

Changing The Lanes To Overtake: Exploring China's Strategy Of Innovation

Mai Jianjun¹

¹Department of Fundamental and Inter-disciplinary Studies International Islamic University Malaysia

Corresponding author : maijianjun@iium.edu.my

Abstract

This article explores China's strategic approach to development, known as Lane-Change Overtaking (Huandao Chaoche), which emphasizes innovation, differentiation, and systemic coordination to bypass traditional development stages. Using a qualitative, interpretive approach based on multiple case studies from key sectors—including electric vehicles, artificial intelligence, and commercial drones—this study analyzes how China has successfully circumvented conventional development paths through strategic innovation and coordination. The research employs thematic content analysis of secondary data drawn from scholarly literature, official policy documents, industry reports, and credible news sources, guided by theories of latecomer advantage, disruptive innovation, and ecosystem building. This strategy involves identifying new tracks and building sufficient driving force to achieve leadership, as exemplified by China's success in the electric vehicle industry and its surge in patent applications. The core principles of Lane-Change Overtaking include aligning internal development needs with global trends, breaking path dependence, fostering disruptive innovation, and building robust ecosystems. The lessons derived from China's experiences offer valuable insights for developing nations, particularly Muslim countries, seeking to accelerate progress and enhance their global competitiveness through strategic adaptation of these principles to their unique socio-economic contexts.

Key words: China, Development, Innovation, Lane-Change Overtaking, Strategy



INTRODUCTION

In the 21st century, the global landscape is increasingly defined by strategic competition between major powers, particularly China and the United States, across technology, innovation, and economic domains. While the United States has historically dominated scientific and technological advancement, China has emerged as a formidable challenger, fundamentally transforming its economic and technological foundations.

China has evolved beyond its former role as "the world's factory" - once characterized by mass production of lower-value goods and technology replication - to become a leading power in technological innovation and industrial transformation. Central to this evolution is a distinctive strategic approach called "Huandao Chaoche" (Lane-Change Overtaking). This innovation-focused strategy has enabled China to circumvent traditional development pathways while reshaping global competitive dynamics.

This article examines the fundamental principles of Lane-Change Overtaking, presents illuminating case studies of its implementation, and considers its implications for Muslim nations pursuing accelerated development in today's complex global environment.

LITERATURE REVIEW

The concept of strategic innovation and technological leapfrogging in emerging economies has received considerable scholarly attention, particularly in relation to China's transformation from a manufacturing hub into an innovation-driven global power. The "Lane-Change Overtaking" (Huandao Chaoche) strategy represents a distinctive departure from conventional development models. Yet, despite its growing relevance, it remains underexamined as a formalized strategic framework in academic literature. This review explores the theoretical and empirical foundations for understanding this strategy within the domains of development economics, innovation studies, and strategic management.

The conceptual roots of Lane-Change Overtaking (LCO) lie in latecomer advantage theory. Gerschenkron (1962) argued that developing economies could accelerate their growth by borrowing advanced technologies, thereby avoiding the sunk costs of legacy systems. Building on this, Lee and Lim (2001) developed the concept of technological leapfrogging, demonstrating how countries like South Korea bypassed analog telecommunications stages to dominate the digital sector. Perez (2010) further linked leapfrogging potential to periods of technological paradigm shifts—such as those involving renewable energy or digital platforms—where latecomers can circumvent

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incumbent dominance. These theoretical foundations support LCO's central premise: that latecomers can strategically change lanes at industrial inflection points to overtake global leaders.

LCO also draws from Christensen's (1997) theory of disruptive innovation, wherein new entrants displace established players by offering more affordable and accessible alternatives. However, the strategy extends beyond disruption by strategically reframing markets altogether. This aligns with Kim and Mauborgne's (2004) Blue Ocean Strategy, where value innovation creates uncontested market spaces. China's electric vehicle (EV) sector illustrates this dynamic well. As Gallagher and Xiao (2019) argue, the EV strategy did not merely compete with internal combustion engine vehicles; it redefined automobility by emphasizing sustainability, software integration, and energy ecosystems. Such reframing supports Teece's (2007) notion of dynamic capabilities, where success lies in sensing and shaping opportunities rather than relying on static resource advantages.

