When Innovation Becomes Crisis: Organizational Inertia, National Culture, and the Challenge of Disruptive Change. The Case of Volkswagen and the EV Market

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Abstract

The global shift toward electric mobility represents one of the most significant technological disruptions in the automotive industry. While emerging EV firms adapted rapidly, several incumbents—most notably Volkswagen—responded more slowly despite having the scale, capabilities, and early awareness to lead the transition. This thesis investigates why Volkswagen delayed its strategic commitment to electrification and how organizational and cultural factors shaped this trajectory. The study adopts a qualitative single-case design with embedded comparative elements, drawing on secondary data to analyse Volkswagen's strategic, operational, structural, and cultural dynamics in relation to the EV transition. Findings reveal that Volkswagen's delay resulted from a multi-layered system of organizational inertia, including path-dependent strategic reasoning, temporal hesitation prior to Dieselgate, operational bottlenecks in software and platform development, and structural constraints associated with its dual-board governance system. The analysis also shows that German national cultural characteristics—particularly high uncertainty avoidance, expert-driven consensus, and long-term orientation—reinforced stability-oriented behaviour and conditioned organizational responsiveness. Comparative contrasts with Chinese EV firms further highlight how different cultural–institutional environments influence adaptation speed.

The study contributes to innovation and organizational theory by illustrating how internal rigidities and cultural contexts interact during technological paradigm shifts. Practically, it offers insights for managers and policymakers seeking to enhance strategic agility in industries undergoing rapid transformation.

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1. Introduction

1.1 Research Problem

The automotive industry is undergoing the most profound technological transformation in its history, as electric vehicles (EVs) shift from peripheral experimentation to a central strategic priority. While new entrants—particularly Chinese EV manufacturers—have embraced this transition with speed and agility, several long-established automotive incumbents have struggled to respond at a comparable pace. Volkswagen represents a particularly salient case: despite possessing global scale, engineering expertise, and early knowledge of electrification trends, the company entered the EV transition later and more cautiously than emerging competitors. This raises a fundamental question in innovation and organizational studies: why do large, technologically capable incumbent firms respond slowly to paradigm shifts that threaten their core business model? The underlying problem examined in this study is the misalignment between rapid environmental change and Volkswagen's organizational capacity to adapt, which provides a compelling lens through which to explore the dynamics of strategic inertia.

1.2 Evidence from the Literature Justifying the Problem

Extensive research highlights that incumbent firms often face structural and cognitive constraints when responding to disruptive technologies. Scholars emphasise that legacy competencies, established routines, and path-dependent strategic orientations can become rigidities that inhibit timely adaptation. In the automotive sector, research shows that dominant players continued to prioritise combustion engine optimisation throughout the early 2000s and 2010s, reinforcing incremental innovation trajectories. The literature also points to the long-recognised emergence of EV technologies, widely discussed among industry analysts, policymakers, and firms well before 2015. Finally, cultural and institutional research suggests that national cultural values—such as uncertainty avoidance, power distance, or long-term orientation—shape organizational risk-taking, coordination patterns, and decision-making speed. Collectively, these bodies of work confirm the academic importance of understanding why powerful incumbents struggle to adapt quickly in periods of technological disruption.

1.3 Deficiencies in the Existing Literature

Despite the breadth of existing scholarship, several gaps remain. First, many studies examine Volkswagen's EV transition through isolated factors—software delays, governance complexity, or Dieselgate—rather than through an integrated, multi-layered analysis of strategic, operational, structural, and cultural inertia. Second, research on automotive innovation tends to emphasise technological and market determinants, while giving limited attention to national culture as a shaping force behind organizational responsiveness. Third, comparative analyses between European incumbents and Chinese EV firms typically focus on industrial policy or cost structures, without examining how cultural–organizational differences influence adaptation speed. Finally, the literature is dominated by industry-level or quantitative perspectives, leaving room for qualitative, interpretive approaches that capture how organizational behaviour unfolds within a specific firm context. This study addresses these deficiencies by providing a structured, qualitative examination of Volkswagen's delayed electrification response, integrating insights from organizational inertia and national culture.

1.4 Importance of the Problem for Audiences

This research holds relevance for multiple audiences. For scholars, it advances theoretical understanding of how organizational inertia and national culture interact to shape strategic responsiveness during technological transitions. For managers and practitioners in the automotive industry and other legacy sectors, the findings offer insights into how large organizations can avoid misalignment between external pressures and internal capabilities—particularly regarding governance, coordination, and cultural patterns that influence decision-making. For policymakers, especially in high-uncertainty-avoidance contexts, the study demonstrates the importance of clear long-term policy commitments and institutional support to enable industrial transformation. Ultimately, this study contributes to broader discussions on how large, established organizations can remain competitive amid rapid technological change, making it significant for both academic inquiry and practical application.

1.5 Purpose of the Study

The purpose of this qualitative case study is to explain why Volkswagen responded late to the electrification shift and how organizational inertia and national cultural factors shaped this delayed transition. By analysing Volkswagen as the primary case and using Chinese EV firms as comparative contrasts, the study seeks to provide an integrated, theoretically grounded interpretation of how strategic, operational, structural, and cultural dynamics interact during technological disruption.

Accordingly, this study is guided by the following research question:

How have organizational inertia and national culture shaped Volkswagen's delayed response to the EV transition, how does this compare with Chinese competitors, and what strategies is Volkswagen adopting to bridge the gap?

2. Literature Review

2.1 Innovation Drivers

The rapid technological development that societies witnessed at the beginning of the 20th century significantly shaped the concept of innovation. It was during that period that the world welcomed some major human discoveries, from nuclear physics to telecommunications. However, in more recent decades, the role of innovation has shifted. The focus is less on technological breakthroughs and more on the creative process that leads to innovation. Processes such as idea generation, opportunity recognition, and the application of existing knowledge to unexplored domains represent fundamental drivers of the evolving nature of innovation (Zizlavsky, 2013).

Successful innovations are the result of a combination of management, marketing, scientific, technological, organizational, financial, and business activities. Market participants act with employees, technologies, and environmental influences, all interacting dynamically and independently in a complex system. Companies are therefore expected to pursue two main goals: ensuring long-term efficient development and growth while continuously mitigating inefficiencies in business processes. Since innovation provides sustainable market success, it must be regarded as a key organizational process. Well-managed and successfully introduced innovation represents a strategic tool through which firms can achieve competitive advantages and ensure long-term prosperity. In this sense, innovation is not optional but a crucial condition for survival. Successful innovation cannot be achieved through imitation but through surpassing competitors with differentiated approaches that generate value for customers, shareholders, and employees (Zizlavsky, 2013).

In the context of market competition, innovation ability refers to an organization's overall ability to engage in innovative activities and attain outcomes in product, technology, management, and marketing through the efficient integration of internal and external resources. Firms must continue innovating and increasingly focus on technology to survive in environments characterized by intense competition. Competition is indeed a relevant catalyst of innovation. It encourages firms to innovate to maintain their market share and competitive advantage. Instead, a lack of competition tends to push firms to prioritize stability over innovation (Liu et al., 2025).

The shift from closed to open innovation further amplifies this dynamic. It reflects the growing reliance on both internal and external sources of knowledge to drive change. Globalization has intensified this need, making open innovation essential, particularly for multinational enterprises. Leveraging external partnerships and collaborations enables firms to continuously evolve, adapt to new market conditions, and respond effectively to global challenges (Hao-Chen et al., 2013).

Beyond competition and globalization, recent decades have introduced new environmental forces shaping innovation dynamics. Sustainability transitions, reflected in frameworks such as the UN Sustainable Development Goals and the EU Green Deal, increasingly push firms to integrate environmental and social objectives into innovation strategies. Digital transformation likewise serves as a critical enabler of innovation, as it allows companies to reconfigure processes, enhance collaboration, and accelerate learning (Liu et al., 2025). Moreover, geopolitical disruptions and trade uncertainties further emphasize the need for adaptive, knowledge-driven innovation systems that strengthen resilience. These interconnected drivers—sustainability, digitalization, and geopolitics—collectively reshape the global innovation landscape, compelling firms to continuously update their business models and dynamic capabilities (Teece, 2007; Teece, 2018).

2.2 Outcomes of Innovation

In the past few decades, innovation has gained a strong reputation. It is often perceived as an inherently positive process; however, this is not always the case. Like all waves, innovation waves have brought benefits but also unintended consequences. While innovation can be beneficial, it is important not to underestimate the hidden challenges and tensions that may come with it, sometimes even resulting in organizational failure. For instance, smartphones and social media have innovated the telecommunications industry, but they have also raised concerns about privacy and mental health (Prud'homme, 2022).

Innovation outcomes can take several forms, ranging from new products and processes to business model transformations that redefine how firms create and capture value. Product and process innovation represent the most visible outcomes, as they lead to the introduction of new or improved goods, services, and methods that meet evolving market demands (Crossan et al., 2010). Organizational and marketing innovations, instead, improve coordination, efficiency, and customer engagement, creating the foundations for sustainable growth.

However, in recent years, business model innovation has emerged as a very relevant form of innovation, driven by the increasing focus on the customer (Hao-Chen et al., 2013). The ability to transform or reconfigure a business model allows firms to turn innovation into a mechanism for competitive advantage through differentiation and strategic adaptability (Teece, 2010; Lettl et al., 2017). By integrating technological and organizational changes into new ways of capturing value, business model innovation strengthens a firm's ability to compete in dynamic markets (Teece, 2018).

Ultimately, innovation, whether expressed through new products, processes, or business models, has a strong impact on firm performance. Empirical evidence shows that firms engaging in continuous innovation achieve superior financial results, increased productivity, and greater long-term resilience (Latifi et al., 2021; Ilyas et al., 2023).

2.3 Definition and Evolution of Innovation

The term innovation appeared at the beginning of the 20th century and was thoroughly studied by the Austrian economist Joseph A. Schumpeter, whose work remains foundational in innovation theory. His view was modern and progressive since it not only focused on products and processes, but also on organizational changes. Indeed, research has traditionally viewed innovation as the development of new products, new technologies, or alternative forms of administration and service. Schumpeter, instead, firmly believed that innovation was not just the result of scientific discoveries and breakthroughs, but that innovation could also arise from the application or combination of existing knowledge to different domains. He described innovation as a creative economic process that requires an idea, but also a proactive business attitude. His perspective highlights how innovation is not just a singular act but the outcome of a complex process that interplays different fields, from management to marketing.

