Shukla, & Jamaleh, 2020).

Dunning's eclectic paradigm (also known as the OLI paradigm) stipulates that FDI occurs when three sets of advantages align (Dunning, 1977; Dunning, 1988). In accordance with the model, an MSC must possess ownership advantages (O), firm-specific assets such as technology, brands, or tacit knowledge and managerial skills; and location advantages (L) in the host country, which include market size, resources, or favourable policies. In order to exploit the ownership asset directly in the foreign markets, it is also necessary to internalise (I) rather than contract out (Eden & Dai, 2009; Sharmiladevi, 2018). The employment of FDI is contingent upon the alignment of OLI advantages. The framework indicates that ownership advantages serve as the primary motivators for a company to invest abroad, location advantages enhance the attractiveness of a particular country, and internationalization advantages represent the net efficiency gain of retaining control within the company (Cantwell & Narula, 2004; Globerman, 2018). Dunning's paradigm is notable for its comprehensive integration of two key elements: transaction costs and ownership advantages. In addition to these elements, it also underscores the objectives of firms, such as accessing new markets or strategic assets. This theory, which is founded on earlier works, provides an explanation of the broad drivers of international expansion. It is the most comprehensive FDI framework to date (Dunning, 1988; Eden & Dai, 2009; Sharmiladevi, 2018).

While these theories remain influential, they exhibit notable limitations when applied to contemporary, policy-intensive sectors such as EV manufacturing. First, the OLI paradigm, despite its integrative ambition, is often criticized for being overly inclusive and difficult to operationalize empirically (Dunning, 2000; Eden, 2003). Second, early frameworks largely treat government policy as a passive backdrop rather than an active determinant of location advantages (Hymer, 1976; Buckley & Casson, 1976). Yet, recent evidence underscores that institutional quality, regulatory predictability, and targeted incentives significantly shape FDI flows (Silajdzic & Mehic, 2020; Contractor et al., 2020). In short, classical theories explain firm-level motives but underplay the role of policy-built advantages, which are critical in the EV sector. Thus, analysis of FDI cases necessitates the utilisation of both conventional OLI logic but also an examination of additional determinants, including regional regulatory environments (Dunning, 2000; Contractor et al., 2020). This acknowledgement of the active role of host-country policy and institutional frameworks in shaping FDI flows underscores the necessity for a more policy-centred analytical approach (Sauvant, 2021). The subsequent section is concerned with the development of this perspective, drawing upon the principles of supply-side economics to explore the manner in which governments create, enhance, and sustain competitive advantages with a view to attracting and retaining foreign investment (Sauvant, 2021).

3.2 Policy-Centred Perspective and Supply-Side Economics

As showcased by classical theories of FDI, there are three key factors that must be considered when undertaking investment decisions. These factors include market access, the existence of a low-cost labour force, and access to natural resources in the host country (Dunning, 1988; Buckley & Casson, 1976). The significance of these factors cannot be overstated. Nevertheless, there is frequently a disregard of government policy, or a perception of its role as a passive factor, under the assumption that state involvement is inevitable. There is an increasing recognition within the FDI scholarship of the role played by host country policies and institutional frameworks as additional drivers of the attractiveness of the host country for MNEs to invest there (Sabir et al., 2019). In other words, the policy environment, including law, regulations, and incentives introduced by the host governments, emerges as one of the most important explanatory variables for the FDI.

The present subchapter is concerned with the extension of the classical FDI frameworks, with a particular emphasis on the manner in which the actions undertaken by countries and the institutional context actively create or enhance location advantages. In this context, supply-side economics frameworks are of particular utility, given that investment capital is highly sensitive to the fundamental supply-side economics of the host economy (Sauvant, 2021). In essence, the primary objective of investors is to identify locations in which they can optimise their productivity and generate profit over an extended period. Consequently, policies that augment a nation's productive capacity and mitigate business risk can confer a substantial comparative advantage, thereby attracting FDI (Kher & Chun, 2020). To operationalize this perspective, this study adopts a structured five-pillar framework that captures the main channels through which policy influences FDI:

1. Cost-side incentives and tax instruments.
2. Infrastructure and industrial land (including grid and logistics).
3. Skills and labor supply (including training instruments).
4. State-aid design and execution capacity under EU rules.
5. Policy credibility and stability (including political signals and trade-policy risk).

It is crucial to note that the policy of the host country can exert a significant influence on both the anticipated returns and the security of the investment. A stable and growth-oriented policy environment has been shown to increase the marginal productivity of capital and the after-tax return on investment (Alfaro & Chauvin, 2017). Furthermore, such an environment can reduce the risk of expropriation, contractual disputes, and other unexpected costs. Research findings have indicated that the quality of institutions, a direct consequence of governance and policy, constitutes a salient rationale for the propensity of foreign capital to be allocated to economically affluent, institutionally robust nations (Sabir et al., 2019). In summary, unfavourable policy environments have the potential to act in a contradictory manner to the advantages offered by low-cost labour or the abundance of natural resources. Consequently, robust institutions and infrastructure would serve to encourage investors to allocate their capital to less endowed markets. By framing host-country policy as a determinant of the host economy's long-run aggregate supply and competitiveness, it is possible to gain a more profound understanding of how proactive governance exerts a shaping influence on FDI, extending beyond classical demand-side factors (Contractor et al., 2020).

Tax policy constitutes a vital supply-side instrument, exerting a profound influence on FDI by modulating the incentives for capital formation. From the perspective of supply-side economics, the reduction of effective tax rates on corporate income has been demonstrated to encourage investment by increasing after-tax returns, thereby incentivising higher capital inflows (De Mooij & Ederveen, 2001). In order to attract FDI, host countries have been utilising a variety of tax instruments, ranging from broad corporate rate cuts to targeted holidays and credits (Akintobi, Okeke, & Ajani, 2022). The operation of such incentives is such that they improve the reward-to-risk ratio for

MNEs. The reduced influence of taxes on profits makes these countries more attractive to investment in new factories or acquisitions. In the taxonomy of the FDI, as published in the IMF magazine, the tax policy was recognised as a key component of the host country's policy framework. It is acknowledged that all other factors are constant; nevertheless, it is posited that a favourable tax regime can influence the location choices of MNEs.

The existing research exploring the connection between tax policy and FDI inflows suggests that there is a strong link between those two variables. In a meta-analysis of numerous studies, De Mooij and Ederveen (2001) found that, on average, a 1 percentage point reduction in the host country's corporate tax rate is associated with a 3.3% increase in inbound FDI. This semi-elasticity of FDI with respect to tax rates indicates that there is a certain amount of responsiveness of foreign investors to fiscal incentives. To attract FDI, numerous host countries have begun implementing supply-side tax reforms. The effectiveness of tax incentives has been shown to vary, and it is evident that excessive levels of incentives may result in erosion of public revenues. However, the broader conclusions align with the supply-side theory, which indicates that investor-friendly tax systems tend to foster greater capital formation, including FDI, by improving the long-term incentive to invest. Conversely, it is crucial to acknowledge that the policy's impact on FDI is contingent upon the credibility and simplicity of the system. The efficacy of the system is contingent upon its moderation and predictability, as opposed to the use of complex ad-hoc incentive schemes, since investors place a premium on certainty with respect to their long-term liabilities (Sauvant, 2021). It is argued that a credible commitment to stable tax regimes with reasonable rebates reduced the perceived risk, thereby functioning as a positive stimulus for investment. In this context, the emphasis is not on the cash flow per se, but rather on the mitigation of uncertainty.

The extent to which investors retain their profits is determined by tax policy; thus, the regulatory framework of the host country is instrumental in determining the ease with which such profits can be made. In other words, the question is how challenging it is to overcome the barriers to entry in a particular market. Its implications extend to various domains, including business regulation processes, licensing, labour law, and property registration, to name a few. The domestic regulations directly impact the costs of production and the flexibility of operations in the chosen market. In the context of economic activity, a regulatory environment characterised by rigidity and limitation can act as an impediment to supply. This environment is associated with increased transaction costs, a diversion of resources from operational activities to compliance-related endeavours, and an overall hindrance to entrepreneurial initiatives (Hasan et al., 2024). By contrast, a lean and transparent regulatory regime has been shown to enhance efficiency and productivity, thereby affecting a long-term shift in the host economy's aggregate supply by allowing firms to operate at lower cost and with greater certainty (Kuzmanoska Mirkovikj et al., 2024). From a supply-side economic perspective, the reduction of bureaucracy and the enhancement of the "ease of doing business" are imperative for the augmentation of productive capacity and the promotion of new investment (Sabir et al., 2019).

Research evidence confirms that countries with more business-friendly regulations attract significantly more FDI. The World Bank's Doing Business indicators, which quantify regulatory burdens and business climate, illustrate this connection. A cross-country analysis has revealed a consistent correlation between higher levels of foreign FDI inflows and improved performance on the Doing Business metrics, even when controlling for other standard FDI determinants (World Bank, 2013). The relationship is not merely speculative: on average, a 1 percentage-point improvement in a country's regulatory quality score (distance-to-frontier) is correlated with an increase of $250–500 million in annual FDI inflows (World Bank, 2013). While correlation does not necessarily imply causation, the findings provide support for the supply-side proposition that a more conducive regulatory environment is associated with reduced production costs and risks, thereby attracting foreign investors. It is important to note that these regulatory benefits apply broadly; an environment that is conducive to domestic small and medium-sized firms also tends to be beneficial for foreign multinationals. In other words, economies that provide a favourable environment for local entrepreneurs are inherently more attractive to external investors, a convergence of interests that underscores the supply-side principle of improving general business conditions.

This dynamic can be illustrated by specific regulatory aspects. Simplified procedures for the initiation of business ventures or the procurement of permits have been demonstrated to facilitate the establishment of FDI projects with greater expediency and reduced overhead expenditure (UNCTAD, 2016). The flexibility of labour regulations enables firms to adapt and optimise their workforce, thereby enhancing productivity. The enforcement of strong contracts and the availability of legal recourse ensure that foreign companies can resolve disputes efficiently, thereby reducing the risk premium on investments. It is important to note that each of these elements, speed, flexibility, and legal certainty, feeds into higher expected profitability or lower risk, thereby effectively raising the long-run supply potential of the host economy. An illustrative data point is the concept of hassle costs: UNCTAD (2017) has observed that the reduction of "hassle costs" associated with bureaucratic delays, corruption, and administrative inefficiency is a pivotal component of contemporary investment facilitation. By reducing such costs, policymakers can eliminate barriers to efficient production, aligning with supply-side recommendations to enhance productivity. To summarise, a regulatory framework that is well-balanced, can serve as a powerful magnet for FDI. This is because it signals a commitment on the part of the host country to enable enterprise and growth. Yet, it is important to note that supply-side approaches are not without criticism. Scholars warn of potential “races to the bottom” in incentive competition, fiscal costs that outweigh benefits, and the risk of policy reversals undermining credibility (Sauvant, 2021; Contractor et al., 2020). These concerns highlight the need for well-targeted, transparent, and predictable measures rather than ad hoc concessions.

The policy of the host country functions as a supply-side mechanism that empowers states to establish comparative advantages, thereby influencing FDI flows in a manner that exceeds the impact of fundamental economic determinants (Harding, Javorcik, &

Maggioni, 2013). Whereas classical models locate comparative advantage in exogenous endowments or technology, modern policy strategies, including tax incentives, regulation, and overall governance, actively build those advantages (Alfaro & Chauvin, 2017). Consequently, governments can leverage deliberate policy interventions to not only attract greater FDI but also enhance the quality of investments. When viewed through the lens of supply-side economics, host country policy is revealed as a central explanatory variable for cross-country FDI variation (Hasan et al., 2024).