The Lane-Change Overtaking strategy also resonates with the National Innovation Systems (NIS) framework, which emphasizes the importance of coordination among the state, firms, and academia (Lundvall, 2016). China's "whole-nation system" exemplifies this coordination by channeling strategic R&D investments into targeted sectors such as semiconductors and green technologies. Fu (2020) highlights the role of innovation clusters in catalyzing industrial upgrading, while Nahm and Steinfeld (2014) document how Shenzhen's manufacturing ecosystem enabled DJI to outpace Western drone competitors.

Although the term "Huandao Chaoche" is rarely theorized directly in English-language academic literature, various sectoral studies illustrate its application in practice. In the electric vehicle industry, Wang (2022) shows how China bypassed foreign patent dominance through early investments in battery standardization. In the digital sector, Keane and Yu (2019) describe how ByteDance, through AI-driven content curation, redefined the logic of social media platforms. Zeng and Williamson (2007) document how Chinese firms like Haier and BYD disrupted global markets through "cost innovation": combining low prices with rapid iteration and "good enough" quality to capture emerging-economy markets before expanding globally.

Despite a growing body of research on China's innovation strategy, Lane-Change Overtaking has yet to be systematically conceptualized as a unified strategic framework. Most existing studies focus on sector-specific tactics or policy instruments, leaving the overarching logic fragmented. Furthermore, there is a noticeable absence of comparative studies exploring how this strategy might be adapted by other emerging economies—



particularly those in the Muslim world—where structural constraints and demographic opportunities mirror China’s earlier developmental stage. This represents an important gap in the literature.

In conclusion, existing research provides a robust foundation for understanding China’s development trajectory through the lenses of latecomer advantage, disruptive innovation, ecosystem building, and dynamic capabilities. However, Lane-Change Overtaking warrants deeper conceptual elaboration and broader comparative inquiry. Its potential as a transferable framework for late-developing countries seeking to bypass entrenched global hierarchies offers valuable insights for both academic theory and policy application.

RESEARCH METHODOLOGY

This study adopts a qualitative, interpretive approach to explore China's "Lane-Change Overtaking" strategy. It primarily relies on multiple case studies from key sectors—such as electric vehicles, artificial intelligence, and commercial drones—to understand how China has successfully bypassed traditional development paths through innovation and strategic coordination.

The research is based on secondary data drawn from scholarly literature, official policy documents, industry reports, and credible news sources. These materials were selected to illustrate real-world applications of the core principles underpinning the Lane-Change Overtaking framework.

Guided by theories of latecomer advantage, disruptive innovation, and ecosystem building, the study uses thematic content analysis to identify recurring strategic patterns. While focused on the Chinese experience, the aim is to extract applicable insights for other developing nations, particularly in the Muslim world. The study is exploratory in nature and does not involve primary data collection.

What is the "Huandao Chaoche" Strategy?

"Huandao Chaoche" is a Chinese term that literally means "change the lane to overtake". The term originally referred to a racing technique where a competitor overtakes the car ahead by switching lanes. It has since been extended to describe an economic strategy of accelerating development by forging new paths, enabling latecomers to achieve a "late-mover advantage" in the competition. Unlike the traditional "straight line overtaking" and "on-curve overtaking," which involve competing within the same lane,



Lane-Change Overtaking emphasizes taking a different path – creating a new lane to gain a first-mover advantage.

This concept was popularized by Jack Ma, the founder of Alibaba, China's global e-commerce and technology giant. During the 2017 China International Big Data Industry Expo, Ma (2020) argued that globalization has made competing with global leaders in established industries increasingly difficult. He asserted that rapid technological development has ushered in a new era requiring the redefinition of industries and the creation of novel competitive strategies. Ma advocates for a "Lane-Change Overtaking" strategy – developing new tracks rather than competing in existing ones. He believes that success may arise not from direct competition with established players, but from redefining industries and identifying new paths where one can lead rather than follow.

Lane-Change Overtaking is a systematic innovation strategy whose core lies in opening up new tracks, reshaping industry rules through disruptive innovations, and building new ecosystems to transition from follower to leader. It represents a paradigm shift in strategic thinking, extending beyond mere technological or business model innovation.