To better understand the complexity behind the concept of innovation, scholars have divided the innovation process into two parts: invention, which relates to the idea itself, and innovation, which involves the whole process that turns the idea into a marketable reality. This process can be further broken down into different phases, starting from idea generation triggered by competitive pressures and the search for opportunities, R&D, and production, to the feedback and learning phase (Zizlavsky, 2013).

Innovation has always played a central role in economics, but its meaning has evolved over time. Indeed, the focus has shifted from purely technological breakthroughs to the creative processes that drive innovation.

2.4 Enablers of Innovation

A relevant enabler of innovation is leadership. Strong leadership can successfully integrate and balance different approaches, including hierarchical, authoritarian, democratic, and meritocratic, which is essential for adapting to the different phases of the innovation process, from the creative act to the transformation of creativity into a structured system (Prud'homme, 2022). Leadership also represents a key component of firms' dynamic capabilities, enabling them to seize opportunities through strategic decision-making and the orchestration of internal resources (Teece, 2007).

A further enabler to consider is knowledge and knowledge management. Knowledge management refers to the acquisition and use of knowledge in an organization to enhance its capabilities and performance. Knowledge is often considered the most significant of enablers. Indeed, the innovation process is considered the most knowledge-intensive business process since it continuously renews and recombines knowledge to generate new knowledge (Jiménez-Jiménez et al., 2014). From the perspective of dynamic capabilities, knowledge management forms one of the microfoundations of innovation, as firms must continuously learn, integrate, and reconfigure knowledge to sense and adapt to environmental change (Teece, 2007).

Beyond leadership and knowledge, social capital acts as a significant force in influencing innovation. Social capital refers to the resources that exist within a firm's internal and external connections. Internal social capital relates to the relationships established among employees and across organizational divisions, whereas external social capital refers to the links developed with external stakeholders, including customers, suppliers, and business partners. Social capital and knowledge management are closely interrelated, as both facilitate learning and the acquisition of skills. Creating internal networks enables the identification of relevant knowledge, facilitates communication flows, and improves technical problem-solving. Instead, external networks give access to new resources and opportunities (Jiménez-

Jiménez et al., 2014). From a dynamic capabilities viewpoint, social capital supports the firm's ability to coordinate, integrate, and reconfigure its knowledge base by combining internal and external resources, reinforcing its innovative ability (Teece, 2007).

2.5 Blockers of Innovation: Organizational Inertia

Organizational inertia is a phenomenon of stagnant organizations and reflects an overly stable condition of an organization's products, production methods, and policies. Organizational inertia has a strong negative influence on innovation, especially open innovation. In many firms, employees resist change and prefer static structures, which can create barriers hindering innovation. This resistance or inertia becomes particularly pronounced when companies attempt to shift from closed to open innovation. Organizational inertia indeed does not mean the absence of innovation; however, when globalization demands a more open and adaptive approach, inertia can become a constraint. (Hao-Chen et al., 2013).

In the last few decades, business model innovation has become a very common and strong form of innovation, shifting the focus from developing new products to creating new ways of delivering value and engaging with the market; however, organizational inertia also negatively impacts business model innovation. Stagnant organizations tend to stay away from risky and disruptive business models and are reluctant to adapt to new operating procedures and management practices, therefore preventing them from fully engaging in business model innovation. These practices, however, not only hinder innovation but also strongly harm the firm's performance, as studies show that both open innovation and business model innovation have a significant positive effect on firm performance (Hao-Chen et al., 2013).

Research also suggests that limited competitive pressure can be considered a component leading to organizational inertia. While competition itself serves as a key driver of innovation, a lack of competition can reduce firms' incentive to adapt or pursue new opportunities. Even in high-demand markets, firms that are slow to adapt may maintain their position not because of greater efficiency, but because competition does not effectively challenge their practices. This indicates that the absence of external competition can indirectly hinder innovativeness by allowing inertia to persist within organizations (Miller et al., 1998).

2.6 Moderators of Innovation: Culture

In the field of International Business (IB), culture represents one of the most complex and influential factors shaping firm behavior across borders. Differences between home-country and host-country cultures can significantly affect management practices, communication, and innovation outcomes. Multinational enterprises, in particular, must navigate cultural distance when coordinating cross-border teams and global innovation networks. Understanding these cultural dynamics is therefore essential for effective international collaboration and knowledge exchange (Tian et al., 2014).

Research consistently shows a strong positive relationship between national culture and levels of innovation. However, since national cultures are usually very stable, passed across generations, and inherently difficult to change, it is fundamental for firms to understand what role culture plays in their innovation process. Within-country cultural diversity also contributes significantly to innovation. Therefore, immigration policies that promote diversity, non-discrimination laws, and equal compensation initiatives can positively impact cultural diversity and consequently promote innovation (Puia et al., 2013).

Another way to leverage this positive relationship is by actively increasing diversity among workers and creating a diverse cultural environment in the firm. Cultural diversity can indeed foster innovation from the inside; people coming from different realities and with different backgrounds tend to approach problems differently and generate different solutions, a framework that is essential for idea generation (Prud'homme, 2022). Culture can therefore be considered a soft resource that can be converted into a durable and valuable competitive advantage (Liu et al., 2025).

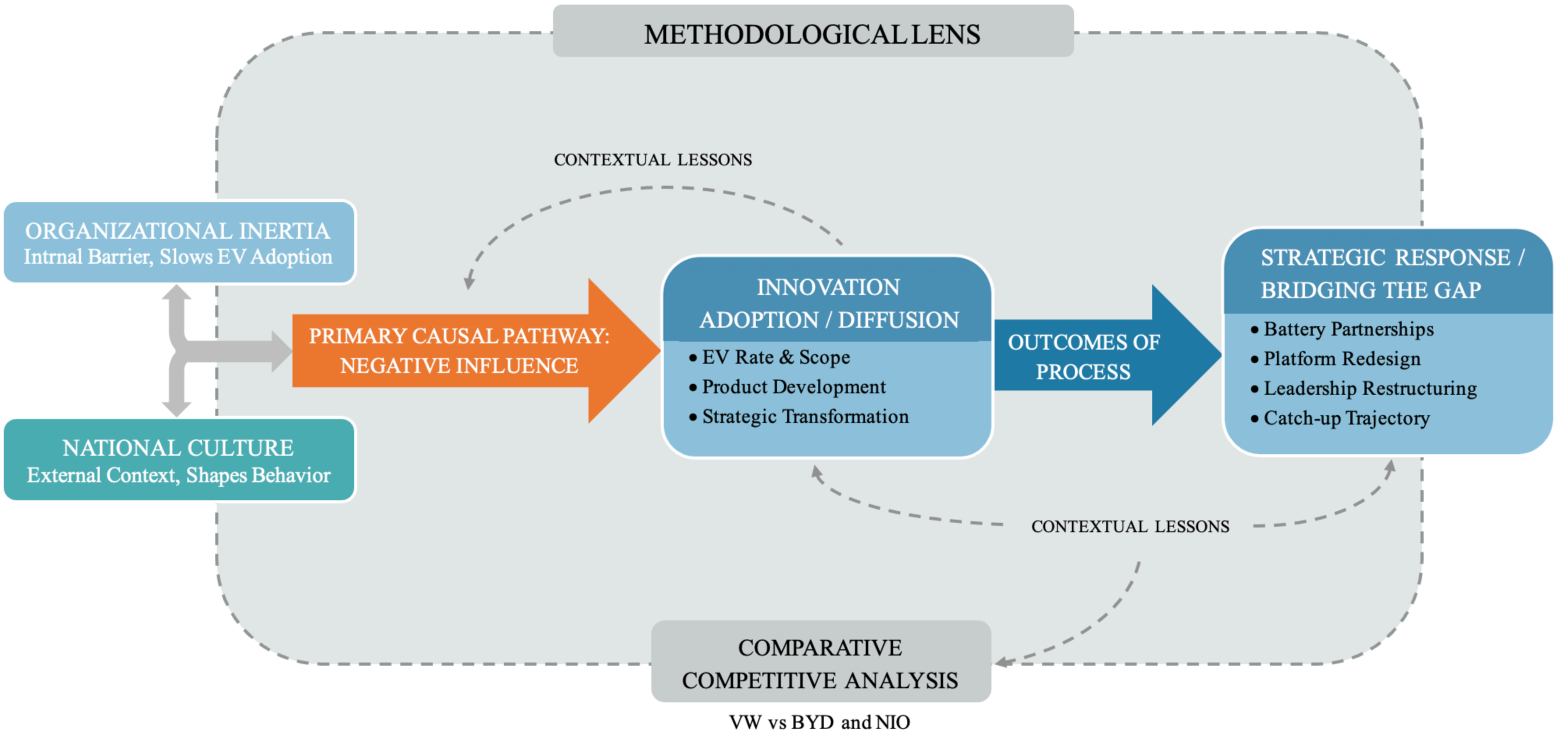
By analyzing the main dimensions of their national culture, like Hofstede's dimensions of power distance, individualism/collectivism, masculinity/femininity, Confucian dynamism, uncertainty avoidance, and indulgence, firms can better understand and work on their strengths and areas for improvement to facilitate innovation (Tian et al., 2018).