By treating policy variables as fundamental determinants, and regarding them as being of equal or greater importance than traditional factors, a more nuanced and detailed explanation can be proposed for the considerable variation in FDI inflows observed between countries. This perspective also has a normative implication: countries seeking more FDI should focus on supply-side reforms that expand their productive capacity and reduce investor risk over the long run. In the broader context of international investment, the existence of sound host country policies can be considered a form of comparative advantage. These policies are cultivated by nations in a manner that supports the ongoing inflow of FDI, and the development benefits that accompany it (Alfaro & Chauvin, 2017). Despite some critiques, a supply-side lens is particularly relevant for EV FDI in CEE. The sector is capital-intensive, infrastructure-dependent, and highly sensitive to policy signals. Classical theories explain why firms seek efficiency or market access, but they do not account for how policy design, execution capacity, and credibility determine which locations attract investment and when projects reach a final decision. By structuring the analysis around the five pillars outlined above, this framework provides a systematic way to assess how CEE governments create and sustain competitive advantages in the EV value chain. This approach will guide the case analysis in the following chapters.

Chapter IV Methodology

4.1 Research Approach and Methodological Choice

The present study employs an inductive, qualitative, exploratory approach to comprehend how recipient-country policies influence Chinese FDI in CEE's EV industry. The analysis does not involve the testing of a pre-established hypothesis. Rather, it draws patterned inferences from a curated set of policy and administrative texts. Documents are regarded as "social facts": they record decisions but also help constitute policy reality through how they define problems, instruments and priorities (Atkinson & Coffey, 2004). Consequently, a desk-based document analysis is deemed an appropriate approach, as it relies on systematic procedures for finding, selecting Recognition of the existence of such sequences reinforces the validity of analyzing the chronology of political actions contained in the documents, appraising and synthesising texts in order to answer research questions (Bowen, 2009). From an institutional point of view, the concept of path-dependent reactive sequences is an integral component. The following sequences of political events are of particular interest in this study. It could be argued that every event is interpreted as a reaction to the previous one, influencing the next (Mahoney, 2000). This means that early decisions have a significant impact on the end results.

The case-study logic of the project is oriented towards analytic generalisation (clarifying propositions about policy–FDI linkages), rather than statistical generalisation (Yin, 2014). The use of two cases facilitates the logic of replication: if the cases have similar backgrounds but differ in the number of investments, the repeated co-variation between system characteristics and FDI outcomes increases the credibility of the proposed explanation (Yin, 2014). Furthermore, the structured case comparison method is employed, which relies on the formulation of the same set of questions and their evaluation against the same set of criteria, with a view to assessing both cases. This methodological approach ensures systematic and comparable analysis, as it focuses on the same key aspects in both countries, thereby enhancing the reliability of the comparison. The rigour of the methodology is ensured through the establishment of a transparent chain of evidence, the clear definition of case boundaries, and the disciplined handling of documentary sources. These are standards that are commonly recommended in the literature on case studies (Yin, 2014; George & Bennett, 2005).

Moreover, the approach is deemed suitable within the EU policy context, which constitutes a significant regulatory framework for the issues under consideration. The EV sector and the inflow of foreign investment are subject to EU objectives and regulations (e.g., climate policy, internal market rules, investment supervision mechanisms), and as such national processes should be viewed in the context of a multi-level policy system. The path dependency approach facilitates the observation of how early decisions, both at the national and EU levels, guide subsequent actions and outcomes (Mahoney, 2000). The comparison of two EU countries according to structured criteria enables the isolation of the impact of specific national policies against the backdrop of the common EU framework. This, in turn, strengthens the accuracy and analytical generalizability of the adopted explanation in relation to the broader debate on EU policies.

4.2 Research design

The present study employs a comparative case study with a Most-Similar Systems Design grounded in Mill's Method of Difference (Anckar, 2020; Mill, 1843) and relies on desk-based document analysis. This design is widely used in comparative politics to isolate explanatory variables by holding background conditions constant (Anckar, 2020). In practice, we seek to ensure that broad background conditions remain as similar as possible between Poland and Hungary, including EU accession and obligations, overall GDP path, an established automotive base, and exposure to the EU state-aid rulebook. This approach enables the examination of differences in electromobility policy regimes as the primary explanation for variation in Chinese EV- FDI. It also facilitates the analysis of processes in terms of a sequence of events, consistent with comparative process-tracing logic (Mill, 1843). In each case, policy development is conceptualised as a path-dependent reactive sequence (Pierson, 2000), where early policy decisions and actions trigger subsequent reactions, shaping the further course of policy and influencing investment outcomes (Howlett, 2009; Ackrill, 2018).

The document analysis approach was selected as the primary research method because policy source documents (e.g., laws, regulations, official programmes, public aid decisions, ministerial guidelines, and government agency materials) provide the most precise definition of policy instruments, legal bases, and administrative procedures (Bowen, 2009). In accordance with established best practices, the collection, evaluation, and synthesis of the documentary material were conducted as part of a transparent research process (Kutsyuruba, 2023). Priority was given to primary sources of a legal and administrative nature, while semi-official and secondary sources (e.g., analytical studies, industry reports, press releases) were used sparingly, mainly to supplement the chronology of events or to confirm information (Wesley, 2010). To maintain consistency in the study, the entire analytical process follows a predefined research protocol (Bowen, 2009).

1. Defining case boundaries and verifying background similarities: At the outset, the elements that make up each case were clearly defined (e.g., time frame 2015–2025, electromobility sector, Chinese EV-FDI investments), following best practices for comparative case study design (Anckar, 2020; Lijphart, 1971). It was also documented that Poland and Hungary have comparable initial conditions in the key aspects mentioned above, ensuring the validity of the Most-Similar Systems Design (Mill, 1843).

2. Defining the scope and identifying the corpus of documents: Next, the exact scope of the analysis of electromobility policy for each country was defined, and a corpus of relevant source documents was collected in line with established document analysis procedures (Bowen, 2009). At this stage, legal acts, decisions, and program materials were reviewed to understand the context and evolution of policy in both countries (Wesley, 2010).

3. Systematic acquisition of sources and assessment of reliability: The next step was a systematic search for and acquisition of missing sources in accordance with the snowball sampling principle, where each document found pointed to further relevant sources (Bowen, 2009). At the same time, the reliability of each source was assessed based on the aforementioned hierarchy (official documents were valued highest, followed by reliable expert publications), ensuring that subsequent analysis was based primarily on verified and objective information (Kutsyuruba, 2023).

4. Synthesis within the case: For each country, a detailed profile of the national electromobility policy was drawn, up and a chronology of key events and decisions was developed. In creating this synthesis, attention was paid to the cause-and-effect relationships between successive events, in line with the concept of a reactive sequence (Pierson, 2000; Howlett, 2009), to capture how earlier policy moves determined subsequent administrative or market responses (Ackrill, 2018). As a result, each case profile reflects the dynamics of policy development over time rather than a static description of instruments.

5. Cross-case comparison: In the next part, a systematic cross-case comparison was carried out to check whether and how differences in electromobility policy regimes translate into differences in EV-FDI results between Poland and Hungary. This comparison was based on a set of common analytical categories, including strategy objectives, support tools, regulatory frameworks, and the level of Chinese capital involvement, consistent with comparative research design principles (Anckar, 2020).

6. Conclusion and reporting: Finally, the results were interpreted and presented using the logic of replication (multiple case studies) rather than statistical generalization, as recommended in qualitative comparative research (Lijphart, 1971). Each relevant claim was linked to specific administrative decisions and FDI outcomes, ensuring transparency and traceability from source data to conclusions (Bowen, 2009).

4.3 Research philosophy and epistemology

From a philosophical standpoint, it can be considered an interpretative study, while from an epistemological perspective, it is rooted in a constructivist framework (Bowen, 2009). The study of politics and institutions is understood as the result of social processes and evolution (Pierson, 2000), with texts interpreted as artefacts embedded in a political and economic context and routine administrative procedures (Wesley, 2010). It is therefore the case that knowledge claims are the result of an interpretation that takes context into account, rather than the assumption that documents transparently reflect an objective world (Bowen, 2009). This position is predicated on the prioritisation of original legal and administrative texts as the content of instruments, and the reading strategies and communication as performative (Kutsyuruba, 2023). This is to be achieved in accordance with interpretation guidelines, with the encoding of priorities and signalling of commitments to investors (Wesley, 2010). In practice, this paradigm supports three choices. Firstly, the analysis employs a source research protocol that includes iterative review, careful reading, and interpretation (Bowen, 2009), in contrast to the use of formal coding software, and the analysis is standardised through the use of a structured comparison guide and extraction matrices (Anckar, 2020). Secondly, it is imperative to assess documents for their origin and intended audience prior to interpretation (Kutsyuruba, 2023). Thirdly, conclusions are formulated as generalising analyses suitable for comparing small data sets and are accompanied by clearly defined scope conditions and alternative explanations (Lijphart, 1971). The combination of these practices enables the integration of the strengths inherent in document analysis with the comparative discipline necessary for deriving reliable conclusions (Bowen, 2009).

4.4 Case selection

The selection of Poland and Hungary as the comparative case studies is grounded in their distinct characteristics and geographical positioning within the CEE region. Both countries possess a substantial production capacity, notably in the automotive industry, and are both actively seeking to develop the EV sector of the industry. Nevertheless, their approach to accepting Chinese investments is vastly different. The Hungarian government has adopted a cooperative approach by opening its economy and facilitating significant Chinese investment, as evidenced by the Belt and Road Initiative (Moldicz, 2025). Consequently, the country emerged as the primary recipient of Chinese investments in EV production, with 31% of all FDI in the sector flowing into it in 2024 (Kratz et al., 2025). Conversely, Poland, while expressing interest in Chinese electric vehicle FDI, decided to adopt a position that was more aligned with the broader European consensus. The Polish government is focused on the maximisation of local added value (through the negotiation of technology transfers and the development of domestic EV companies) and supports EU protective measures (e.g., tariffs on Chinese EVs), which contrasts with Budapest's liberal approach (Ličková et al., 2024). The timeframe for the analysis was indicated to be between 2015 and the first half of 2025. Despite the increased relevance of Chinese FDI in the aftermath of the global financial crisis of 2008, the rollout of EV sector development plans in both countries did not officially begin until 2015. Consequently, the analysis will commence from this point onwards. A comparative case study analysis of the two countries will facilitate comprehension of the elements of national strategies that determine investment characteristics (scope of production, location, technology, and cooperation with suppliers). The results of the study can provide conclusions for both theory (in terms of how institutions and public policies influence global flows of technological capital) and practical recommendations for designing industrial policies in the CEE region. These recommendations will help to plan the development of the EV industry and protect economic interests from the undesirable effects of external investments (Moldicz, 2025).

4.5 Data and Methodology Limitations

The primary limitation of this study is that the documents analyzed do not present objective reality; they were produced for specific audiences and for specific purposes (Bowen, 2009). Official texts such as legislation, state aid decisions, program rules, strategies, and ministerial and agency documents tend to reflect institutional accounts shaped by immediate political, administrative, and communicative contexts (Wesley, 2010). These texts typically have a double function: they serve both to document activity and legitimize choice, and to signal success (Bowen, 2009). This can result in selectivity over what is emphasized and in the organization of evidence. Analysis of such materials, therefore, requires attention not only to their content, but also to their origin, intended audience, and timing, in accordance with best practice qualitative document analysis. The second limitation concerns the ontological status of documents: they are both sources of information and agents in institutional processes. As the literature highlights, documents are “social facts” that, by encoding priorities, classifying action, and signalling to stakeholders (including potential investors), become part of the reality they describe (Bowen, 2009). The practice of reading political texts as descriptive and performative helps avoid treating institutional descriptions as objective facts and emphasizes the context-dependent character of document meanings, which can change over time and space (Pierson, 2000). Availability and recoverability of data also influence the completeness of the dataset. Not all relevant material is publicly accessible; some is archived only intermittently, and figures provided in different sources may be conflicting or variable. Document research is therefore susceptible to selective bias (Wesley, 2010). This study’s methodology relies exclusively on secondary sources, without incorporating primary data or interviews. Such a desk-based approach introduces clear limitations. It raises the risk of biases or gaps, as the analysis depends on information produced by others, which may not fully capture on-the-ground realities. Consequently, there may be discrepancies between policy on paper and actual implementation outcomes in the EV industry. Acknowledging this limitation underscores that the findings are interpretative and context dependent. Nonetheless, document analysis remains an effective strategy for tracking policy changes and their implementation over time, especially when the aim is to reconstruct the structure of instruments and administrative pathways rather than to estimate population parameters (Bowen, 2009).