Two Stages of the Lane-Change Overtaking Strategy

The Lane-Change Overtaking strategy comprises two distinct yet interconnected phases that work together to enable a transition from follower to leader. The first phase involves identifying and shifting to new tracks with greater developmental potential, while the second focuses on generating sufficient driving force to surpass competitors within these new domains. This dual-phase approach has been fundamental to China's capacity to leapfrog established players across multiple sectors, ranging from electric vehicles to digital technologies. By strategically selecting emerging fields where traditional advantages are less entrenched, and subsequently mobilizing resources to cultivate innovation capabilities, China has repeatedly demonstrated how latecomers can redefine competitive landscapes and attain leading positions that were previously unattainable through conventional development trajectories.

Changing the Lane: Identifying New Tracks

To "change lanes," the first step is to identify a suitable new track. This involves assessing the track's width – the breadth of available opportunities; its road conditions – the level of competition, regulatory environment, and technological landscape; and its sustainability – its potential for long-term growth versus being a short-lived trend.

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Furthermore, internal readiness must align with external opportunities. A country or company cannot assume automatic success from shifting to a new track; it must critically evaluate its own "vehicle condition". This evaluation includes examining technological capabilities, human capital, financial strength, institutional adaptability, and strategic vision. Entering a new domain without these prerequisites can lead to failure, regardless of the track's apparent promise.

China's emergence as a global leader in the electric vehicle (EV) industry serves as a prime example of successful lane change. Since 2009, China has been the world's largest automobile producer (Zhang, 2025). However, despite its size, the industry was constrained by its reliance on foreign technology and a lack of key innovations. The opening of the domestic automotive market to foreign competitors intensified competitive pressure. Simultaneously, challenges such as automobile exhaust pollution, climate change, and energy security created an urgent need for industrial transformation. The EV industry presented an ideal lane for China's strategic shift. This opportunity was supported by long-term global megatrends, including climate change mitigation, energy security demands, and urban air quality improvements. Moreover, the EV sector offered distinct advantages over the internal combustion engine (ICE) market. While the traditional automotive industry was dominated by established players and mature technologies, the EV sector represented a new frontier with fewer entrenched leaders. This emerging market, characterized by rapid growth and evolving technologies, provided an opportunity for new entrants to establish strong positions as the industry developed. Through this strategic move, the Chinese auto industry, which has developed over more than 70 years, has transitioned from follower to leader. By 2023, China had surpassed Germany and Japan to become the world's largest car exporter, with the industry of new energy vehicle (NEV) being key to boosting the rapid growth of China's automobile industry (Feng & Chen, 2024).

Overtaking: Building Driving Force

The core of Lane-Change Overtaking is generating sufficient driving force. Regardless of the chosen lane, achieving and maintaining leadership requires substantial momentum, with innovation capability as the decisive factor. In 2016, the Central Committee of the Communist Party of China and the State Council issued the National Strategy for Innovation-Driven Development. This strategy outlines an ambitious three-step goal: China will join the ranks of innovative countries by 2020; become one of the



leading innovative nations by 2030; and emerge as a global powerhouse in science and technology innovation by 2050 (Three-Step Strategy, 2016).

Since the International Patent Cooperation Treaty came into force in 1978, the United States has consistently led all countries in annual innovation output. However, over the past two decades, China has demonstrated remarkable growth, with a 200-fold increase in Chinese patent applications (Babenko, et al, 2020). China has been the global leader in patent applications since 2011. In 2022, China's international patent applications under the Patent Cooperation Treaty (PCT) represented 25% of the global total. This trend continued in 2023, with Chinese companies comprising four of the top ten PCT applicants worldwide, and Huawei securing the leading position (PCT, 2024).

Key Principles of Lane-Change Overtaking

The Lane-Change Overtaking strategy represents a transformative approach to innovation and development, empowering latecomers to surpass established competitors. This strategy moves beyond incremental improvements, redefining the rules of competition and creating entirely new pathways to success. Innovation is the driving force behind this strategic approach.

Aligning Internal Development Needs with Emerging Global Trends

The "changing lanes to overtake" strategy must begin with a thorough and strategic assessment of internal development needs alongside a forward-looking analysis of global industrial trends. Success hinges on distinguishing visionary moves from potentially costly miscalculations. This is a foundational step to ensure that strategic shifts are grounded in reality and aligned with both domestic capabilities and international trajectories. Internally, identifying structural gaps—whether technological, economic, or societal—is vital, as any directional shift must be built upon a solid foundation. For example, China's challenges in the 2010s with severe air pollution and heavy reliance on oil imports prompted a strategic pivot toward the electric vehicle (EV) industry, addressing both environmental concerns and energy security priorities. Concurrently, global momentum around climate change mitigation signaled the high-potential trajectory of the New Energy Vehicle (NEV) sector, particularly EVs. Aligning internal development needs with such global trends ensures that development strategies are timely and future-proof.