3. Theoretical Framework

Table 1
Theoretical Concepts

Theoretical Concept	Empirical Application to the Study	Expected Link / Role in Framework	Operationalization / Measurement (Secondary Data)
Comparative Competitive Analysis	Compare VW's response with Chinese EV firms (e.g., BYD, NIO) to identify how flexibility, entrepreneurial culture, and government support enhance competitiveness.	Provides comparative lens to contextualize findings and derive lessons/recommendations.	Annual reports, market analyses, news articles, and industry reports. KPIs such as EV market share, production numbers, model launches, and strategic partnerships.
Organizational Inertia	Volkswagen's entrenched hierarchy, long-term combustion-engine focus, and bureaucratic decision-making delayed adaptation to EV technologies.	Acts as an internal barrier influencing the slow innovation adoption process.	Company reports, annual reports, press releases, and industry case studies. Historical EV initiative timelines, repeated focus on combustion engines, and delays in EV adoption.
National Culture	How German cultural traits shaped VW's cautious innovation and risk-averse EV strategy.	Functions as an external contextual moderator, reinforcing organizational inertia and shaping innovation behavior.	Hofstede's national cultural dimension scores. Content analysis of VW corporate communications, mission statements, and news reports to infer cultural traits.
Innovation Adoption / Diffusion	VW's rate and scope of EV innovation, product development, and strategic transformation in response to market and technological disruption.	Serves as the dependent process influenced by inertia and culture; outcome variable indicating adaptation speed.	Product launches, EV model introductions, R&D spending, and patent filings using public databases, market reports, and company publications.
Strategic Response / Bridging the Gap	VW's current actions (battery partnerships, platform redesign, leadership restructuring) aimed at catching up with EV leaders.	Represents the outcome dimension — the firm's adaptation and transformation trajectory.	Press releases, annual reports, news articles, and partnership announcements. Initiatives like platform redesigns and strategic alliances using publicly reported outcomes.

Figure 1
Methodological Lens



4. Methodology

This study investigates how innovation can evolve into a crisis when internal and external forces hinder a firm's ability to adapt. Specifically, it examines how organizational inertia affects the timing and effectiveness of Volkswagen's transition to electric vehicles (EVs), and how national culture moderates this process. The empirical analysis focuses primarily on Volkswagen (VW) and integrates a comparative contrast with leading Chinese EV firms (BYD and NIO).

4.1 Research Design

This thesis uses a qualitative single-case study with embedded comparative elements. A case study approach is appropriate because the research question requires an in-depth understanding of complex organizational dynamics, including inertia, strategic behaviour, cultural influences, and technological transition. These processes must be analysed within their real-world context and cannot be meaningfully captured through quantitative or variable-based designs.

Volkswagen is treated as a critical case: a large, globally influential incumbent with strong dependence on combustion-engine technologies, a hierarchical organizational structure, and well-documented delays in electrification. If organizational inertia plays a significant role in hindering innovation, its effects should be particularly visible in a case like VW.

The comparative component includes Chinese EV firms as embedded subcases. They offer a contrasting institutional and cultural context, helping illustrate how different environments shape innovation speed and strategic flexibility. This contrast strengthens the explanatory power of the analysis by highlighting conditions under which inertia is more or less pronounced.

This design supports the application of the thesis's analytical framework, which connects organizational inertia and national culture to firms' responses to technological disruption.

4.2 Case Selection

Volkswagen was selected because of its strategic relevance and theoretical suitability for studying organizational inertia:

- It has long-standing path dependence linked to combustion-engine excellence;
- It operates within a hierarchical and bureaucratic structure, characteristic of the German industrial model;
- It has experienced delays and challenges in its EV transition, making it an ideal case to observe inertia in practice.

The inclusion of Chinese EV firms is justified because:

- They operate in a different cultural and institutional setting;
- China's EV market developed in a context with little domestic competition in combustion, encouraging early commitment to electrification;
- They help highlight contrasting patterns of strategic decision-making, investment behaviour, and cultural influences.

These firms are analysed as subcases within the overarching Volkswagen case, supporting comparison without requiring full multi-case symmetry. This study adopts a purposeful critical case sampling strategy, selecting Volkswagen as a theoretically and empirically central case for understanding organizational inertia in legacy automakers. Volkswagen is both theoretically and empirically central to understanding organizational inertia in legacy automakers due to its scale, historical path dependence in combustion technologies, and the documented difficulties of its electrification process.

4.3 Data Sources

This research relies entirely on secondary data. No primary data were collected. Sources include:

- **Corporate documents**: annual reports, sustainability reports, strategic roadmaps, investor presentations.
- **Industry and market reports**: analyses from consultancies, sector associations, and market intelligence providers.
- **Regulatory and policy documents**: EU emissions regulations, German industrial policies, Chinese EV policies.
- **Press releases and official statements**: updates on strategy, partnerships, and leadership changes.
- **Academic literature**: studies on organizational inertia, innovation, national culture, and automotive industry transformation.
- **News articles and reputable online sources**: reporting on VW's delays, internal conflicts, and the rise of Chinese EV competitors.

These sources provide insights into strategic priorities, internal structures, public narratives, and organizational developments. Triangulating across corporate, academic, and journalistic materials increases reliability and reduces bias.

The temporal focus spans roughly from 2000 to the present, covering the period in which electrification became strategically significant. Documents were selected based on relevance to organizational structure, strategic decisions, cultural influences, or EV-related developments.

4.4 Data Analysis

Data were analysed through qualitative content analysis, combining a theory-driven approach with the identification of limited inductive insights emerging from the material. The analysis is structured around the two pillars of the theoretical framework: organizational inertia and national culture.

4.5 Operationalising Organizational Inertia

Organizational inertia was examined using four analytical dimensions that structure the findings chapter:

1. **Strategic Inertia: Path Dependence**

   Focused on the long-term reliance on combustion engines, legacy investments, and continuity-based strategy.

2. **Early Signals Ignored: Strategic Hesitation**

   Reflected in the delayed recognition of EV trends and the reluctance to shift resources or commit early to electrification.

3. **Operational Inertia: Executional Delays and Coordination Issues**

   Evident in platform delays, software challenges, internal coordination difficulties, and implementation gaps.

4. **Structural Inertia: Bureaucracy and Slow Decision-Making**

   Related to hierarchical structures, complex stakeholder governance, and slow or fragmented decision processes.

These four categories served as deductive codes applied across all relevant documents for Volkswagen and then used to structure the comparison with Chinese EV firms.

4.6 Operationalising National Culture

National culture was analysed using four of Hofstede’s cultural dimensions, applied as interpretive lenses:

- **Uncertainty Avoidance (UAI)** – to interpret levels of risk aversion and preference for stability.
- **Power Distance (PDI)** – to assess the influence of hierarchy and centralised decision-making.
- **Individualism vs. Collectivism (IDV)** – to understand consensus processes, stakeholder involvement, and team autonomy.
- **Long-Term Orientation (LTO) –** to interpret investment horizons, strategic planning, and future orientation.

These dimensions helped contextualise corporate behaviour within broader national cultural tendencies, for both Germany (VW) and China (BYD/NIO).

4.7 Analytical Procedure

The analysis followed four main steps:

1. **Document Collection and Selection**

   Relevant reports, articles, and documents were identified and compiled according to relevance to strategy, cultural aspects, organizational structure, or EV development.
2. **Extraction of Relevant Material**

   Passages related to inertia, culture, EV strategy, or organizational behaviour were isolated for closer examination.
3. **Coding**

   Material was coded using the deductive categories above (the four inertia dimensions and four culture dimensions). Additional emerging patterns were documented as inductive insights.

4. **Cross-Case Interpretation**

   Volkswagen's coded material was compared with the Chinese subcases to highlight differences in inertia, cultural drivers, and speed of innovation adoption.

This process ensures a systematic and transparent connection between the conceptual framework and the empirical findings presented in the following chapter.

4.8 Structure of the Findings Chapter

Although the data were coded deductively using the analytical categories outlined in the previous sections, the Findings chapter is organized thematically rather than code-by-code. This reflects the modular nature of the conceptual framework, in which each analytical dimension constitutes a distinct lens through which the case is examined.

Presenting the results across four thematic sections—organizational inertia, national culture, innovation adoption and diffusion, and strategic response—allows each dimension to be analysed in depth before being integrated in the Discussion chapter. This approach maintains methodological coherence while ensuring analytical clarity and a logical progression of the empirical narrative.

5. Findings

5.1 Organizational Inertia

5.1.1 Strategic Inertia: The Consequences of Path Dependence

The findings show that Volkswagen's long-term optimisation of internal combustion engine (ICE) technologies reinforced a path-dependent strategic trajectory that favoured continuity over substitution. At the industry level, Germany's automotive model specialised around ICE competitiveness, creating strong incentives to maintain the existing technological base rather than pursue alternatives (Altenburg, 2014).

National transition efforts also progressed slowly, with transport identified as the lagging sector in decarbonisation, reinforcing conditions in which maintaining combustion technologies remained strategically acceptable (Hockenos, 2016). Within this context, high profitability from combustion models and accumulated manufacturing capabilities strengthened the rationale for sustaining the status quo rather than reallocating resources toward electrification.

Volkswagen's R&D orientation remained dominantly combustion-focused throughout the 2000s and early 2010s, with major incumbents prioritising ICE efficiency improvements and incremental optimisation until the post-Dieselgate period, when large-scale redirection into electrification was initiated (Krzywdzinski et al., 2023). Established engineering capabilities and internal routines reinforced existing strategic assumptions, making combustion technologies the core around which investments and decision-making continued to revolve (Leonard-Barton, 1992).

Comparative evidence demonstrates that this form of strategic inertia was not structurally inevitable but context-specific. Chinese EV firms such as BYD and NIO entered the sector without legacy ICE competencies, enabling early and direct commitment to electrification. BYD aligned its strategic orientation with policy signals and technological opportunity rather than incumbent optimisation, accelerating adaptation and capability development (Yin et al., 2025). Similarly, NIO adopted an agile positioning strategy supported by the absence of technological lock-in and a market environment geared toward rapid EV scaling (Zeng et al., 2025).

These contrasts indicate that Volkswagen's delayed transition stemmed from structurally embedded advantages that favoured maintaining the existing trajectory rather than proactively initiating technological change.

5.1.2 Early Signals Ignored: From Awareness to Strategic Hesitation

The findings indicate that Volkswagen recognised emerging regulatory and competitive signals associated with electrification but did not translate this awareness into early strategic commitment. Throughout the early 2010s, German automotive firms continued to prioritise optimisation of combustion technologies despite increasingly stringent EU emissions targets, demonstrating that external pressure was visible but did not trigger proactive adjustment (Krzywdzinski et al., 2023). This shows that the delay stemmed from interpretation rather than information constraints.

Evidence confirms that Volkswagen's major strategic shift toward electrification occurred only after the 2015 emissions scandal. Internal restructuring and large-scale portfolio redirection were initiated as a direct response to the crisis rather than anticipation, with the transition accelerating only once reputational and regulatory consequences materialised. This indicates that Dieselgate functioned as a trigger rather than the continuation of a pre-existing strategic pathway. Matthias Müller put it, talking about Volkswagen: "We will not allow this crisis to paralyze us, we are using it as a catalyst for the change Volkswagen needs." (Jellinghaus, 2021).