Chapter V Comparative Analysis

The objective of this chapter is to empirically verify the theoretical framework presented in the second part of the thesis by analysing two CEE countries, Poland and Hungary, which have recently become popular locations for foreign investment in the electromobility sector. Both countries have similar economic profiles, strong automotive industry traditions, and membership in the European Union, meaning similar restrictions on public aid. Despite these similarities, there have been significant disparities in their capacity to attract Chinese investment in the electric vehicle value chain. The objective of this chapter is to respond to the following research question: How far is the Chinese FDI in CEE's electric vehicle industry shaped by the recipient country's government policies? The analysis will aim to verify how significant for the FDI is the five-pillar supply-side framework (taxes and costs, infrastructure and industrial land, labour resources and skills, execution of public aid, and policy credibility and stability). The chapter will comprise two case studies, followed by a cross-country comparison to identify the mechanisms that differentiate the results of the two countries.

5.1 Case study – Poland

5.1.1 Country context

Poland is not only the largest economy in the CEE region, but also a longstanding leader in the automotive industry, particularly in terms of automotive manufacturing. This sector contributes approximately 8% of the country's GDP and employs over 170,000 individuals in production and supply chain roles (PAIH, 2025). By 2024, Poland's nominal GDP had reached approximately €846 billion, with an approximate 2.9% growth rate year-to-year, thus surpassing most of the countries in the region (Central European Times, 2025). Nevertheless, despite its substantial industrial capacity in the automotive sector, Poland was relatively late in commencing EV production. In December 2018, the number of BEVs registered was only 5,200, constituting a mere

0.1% of all registered vehicles. Infrastructure development also lagged behind. As of the close of 202, Poland possessed a public charging infrastructure of approximately 1000 charging points (Polish Automotive Industry Association & Polish Alternative Fuels Association, 2020).

Recognising the necessity to transition from a power mix dependent on coal (which accounted for 80% of electricity generation in 2018), the government began to signal an EV ambition in 2016 when the Prime Minister pledged to have 1 million electric vehicles on Polish roads by 2025 (Reuters, 2016). The dominance of coal in the primary energy sector, with a share of up to 50% in 2018, posed a significant challenge to the EU's climate objectives (European Commission, 2019). This prompted a strategic shift in the energy landscape. It also signified Poland's ambition to swiftly align with the prevailing market order. In the following year, the Ministry of Energy published an electromobility strategy for Poland. This strategy encompassed a comprehensive five-stage plan, including the following elements: (1) raising awareness, (2) supply-side activities, (3) demand-side incentives, (4) regulatory improvements, and (5) network integration (Ministry of Energy, 2016). The initial phase of the project centred on the implementation of information campaigns and the engagement of relevant stakeholders. The subsequent phase focused on the attraction of investment for manufacturing facilities producing batteries and other components for EVs. The third phase concentrated on subsidies for consumers and tax rebates for private and corporate buyers, while the fourth phase focused on detailed and comprehensive regulation concerning emission zones and public-fleet mandates. The fifth phase of the project was dedicated to the establishment of infrastructure goals for the nationwide network of charging stations (Ministry of Energy, 2016).

5.1.2 Supply-side policies

From 2018 to 2024, the Polish government implemented a series of measures with the objective of enhancing the nation's capacity within the industry and attracting FDI into the EV supply chain (PAIH, 2023). The supply-side policies encompassed a range of measures, including substantial tax rebates, subsidies, and privileges associated with special economic zones (SEZs). These were complemented by targeted programmes financed by national and EU funds (PAIH, 2023). The formulation of these policies was intended to provide incentives for EV producers and component suppliers, including Chinese investors, to establish their businesses in Poland. This subchapter provides a synopsis of the key initiatives concerning supply-side policies, their objectives and ramifications, with consideration given to the responses of Chinese businesses.

At the beginning of 2018, Poland introduced its first comprehensive electromobility law, the Act on Electromobility and Alternative Fuels, with the aim of promoting electromobility and implementing EU directives concerning alternative fuels (Ministry of Energy, 2018). The Act facilitated the introduction of proper EV infrastructure, making it easier to build charging stations by removing the need for building permits, and introduced tax rebates to stimulate the electromobility ecosystem. The overarching objective of this strategy was to incentivise producers to establish future supply chains within the region.

Simultaneously, Poland underwent a comprehensive reform and modernisation of its investment incentive system. In mid-2018, a new initiative was launched with the establishment of Polish Investment Zones (PIZ), representing a contemporary and investment-friendly iteration of the SEZs (PAIH, 2023). The most significant facilitation of the investments pertained to the territorial aspect, enabling the majority of newly registered companies to be exempt from tax, irrespective of their geographical location within Poland (Successful Investing in Poland, 2025). In contrast to the earlier incentive schemes, which were characterised by fragmentation, investors are now able to receive long-term tax rebates. The duration of these rebates can extend up to 15 years, with the length of the rebates in less developed regions being longer. These rebates are proportional to the size of the investment and/or the number of new employment opportunities created (Successful Investing in Poland, 2025).

This reform was pivotal in attracting new investment, which could have resulted in the establishment of factories producing EVs (PAIH, 2023). In 2018, the Polish government expanded the scope of tax rebates for research and development (R&D), enabling the doubling of the deduction for eligible research expenses from 50% to 100% of costs for all companies (Government of Poland, 2019). This measure enabled companies to accrue tax savings of 19 PLN for every 100 PLN spent on R&D in Poland. This move, in conjunction with the introduction of a 5% IP Box tax in 2019 (Government of Poland, 2019), which could be applied to revenue from intellectual property, indicated Poland's strategic intent to attract investments based on innovation, such as R&D in the field of EV batteries or engineering centres, on its territory (Furga-Dąbrowska, Przygodzki, & Bernat, 2017). To summarise, the 2018 policy framework (comprising the Electromobility Act, PIZ tax zones, and R&D incentives) was designed to enhance Poland's appeal to investors in the electric vehicle sector. This was to be achieved by reducing operating costs, supporting infrastructure, and ensuring a favourable regulatory environment.

In accordance with the foundations laid in 2018, the Polish government initiated a concerted effort to attract foreign automotive industry leaders as part of a broader strategy to position Poland as a regional hub for electromobility and EV production. In the governmental Strategy for Responsible Development, electromobility has been recognised as a priority (Ministry of Economic Development, 2017). Institutions such as the Polish Investment and Trade Agency (PAIH) are focusing on investors from advanced technology sectors, who could provide developed know-how and suitable resources to develop Polish supply chains within the EV industry (PAIH, 2023). Recent activities have met with a reasonable degree of success, as evidenced by the increased propensity of Chinese corporations to direct investment towards Poland. An example of this phenomenon would be Jiangsu Guotai Huarong, a well-known Chinese corporation that elected Poland as an ideal site for the establishment of a manufacturing facility in 2019 for the production of battery chemicals indispensable for the manufacturing of lithium-ion batteries (GTHR, 2018). The plant in Godzikowice near Oława (Lower Silesia) was announced with an investment of up to €39 million and an annual production capacity sufficient to service approximately 1 million batteries for electric vehicles (GTHR, 2018).

Simultaneously, Chinese company Capchem announced plans to construct an electrolyte and conductive paste manufacturing facility at an estimated cost of approximately €47 million in Śrem, Poland (Investmap, 2021; Capchem, 2021). Another Chinese producer, Bafang, announced its intention to construct a manufacturing facility in the vicinity of Wrocław, with an estimated cost of approximately €15 million, focused on producing components for electric bicycles and scooters (BikeNews Online, 2019). These early commitments can be considered a direct result of the favourable investment climate in Poland. All three projects utilised the locations of the Polish Investment Zones (PIZs) (Polish Investment and Trade Agency, 2023), which offer tax exemptions and are closely linked to the growing battery cluster around Wrocław, anchored by LG Energy Solution's gigafactory (LG Energy Solution, 2025). The Polish government regarded these investments as substantiating its strategy of attracting EV investment, despite being aware of intensifying regional competition. In contrast, Poland attempted to attract investment for a substantial manufacturing facility producing battery cells for electric vehicles by CATL, but was unsuccessful in its bid, which was instead awarded to Germany due to a more appealing incentive package and proximity to major customers such as BMW (Zhang, 2021). This case demonstrates that substantial state support, combined with established connections to the regional market, was pivotal in securing EV projects.

Despite the challenges posed by the 2020 pandemic, the Polish EV sector successfully attracted financial support from European institutions, such as the European Investment Bank (EIB), which complemented existing national incentives. In 2024, Poland secured €1.4 billion in EIB-approved funding for e-mobility initiatives, including charging infrastructure and zero-emission heavy-duty vehicles (Randall, 2024). This financing was aligned with the EU's broader battery ecosystem strategy, which aims to strengthen Europe's battery value chain and reduce dependency on imports (European Commission, 2023). Within Poland, incentives were further enhanced: since 2020, R&D tax relief was extended, and in 2022, deductions for salaries related to research and development doubled to 200% (Government of Poland, 2019). Poland also signalled its intention to leverage the EU Recovery and Resilience Facility (RRF) to fund green industrial investments, with over €15 billion allocated to green transition measures, including sustainable mobility and energy efficiency (European Commission, 2022).

In November 2021, the National Fund for Environmental Protection and Water Management (NFOŚiGW) initiated a programme with an allocation of PLN 870 million, supported by the EU Modernisation Fund, with the objective of co-financing over 17,000 EV charging points on a nationwide basis (Ministry of Climate and Environment, 2021). Despite being presented as an infrastructure measure, it was in fact an integral component of a broader strategy to consolidate Poland's status as a leading battery hub within the European continent. This strategy utilised public grants and low-interest loans to significantly augment domestic production of batteries, separators, electrolytes, and charging hardware. In that same year, amendments were made to the Electromobility Act, stipulating that from January 2022, a minimum of 10 percent of municipal fleets in major cities must be comprised of EVs (with this figure rising to 30% by 2025), thereby establishing a guaranteed domestic market for e-buses and municipal vehicles (Ziemacka, 2021). In light of this policy framework, Chinese investors commenced further investments. For instance, in April 2021, Ningbo Tuopu Group unveiled plans for a €30 million manufacturing facility in Poznań, dedicated to the production of EV subframes (Polish Investment and Trade Agency, 2021). This initiative was supported by PIZs tax incentives and streamlined facilitation from PAIH and local authorities. Subsequent supply-chain projects included investments in Chinese chemical plants (for example, Guotai Huarong and Capchem) (GTHR, 2018; Capchem, 2021). Collectively, these developments signified 2021 as the year Poland's integrated policy approach, encompassing incentives, mandates and infrastructure funding, which translated into a developing cluster of EV supply-chain FDI, with Chinese firms among the key new entrants.