China's strategic focus on EVs is also closely tied to its ambition to achieve industrial upgrading and enhance global competitiveness. Although China's automotive sector historically trailed established global leaders in internal combustion engine (ICE)

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technologies—long dominated by European, American, and Japanese manufacturers—the strategic transition to electric vehicles (EVs) enabled China to circumvent conventional technological constraints and foster indigenous innovation in key domains. This strategic redirection has produced significant changes. China's EV industry has successfully transitioned from serving domestic demand to becoming a global exporter. In 2022, China accounted for 62 percent of global EV production (though this figure also counts Western manufacturers operating in China, such as Tesla) and 59 percent of global EV sales (Stephen, 2024). Similarly, in 2022, China's battery manufacturing capacity stood at 0.9 terawatt hours, roughly 77 percent of the global share. China's two largest EV battery producers—CATL and FDB—alone account for over one-half of global EV battery production, and in total, Chinese manufacturers produce 75 percent of the world's lithium-ion batteries (Qi, 2025). In 2023, this trend of increasing exports culminated in China becoming the world's largest automotive exporter, shipping 4.91 million vehicles in total, including 1.2 million new energy vehicles (NEVs), and surpassing Japan and Germany in annual vehicle exports (Qi, 2025) .

Breaking Path Dependence

Breaking path dependence involves rejecting traditional development trajectories shaped by established players. Instead, it requires creating new paths by redefining problems, industries, or technologies to bypass entrenched competition. This is essential for organizations and nations seeking to overtake established players rather than remain constrained by outdated trajectories. Traditional development paths are often shaped by dominant incumbents who have established industry standards, supply chains, and technological frameworks to their advantage, making it difficult for latecomers to compete equitably. Challengers must therefore redefine the competitive landscape by approaching problems, industries, or technologies from a fundamentally different perspective. This necessitates questioning long-held assumptions, rejecting incremental improvements, and identifying unconventional strategies to bypass entrenched competition.

Breaking path dependence in Lane-Change Overtaking signifies a fundamental shift in how companies approach market disruption and competitive strategy. Rather than adhering to the established paths of industry incumbents, organizations must reimagine the problems they address and their methods of value delivery. This often entails questioning core assumptions about industry boundaries, customer needs, and technological approaches that are deeply embedded in traditional business models.



This approach can render existing competitive advantages obsolete. When a company successfully redefines an industry's parameters, incumbents' accumulated expertise, infrastructure, and market position can transition from assets to liabilities.

TikTok is a compelling case of breaking dependence on traditional paths. Initially founded as Toutiao in 2012 – its Chinese name meaning "the headlines" – the platform emerged during China's mobile revolution. Smartphone penetration rapidly increased from near zero in 2010 to 65% by 2014, providing fertile ground for mobile-first innovation (Toutiao Marketing, 2025). Toutiao's growth resulted from strategic moves that distinguished it from conventional social media platforms. First, it prioritized a seamless user experience. Unlike most apps at the time, Toutiao did not require account registration or password setup; users could begin consuming content immediately upon downloading the app. This frictionless onboarding significantly reduced entry barriers and accelerated adoption. Second, instead of generating its own content, Toutiao positioned itself as a public information and news aggregation platform. As its management famously stated, "We don't produce news content; we are couriers of news content" (Xie & Liu, 2014). This approach allowed it to avoid direct competition with established media companies while leveraging extensive third-party content to attract and retain users. Third, Toutiao utilized AI-driven personalization to revolutionize content delivery. Its algorithms continuously analyzed user interactions—reading habits, content preferences, and engagement patterns—to provide highly customized news feeds. This data-driven approach enhanced user retention and provided the platform with an unprecedented ability to predict trends and adapt to evolving consumer behaviors.

Building on these foundations, Toutiao expanded into short-form video content, leading to the development of TikTok. Unlike traditional social media platforms such as Facebook, which rely heavily on the social graph—connections between friends, family, and acquaintances—to drive content distribution, TikTok adopted a fundamentally different approach. Instead of curating content based on a user's network, TikTok utilized AI-driven recommendations that prioritized user behavior over social connections. Consequently, content discovery was no longer limited to what friends shared but was instead determined by engagement patterns, watch time, and interaction history. More importantly, TikTok positioned itself not merely as a social platform but as an entertainment hub. It seamlessly integrated music, special effects, and filters, encouraging users to produce and upload short videos ranging from 15 to 60 seconds, offering users the opportunity for widespread visibility. This content-centric approach, combined with its robust recommendation engine, resulted in high user engagement.