A temporal lag between disruption awareness and strategic change is also observable. While the commercialisation of electric vehicles expanded between 2012 and 2016, Volkswagen continued to downplay the feasibility and market relevance of EVs during this period, resulting in delayed conversion of sensing into commitment. The company's long-term strategic programme, *Together 2025*, was introduced nearly a decade after EV market entry by the EV market, reflecting late alignment with technological and regulatory trajectories (Krzywdzinski et al., 2023).

Continued hesitation remained visible even after the strategic shift. Volkswagen postponed the launch of its Trinity EV project further into the decade, indicating that implementation timelines slowed rather than accelerated following the initial transition (Reuters, 2024). Similarly, company leadership publicly stated that the pace of electrification "cannot go any faster," signalling internal constraints on transition speed despite external pressure (Euractiv, 2024). These findings show that recognition of disruption did not immediately translate into accelerated execution.

Comparative evidence demonstrates that this temporal pattern diverged sharply from developments in China. State-led policy alignment expanded the new-energy vehicle market before disruption became existential, reducing transition risk and enabling earlier adaptation (Ou et al., 2017). Firms such as BYD aligned strategic orientation with policy signals and market expansion proactively rather than reactively, supporting earlier capability development and reducing the lag between sensing and action (Yin et al., 2025).

5.1.3 Operational Inertia: Executional Delays and Coordination Failures

The findings indicate that Volkswagen struggled to translate its post-Dieselgate strategic shift into effective operational execution. Even after committing to large-scale electrification, the transition was slowed by fragmentation across software development, platform integration, and internal coordination, resulting in delays to planned product rollouts and reduced implementation speed (Sebeykin, 2017). This demonstrates that inertia persisted beyond strategy, emerging in the processes required to operationalise technological change.

Evidence shows that software integration became a critical bottleneck early in the transition. Volkswagen faced significant delays in the launch of the ID.3 due to unresolved software issues developed through its in-house unit, CARIAD. Thousands of vehicles were produced but remained undeliverable while software functionality was still incomplete, reflecting a misalignment between production sequencing and digital readiness (O'Kane, 2020). These delays illustrate how the introduction of new technological capabilities exposed coordination gaps within the organization.

Operational hesitation continued in subsequent phases of the transition. Volkswagen postponed the launch of its Trinity programme—originally positioned as a flagship next-generation EV—further into the decade, indicating that execution timelines slowed rather than accelerated following the initial commitment to electrification (Reuters, 2024). Continued slippage in platform and model deployment highlights the persistence of implementation barriers even after strategic intent was clearly established.

The effects of these coordination challenges extended into production capacity. Company reporting confirms that Volkswagen temporarily reduced output and paused EV manufacturing at several German plants due to weaker demand and internal adjustment pressures, revealing fragility in scaling processes rather than smooth transition execution (Reuters, 2025). These findings show that operational inertia emerged not only through delays but through interruptions to continuity, limiting the pace of transformation.

Comparative evidence demonstrates that these challenges contrast sharply with the implementation patterns observed in China. Firms such as BYD leveraged vertically integrated structures to reduce dependency on external suppliers, enabling synchronised development across battery systems, software, and manufacturing processes (Yin et al., 2025). Coordinated digital operations and data-driven production systems allowed adaptation to occur without major sequencing delays, supporting faster rollout cycles and stabilised scaling. These contrasts indicate that Volkswagen's operational inertia stemmed from internal fragmentation rather than technological impossibility.

5.1.4 Structural Inertia: Bureaucracy and Decision-Making Constraints

The findings indicate that Volkswagen's organizational structure constrained the speed and flexibility of strategic decision-making during the transition to electrification. The company operates under a dual-board governance model in which strategic authority is divided between the Management Board and the Supervisory Board, requiring formal approval for major investment and strategic initiatives (Volkswagen AG, 2022). This system institutionalised slow consensus-building and reduced the organization's capacity to redirect resources rapidly in response to technological disruption.

According to the 2022 Corporate Governance Declaration, the Supervisory Board consists of 20 members, split evenly between 10 shareholder representatives and 10 employee representatives in accordance with German codetermination law (Volkswagen AG, 2022). The State of Lower Saxony is entitled to appoint two shareholder representatives for as long as it retains at least 15 % of ordinary shares, alongside shareholder members elected at the Annual General Meeting (Volkswagen AG, 2024). Employee seats include seven workforce-elected members and three trade union representatives, primarily from IG Metall (Volkswagen AG, 2024). This parity structure requires alignment across labour, state, and capital interests, slowing strategic redirection even when external pressures intensified.

Committee structures replicate this institutional balance. The Supervisory Board maintains four committees: the Executive Committee, Nomination Committee, Mediation

Committee, and Audit Committee. The Executive Committee consists of four shareholders and four employee representatives, while the Audit Committee includes three shareholders and three employee representatives, reinforcing multi-layered approval requirements (Volkswagen AG, 2024). The Nomination Committee is composed exclusively of shareholder representatives (Volkswagen AG, 2024). These arrangements multiply coordination points and extend decision cycles beyond those of more centralised organizational models.

Internal accounts following the emissions crisis further revealed how structural constraints translated into limited oversight and slow governance response. Industry observers noted that, unlike other German manufacturers, Volkswagen's Supervisory Board lacked effective authority over the CEO due to its composition and political representation, contributing to reduced internal challenge during critical periods of strategic decision-making (Reuters, 2015). This internal recognition demonstrates that the company's governance structure did not merely formalise consensus-building but constrained timely intervention, reinforcing structural inertia from within rather than solely through external institutional design.

Ownership composition further reinforced constraints on strategic agility. The State of Lower Saxony's veto rights under the Volkswagen Law meant that major strategic decisions—such as rapid investment acceleration or restructuring—required supermajority backing (Sharpe, 2017). Even after the strategic rationale for electrification had been established, these approval mechanisms slowed implementation, contributing to delays in technology platform consolidation and capital allocation.

Comparative evidence demonstrates that this form of structural inertia diverged sharply from organizational conditions observed in Chinese EV firms. Companies such as BYD operated under streamlined governance structures that enabled fast capital deployment and strategic alignment without multi-layered approval processes (Yin et al., 2025). Similarly, NIO's organizational model supported shorter decision cycles and faster mobilisation of resources, facilitating earlier entry into new product and technology segments than Volkswagen (Zeng et al., 2025). These contrasts indicate that Volkswagen's slower organizational responsiveness was shaped not by technological limitations but by embedded structural arrangements prioritising stability over speed.

5.1.5 Synthesis

The findings show that organizational inertia at Volkswagen operated across interconnected strategic, temporal, operational, and structural layers, shaping the tempo and trajectory of the firm's transition to electrification. Strategic path dependence anchored decision-making in the long-standing optimisation of combustion technologies, reinforcing investment continuity and delaying commitment to technological substitution. This strategic positioning influenced how external signals were interpreted, producing a temporal lag in which disruption was recognised but not converted into anticipatory action. As a result, a major strategic reorientation occurred only after an external shock, rather than through proactive adjustment.

Even after the shift in strategic intent, inertia persisted at the level of execution. Coordination challenges, software integration delays, and postponed platform rollouts demonstrated that the capacity to implement change did not match the scale of the announced transformation. Structural features further amplified these delays. Consensus-based governance, parity representation, and veto-based approval mechanisms slowed decision cycles and constrained rapid resource reallocation, extending the time required to move from strategy to implementation.

Taken together, these patterns indicate that Volkswagen's transition was not blocked by resistance to innovation but slowed by deeply embedded organizational arrangements that prioritised stability, continuity, and controlled adjustment. Electrification, therefore, unfolded as a reactive and sequential process, rather than a proactive or accelerated one.

The comparative findings reinforce this conclusion. Chinese EV firms such as BYD and NIO did not experience equivalent drag across these layers, as the absence of legacy technological dependencies and more centralised decision structures enabled faster alignment between strategic intent, resourcing, and execution. This contrast highlights that inertia at Volkswagen was context-specific rather than unavoidable, shaped by the interaction of historical capabilities, institutional design, and organizational processes.

Overall, the evidence shows that organizational inertia did not prevent Volkswagen from entering the EV transition but reshaped its timing and trajectory, turning electrification into a catch-up process rather than a position of early leadership.

These layers did not operate independently but reinforced one another, creating a compound inertia effect that shaped the tempo and trajectory of Volkswagen's transition.

Table 2
Organizational Inertia

Layer of Inertia	Evidence from Findings	Mechanism	Effect on Transition	Comparative Contrast (China)
Strategic Inertia	Long-term ICE optimisation; high profitability; routines reinforcing combustion logic	Path dependence; core rigidities	Delay in committing to electrification	BYD & NIO had no ICE legacy → faster alignment
Temporal Inertia	Early signals recognised but not acted upon; Dieselgate as trigger	Slow conversion of sensing → action	Late strategic shift, reactive not anticipatory	China aligned earlier due to policy-driven NEV expansion
Operational Inertia	Software delays (ID.3), Trinity postponement,	Fragmented capabilities;	Slow implementation	BYD vertical integration removes

	production pauses	coordination failures	& uneven scaling	coordination gaps
Structural Inertia	Parity governance, veto rights, multi-layer approval	Slow decision-making; institutional drag	Reduced agility; extended decision cycles	China's hierarchical, centralised structures allow rapid alignment
Synthesis	Inertia is multi-layered and interconnected	Reinforcement across layers	Transition becomes reactive, sequential catch-up	China shows context-dependent advantages

5.2 National Culture

5.2.1 Purpose and Analytical Positioning

The second analytical dimension concerns national culture, which operates as a moderating mechanism shaping the organizational behaviours identified in Section 5.1

This section examines how national cultural patterns shape firms' innovation behaviour and strategic responsiveness during technological disruption. The analytical focus is not on culture as a deterministic cause, but as a conditioning environment that influences how organizations interpret risk, coordinate decision-making, and respond to external change. This positioning reflects evidence showing that national culture affects innovation indirectly by shaping preferences, expectations, and behavioural norms rather than prescribing fixed outcomes (Tian et al., 2018).