The supply-side strategy that was established in previous years has been a source of continued benefit to Poland in 2022. A further market-leading Chinese producer has announced its intention to enter the Polish market. In late 2022, Sanhua Automotive, a manufacturer of EV thermal management components, established a subsidiary in Poland (Dzhelik, 2023). The company announced its intention to invest in the reactivation of a production facility in Tychy (Silesia). By 2023, Sanhua had committed approximately €40 million to the construction of a 13,000 m² factory in the Katowice PIZ (Ptak, 2023). The factory was to be used for the production of EV heat pumps, valves, and cooling units. The target capacity was set at 3.5 million units per year, with the expectation that this would result in 350 new jobs by 2025 (Dzhelik, 2023). The city of Tychy was selected on the basis of the presence of an existing automotive cluster and extant factory infrastructure. The company has derived considerable benefit from CIT tax exemptions, a consequence of the city's location within a PIZ. The investment was consistent with the government's policy instruments aimed at the revitalisation of industrial sites and the attraction of foreign investment to less developed regions (PAIH, 2023). Sanhua's investment was met with enthusiasm by Polish authorities, who lauded it as a testament to the vibrant growth and allure of the Katowice PIZ. This investment was further recognised as a significant contributor to the enhancement of the region's economic resilience.

In the early months of 2023, Electromobility Poland, a Polish EV startup with state backing, entered into a cooperative agreement with Geely, a Chinese corporation that had established a technology hub in Kraków during the same period (Electromobility Poland, 2025). The collaboration was intended to provide a foundation for the domestic electric vehicle initiative called Izera, which had been conceptualised by the preceding administration (ZGH Group, 2022). As of mid-2023, Poland had received five significant investments from China, primarily in the fields of battery production, component manufacturing, and R&D. These investments position Poland as the second-largest recipient of FDI in the CEE region, surpassed only by Hungary, in the EV sector (Szunomár, 2025b). Nevertheless, it is crucial to emphasise that these investments remained relatively superficial and did not address final products. Instead, they focused on parts supply, which occupied a relatively low position on the value chain. Despite this, however, they were still able to bring capital, employment opportunities, and the transfer of expertise. The Polish government's introduction and maintenance of supportive tax policies, in conjunction with the continued leveraging of EU funds, has resulted in the establishment of a multi-level backing system (Dudkowiak & Cichoń, 2024). This has, in turn, reassured foreign investors of a stable, long-term commitment on the part of the Polish government to the EV sector.

By the end of 2023, the Polish approach to the EV sector and the supply-side policies had become a virtuous circle of a kind. The introduced incentives have led to sizable FDI inflows, which in turn increased Poland’s importance on the, so to speak, sectoral map, and led the government to signal even more openness to EV investment. In December of said year Polish government reviewed a bilateral agreement to facilitate, the most significant so far, Chinese investment: the Leapmotor’s plan to produce EVs (not only components like it was done earlier) in Stellantis’s Tychy factory (Greenwood, 2024). The talks were announced in early 2024. It was underlined that it will be the first Chinese-branded EV production line in Poland yet leveraging on the existing infrastructure and expertise of the factory, the Leapmotor T03 began being assembled at the Stellantis plant in Tychy in mid-June 2024 (Zhang, 2024b). However, on 30 March 2025, Stellantis suspended this production line (Anderson, 2025). At the same time, plans to launch the larger B10 model in Poland were abandoned, with the joint venture partners indicating Spain as the preferred location for this investment (Westerheide, 2025).

5.1.3 Demand-side policies

The transition of Poland into a relevant player within the EV industry has been predominantly driven by incentives relating to the supply side. These incentives have been designed to attract foreign investment, thereby enabling the country to begin the process of transforming its automotive industry. The research also suggests that supply-side incentives are often more cost-effective and provide clearer signals to stakeholders than subsidies alone, based on demand (Lindsell, McNamara, & Soat, 2024). Nonetheless, demand-side measures remain a pivotal component of the policy mix, as they facilitate the implementation of a comprehensive whole-system approach, thereby contributing to the establishment of a viable industry (Lindsell, McNamara, & Soat, 2024). The Act on Electromobility has introduced a series of supply-side incentives, as well as a basic demand-side framework. It intended to encourage the uptake of EVs, while the latter exempts EVs from the country's 3-19% excise tax and offers depreciation allowances when compared with conventional vehicles (Ministry of Energy, 2018). Moreover, it has been demonstrated that the aforementioned entity has been granted non-fiscal privileges, including the right to utilise bus lanes and the entitlement to free parking. In addition to these incentives, the Act stipulated that public-sector procurement be subject to the requirement of electrifying 10% of the municipal fleet by 2020 and 20% by 2023 (Ministry of Energy, 2018). The concept of Clean Transport Zones (CZTs) was proposed, although the initial implementation was characterised by a lack of enforcement and limited societal appreciation. Only a small number of municipalities (e.g., Warsaw) have opted to introduce them (European Commission, 2024).

The discrepancy between ambitious targets set by the Polish government, including the aforementioned national goal of one million EVs by 2025 (in the country context subchapter), and the minimal uptake on the consumer side has undermined the credibility of demand-side policies. The measures implemented by the government indicated its support for the EV industry's integration within the automotive sector. However, these measures proved insufficient to persuade foreign investors, who did not perceive them as sufficient justification to commit to investment (Mobility Portal, 2025). Furthermore, the fiscal demand-side incentives were found to be somewhat insubstantial. In the period between 2020 and 2024, the government instigated a series of pilot subsidy programmes with the objective of increasing the number of EVs sold and registered. While the initial two subsidy programmes, "Nasz Eauto" and "Mój Elektryk", demonstrated marginal to moderate adoption of EVs, a decline in registrations was observed in 2024 (Ujazdowski, 2025; European Alternative Fuels Observatory, 2024). The fragility of the tool and the absence of anticipated outcomes resulted in the authorities' decision to suspend the subsidy programme (Colaluce, 2024). The demand-side incentives have been shown to increase visibility of EVs; however, they have not attracted significant investment. This finding is consistent with the extant literature on the topic, which emphasises that demand-side support validates the market, but continuity and credibility are also important, with investment signals coming from supply-side instruments (Yi, 2019).

5.1.4 EU Anti-Subsidy Tariffs and Poland's Stance

In 2023, the EC initiated an investigation into Chinese EV exports with the objective of identifying any potential subsidies that may be in violation of EU anti-subsidy legislation (European Commission, 2023). The claim was made that Chinese producers were engaging in anti-competitive practices, namely the utilisation of high state subsidies, within the EV industry. This enabled the producers to artificially reduce prices by approximately 20% compared to European EVs (Grieger, 2023). The EC further contended that China possessed surplus production capacity amounting to approximately 3 million EVs per annual basis, which was approximately double the size of the existing EU market (Blenkinsop et al., 2024). In light of the past solar panel crisis (Clinch & Meredith, 2023), and with a view to safeguarding domestic industries, the EC has proposed the imposition of duties of up to 45% on Chinese EVs (European Commission, 2024). In the vote conducted in October 2024, a total of ten member states, including Poland, expressed their support for the tariffs. In contrast, five member states voiced their opposition, while twelve member states chose to abstain (Demarais, 2024). The adoption of a protectionist approach by Poland was a response to the necessity of implementing measures to defend the EU EV industry, as well as to support domestic initiatives. Nevertheless, Poland's pro-tariff position has met with retaliation. Despite the fact that it has not had any impact on the existing component supply project, it has had consequences for vehicle assembly plans. This is because Beijing has urged its automakers to halt and reconsider investments in pro-tariff countries (Reuters, 2024b). The pro-tariff vote has become a critical juncture essentially changing the trajectory and the future of the Chinese EV FDI in Poland, at least for the time being. The following table illustrates the impact of the Polish protectionist vote, on specific investments:

Table 5-1 Investments launched in Poland and the impact on them in light of the tariff vote.

Year	Project	Nature of investment	Impact of EU tariffs
2019	Capchem electrolyte & paste plant	Chinese firm invested ~€47 m in a Wrocław-area factory producing battery chemicals.	**Minimal direct effect**, since the project supplies materials rather than complete vehicles. Long-term expansion could be reassessed if market access becomes uncertain.
2019	Bafang e-bike motor plant	Chinese e-bike motor manufacturer opened a 6 000 m² assembly plant in Wrocław.	**Unlikely to be affected**, as tariffs apply to electric cars, not e-bike components.
2021	Tuopu EV subframe factory	Chinese supplier built a subframe/chassis plant in Poznań PIZ.	**Indirect risk**, since it supplies European EV makers. Trade tensions may reduce orders or discourage further capital injections.
2022	Capchem chemical plant in Śrem	Chinese expansion of electrolyte production, capacity 40 000 t/year.	**Little direct exposure**; similar rationale as other chemical plants.
2023	Sanhua Automotive thermal-management plant	Chinese firm invested €40 m in a Tychy facility producing heat pumps and valves.	**Limited direct impact**, but future scaling may depend on stability of EU–China trade relations.
2023	Geely × ElectroMobility Poland (EMP)	Technology licensing/localisation route: EMP licensed Geely's SEA EV platform (Nov 2022); in 2023 EMP confirmed design work for three Izera models.	**Limited direct impact**. Licensing/local production is largely insulated from import duties on China-built cars, though Beijing's from 30 October 2024 instruction to pause major investments in pro-tariff states raises perceived political-risk for any future capex-heavy steps.
2024	Leapmotor–Stellantis T03 assembly JV	Chinese start-up Leapmotor and Stellantis assembled the T03 city car at Stellantis's Tychy plant; production began mid-2024 but halted in March 2025.	**Strongly affected**. The tariffs raised uncertainty around Chinese EV exports and the EU's pro-tariff vote prompted Beijing to instruct automakers to halt "heavy asset" investments in countries that supported the duties. Reuters-sourced report noted that at a meeting on 10 Oct 2024 China's Ministry of

			Commerce told BYD, SAIC and Geely to pause factory plans in pro-tariff states like Poland. Stellantis scrapped plans to produce Leapmotor's larger B10 in Poland, and the JV's small-scale T03 line was suspended.

Source: Own elaboration based on analysis of the investments introduced in chapter 6.1.

5.1.5 Conclusion

As of 2018, the government of Poland had initiated an improvement in policies designed to support the electromobility sector, with a primary focus on supply-side measures. The Electromobility Act of 2018 established a legal framework for the development of charging infrastructure and incentives, as well as a modernised tax instrument, the PIZ, which replaced special economic zones. New investors are able to benefit from investment incentives, while Polish companies and subsidiaries of corporations receive R&D incentives and access to financing from the EU and international institutions. It is evident that PAIH has been instrumental in facilitating the operations of foreign corporations within the Polish economic landscape. This claim is substantiated by the testimonies provided by politicians, who have expressed their appreciation for China's investment in Poland and the role it has played in driving employment opportunities (Polish Investment and Trade Agency, 2024; Szunomár, 2025b).

Until 2024, demand-side incentives were rather limited in scope. There was no coherent and well-functioning system of subsidies for the purchase of new EVs, and the only models to be assembled in Poland were ultimately to be the Izera and Leapmotor, but both plans were put on hold. Consequently, it can be substantiated that the domestic market for electric vehicles in Poland is evolving at a more gradual pace than in numerous Western nations. This phenomenon is attributed to the fact that Chinese investors primarily pursued opportunities in Poland due to the country's strategic positioning as a manufacturing hub, as opposed to proximity to substantial demand. Poland's endorsement of the EU's anti-subsidy tariffs on Chinese EVs in October 2024 coincided with China's directive to its manufacturers to suspend substantial investments in countries that support the tariffs. This development led to an escalation in the political and trade risks for projects in Poland. The immediate result of these events was the abandonment of plans to launch production of the Leapmotor B10 crossover in Tychy in favour of a location in Spain and the suspension of assembly of the T03 model at the Stellantis plant in Tychy (Anderson, 2025; Westerheide, 2025).