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Reports indicate that the average user spends 75 minutes daily on TikTok (Toutiao Marketing, 2025). By moving away from the constraints of the social graph and prioritizing AI-driven personalization, TikTok democratized content creation, enabled creators to achieve rapid virality, and redefined the landscape of global entertainment consumption.

Disruptive Innovation and Development Leapfrogging

The concept of “disruptive innovation” was initially introduced in 1997 by Clayton Christensen of Harvard Business School. Disruptive innovation describes the process by which complex or expensive products and services—previously accessible only to high-end consumers or specialized users—are transformed into more affordable, accessible alternatives for a broader population. This transformation fundamentally reshapes markets by challenging and ultimately displacing established industry leaders who fail to adapt. By democratizing access to previously exclusive offerings, disruptive innovations create new value networks that often emerge in overlooked market segments before expanding to capture mainstream customers.²

DeepSeek’s emergence as a disruptive force in AI exemplifies how rethinking fundamental assumptions can transform entire industries. In contrast to U.S. technology companies that invested substantial capital in training large, general-purpose models on cutting-edge GPUs, DeepSeek prioritized software innovation and architectural efficiency. By employing techniques such as 8-bit decimal precision (instead of the industry-standard 32-bit), multi-token processing (analyzing entire sentences rather than individual words), and a Mixture of Experts (MoE) framework that activates specialized sub-models only when necessary, DeepSeek significantly reduced computational demands. This enabled the training of competitive models like DeepSeek-V3 for approximately \$5.6 million—a fraction of the \$40–200 million invested by OpenAI or Google—using less complex GPUs and consuming less energy. These advancements lowered the cost of AI development, democratizing access and destabilizing the market; AI-related stocks experienced substantial losses as investors reassessed the viability of high-cost, GPU-dependent models (Hypotenuse, 2025).

The company’s open-source strategy further amplified this disruption. By releasing models like DeepSeek-R1 under permissive MIT licenses, it fostered global collaboration and adoption, challenging proprietary technology companies (Mackenzie, 2025). This

² Alexandra Twin, "Disruptive Innovation: Meaning and Examples," *Investopedia*, June 20, 2024, <https://www.investopedia.com/terms/d/disruptive-innovation.asp>.



approach not only reduced barriers to entry but also leveraged China's unique circumstances, such as U.S. export controls on advanced chips. By innovating with distributed training across less powerful GPUs, DeepSeek turned limitations into advantages. Its Multi-Head Latent Attention (MLA) architecture optimized memory usage, while domain-specific tuning—tailoring models to industries like healthcare and finance—delivered precision without the resource demands of trillion-parameter general models (Mackenzie, 2025). This adaptability contrasted with the reliance of Western firms on extensive datasets and monolithic architectures, enabling DeepSeek to occupy niche areas that incumbents overlooked.

The speed and scale of this disruption reflect broader principles of latecomer leapfrogging. DeepSeek's \$6 million, two-month development cycle challenged the notion that AI dominance necessitates exorbitant capital or cutting-edge hardware. By redefining resource value—prioritizing software efficiency over GPU capabilities—it introduced uncertainty into Nvidia's market position and revealed the vulnerability of "moats" such as high entry costs. The consequences extended beyond AI companies: energy providers and chip manufacturers faced uncertainty as projections for data centers and high-end hardware demand decreased. However, this disruption also promoted democratization, allowing smaller entities to participate in a field previously dominated by major technology corporations (Mackenzie, 2025).

Ultimately, DeepSeek's trajectory illustrates how constraints can stimulate innovation. Sanctions on China catalyzed a shift toward more efficient, open-source AI, while incumbents—constrained by prior investments in legacy infrastructure—struggled to adapt, mirroring the challenges faced by traditional airlines with the emergence of low-cost carriers. The key insight is that disruption succeeds not by outperforming incumbents within existing parameters, but by redefining those parameters. By reducing costs, embracing open-source principles, and emphasizing precision over generality, DeepSeek not only challenged the established hierarchy in AI but also redefined the potential of the industry.