The purpose of the analysis is to clarify why Germany's cultural profile supported incremental optimisation and extended commitment to combustion-based technological paths, while China's cultural configuration facilitated earlier alignment with emerging technologies such as battery-electric mobility—without assigning normative superiority to either model. As highlighted in systematic reviews, cultural influences on innovation are complex, context-dependent, and operate through multiple interacting mechanisms rather than linear relationships (Tian et al., 2018).

The application scope remains intentionally asymmetrical. The primary focus is Volkswagen within the German cultural context, tracing how specific Hofstede dimensions conditioned the persistence of organizational inertia identified in previous sections. The secondary reference to China (BYD/NIO) serves only as a light comparative contrast, illustrating different cultural enablers of technological commitment rather than constructing a parallel or competing case. This avoids cultural essentialism and grounds the comparison in analytical purpose.

Overall, this section positions national culture as a shaping force rather than a determining factor, showing that cultural characteristics influenced the cognitive and institutional conditions under which Volkswagen interpreted disruption and enacted change—but did not independently cause strategic delay.

5.2.2 Framework: Cultural Dimensions Shaping Innovation

The analysis draws on four Hofstede dimensions that directly influence how organizations interpret risk, coordinate decision-making, and engage in technological change: Uncertainty Avoidance (UAI), Power Distance (PDI), Individualism vs Collectivism (IDV), and Long-Term Orientation (LTO). These dimensions are applied not as determinants of innovation performance, but as mechanisms shaping behavioural tendencies relevant to strategic responsiveness.

Evidence shows that cultural values affect innovation primarily through indirect pathways—such as tolerance for ambiguity, willingness to challenge existing assumptions, and preferences for planning versus experimentation—rather than through fixed national outcomes (Tian et al., 2018). The influence of culture is therefore conditional and interacts with organizational structures and industry context.

The selected dimensions map onto core drivers of innovation in legacy industries undergoing disruption:

- **Uncertainty Avoidance (UAI)** is defined as *"the extent to which members of a society feel threatened by uncertainty and ambiguity"* and seek to reduce it through rules and procedures (Tian et al., 2018). High UAI shapes comfort with technological risk and reinforces preferences for proven, low-variance solutions over early adoption.
- **Power Distance (PDI)** refers to *"the extent to which the less powerful members of institutions and organizations expect and accept that power is distributed unequally"* (Tian et al., 2018). PDI affects how authority is distributed and whether strategic redirection can occur rapidly through top-down alignment or more slowly through negotiation.
- **Individualism vs Collectivism (IDV)** distinguishes societies in which *"ties between individuals are loose"* from those organized around *"strong, cohesive in-groups"* (Tian et al., 2018). IDV conditions the balance between specialised expertise and cross-boundary coordination, influencing experimentation and organizational learning.
- **Long-Term Orientation (LTO)** involves *"the fostering of virtues oriented toward future rewards, in particular perseverance and thrift"* (Tian et al., 2018). LTO shapes temporal preferences, including whether firms prioritise optimisation of existing systems or early commitment to emerging technologies.

These cultural mechanisms align with findings that national patterns can either reinforce continuity or enable rapid mobilisation, depending on how values interact with organizational and institutional settings (Tian et al., 2018).

5.2.3 Germany's Cultural Profile and Innovation Implications

Germany's cultural profile reflects patterns that shaped how technological change was interpreted and operationalised within legacy industries such as automotive manufacturing. Across the four relevant Hofstede dimensions, the findings indicate that cultural tendencies did not prevent innovation but reinforced continuity, making early strategic redirection less likely in the absence of external pressure.

High Uncertainty Avoidance (UAI 65)

Germany's score reflects a cultural preference for reducing ambiguity through systematic planning, detailed preparation, and rule-based coordination (The Culture Factor Group, n.d.). High UAI cultures seek to minimize uncertainty through structured processes and reliance on expertise (Tian et al., 2018). Evidence shows that high UAI is associated with risk-averse and incremental innovation trajectories, as extensive validation is prioritised before adopting new technologies (Tian et al., 2018). This aligns with the long-standing optimization of combustion technologies in Germany's automotive sector, where incremental efficiency improvements were favoured over early electrification.

Low Power Distance (PDI 35)

Germany's low PDI indicates expectations of participative communication and challenge of authority, with leadership legitimacy tied to expertise rather than hierarchy (The Culture Factor Group, n.d.). However, research shows that in highly specialised and expert-driven organizations, low PDI does not automatically enable rapid change; instead, dominant expert logic can reinforce existing technological trajectories (Tian et al., 2018). In this context, authority is not unquestioned, but expert consensus becomes a stabilising force, slowing internal challenge when prevailing expertise supports continuity.

High Long-Term Orientation (LTO 57)

Germany's pragmatic and future-oriented cultural profile reflects an emphasis on persistence, adaptation, and sustained optimization (The Culture Factor Group, n.d.). High LTO cultures show a strong propensity to improve existing systems before shifting to new ones, supporting long-horizon investment but also delaying early commitment to emerging technologies (Tian et al., 2018). This helps explain why combustion-based improvement remained strategically dominant over extended periods, even as electrification signals intensified.

High Individualism (IDV 79)

Germany's high IDV reflects loose social ties and strong professional autonomy, with communication emphasising directness and individual accountability (The Culture Factor Group, n.d.). Individualist cultures support independent decision-making and risk-taking in certain contexts (Tian et al., 2018), but can also reinforce specialisation and domain protection, reducing cross-boundary experimentation and organizational learning when operating within highly technical industries. Evidence shows that individualism does not inherently increase radical innovation and may instead stabilise existing professional silos (Tian et al., 2018).

Core implication

Together, these cultural tendencies did not cause Volkswagen's delayed transition, but they shaped the cognitive and procedural conditions under which strategic alternatives were evaluated—favouring optimization, validation, and continuity over early technological substitution.

Internal reflections at Volkswagen after Dieselgate echoed these cultural tendencies, with board-level representatives stating the need for "a culture in which it's possible and permissible to argue with your superior," indicating that established communication norms discouraged open challenge prior to the crisis (Guardian News and Media, 2015).

5.2.4 China's Cultural Profile (Subtle Contrast, Not Symmetric)

The contrast with China is used to reinforce, rather than invert, the analysis. The purpose is not to present China as an opposite case, but to highlight how different cultural patterns created distinct enabling conditions for technological commitment in emerging industries such as battery-electric mobility.

Low Uncertainty Avoidance (UAI 30)

China’s low UAI reflects higher comfort with ambiguity and greater tolerance for flexible adaptation (The Culture Factor Group, n.d.). Low UAI cultures are associated with greater openness to experimentation, iterative learning, and reduced reliance on rule-based certainty (Tian et al., 2018). This supports earlier commitment to emerging technologies, as uncertainty is not treated as a barrier requiring extended validation.

High Power Distance (PDI 80)

China’s high PDI indicates acceptance of hierarchical authority and centralised decision-making (The Culture Factor Group, n.d.). While high PDI can limit participatory challenge, it can also accelerate strategic alignment when leadership and institutional priorities are coordinated (Tian et al., 2018). In this context, hierarchy functions as an enabling mechanism for rapid mobilisation rather than a constraint, particularly when state–industry coordination is strong.

Collectivism (IDV 43)

China’s lower IDV score reflects a collectivist orientation, where actions are guided by group cohesion rather than individual autonomy (The Culture Factor Group, n.d.). Evidence shows that certain collectivist forms can facilitate innovation when shared objectives support coordinated learning and resource alignment (Tian et al., 2018). This cultural configuration helps explain the emergence of ecosystem-level mobilisation in China’s EV sector, including supply-chain integration and battery scaling.

Very High Long-Term Orientation (LTO 77)

China’s high LTO indicates strategic patience and strong future orientation (The Culture Factor Group, n.d.). High LTO cultures support sustained investment and long-horizon transformation (Tian et al., 2018), enabling commitment to new technological paths even before commercial returns are secure. This aligns with sustained national prioritisation of battery technologies and infrastructure development.

Integrative clarification

This comparison does **not** imply superiority of one cultural model over another. Instead, it shows that cultural patterns created different enabling conditions:

- In Germany, cultural tendencies reinforced optimization and continuity
- In China, cultural tendencies supported earlier alignment and coordinated scaling

Neither model determines outcomes on its own, and both operate through interaction with institutional structures.

5.2.5 Integrative Link Back to Volkswagen

The findings indicate that national culture did not determine Volkswagen's delayed response to electrification, but it conditioned the organizational environment in which strategic decisions were interpreted and enacted. Germany's cultural profile—characterised by high uncertainty avoidance, low power distance, high long-term orientation, and strong individualism—reinforced preferences for systematic planning, validation, and optimization rather than early technological substitution.

High uncertainty avoidance shaped a decision culture that prioritised proven, low-variance technological pathways, supporting the continued refinement of combustion systems before committing to electrification (Tian et al., 2018). Low power distance did not function as a mechanism for rapid internal challenge; instead, expert consensus became a stabilising force, reinforcing the dominant technological trajectory even as external signals intensified. High long-term orientation further strengthened a focus on sustained improvement of existing systems, aligning with Volkswagen's extended optimization of diesel and ICE technologies (The Culture Factor Group, n.d.). High individualism contributed to strong professional specialisation, limiting cross-boundary experimentation during the early stages of technological disruption (Tian et al., 2018).

By contrast, China's cultural configuration—lower uncertainty avoidance, higher power distance, collectivist orientation, and very high long-term orientation—created different enabling conditions, supporting earlier alignment around battery-electric mobility and coordinated scaling (The Culture Factor Group, n.d.; Tian et al., 2018). However, this contrast does not imply a cultural hierarchy; it illustrates that culture interacts with institutional and organizational structures to shape how and when firms respond to disruption.

Closing takeaway

National culture did not cause Volkswagen's strategic delay, but it shaped the cognitive, procedural, and organizational conditions under which inertia emerged and persisted—reinforcing continuity, raising the threshold for strategic reversal, and contributing to a transition that unfolded as a reactive catch-up process rather than proactive leadership.