The Polish case study demonstrates that the host country's strategies had a noteworthy impact on attracting Chinese capital, particularly within specific segments of the value chain. Poland offered investors a range of incentives, including tax reductions and institutional support, which resulted in capital flowing into component manufacturing plants (electrolytes, cathode materials, thermal systems, vehicle frames), typically as greenfield or joint venture entities. However, the absence of mature demand and the limited scope for innovation within the country have resulted in a concentration of Chinese investment in Poland on the lower links of the supply chain, specifically components and semi-finished products, as opposed to the final assembly of vehicles. In summary, Polish instruments (PIZ, R&D incentives, EU funds) have proven to be a relatively effective means of attracting FDI from China (Transport & Environment, 2025). However, these instruments do have a certain impact on the nature of these investments, which are primarily manufacturing facilities producing specific components, often with relatively low added value, rather than full-scale vehicle production. Poland continues to function predominantly as an assembly hub for semi-finished products, a development that aligns with analysts' concerns regarding the potential consequences of maintaining an assembly plant without its own proprietary technologies (Transport & Environment, 2025). In summary, Polish policies and institutions provide significant support for the inflow of foreign EV investment. However, to date, Chinese investment has been predominantly driven by supply-side incentives, resulting in the development of lower value-added links. The ultimate profile of Chinese investments remains contingent upon EU regulations and global conditions.

5.2 Case study – Hungary

5.2.1 Country context

The automotive sector is considered to be one of the pillars of the Hungarian economy. It is estimated that 20% of the country's GDP is contingent upon the existence of the industry, and together with the supplier industry, accounts for nearly 30% of industrial production (Djonovic, 2024). The automotive manufacturing facilities of corporations such as Suzuki, Opel, Audi, and Mercedes-Benz are situated within the country's borders (Embassy of Hungary in Doha, 2025). Furthermore, there has been a recent increase in investment in the field of electromobility and battery production (International Trade Administration, 2024). Despite encountering an economic downturn in 2023, marked by a 0.9% decrease in GDP on an annual basis, and facing challenges in its business cycle, Hungary has demonstrated a notable economic recovery, exhibiting a modest growth of approximately 0.5% in 2024 (European Commission, 2025). The recovery was predominantly attributable to the influx of investment in the automotive and EV sectors (Daily News Hungary, 2024).

Hungary established strong trade links with China in 2015, when they have signed an intergovernmental agreement on cooperation within the framework of the BRI, as the first EU country (State Council of the PRC, 2024). Following Xi Jinping's visit to Budapest in May 2024, the bilateral relations between the two nations were strengthened, with the two countries entering into a comprehensive, strategic partnership. During the visit, the leaders of the two countries proceeded to sign 18 partnership agreements and a Memorandum of Understanding, encompassing cooperation in fields such as infrastructure, the energy sector, and industrial collaboration (Ministry of Foreign Affairs of the PRC, 2024). As a result there is quite an extraordinary concentration of the Chinese FDI in the electromobility sector. Data for 2024 has revealed that Hungary concentrates about 31% of the EV FDI coming to the EU and the United Kingdom, as well as 62% of the e-mobility greenfield investments in Europe, again locating Hungary as the highest recipient in the CEE region and the EU (Evertiq, 2025).

The geographical distribution of the EV sector is characterised by a concentration in two specific locations. Debrecen, the second largest Hungarian city, has emerged as a pivotal centre within the battery-car cluster (Hungary Today, 2025a). The construction of the CATL mega-factory is underway, with an estimated investment value of approximately 7.3 billion euros. The new BMW factory is to be located in this area (Boeriu, 2025). The factory will focus on the assembly of the fully electric iX3, with operations planned to commence at the end of 2025. Budapest continues to function as the financial and R&D centre of the country, contributing approximately one-third of the national GDP (U.S. Department of Commerce, 2024). It is at this location that the majority of corporate and administrative decisions are made, with regard to new projects and investments. The second cluster for EV production is located in the vicinity of Szeged, where the company BYD is constructing its first European factory for passenger vehicles, with the intention of commencing production at the beginning of 2026. (Hungary Today, 2025b) The consequence of these trends is the country's increasing specialisation in EV chains, encompassing original equipment manufacturers (OEM), electric engines, and, most significantly, batteries and materials for their production. In addition to the implementation of policies designed to attract FDI and the streamlining of administrative procedures, Hungary is undertaking measures to establish a robust foundation for the advancement and expansion of the EV industry, with the objective of attaining the status of European leader in this domain (Éltető, 2025).

5.2.2 Early electromobility policies

Compared to other countries, Hungary has laid the groundwork for electromobility support quite early. In 2014, the government initiated the Jedlik Ányos Programme, which was intended to provide a comprehensive framework for the support of electromobility. In 2015, the Action Plan for the development of electromobility in Hungary was officially adopted (Bibók, 2017). The policy has encompassed both supply-side and demand-side measures. The demand-side policies encompassed the introduction of green license plates, which granted certain parking and traffic privileges (Bibók, 2017). The preliminary supply-side policies encompassed the facilitation of the administrative and licensing processes for charging station operators, the establishment of priorities in investment proceedings, and the initiation of infrastructure pilots (Bibók, 2017). The Jedlik Ányos Action Plan was instrumental in facilitating the opening of the market by laying the groundwork for reducing regulatory anxiety and lowering barriers to entry for consumers and investors. This, in turn, led to the subsequent introduction of robust financial instruments and the clarification of rules for providing charging services in subsequent legal acts.

The policy introduced between 2026 and 2019 built on this foundation by balancing supply and demand. In terms of demand, subsidies for the purchase of battery electric vehicles (BEVs) were introduced in 2016. Representing up to 21% of the vehicle price, these subsidies amounted to approximately 4,800 euros, with a vehicle price limit of around 49,000 euros (Kató, 2020). On the supply side, Government Decree 170/2017 was pivotal in formally defining the 'electromobility service' (licences, tariff transparency and standards), while Government Decree 243/2019 clarified the requirements for operators and service providers (Nemzeti Jogszabálytár, 2019). The launch of the Green Bus Programme in 2019 marked the culmination of this period. The programme received a budget of approximately 100 million euros for the 2020–2029 period, subsidising 20–80% of the purchase costs of electric buses/trolleybuses and supporting infrastructure in cities with more than 25,000 inhabitants (Erős, 2020). Consequently, by 2020, Hungary had an effective set of tools in place, comprising purchase subsidies and usage privileges (demand), as well as a regulated, investable charging market and public procurement of zero-emission rolling stock (supply) (U.S. Department of Commerce, 2024). This arrangement enabled the country to rapidly scale up electromobility in the 2020s.

5.2.3 Supply-side policies

From 2020 to 2022, Hungary implemented a significant supply-side strategy in the electromobility sector, ranking among the most aggressive initiatives within the EU. The strategy was characterised by a multifaceted approach, encompassing a range of financial incentives, including direct monetary subsidies, tax rebates, and grants allocated for R&D activities and training programmes (International Trade Administration, 2024). Additionally, the strategy sought to facilitate administrative processes and streamline licensing procedures, thereby enhancing the efficiency and accessibility of these services. The Hungarian Investment Promotion Agency (HIPA) was established as an administrative body with the purpose of providing investors with assistance in applying for national subsidies, accessing EU funds, and other forms of financing (HIPA, 2025).

The initial significant success in attracting investors was achieved in 2022 through the acquisition of two substantial Chinese investments: The CATL traction battery factory and the SEMCORP (Yunnan Energy) lithium-ion cell separator production plant are two industrial facilities of particular interest (HIPA, 2022; Evertiq, 2023). The CATL project was regarded as groundbreaking. In 2022, the company announced its intention to construct a gigafactory with an annual target capacity of 100 GWh, which would make it the largest facility of its kind in Europe. The valuation of the investment was estimated to be approximately 7.3 billion euros, constituting the most substantial foreign investment in the annals of Hungary (HIPA, 2022). The government has negotiated subsidies amounting to approximately 800 million euros from European funds, constituting 10-12% of the total project value. The government has also committed to preparing the grounds for the investment, which includes the development of a 221-hectare site for the factory, the construction of access roads and railway sidings, and the reservation of the necessary connection capacity in the power grid (HIPA, 2022). Another example of a megaproject was the Chinese SEMCORP investment, which resulted in the establishment of a separator production plant, the key material for battery cell manufacturing (Evertiq, 2023). The initial phase of the investment, amounting to 183 million euros, resulted in the establishment of the factory in 2023 (HIPA, 2022b). The initial intention had been to extend operations incrementally in order to meet the full demand for separators in the region. The company has announced its intention to increase production capacities by a factor of at least two by the end of 2025 (Eurofound, 2025). Furthermore, the Hungarian government has indicated its commitment to providing ongoing administrative and financial support until that time. It is estimated that between 2016 and 2022, the EV sector in Hungary attracted FDI to the value of 5.3 billion euros. In the year 2023 alone, however, the value of FDI increased to 8.5 billion euros, with the majority of this increase attributable to Chinese investment (Hungarian Battery Association, 2024).

The establishment of the EV sector in 2020–2022 initiated a sequence of events that subsequently manifested as a snowball effect in subsequent years, with Hungary sustaining its series of investment successes. In 2023, the Chinese automotive giant BYD Auto announced its entry into the country, with plans to construct an electric vehicle manufacturing facility in the city of Szeged (Kane, 2023). This will be BYD's inaugural electric car assembly plant in Europe, representing a significant advancement in terms of value chain integration. Following an investment in battery production, the Chinese automotive manufacturer will also locate the final assembly of EVs in Hungary (Kane, 2023). The government of Hungary has approved the provision of financial assistance to BYD, the precise amount of which will be disclosed following the requisite approval from the EC (Central European Times, 2025). This development underscores the government's commitment to the ongoing subsidisation of industry investments. Another new entrant to the market is the Chinese company EVE Power, the ninth largest battery cell manufacturer worldwide, which in 2023 selected Hungary as the location for its first European battery factory. The EVE project, with an estimated value of approximately €1.3 billion, is anticipated to generate 1,000 employment opportunities, and the government has provided it with a grant of approximately €37 million (Eurofound, 2024). It is noteworthy that the value of this aid is relatively modest, constituting approximately 3% of the costs (Eurofound, 2024). This may be attributable to the smaller scale of the investment or the less advantageous location, thereby demonstrating Hungary's capacity to adjust the intensity of support according to needs.

The Hungarian supply-side incentive system is predicated on a combination of several financial instruments, namely:

- **Investment subsidies** – The government is offering non-refundable grants for projects that are considered to be strategic. Such grants are known as investment subsidies. The amount in question is subject to negotiation on a case-by-case basis and is contingent upon specific KPIs. These KPIs encompass the valuation of the investment, the number of employment opportunities generated by the investment, and the adherence to stipulated deadlines. The most substantial projects were eligible for funding amounting to hundreds of millions of euros, a prime example being the 800 million euros allocated for the CATL battery factory (Csonka, 2023). This form of assistance was provided as part of the regional investment programmes, and it necessitated EC approval, which is typically granted on the condition that the threshold of 25-50% of the eligible costs is not exceeded, contingent on the geographical location (Csonka, 2023). In reality, the Hungarian grants constituted 10% of the value of the EV projects, which was well within the appropriate limits, but also represented a substantial decrease in the investors' capital costs (Tatai-Szabó & Bencze, 2023).
- **CIT tax rebates** – Tax rebates have become one of the most significant supply-side incentives. Development tax incentives allow companies to subtract a significant part of the costs of new investments or the development of existing factories from their income tax. The CIT exemptions are designed to be in effect for a period ranging from a few years to several years, with the precise duration determined by factors such as the geographical location and the scale of the investment. It was estimated that the tax privileges for the major battery factories located in eastern Hungary would reach the upper end of the range permitted by the regional aid programmes, amounting to between 50 and 60% of the eligible costs (Forgó, 2024). Furthermore, the government offered rebates in the property taxes, as well as the land tax, for the construction of the factories. Consequently, the effective tax rate for electromobility companies is reduced,

enhancing the project's profitability and increasing the internal rate of return on investments in Hungary relative to alternative locations.