Table 3
National Culture

Cultural Dimension	**Germany (VW Context)**	**Effect on Innovation / Transition**	**China (Light Contrast)**	**Comparative Insight**
Uncertainty Avoidance (UAI)	High (65)	Preference for low-variance, incremental innovation; strong validation requirements	Low (30)	More tolerance for uncertainty → earlier experimentation
Power Distance (PDI)	Low (35)	Expert-driven consensus slows strategic redirection	High (80)	Hierarchical alignment accelerates coordination
Individualism (IDV)	High (79)	Specialization and silos limit cross-functional experimentation	Low / Collectivist (43)	Group-oriented mobilisation supports coordinated scaling
Long-Term Orientation (LTO)	High (57)	Sustained optimization of existing systems	Very High (77)	Strong commitment to long-term transformation

Core Implication	Culture reinforced continuity and optimization	Conditioned slow redirection	Culture enabled earlier alignment	Differences are contextual, not normative

5.3 Innovation Adoption and Diffusion

5.3.1 Early / Incremental Adoption (2008–2016)

Building on the organizational and cultural dynamics examined earlier, this section analyses innovation adoption and diffusion as the outcome variable of the transition.

The findings indicate that Volkswagen engaged in early electrification initiatives during this period, but adoption remained incremental, peripheral, and compliance-oriented rather than strategically transformative. Electrification activity was introduced within an ICE-centric logic, reflecting continuity rather than technological repositioning.

Volkswagen's first-generation EV efforts centred on retrofitted combustion platforms, including the *e-Up!* and *e-Golf*, which adapted existing vehicle architectures rather than deploying dedicated electric designs. Investment and development priorities during this period remained focused on internal combustion technologies, and electrification served primarily as a regulatory response rather than a strategic pivot (Altenburg, 2014). No dedicated EV architecture existed before the development of the MEB platform, reinforcing the marginal position of early models.

Public announcements signalled growing interest in electrification, but lacked scale, integration, and organizational commitment. Early investment plans emphasized exploratory projects across vehicles and commercial segments without establishing a systemic shift toward battery-electric production (Kiley, 2017). These initiatives reflected scope without depth, maintaining an ICE-led trajectory while presenting limited advances in EV capability.

Overall, the period from 2008 to 2016 is characterised by incremental adoption without structural change, in which electrification existed as a technological extension of combustion-based systems rather than a redefinition of Volkswagen's strategic direction.

5.3.2 Crisis-Induced Acceleration (2016–2020)

The findings indicate that Volkswagen's transition to electrification accelerated only after the 2015 emissions scandal, which functioned as an exogenous shock that broke the continuity of the prior combustion-centric trajectory. The strategic shift that followed was therefore reactive rather than anticipatory, marking a transition triggered by crisis instead of voluntary repositioning.

Following Dieselgate, in November 2016, Volkswagen Group announced the investment of EUR 3.5 billion into the company's future and released a major restructuring program until 2025 (Jellinghaus, 2021). This represented the first comprehensive departure from incremental EV activity and repositioned electrification as a central strategic pillar rather than a peripheral compliance activity (Krzywdzinski et al., 2023). The development of the MEB platform emerged as a foundational element of this shift, enabling dedicated battery-electric architectures instead of retrofitted combustion models (Jellinghaus, 2021).

The launch of the ID.3 symbolised the new direction, serving as the first mass-market vehicle built on a purpose-designed EV platform and marking a public turning point in Volkswagen's technological orientation (Jellinghaus, 2021). Dieselgate was the decisive turning point, noting that the scandal altered the political, regulatory, and reputational environment to the extent that strategic continuity was no longer viable (Krzywdzinski et al., 2023).

The period also saw a rapid increase in announced electrification targets, including large-scale investment commitments and multi-brand rollout plans, signalling acceleration at the level of strategy even as implementation capabilities were still forming (Jellinghaus, 2021). However, the reactive nature of this transition meant that acceleration began a decade into global EV commercialization, reinforcing the temporal lag identified earlier (Krzywdzinski et al., 2023).

Overall, 2016–2020 represents a phase of forced strategic acceleration, in which Volkswagen reoriented its technological pathway in response to external shock rather than proactive anticipation.

5.3.3 Scaling but Lagging (2020–Present)

The findings indicate that Volkswagen entered a phase of accelerated scaling following the launch of its dedicated EV architecture, but diffusion progressed more slowly than expected due to execution gaps and persistent structural constraints. During this period, Volkswagen became one of the largest producers of battery-electric vehicles globally, yet the trajectory of market penetration remained shallower than that of earlier entrants.

The rollout of the MEB platform expanded across multiple brands, enabling the standardisation of battery-electric models and broader portfolio coverage (Krzywdzinski et al., 2023). However, the transition from platform readiness to market-level diffusion encountered significant implementation challenges. The launch of the ID.3 was delayed due to unresolved software issues, with completed vehicles held back from delivery while digital systems were still under development (O'Kane, 2020). These delays demonstrated that scaling capacity did not yet match the pace of strategic ambition.

Battery-electric volumes increased during this period, but profitability and software performance remained below expectations. While Volkswagen achieved substantial expansion in EV production, structural and organizational constraints continued to slow the diffusion curve, limiting competitive catch-up (Krzywdzinski et al., 2023). As a result, scaling occurred unevenly, with technological progress outpacing internal coordination capabilities.

Overall, the period from 2020 onward reflects a phase of rapid scaling with lagging diffusion, in which Volkswagen consolidated its position as a major EV manufacturer but did not achieve the accelerated market penetration observed among earlier leaders. Electrification progressed, but implementation constraints prevented a convergence toward the frontier.

5.3.4 Plateau and Structural Saturation (2023–2025)

The findings indicate that after the initial acceleration phase, Volkswagen's EV transition entered a plateau characterised by structural saturation and demand-side constraints, slowing both momentum and diffusion. Despite advanced platforms and earlier strategic commitments, the organization faced diminishing returns on scalability and mounting operational headwinds.

Evidence points to production pauses in 2025, as Volkswagen temporarily reduced output at its German EV plants due to weak demand and internal adjustment pressure (Reuters, 2025). Moreover, leadership publicly acknowledged a ceiling to acceleration, stating that the company's electric push "can't go any faster" amid workforce and supply-chain constraints (Euractiv, 2024). These developments underscore structural limitations in transforming scale into sustained growth and indicate that Volkswagen's EV diffusion had reached a saturation phase in Europe.

The combination of weaker demand growth and internal structural limits created a diffusion curve that flattened over time rather than continued to steepen. Volkswagen's earlier comparative delay and executional lags meant that it was competing in a mature global EV market where front-runners had already advanced. The result is a trajectory of catch-up that struggles to achieve frontier speeds.

Overall, the period 2023-2025 reflects a phase of structural saturation, where Volkswagen's transition is not stalled entirely, but advancing at a slower, stabilised pace rather than accelerating as it once did.

5.3.5 Comparative Lens: BYD & NIO as Fast-Path Entrants

Chinese EV manufacturers followed a structurally different diffusion pathway, scaling without legacy combustion constraints and within a highly supportive institutional environment (Altenburg et al., 2016). This divergence reflects national trajectories in which early electrification was enabled by policy alignment, industrial coordination, and the absence of path-dependent technological lock-in (Altenburg et al., 2016).

BYD: Battery-First, Vertically Integrated, Rapid Scaling

BYD developed a battery-first industrial model, entering EV production from core battery competencies rather than combustion platforms (Zhan, 2025). Research shows that BYD's strategic advantage is rooted in vertical integration across the full value chain, enabling control over key components and reducing dependency on external suppliers (Zhao et al., 2025).

The company's rapid scale-up was reinforced by early entry into NEVs and the accumulation of manufacturing capability, which allowed accelerated deployment and cost competitiveness (Yin et al., 2025). National-level conditions amplified this trajectory: China's NEV market experienced explosive expansion, with sales rising from 1.32 million units in 2020 to 12.86 million units in 2024, illustrating a steep diffusion curve (China Association of Automobile Manufacturers [CAAM], 2025; International Energy Agency [IEA], 2024). This environment enabled BYD to scale faster than legacy incumbents tied to combustion architectures.

NIO: Born-Electric and Business-Model Innovation

NIO followed a born-electric pathway, entering the sector without prior ICE operations and structuring its strategy around service and ecosystem differentiation (Zeng et al., 2025). The firm implemented Battery-as-a-Service (BaaS), lowering purchase barriers through subscription-based access to battery capacity (Zeng et al., 2025).

Additional evidence shows that NIO built a direct-engagement model through user-experience platforms and community-based brand infrastructure, reinforcing customer retention and market positioning (Zeng et al., 2025). Strategic partnerships supported rapid capability expansion in charging and digital integration, enabling agility despite limited production scale (Zeng et al., 2025).

Comparative Insight

Both BYD and NIO demonstrate that fast-path entrants scaled electrification earlier because they:

- operated without legacy ICE systems (Altenburg et al., 2016)
- aligned organizational design directly with battery-electric architectures (Zhao et al., 2025)
- benefited from rapid national NEV expansion (Ou et al., 2017)

This contrast confirms that Volkswagen's slower diffusion was path-dependent rather than sector-determined, emerging from incumbency constraints rather than technological inevitability (Altenburg et al., 2016).

5.3.6 Synthesis

The findings show that Volkswagen's electrification process followed a late, crisis-activated, and uneven diffusion pattern, shaped by earlier path dependence and organizational constraints. Initial adoption remained incremental and peripheral, with retrofitted models introduced without structural commitment to electrification. Acceleration occurred only after

Dieselgate, marking a reactive transition in which strategic change was triggered by an external shock rather than anticipatory repositioning.

Subsequent scaling expanded Volkswagen's EV portfolio through the deployment of the MEB platform, but diffusion progressed more slowly than expected due to software delays, coordination gaps, and structural limitations, resulting in a flattened trajectory rather than continuous acceleration. The most recent period indicates a plateau phase, characterised by production pauses and acknowledged limits to further acceleration in the European market, signalling structural saturation rather than strategic withdrawal.

The comparative analysis reinforces that this pattern was not sector-wide or technologically inevitable. Chinese manufacturers such as BYD and NIO scaled earlier and more rapidly because they entered electrification without legacy constraints and within policy environments that supported fast alignment and ecosystem development. In contrast, Volkswagen's transition unfolded as a catch-up process, shaped by the need to reverse established technological commitments rather than extend existing capabilities.

Overall, the evidence indicates that adoption and diffusion at Volkswagen were not obstructed, but delayed, sequenced, and structurally constrained, resulting in a transition defined by reactive acceleration, uneven scaling, and limited diffusion momentum relative to early leaders.

Table 4
Innovation Adoption and Diffusion

Phase	Period	Evidence from Findings	Diffusion Pattern	Comparison with Fast-Path Entrants
Early/Incremental Adoption	2008–2016	Retrofitted EVs (e-Golf, e-Up!); ICE-centric investments; exploratory initiatives	Low intensity; no structural commitment	BYD/NIO begin with dedicated EV logic

Crisis-Induced Acceleration	2016–2020	Dieselgate triggers Together 2025, MEB development	Sharp rise in strategic focus; reactive entry	China firms scale proactively pre-crisis
Scaling but Lagging	2020–Present	MEB expansion; ID.3 delay; coordination gaps	Scaling accelerates, diffusion slower than expected	BYD/NIO scale faster due to integrated architectures
Plateau & Structural Saturation	2023–2025	Production pauses; “can’t go any faster”; demand constraints	Diffusion curve flattens	China’s NEV curve continues steep trajectory
Synthesis	—	Late, uneven, constrained diffusion	Catch-up pattern	Entrants benefit from institutional alignment & no legacy constraints

5.4 Strategic Response and Bridging the Gap

5.4.1 Platform Redesign and Technological Consolidation

Finally, the findings examine Volkswagen’s strategic responses, which reflect the organization’s efforts to address the inertia patterns and capability gaps identified in previous sections.

The findings indicate that Volkswagen is restructuring its technological foundation to address the architectural fragmentation that characterised its earlier electrification phase. This shift reflects a strategic move from multiple platform solutions toward a unified system intended to reduce complexity, improve efficiency, and enable deeper software integration across brands.

Volkswagen’s first-generation electrification was built on the MEB platform, which became the core of its EV strategy but also revealed structural limitations, including scalability constraints and difficulties integrating software across vehicle lines (Krzywdzinski et al., 2023). The continued reliance on multiple architectures increased development costs and restricted cross-brand standardisation within the group (Krzywdzinski et al., 2023; Volkswagen AG, 2024).

In response, Volkswagen is developing the next-generation SSP (Scalable Systems Platform) as a single architecture designed to replace MEB and consolidate vehicle development across brands (Volkswagen AG, 2024). The SSP platform aims to reduce structural and software complexity, enable higher levels of component commonality, and support a unified electronic architecture that allows over-the-air upgrading and centralised software functionality (Volkswagen AG, 2024).

Evidence shows that the transition to SSP is also intended to improve production efficiency by shifting from multiple platform families to a single scalable system, aligning manufacturing processes across volume and premium brands, and reducing duplication in development resources (Krzywdzinski et al., 2023). This redesign reflects a structural pivot from platform expansion to platform consolidation, marking a strategic effort to rebuild Volkswagen's technological base for long-term competitiveness in a software-defined EV industry

Overall, Volkswagen's platform strategy represents a shift from fragmented electrification toward integrated technological coordination, aimed at overcoming earlier path-dependent constraints and enabling future scalability.

5.4.2 Battery Strategy and Supply Chain Repositioning

The findings show that Volkswagen is shifting from reliance on external battery suppliers toward building internal capability and securing long-term access to cell production. This transition reflects a strategic repositioning aimed at reducing vulnerability in the electrified value chain and improving cost competitiveness.

Volkswagen's earlier electrification phase was characterised by dependence on external cell suppliers, which constrained scaling capacity and limited control over battery cost structures (Rísquez Ramos et al., 2024). As global electrification increased demand for lithium-ion cells, supply concentration and price volatility created additional strategic risk for manufacturers operating without internal capacity (Rísquez Ramos et al., 2024).

In response, Volkswagen has pursued a multi-track battery strategy that combines joint ventures, long-term sourcing contracts, and internal capability development. Evidence shows that the company has formed partnerships with suppliers such as Northvolt, CATL, and Gotion, and simultaneously advanced plans for gigafactory development within Europe to secure a stable and cost-competitive cell supply (Rísquez Ramos et al., 2024). These initiatives are designed to reduce reliance on Asian supply chains and align battery sourcing with regional industrial policy.

Volkswagen is integrating battery strategy more directly into group governance, shifting from procurement-driven sourcing to platform-based coordination and internal capability building (Volkswagen AG, 2024). This includes standardising cell formats, strengthening in-house expertise, and aligning battery development with upcoming vehicle platforms such as SSP.

Overall, Volkswagen's battery strategy reflects a structural transition from dependence to controlled capability, repositioning the firm within evolving global value chains to support long-term electrification at scale.

5.4.3 Software and Digital Restructuring

The findings indicate that software remains the most significant bottleneck in Volkswagen's electrification transition, and the company is undergoing structural redesign to address delays and capability gaps that emerged during the adoption and scaling phases.

Volkswagen created its software subsidiary CARIAD to act as a cross-brand software entity and lead group-wide electronic architectures and digital platforms (Volkswagen AG, 2024). However, early software programmes were affected by significant delays that impacted vehicle rollouts, such as the ID.3 launch, which was postponed due to software problems (O'Kane, 2020), and later contributed to postponements of flagship EV projects (Reuters, 2024). The company's earlier approach relied on distributed software development embedded within individual brands, which resulted in fragmented architectures and slowed integration across models (Jellinghaus, 2021).

Recent strategic adjustments show that Volkswagen is restructuring CARIAD, shifting toward modular software governance and redefining responsibilities to improve development speed and cross-brand alignment (Volkswagen AG, 2024). The analysis indicates that the new model emphasises reducing platform complexity, sequencing software rollouts more realistically, and integrating digital systems with the upcoming SSP architecture (Volkswagen AG, 2024).

The restructuring also includes external technological cooperation to accelerate capability development. Evidence shows that Volkswagen has adopted a strategy of selective partnerships to support the software stack and compensate for internal delays, including collaboration intended to strengthen advanced software functions and reduce execution risk (Volkswagen AG, 2024).

Overall, Volkswagen's software transformation represents a shift from centralised ambition to phased capability rebuilding, aimed at resolving earlier implementation barriers and enabling the transition toward software-defined vehicle architectures.

5.4.4 Leadership and Organizational Reconfiguration

The findings indicate that Volkswagen has undertaken leadership and organizational restructuring to address internal barriers that contributed to earlier delays in its electrification transition. These changes reflect a shift from strategy expansion toward execution focus, aiming to reduce decision-making complexity and improve implementation capacity.

Following the emissions crisis, Volkswagen underwent a leadership reset that linked governance reform to strategic redirection, with managerial changes intended to realign priorities and restore organizational stability (Jellinghaus, 2021). A subsequent leadership transition from Herbert Diess to Oliver Blume marked a further shift in emphasis, with a strengthened focus on operational delivery and coordination across brands (Volkswagen AG, 2024).

Structural adjustments also involved clarification of brand roles and redefinition of group-level responsibilities to reduce internal competition and overlapping mandates (Volkswagen AG, 2024). Evidence indicates that Volkswagen has moved toward simplified decision pathways and tighter integration between strategic planning and implementation processes (Volkswagen AG, 2024).

Additional governance updates have been linked to supervisory-level changes and board-structure refinement, reflecting efforts to strengthen oversight and improve alignment between long-term electrification objectives and organizational accountability (Volkswagen AG, 2022).

Overall, these reforms represent a transition from crisis-driven leadership change to organizational reconfiguration, aimed at enabling faster execution, reducing structural inertia, and supporting the technological and strategic shifts underway across the group.

5.4.5 Current Positioning and Remaining Constraints

The findings indicate that Volkswagen has shifted from a delayed response toward an active restructuring phase, marked by platform consolidation, battery strategy development, and software reorganization. However, the transition remains incomplete, and several constraints continue to shape the company's competitive position in the electrified market.

Volkswagen has progressed beyond initial adoption and is now implementing structural transformation across its technological and organizational systems, including the transition toward SSP and the restructuring of CARIAD (Volkswagen AG, 2024). These developments demonstrate movement from strategic commitment to capability rebuilding, signalling a shift in focus from expansion toward execution (Jellinghaus, 2021). Despite these advances, structural limitations persist, particularly in the areas of software integration, coordination speed, and platform readiness. Evidence shows that Volkswagen continues to face implementation challenges and systemic constraints that slow the pace of transition even after strategic acceleration (Krzywdzinski et al., 2023). Similar findings highlight that the electrification shift requires extensive reconfiguration of global value chains and organizational roles, creating transitional pressure across the industry (Zhao et al., 2025).

Recent industry assessments emphasise that the broader automotive sector is undergoing strategic recalibration in response to electrification, with manufacturers adjusting investment timelines, product portfolios, and risk exposure (KPMG, 2024). For Volkswagen, these external dynamics intersect with internal constraints, including execution speed, fluctuating demand in key European markets, and intensified competition from fast-scaling EV entrants.

Overall, Volkswagen's current position reflects a transition from technological adoption to organizational and structural transformation, demonstrating progress while maintaining unresolved challenges that will determine the pace and effectiveness of future competitiveness.

Table 5
Strategic Response and Bridging the Gap

Strategic Lever	Evidence from Findings	Intended Purpose	Remaining Constraints	Industry Context
Platform Redesign (SSP)	Shift from MEB → SSP; aim for unified architecture	Reduce complexity; improve scalability and software alignment	SSP still under development; legacy fragmentation persists	Industry moving toward software-defined platforms
Battery Strategy	Joint ventures; gigafactories; supplier partnerships	Reduce dependence; secure competitive cell supply	High capital intensity; market volatility	Global race for battery capacity
Software Reorganization (CARIAD)	Delays corrected through restructuring & modularisation	Improve development speed; integrate with SSP	Capability gaps; phased instead of centralised delivery	OEMs globally face software bottlenecks
Leadership & Governance Reform	From Diess → Blume; clearer brand roles	Improve execution; streamline decision pathways	Governance complexity still slows decisions	Sector-wide strategic recalibration
Current Positioning	Structural transformation underway	Move from strategy → execution	Pace still limited; demand uncertainty	Competition from China intensifying

6. Discussion

This chapter interprets the empirical findings through the lens of the conceptual framework, linking organizational inertia, national culture, and innovation adoption to Volkswagen's delayed transition to electric vehicles (EVs). Rather than reiterating results, the purpose is to illuminate their broader meaning and explain how the case contributes to existing theory and managerial understanding.