- **Training grants** – The government's efforts to attract investment in the EV industry to the country have highlighted a potential shortage of qualified employees, prompting the introduction of training grants. A wide-ranging financing mechanism has been initiated with the objective of enhancing the skills and qualifications of the labour market (EIT InnoEnergy, 2023). With the influx of investment into the country, companies embarking on the establishment of new manufacturing facilities were granted the opportunity to apply for partial financial assistance to cover the recruitment and training costs for a significant number of employees. The training programmes encompassed a diverse range of educational offerings, including technical courses, training in the operation of contemporary production lines, and language courses catering to the linguistic needs of engineering personnel (EIT InnoEnergy, 2023). The implementation of co-financed programmes has been identified as a key factor in the enhanced productivity of employees. This, in turn, has resulted in a reduction in the time required for factories to reach full capacity. For the investor, this signified a more expeditious entry into full production capacity; for the region, it entailed the transfer of new skills to the local workforce.
- **R&D incentives** – The government has introduced enhancements to its R&D projects with a view to persuading investors to locate production facilities and activities with higher added value. Companies have the option to utilise preferential cost accounting for R&D projects, encompassing supplementary rebates for prototyping, laboratories and engineering centres. The government initiated its support for research consortia, engaging the involvement of investors and Hungarian universities, utilising EU funds from programmes such as Horizon Europe (European Commission, 2020). Furthermore, investors were incentivised to establish local R&D centres, leveraging a combination of national incentives and EU funds. For instance, automotive companies

developing EV components in Hungary have the option to apply for cohesion funds for laboratories and research infrastructure concurrently (European Commission, 2022). Despite the predominant concentration of investment on the manufacturing sector, the R&D initiative served as a complementary measure, facilitating an incremental augmentation in the technological contribution of these investments to the economy.

The second component of supply-side policies was the facilitation of investment processes from administrative and infrastructural perspectives. The Hungarian government has established a dedicated service to oversee projects deemed to be of national importance, a category which includes the majority of EV investments (HIPA, 2025). The allocation of this status to the designated projects enabled the utilisation of reduced waiting times and concurrent procedures with regard to spatial planning, environmental protection processes, and construction permits. In practice, investors received all the necessary decisions in a remarkably expeditious manner. To illustrate this point, the environmental permit for the CATL factory was issued within a few months despite the presence of thousands of pages of documentation, a matter that gave rise to controversy among environmentalists (Hungary Matters, 2023). However, the government contended that the 'fast track' procedure was imperative to prevent megaprojects from becoming mired in bureaucratic delays, while also ensuring compliance with EU requirements (Daily News Hungary, 2023).

Additionally, the government has established large industrial zones in collaboration with municipalities, offering fully developed infrastructure. A prime example of this phenomenon is the Southern Industrial Park in Debrecen. In this case, the local authorities undertook a concerted effort to consolidate and purchase land, creating vast areas that were primed for investment (City of Debrecen, 2025). These areas, encompassing hundreds of hectares, were strategically equipped with infrastructure such as roads and utility connections, and were prepared for the construction of industrial buildings. In the context of corporate decision-making, the availability of well-connected parcels with comprehensive technical infrastructure emerged as a pivotal competitive advantage for Hungary in the investor landscape (Doing Business in Hungary, 2025). In the case of Hungary, a notable advantage highlighted by these comparisons is the availability of immediately ready land for industrial development. This land often comes with an existing development plan, eliminating the need for extensive and often protracted preparation and location procedures, which can prove to be a significant bottleneck in the decision-making process.

From the perspective of investors, the Hungarian supply-side package has offered a unique blend of benefits. The primary objective is to ensure predictability and the efficient delivery of administrative services. At HIPA, investors were able to swiftly attain clarity on the available incentives and regulatory requirements, and the due diligence process was rendered more efficient. Secondly, a substantial decline in capital and operating expenses was achieved through the provision of substantial subsidies, tax exemptions, and training subsidies. This resulted in a marked enhancement in the project's profitability when compared to other locations. Thirdly, the necessary infrastructure and facilities must be in place. This includes access to significant investment areas, accompanied by permits, utilities, and power connections. Additionally, there must be prospects for the further expansion of capacity.

Hungary's position as a leader in attracting FDI in the EV sector can be attributed to a combination of financial mechanisms, rebate programmes, administrative facilitation, and infrastructure readiness. As of the end of 2020, the country had attained fourth position in global rankings of lithium-ion battery production, with China, the USA, and Germany occupying the top three positions (Ionita, 2023). This position was further reinforced by planned investments, which indicated a potential rise in the country's ranking in the near future. Hungary has the potential to achieve a total battery production capacity of approximately 217 GWh per year by 2031 (an increase from 27.5 GWh in 2021), which would position it as the second-largest global producer (Hartley, 2022). The battery industry's share in the country's exports is growing rapidly, with batteries becoming one of Hungary's fastest-growing export categories. According to the Orbán government, the "Opening to the East" strategy has begun to yield tangible results in the e-mobility sector. The influx of investments from Asia, notably China, has resulted in the establishment of a new industrial pillar and the potential for the country to reduce its reliance on conventional Western automotive manufacturing (Wu, 2024).

5.2.4 Demand-side policies

From a demand-side perspective, the Hungarian policy framework is underpinned by three core pillars: namely, periodic purchase subsidies, a comprehensive benefits and incentives scheme known as the 'green plate', and public procurement regulations. Following a period of inactivity, the government has reintroduced updated purchase subsidies, with a renewed emphasis on companies. Since February 2024, the budget has approximated 78 million euros, with grants of up to €10,500 per vehicle (the level of support is dependent on the price and capacity of the battery). The updated incentive scheme proved to be a resounding success, with thousands of subsidy applications being submitted, resulting in an increase in demand for EVs (European Alternative Fuels Observatory, 2025). Simultaneously, the 'green plate' scheme was in operation, providing consumers with rebates on registration taxes and fees, as well as ownership taxes. In the business sector, it is customary to deduct 50% of VAT from leasing and operating expenses (no general VAT exemption on the purchase of BEVs). Simultaneously, as of September 2024, hybrid vehicles were no longer eligible for new green license plates and had to be replaced with white plates by the end of November 2026 (Hetzmann, 2024). This shift in policy indicates a clear preference for fully electric vehicles. A further element of demand-side policies is public procurement. The Hungarian government has implemented a revised EU directive concerning clean transportation (EU 2019/1161), which has introduced minimum shares of clean vehicles as part of the public fleet (European Union, 2019). Furthermore, new objectives have been established for public transportation, stipulating that at least half of the buses must be non-emission vehicles. In contrast to the other EU countries that have introduced LEZs/CTZs, Hungary has opted for a different approach by implementing its own schemes and anti-smog regulations (Ogunkunbi & Meszaros, 2023). While demand-side policies did not attract the same level of investment as supply-side measures, they were able to stabilise demand and reduce risk, which was essential for investors to close the budget gaps necessary for their projects.

5.2.5 Conclusion

Hungary assumed a predominant role as a European nexus for Chinese capital within the electromobility value chain (Kratz et al., 2024). Following a series of distributed projects, a major breakthrough was marked by the declaration of a substantial foreign investment, the largest of its kind in the country's history, as substantiated by the company's official statement. Subsequent investments were directed towards materials and cells, including the SEMCORP separator plant (the inaugural line outside China) and the EVE Energy project in Debrecen (Hungary Today, 2025). Simultaneously, BYD initiated the expansion of its e-bus manufacturing facility in Komárom, and the first European BYD passenger car factory is under construction in Szeged (SEMCORP, 2023; Hungary Today, 2025). The scale of capital inflows is indicative of these decisions: in 2023, Hungary accounted for 44% of all Chinese FDI in Europe, with 69% of the inflow going to the EV sector; in 2024, it maintained its leading position, attracting 31% of Chinese FDI and as much as 62% of Chinese EV investments in Europe (Kratz et al., 2024b). This concentration is predominantly characterised by greenfield development, with a notable concentration in two distinct clusters. The following cities have been selected for the present study: Debrecen, which is to be the focus of the analysis of cells and materials, and Szeged, which will be the focus of the analysis of vehicle assembly.

This phenomenon may be sustained by the interplay between investment policy and the broader trade context. The EU's trade policy and the reaction of member states sent a signal to investors after EU countries approved anti-subsidy tariffs on Chinese EVs, which came into force at the end of October, with Hungary voting against, contrasting with some capitals and widely noted in analyses and legal communications (IISS, 2024). Despite the division in the vote, the tariffs were implemented, intensifying the trade dispute, with Budapest indicating a willingness to participate in Chinese projects. Moreover, the increasing presence of BYD, from buses to car assembly, and parallel investigations by the Commission under the Foreign Subsidies Regulation (FSR) indicate that locating production in the EU will increasingly be linked to requirements for transparency of subsidies and local value added, which may affect the pace and profile of further investments (Central European Times, 2025). When considered as a whole, these elements, greenfield megaprojects, geographical concentration, and political signals, establish a model that is unique to Hungary for attracting Chinese FDI in EVs. This model serves to strengthen the country's position within the European value chain, but it also increases its exposure to geopolitical and regulatory risks.

5.3 Case comparison

Poland and Hungary, despite a similar base structure of the automotive industry in both countries, have created different ways of developing the electromobility sector. Poland attracted investments mainly focused on the development of the EV supply-chain, including the battery cluster near Wrocław, as well as factories producing other components dispersed in the Silesia and Greater Poland regions. Unfortunately, there is no big assembly factory with Chinese capital functioning in Poland. On the other hand, Hungary became the European centre for Chinese EV FDI, becoming home for a battery superfactory in Debrecen, an assembly factory in Szeged, as well as other types of supply-chain production. As a result, Hungary has attracted both battery superfactories and EV assembly plants, while Poland's share has been limited mainly to medium-scale delivery projects. Table 2 shows a detailed comparison between Poland and Hungary, according to the earlier established criteria:

Table 5-2 Comparison between Poland and Hungary.

Pillar	Assessment		Evidence
	Poland (PL)	Hungary (HU)	
Pillar 1: Taxes and costs	Medium	High	**PL**: The 2018 Electromobility Act established a framework for tax breaks; CIT exemption of up to 50% in certain regions. **HU**: Generous financial support > €1 billion for mega battery factories, with the government allocating approximately €3.8 billion in subsidies for the EV sector.
Pillar 2: Infrastructure and Industrial land	Medium	High	**PL**: Development of clusters and existing industrial infrastructure, but preparation of new sites less coordinated. **HU**: Ready-made industrial parks have accelerated projects; e.g., in Debrecen, the city allocated 221 ha for the CATL investment, which enabled a quick start to construction.
Pillar 3: Labour resources and Skills	Low	Medium	**PL/HU**: Comparable levels of labor costs and availability of skilled technical workers. **HU**: In addition, training programs linked to investments (in cooperation with HIPA) increased the supply of skills.
Pillar 4: Execution of public aid	Medium	High	**PL**: Support instruments implemented in accordance with EU law, but lacking flexibility (lengthy procedures, no single point of contact). **HU**: HIPA, as a coordinator, tailored incentives and permits to the investor's needs, significantly reducing implementation time. HIPA handled 2,200 (worth ~€59 billion) creating 170,000 jobs, which proves its effectiveness.
Pillar 5: Policy credibility and Stability	Low	High	**PL**: Inconsistent policy: electromobility was officially supported, but at the same time Warsaw backed EU anti-subsidy tariffs on Chinese EVs (October 2024), increasing the risk for investors. As a result, China recommended that domestic companies suspend large investments in countries supporting tariffs (the Leapmotor project in Poland was suspended). **HU**: Consistently open policy: Budapest voted against the tariffs, signaling a friendly approach. Chinese company BYD decided to locate its first European electric car factory in HU and is considering moving its European headquarters to Hungary.