6.1 Volkswagen's Delayed Transition as a Multi-Layered Inertia Problem

The empirical analysis reveals that Volkswagen's slow strategic response to electrification did not originate from a single barrier but from an interconnected system of strategic, temporal, operational, and structural inertia. These layers reinforced one another, ultimately shaping the pace at which the company was able (or unable) to adapt.

Strategic path dependence, rooted in Volkswagen's historical success with combustion technologies, created a dominant logic that favoured continued optimization of ICE systems. Temporal inertia amplified this effect: although electrification signals were visible early, they were not translated into meaningful commitment until Dieselgate forced a strategic pivot. Operational inertia then slowed execution, with software bottlenecks, platform delays, and coordination issues preventing Volkswagen from converting strategy into timely implementation. Structural inertia, finally, emerged from the company's consensus-based, codetermined governance architecture, which elongated decision cycles and constrained rapid redirection.

This cumulative effect aligns with organizational theory, suggesting that incumbent firms often struggle not because they lack awareness of disruption, but because their existing capabilities and structures limit their ability to act on that awareness quickly. The Volkswagen case, therefore, illustrates how inertia is dynamic and systemic rather than static. The comparative findings reinforce this conclusion. BYD and NIO, which entered the market without combustion legacies and operated in more flexible, state-aligned institutional environments, were able to scale EVs earlier and faster. This contrast highlights that Volkswagen's delay was context-dependent, not technologically inevitable.

6.2 The Moderating Role of National Culture

National culture shaped the organizational environment in which Volkswagen's strategic decisions unfolded. Germany's high uncertainty avoidance, strong long-term orientation, expert-driven logic, and relatively low power distance created cognitive and procedural tendencies that favoured continuity, extensive validation, and incremental adjustment.

This supports the argument in cultural innovation literature that culture exerts influence indirectly, by shaping preferences, expectations, and norms rather than dictating fixed outcomes. In Volkswagen's case:

- high UAI reinforced a preference for proven technological pathways;
- low PDI sustained expert-based consensus rather than rapid top-down shifts;
- long-term orientation supported optimization of existing systems;
- individualism contributed to strong professional silos rather than cross-functional experimentation.

China's cultural profile provided a meaningful—though intentionally asymmetrical—contrast. Lower uncertainty avoidance, higher power distance, and a collectivist orientation supported earlier commitment to EV technologies and more coordinated scaling among firms like BYD and NIO. The comparison does not imply cultural superiority, but demonstrates how cultural configurations can enable or constrain organizational responsiveness in different ways.

6.3 Innovation as Crisis-Activated Rather than Crisis-Preventive

One of the most significant insights emerging from this research is that Volkswagen's major technological shift occurred only after Dieselgate, an external shock that fundamentally altered regulatory pressures and reputational stakes. Innovation at Volkswagen was therefore crisis-activated—necessary only when the existing trajectory became untenable.

This supports the broader literature on incumbent behaviour under disruption: firms often recognise environmental change early, but internal structures and dominant logics prevent proactive repositioning. Instead, change materialises when a crisis breaks the logic of continuity. In Volkswagen's case, electrification became a strategic necessity only once the reputational and political consequences of Dieselgate forced an irreversible break with past practices.

6.4 Transformation at a Constrained Tempo

Volkswagen is now undergoing one of the largest industrial transformations in its history. Platform consolidation, battery strategy repositioning, software restructuring, and leadership changes signal a move from strategy formulation to capability rebuilding. These developments show that adaptation is occurring—but also that it is occurring within the constraints of legacy systems, complex governance structures, and uneven internal capabilities.

The transition is therefore best understood as a bounded transformation: progressing, but not at the pace of front-runners and not without friction.

7. Managerial Relevance

7.1 Insights for Legacy Firms in Technological Transition

Volkswagen's journey illustrates that incumbent strength can become a liability when dominant technological paradigms shift. Managers in legacy industries should therefore continuously assess whether existing competencies have become core rigidities and whether organizational structures allow early movement toward alternative technological pathways.

7.2 Implications for Firms Responding to Disruption

The thesis highlights that delays often emerge not because firms fail to sense disruption, but because internal processes prevent timely action. Reducing the gap between awareness and commitment requires faster decision pathways, enhanced cross-functional coordination, and governance structures that allow timely strategic redirection.

7.3 Implications for High-UAI / Low-PDI Contexts

Organizations operating in cultures similar to Germany's must actively counterbalance tendencies toward risk avoidance, over-planning, and expert-driven consensus. Managers in such contexts need to cultivate experimentation, encourage upward challenge, and promote cross-disciplinary learning.

7.4 Implications for Policymakers

Volkswagen's trajectory also shows that strong, consistent policy signals shape firms' technological commitments. Policymakers can accelerate industrial transitions by providing clarity, reducing uncertainty, and supporting infrastructure aligned with long-term technological goals.

8. Recommendations

The findings of this thesis point toward several strategic areas where Volkswagen—and comparable incumbents—could enhance their adaptability and long-term competitiveness. Rather than standalone steps, these recommendations form a cohesive set of shifts that together support more agile and future-oriented organizational behaviour.

1. Strengthening Ambidextrous Structures for Innovation Protection

A priority is to strengthen ambidextrous structures that protect innovation from legacy logic. Volkswagen would benefit from reinforcing organizational units dedicated exclusively to electrification and software, equipped with autonomy, dedicated budgets, and clear mandates. Isolating these units from ICE-driven priorities would reduce the risk that new technologies remain subordinate to established competencies.

2. Simplifying Governance and Accelerating Decision-Making

A second recommendation concerns governance simplification and decision-making speed. The case shows that consensus-based, multi-layered approval structures slow organizational responsiveness. Clarifying the division of responsibilities between group and brand levels, reducing redundant committees, and streamlining investment approval pathways would make the company more capable of acting decisively during technological transitions.

3. Strengthening Software Capabilities and Cross-Brand Integration

A third area requires strengthening software capabilities and integration. Given that software bottlenecks caused repeated delays, Volkswagen should deepen its partnerships with specialised digital firms, build cross-brand software teams, and ensure that software development timelines are tightly synchronised with platform strategies. As vehicles become increasingly software-defined, this alignment is essential.

4. Deepening Control of the Battery Value Chain

A fourth strategic direction involves deepening control over the battery value chain. Expanding gigafactory projects, standardising cell technologies, and vertically integrating key components would improve cost competitiveness and reduce dependence on external suppliers—an area where Chinese competitors currently hold an advantage.

5. Advancing Cultural and Leadership Transformation

Finally, cultural and leadership transformation will be crucial for sustaining long-term agility. Encouraging a culture that tolerates uncertainty, values experimentation, and supports upward challenge would help mitigate the influence of high uncertainty avoidance and entrenched expert logic. This shift requires leadership that models openness, cross-functional collaboration, and a willingness to reconsider dominant assumptions.

Together, these recommendations suggest a path toward a more flexible, digitally capable, and future-ready Volkswagen. They emphasise that technological transitions are not only about new platforms and investments, but fundamentally about reconfiguring organizational behaviours, governance systems, and cultural norms.

9. Limitations

Reliance on Secondary Data

The study is based exclusively on secondary sources, limiting access to internal processes, informal dynamics, and confidential strategic discussions.

Single-Case Design

While the Volkswagen case offers depth, it restricts generalisability. Volkswagen's unique governance model, history, and national context mean findings may not transfer directly to all incumbents.

Cultural Interpretation Constraints

Cultural analysis relied on Hofstede scores and observable behaviours. Culture is multi-layered and context-dependent; therefore, interpretations must be approached with caution.

Fast-Changing Industry Context

The automotive sector is undergoing rapid change. Some developments evolved during the research process, which may affect the stability of insights.

Asymmetrical Comparative Component

China's EV firms were used as light comparative contrasts, not as fully developed parallel cases. This limits the breadth of comparative claims.

10. Conclusion

This thesis examined how organizational inertia and national culture shaped Volkswagen's transition to electric vehicles, and why this transition unfolded as a delayed and structurally constrained process rather than a proactive strategic shift. By integrating a multi-layered analysis of strategic, temporal, operational, and structural inertia with a cultural perspective based on key Hofstede dimensions, the study demonstrated that Volkswagen's late entry into electrification was not the result of technological incapability but the outcome of deeply embedded organizational patterns and cultural tendencies that favoured continuity, validation, and incremental adjustment.

The analysis showed that Volkswagen recognised the signals of disruption early, yet remained committed to refining its combustion-engine trajectory until the Dieselgate crisis broke the logic of continuity. Electrification, therefore, emerged as a crisis-triggered redirection rather than a process of anticipatory innovation. Even after this strategic pivot, execution was hindered by software delays, coordination gaps, platform fragmentation, and governance complexity, revealing that transformation was constrained not by intent but by internal structural and procedural barriers.

National culture further conditioned the organizational environment in which decisions were made. Germany's high uncertainty avoidance, strong long-term orientation, low power distance, and high individualism reinforced stability-oriented decision-making, expert-driven consensus, and siloed structures, making rapid technological substitution less likely. In contrast, Chinese EV firms such as BYD and NIO—operating without legacy constraints and within enabling cultural–institutional configurations—demonstrated earlier alignment and faster diffusion, highlighting the context-specific nature of Volkswagen's delay.

Overall, this thesis contributes to the understanding of innovation failure not as a lack of innovation per se, but as a misalignment between environmental change and organizational capacity to respond at the required pace. It shows that in large incumbents, innovation can become a crisis when internal rigidities slow down adaptation, turning transformation into a reactive process of catch-up. Volkswagen is now engaged in substantial restructuring—platform consolidation, battery strategy upgrades, software reorganization, and leadership reform—yet the effectiveness of these efforts will depend on its ability to overcome the very inertia that shaped its trajectory.

By offering an integrated perspective that links organizational behaviour, cultural context, and technological disruption, this study highlights the importance of aligning internal capabilities, governance structures, and cultural norms with the demands of fast-moving technological transitions. For firms facing similar challenges, the core implication is clear: technological change requires not only new technologies, but new ways of organizing, deciding, and interpreting the future.

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