Source: Own elaboration based on the data analysed in the Case Studies.

- **Pillar 1 (Taxes and Costs)**: Hungary has offered exceptionally large financial incentives to attract investments EVs, far surpassing those offered by Poland. By 2025, the Hungarian government had invested approximately €3.8 billion in the EV battery industry, allocating this funding to direct subsidies (cash grants) and infrastructure development (bne IntelliNews, 2025). These generous packages, amounting to around 2% of Hungary's GDP, offset investors' costs significantly and attracted major players in the battery industry, such as CATL (Millar, 2024). On, to set up production facilities. Poland, on the other hand, implemented more moderate incentives, primarily in the form of tax relief. For instance, under the 2018 Electromobility Act and regional aid programmes, investors in Poland can receive CIT exemptions of up to 50% in certain areas, thereby lowering long-term operating costs (Polish Ministry of Finance, 2022). However, while Poland's tax-based incentives are beneficial, they are smaller in scale and less immediate than Hungary's substantial up-front subsidies, making Hungary a more cost-effective destination for large-scale EV projects.
- **Pillar 2 (Infrastructure and Industrial Land)**: Hungary took a proactive approach by preparing 'ready-to-go' industrial sites with full infrastructure, accelerating project roll-out for investors. A prime example of this is the 221-hectare site in Debrecen's Southern Industrial Park that was allocated to CATL for its gigantic battery factory (Battery-News, 2024). Thanks to this advance preparation, construction could begin almost immediately after the investment was announced. Similarly, Hungary has an extensive network of industrial parks and zones nationwide, ensuring that other investors, such as BYD in Szeged, have access to prepared land with roads, utilities and permits in place. This coordinated strategy has significantly reduced lead times for new factories (Doing Business in Hungary, 2025). Poland has also developed industrial clusters; for instance, the area near Wrocław hosts a major battery cluster, and regions such as Silesia and Greater Poland have numerous auto parts EV component factories. However, Poland's development of new large-scale sites

has been slower and less centralised (Colaluce, 2024). It generally upgrades existing industrial areas gradually rather than setting aside huge ready-made plots in advance. Consequently, while regions in Poland such as Lower Silesia offer good infrastructure, the kind of rapid, uniform site preparation seen in Hungary (e.g. the fast-tracked project in Debrecen) has not been replicated consistently in Poland.

- **Pillar 3 (Labour resources and Skills)**: Both countries have relatively low labour costs and a solid base of skilled workers, but Hungary has gained an advantage by actively tailoring its workforce to meet the needs of the EV sector. Government agencies and companies in Hungary collaborate on targeted training initiatives to ensure that workers possess the specific skills required for battery and electric vehicle manufacturing. For instance, CATL has collaborated with the University of Debrecen and local technical colleges to develop specialised training programmes in battery technology, thereby enhancing the skills of thousands of local workers in areas such as battery chemistry and electronics (Hungary Today, 2024). HIPA often facilitates such programmes or advertises the availability of a 'job-ready' skilled workforce to investors, significantly enhancing Hungary’s attractiveness (Batteries News, 2021). Similarly, Poland's workforce is well-educated in engineering and manufacturing disciplines, thanks to its strong network of technical universities and vocational schools. However, it has generally relied on its existing education system and standard EU-funded training projects, rather than introducing new, dedicated upskilling programmes linked to incoming EV investments. While Polish engineers and technicians are competent and Poland produces a large number of STEM graduates (OECD, 2019), Hungary's additional efforts in coordinating training with investor needs provide a more customised labour pool for the electromobility sector. In summary, while Poland and Hungary start with similar human capital, Hungary’s partnership-driven skills development (in tandem with firms and agencies like HIPA) gives it a qualitative advantage in meeting the specialised demands of EV and battery plants.

- **Pillar 4 (Execution of public aid)**: The delivery and management of investment incentives in Hungary has been highly efficient and investor-focused, largely thanks to the HIPA's role as a one-stop shop. HIPA coordinates all aspects of state aid, including grants, tax breaks, permits, and regulatory approvals, under a single umbrella. It tailors packages to each investor and fast-tracks administrative procedures. This flexible approach drastically reduces bureaucracy and waiting times (HIPA, 2023). HIPA facilitated 2,200 investment projects across all sectors, worth approximately €59.2 billion and creating around 170,000 jobs, highlighting how effective its coordinated execution can be (HIPA, 2025c). In Poland, support instruments are available, but execution is slower and more fragmented. While Poland adheres strictly to EU state aid rules to ensure transparency and fairness, the process of securing incentives or permits can involve multiple institutions and lengthy paperwork. Unlike HIPA, there is no single agency with the authority to oversee projects from start to finish. Instead, investors must first seek guidance from PAIH, before navigating various ministries, regional authorities, and regulatory offices separately for permits and approvals. This can result in delays and a less investor-friendly experience. In essence, Poland provides substantial public aid, such as grants, tax exemptions or EU funds (PAIH, 2025), but lacks the streamlined, agile delivery mechanism offered by Hungary. Hungary's ability to customise incentives and swiftly resolve issues through HIPA has proven to be a more effective way of getting projects off the ground quickly. Poland's more rigid framework sometimes struggles to match this speed and flexibility.
- **Pillar 5 (Policy credibility and stability)**: Hungary's consistent and welcoming stance towards Chinese EV investments has made it a trusted destination, whereas Poland's mixed signals have raised concerns for Chinese investors. The Hungarian government has maintained a clear pro-investment, pro-China

approach: for instance, it voted against the EU's proposal to impose anti-subsidy tariffs on Chinese electric cars, thereby signalling to Chinese firms that their investments would be politically welcome. This policy stability has yielded tangible results. In response to Hungary's openness, major Chinese companies have deepened their commitments: BYD, for instance, chose Hungary for its first European electric car factory in Szeged, and also decided to establish its European headquarters and an R&D centre there, underlining the high level of confidence in Hungary's business environment (HIPA, 2025d). Poland, on the other hand, has adopted a more ambivalent stance. While Warsaw has promoted electromobility domestically and welcomed some Chinese suppliers in the battery supply chain, Poland has also supported the EU's investigation into Chinese EV imports and potential tariffs in late 2024 (Poland Daily 24, 2024). This aligns with the EU's broader trade defence measures. This inconsistency, officially courting investment while supporting policies that are perceived as hostile by Beijing, has made Chinese investors wary. In fact, the Chinese government has reportedly advised its car manufacturers to reconsider or pause major investments in European countries that have endorsed the EV tariffs. Consequently, a high-profile Chinese EV project in Poland was derailed: the planned Leapmotor–Stellantis joint venture to produce EVs in Poland was suspended amid these tariff tensions (Poland Daily 24, 2024). By contrast, Hungary's consistent policy of opposing the tariffs and maintaining positive engagement with Chinese firms has reassured investors that projects there will not face political headwinds. In summary, Hungary's credibility and predictable stance have been key in attracting Chinese EV FDI, whereas Poland's less stable policy line has created uncertainty, costing it at least one major EV investment and potentially dampening future prospects.

The observed differences can be explained by a three-step mechanism. Firstly, the design and intensity of policy must be considered. The Hungarian government employed a bespoke combination of incentives, including non-repayable grants for major projects, specialised tax reductions, and streamlined administrative procedures. HIPA provided investors with comprehensive services, ranging from initial consultation to post-investment support. In contrast, Poland opted for a more comprehensive approach, implementing universal incentives, transitional programmes, and incremental regulatory reforms. Secondly, institutional capacity: The speed and predictability of investment services were deemed to be of the utmost importance. HIPA functioned as a comprehensive service provider, offering investors a distinct benefit in the form of expedited permit issuance and substantial assistance. This approach led to a reduction in transaction costs. PAIH, the Polish equivalent, operated in accordance with EU procedures. However, it did not provide the same level of customisation or the same speed of decision-making. Thirdly, credibility and political signals: Budapest's consistent, pro-investment stance has been shown to reduce perceived risk (for example, investors are aware of Hungary's openness to cooperation with China). In contrast, Warsaw adjusted its course in accordance with EU policy, leading to the suspension and redirection of the development of the Leapmotor–Stellantis assembly plant. This decision was influenced by the support for tariffs on Chinese EVs. This dynamic ultimately resulted in European investors perceiving Hungary as a more secure location. The development of the Polish and Hungarian EV industries may have been influenced by factors other than supply-side policies. In order to ensure the validity of the conclusions, additional factors were given full consideration:

- **Corporate strategies and proximity to other companies from the industry** – Several Chinese companies have chosen to locate their industrial projects in proximity to European customers. For instance, the EVE factory was strategically coordinated with BMW in Debrecen (Randall, 2023). However, it is noteworthy that Poland also had attractive links in the form of the joint Stellantis plant in Tychy and LG's large facilities (Kane, 2022). This suggests that logistical factors and the OEM network do not fully explain the concentration of investment in Hungary alone.
- **Geographical and infrastructural factors** – Both countries have similar

geographical advantages. They are strategically situated within the CEE region, offering excellent transport connections and seamless access to the EU markets. While Hungary had ready-made industrial parks in Debrecen, Poland had an equally strong industrial infrastructure in the vicinity of Wrocław and Katowice. The disparity in the scale of investment cannot be fully explained by differences in land availability and transport networks.

- **Labour costs and availability of workforce** – Poland and Hungary have similar labour costs and skilled workforces. Although Hungary may have attracted slightly larger training programmes dedicated to specific projects, the cost difference itself was not significant. The fundamental factor was the structure of policy rather than wage competitiveness.
- **The effect of investment accumulation** – The implementation of large-scale projects has resulted in an increase in the country's attractiveness, leading to the attraction of additional investors. However, analysis indicates that without a properly structured package of incentives and efficient implementation, such large investments would not have been possible. In practice, the accumulation of investments was the result of an earlier incentive strategy. To summarise, the concentration of Chinese investment in Hungary can be attributed to the structure of supply-side policy and the stability of political signals, which have been consistent and predictable.

The previously described factors have undoubtedly contributed to the advancement of Chinese EV FDI within the region, thereby enhancing its overall attractiveness. Nevertheless, it should be noted that none of the aforementioned factors could provide a satisfactory explanation for the investment advantages demonstrated by one country over another. The combination of governmental support, the introduction of supply-side policies, and additional factors contributed to the increased attractiveness of the analysed countries to Chinese investors in the EV sector. The implementation of supply-side policies served as a catalyst for the pre-existing location advantages, thereby enhancing the attractiveness of both countries. The aforementioned alternative factors should not be considered incorrect; they remain relevant in attracting investment. However, they are insufficient in themselves, as their influence on attracting investment alone is not sufficient when compared to the government strategies executed with the use of supply-side policies.

Chapter VI Discussion

The empirical analysis aligns with classical FDI theories, such as the OLI paradigm. In this case, the findings highlight the importance of the location aspect of the paradigm. Poland and Hungary have deliberately created and exploited location advantages. According to Dunning (1980; 1993), localisation advantages include characteristics of a country that make it attractive to investors, such as low labour costs, access to raw materials, a favourable regulatory environment, tax incentives, and access to skilled labour. The host countries provided all these elements, which, in the language of eclectic theory, explains why Chinese companies chose these particular locations. Investors from China had their own ownership advantages (e.g., battery technology and capital) and were motivated to internalise operations in Europe (Hymer, 1976). However, it was only when the condition of an attractive location, largely arranged by active government policy, was met that FDI was realised (Moran, 1998). Therefore, it can be said that this case confirms Dunning's theoretical approach. FDI flows to countries that offer the right incentives and facilities, enabling companies to leverage their ownership advantages in foreign markets effectively (Vernon, 1966).

At the same time, the results of the analysis are in line with supply-side economics, which emphasises the role of policies that stimulate supply (production and investment) for economic growth (Laffer, 2004). Supply-side concepts suggest that governments can stimulate economic activity by creating favourable conditions for producers and investors, for example by lowering taxes, reducing bureaucracy, and investing in infrastructure (Snowdon, 2005). In the context of FDI, the supply approach translates into a strategy of competing for investors by improving the investment climate. Poland and Hungary have confirmed the effectiveness of this strategy (Moran, 1998). By reducing barriers and offering financial incentives, these countries have increased the number of attractive locations for capital investment, attracting Chinese companies in the process (North, 1991).

The literature shows that targeted investments, particularly those focused on exports and integrated into global value chains, can be a powerful driver of economic transformation in the host country (Moran, 1998; Wells, 1999). The analysed case studies illustrate this model through the activities of Chinese electric vehicle factories that supply batteries and vehicles to European companies. However, research also shows that the effectiveness of investment policy tools such as tax breaks is limited, and that overusing them can be counterproductive, particularly when investors would have made the investment decision regardless of the additional incentives (Wells, 1999). In the context of Poland and Hungary, this means that although generous incentives were offered, they had to go hand in hand with overall economic attractiveness and stability; the incentives alone would not have been enough if the country had not been, for example, part of a large market or guaranteed the efficient implementation of investments. Supply-side policy should focus on improving fundamental conditions, and instruments such as tax incentives should be used judiciously, where they can realistically tip the scales of an investor's decision (Laffer, 2004). In summary, the experiences of Poland and Hungary provide an empirical illustration of the combination of the OLI paradigm with the supply-side approach: these countries identified the key location factors valued by investors and actively reinforced them through supply-side policies. The success in attracting Chinese FDI EV thus largely confirms the validity of this theoretical framework in the practice of economic development (Moran, 1998).

However, there is an additional factor to analyse. If we apply the reactive sequence framework to the anti-subsidy investigation process and its effects. Poland's vote in favour of EU anti-subsidy tariffs against Chinese EVs in November 2023 can be seen as an initial critical juncture that triggered a chain of responses. Shortly afterwards, the EU Council ratified duties of up to 45% on Chinese EVs. In turn, Beijing signalled to Chinese carmakers to freeze major investments in any European state that had supported the duties. Sino–European joint ventures responded: Stellantis and Leapmotor withdrew plans for a second Polish EV model and halted assembly of one model. Each move followed the previous one as a reaction, representing a reactive sequence (Mahoney, 2000). In effect, Poland's vote, a contingent policy choice, triggered China's investment freezes, which directly impacted company investment decisions regarding project relocation. This chain of events demonstrates how an initial political decision can have an inherent sequential impact: Poland's vote triggered Beijing's response, which in turn reshaped company strategies.

6.1 Critical approach to alternative explanations

Although the state's supply policy was the decisive factor, other possible explanations for the influx of Chinese EV investments into Poland and Hungary should also be considered and assessed for their significance. The first alternative perspective is that of demand and market factors. It could be argued that Chinese companies located their factories in Europe primarily to circumvent trade barriers and gain proximity to the market (i.e., the EU) in the face of rising tariffs on imported electric vehicles (Kollewe, 2024). Indeed, anti-subsidy proceedings and the threat of tariffs from Beijing and Brussels have created a strong incentive for Chinese manufacturers to localise production within the EU. However, demand-side motives alone do not explain why Poland and Hungary have become the main beneficiaries rather than other EU countries. Differences in the host countries' offers come into play here. Competition on location terms is what made investors choose these countries over others. For example, the Czech Republic is also in the EU and has a strong automotive sector, yet it remains the only Visegrad Group country without direct Chinese EV investment. This suggests that market access and industrial tradition alone were insufficient (Remžová, 2025).

The second group of potential explanations concerns the global strategy of Chinese companies and the Chinese state itself. It could be argued that these investments form part of a broader Chinese initiative, such as the Go Global strategy or the BRI, and that Poland and Hungary found themselves in the way for geopolitical reasons. Indeed, Hungary enjoys China's political support as a 'gateway' to Central Europe, which has undoubtedly fostered a favourable investment climate (as previously mentioned, the close relationship between Orbán and Xi has resulted in trust) (Gizińska & Uznańska, 2024; Reuters, 2025). However, geopolitical favourability is not enough if the investment is not economically justified. Chinese companies are primarily guided by business logic, such as costs, efficiency, and the ability to serve customers (e.g. European car manufacturers). The choice of specific locations in the CEE region was therefore the result of a combination of China's policy (the desire to have a presence in the EU) and competition between countries in the region, won by those offering the best conditions. The existing industrial ecosystem was also important: for example, Hungary already had an automotive cluster comprising German car factories, creating natural links (Spike, 2023).

6.2 Implications for industrial policy in Poland, Hungary, and the EU

The success of Hungary and the moderate success of Poland in attracting Chinese EV FDI have a number of implications for both national and broader EU policy. It initially confirms that an activist pro-investment supply-side approach makes a nation more attractive to investors. Creating location benefits, including infrastructure, tax incentives and a skilled workforce, has delivered scalable results, including massive investments and the generation of thousands of jobs, that render these countries extremely important (Hungary) and moderately important (Poland) to the European EV supply chain. Policymakers should continue and improve the supply-side policies, investing in human capital to prevent shortages of skilled labour, maintaining investment incentives while controlling fiscal costs and ensuring regulatory long-term predictability in the sector (e.g., spatial planning and environmental legislation).

Effective policy recommendations must be tailored to the unique context and strengths of each host country. In Poland's case, for example, the government could facilitate partnerships between Chinese investors and domestic firms to enhance technology transfer and local supply chain integration, building on the country's strong automotive industrial base and large skilled workforce. Polish policymakers could provide targeted subsidies or tax breaks for EV and battery projects, while also ensuring policy stability and a clear long-term strategy. These steps would leverage Poland’s industrial foundation to attract projects offering greater value added (beyond just manufacturing components) in the EV sector. For Hungary, the recommendations focus on sustainability and diversification. The Hungarian authorities should continue to capitalise on logistical connectivity and investor-friendly policies but also attach stricter conditions to incoming FDI. This differentiated policy approach acknowledges Poland’s need to activate its latent industrial capacity with more aggressive incentives and Hungary’s need to manage dependency by extracting greater long-term benefits from the investments it has attracted.

The lessons from Poland's and Hungary's experiences for other EU countries are that active industrial policy can attract investment in new technologies. Yet they also refer to the difficulties of EU-level coordination to ensure an even distribution of benefits and avoid the creation of new dependencies (e.g., on Chinese battery supplies) (Szunomár, 2025a). Other countries, especially in the CEE region, are already drawing conclusions: Slovakia, for example, has begun to woo similar projects more actively and has already attracted several EV investments, demonstrating that the strategy employed by Warsaw and Budapest is reproducible (Reuters, 2024a). The broader implication is that governments should actively generate their country's comparative advantages rather than wait passively for investors. However, they must also be aware that supply-side policies must be pursued judiciously so as not to offset the gains from development through the long-run costs (fiscal and social).

At the EU level, questions are being raised about the coordination of industrial and investment policy. Investment from China in EVs is assisting the EU in reducing its carbon emissions from transport, making its production facilities wealthier with 'green' technologies as well as generating employment, and these investments are reindustrialising some countries (especially those in the CEE region) in advanced sectors, thereby promoting economic convergence within the EU (Tagliapietra, Trasi, & Sebastian, 2025). However, there are also concerns about excessive dependence on China and market distortions affecting competition within the EU (Szunomár, 2025a). In fact, Chinese capital inflow has been restricted to a few countries, largely due to a subsidy race between member states. Overall, this puts pressure on the EU to introduce a uniform framework, such as state aid guidelines for the battery sector, to avoid negative competition and maintain compliance with the single market rule (Todts, 2025) s. Meanwhile, Brussels is trying to secure foreign investment (notably Chinese investment) in European interests. Consequently, there are arguments for conditioning market access to the EU or for regulating investment in the interests of economic security.

Chapter VII Conclusion

The research indicates that the location advantages established by the respective governments of Poland and Hungary were instrumental in attracting Chinese FDI to the EV sector. The supply-side policies, encompassing tax rebates, subsidies, infrastructural investment, and proactive measures to streamline business procedures, emerged as a pivotal factor in the decision-making process regarding the allocation of Chinese investments. In response to the research question, it was determined that state-built locational advantages are a determining factor in the success or failure of competition for Chinese FDI in the EV industry. This outcome validates the strategic implementation of supply-side economics, which yielded the anticipated outcome in the form of a substantial influx of investment. The decision of Chinese EV companies to establish operations in these countries was not solely driven by market potential; rather, it was predominantly influenced by the incentives and conditions proffered by the state in terms of supply. The conclusion that can thus be drawn is as follows: Poland and Hungary have created sufficiently attractive location conditions, in line with the OLI paradigm, that Chinese investors have recognised them as optimal production bases in Europe. However, there is a need to provide an additional explanation for the research question: political stability and credibility are the most important factors in attracting investment. From a practical point of view, foreign investors planning to invest capital pay close attention to the predictability and reliability of the host country's institutional and political environment. They must also consider the target country's political stability, since frequent changes of government or legislative inconsistency increase venture risk. Consequently, political stability and state credibility can be considered fundamental complements to location incentives when it comes to attracting foreign direct investment.

The research demonstrates a significant relationship between the supply-side policies and the influx of Chinese EV FDI into Poland and Hungary. However, the study is subject to certain limitations, thereby creating a framework for future research opportunities. Firstly, the analysis is limited to the initial stages of the investment. The impact of the FDI will become more evident in the coming years, as further research will be possible in areas such as the influence on the labour market, technology transfer and the trade balance. Future studies should direct their attention to the analysis of the advantages and long-term effects of supply-side policies. Moreover, the research is focused on classical FDI theories and supply-side economics, disregarding broader outlooks such as new institutional economics and broader geopolitical implications. Despite the deliberate decision to analyse the case studies through these particular lenses, future research could be expanded to explore the supply-side policy and institutional quality nexus, or to investigate investment decisions and a more comprehensive Chinese strategy for the CEE region.

It is also important to note that the case study analysis included only two countries. In order to achieve a broader generalisability of the results, it would be valuable to extend the research to include more CEE countries in future studies. It is also noteworthy to observe that the study under discussion did not address the limitations associated with the supply-side policy approach. The project has not yet considered the environmental costs and general thoughts of the citizens concerning the rapid development of new factories in the EV industry. In the context of future research, there is a need to consider social and environmental responsibility aspects. A further underresearched aspect is the effectiveness of public spending. It would be worthwhile to determine whether the governmental subsidies are actually yielding a return on investment in terms of fiscal, developmental, or technological advantages. Despite the valuable insights provided by this research, further investigation would be necessary to enhance our understanding of the role of host government policies in attracting Chinese EV FDI. Such research would contribute to a more comprehensive understanding of the subject and facilitate the development of precise recommendations for industrial policy in the context of the global green transition.

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Resume and Academic Papers and Research Results Published During Study

Resume

I received my bachelor's degree in global business, finance and governance from Warsaw School of Economics during a study period from October 2019 to July 2022. I received my bachelor's degree in economics from the School of Economics and Trade Kyungpook National University during a study period from September 2021 to August 2022.

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