Ecosystem Building

Lane-Change Overtaking also necessitates the development of an interconnected network comprising partners, suppliers, and complementary businesses that bolster the company's central position. Unlike traditional competition, which prioritizes product superiority, ecosystem building establishes a platform wherein multiple stakeholders



contribute to and rely on the innovating company. This strategy fosters robust network effects and structural advantages that competitors struggle to replicate.

In Lane-Change Overtaking, ecosystem building fulfills three critical functions. First, it erects barriers to entry by establishing standards and dependencies that favor the platform leader. Second, it accelerates innovation through collaborative development across the ecosystem. Third, it facilitates expansion into adjacent markets by leveraging established platform strengths.

Da-Jiang Innovations Science and Technology Co., Ltd. (DJI), the Chinese commercial drone manufacturer and a dominant player in the commercial drone industry in the world, exemplifies this principle in action. Founded in 2006, DJI rose to command nearly 70% of the global drone market by strategically constructing an ecosystem around its technology (Jin 2023).

DJI's success in dominating the drone industry hinged on a calculated balance between open collaboration and closed innovation, a strategy amplified by its integration into Shenzhen's manufacturing ecosystem, its rivalry with GoPro, and its expansion into software-driven ecosystems. The company maintained strict control over proprietary hardware technologies like flight control systems and gimbals, which formed its competitive core. Simultaneously, it outsourced non-critical components to Shenzhen's dense supplier network, leveraging the city's cost efficiency and agility to scale production. This dual approach allowed DJI to focus R&D on high-value innovations while capitalizing on Shenzhen's industrial chains – a combination founder Wang Tao credited as pivotal to outpacing rivals (Jin, 2023. p150). By anchoring itself in Shenzhen, DJI transformed the city's ecosystem into a strategic asset, enabling rapid prototyping, agile supply chains, and cost advantages that global competitors struggled to replicate.

The collaboration and conflict with GoPro exemplified DJI's strategic duality. In 2013, DJI's Phantom drone integrated GoPro's cameras to create the first mainstream "flying camera," tapping into the U.S. action camera market. While this open-field partnership expanded DJI's reach, the company safeguarded its closed-field technologies, such as the drone's stabilization gimbal, ensuring it owned the platform standard for aerial imaging. When GoPro demanded OEM manufacturing, DJI refused, prioritizing control over its intellectual property. This dispute catalyzed DJI's vertical integration: by 2015, it had developed in-house cameras (e.g., Phantom 3, Inspire) and handheld gimbals like the Osmo, embedding proprietary three-axis stabilization into a portable ecosystem. The move not only displaced GoPro but allowed DJI to redefine



industry standards, merging aerial and wearable camera technologies under its brand (Jin, 2023. p151-152).

DJI further solidified its ecosystem by expanding beyond hardware, adopting a platform strategy that opened its software infrastructure to external innovation. The release of its SDK (Software Development Kit) enabled developers to build custom applications atop DJI's technology, while tools like DJI Terra — which converted drone data into 3D digital models—positioned the company as a foundational platform for industries ranging from agriculture to filmmaking. Strategic partnerships with firms like Microsoft, Rosenbauer (firefighting equipment), and Kubota (agricultural machinery) embedded DJI's drones into specialized workflows, allowing partners to combine DJI's capabilities with sector-specific expertise. For example, farmers used DJI-powered systems for precision crop monitoring, while firefighters integrated drones into disaster response protocols (Jin, 2023. p155-156). This systemic coordination—rooted in Shenzhen's manufacturing ecosystem but scaled globally—transformed DJI from a hardware manufacturer into an architectural hub for innovation. By controlling core technologies while fostering external collaboration, DJI created an ecosystem where third-party solutions naturally coalesced around its platform, further entrenching its dominance. The result was a self-reinforcing cycle: DJI's open-closed strategy not only shattered perceptions of Chinese firms as lacking technical prowess but redefined the company as a global innovator, bridging hardware, software, and industry-specific applications under a unified, adaptable ecosystem.

Adapting the Lane-Change Overtaking Strategy - A Path Forward for Muslim Nations

Many Muslim countries today face developmental challenges similar with those encountered by China a few decades ago. Historically, China significantly lagged behind Western nations and Japan in economic, scientific, and technological prowess. Key sectors, such as the automotive industry, were heavily dependent on foreign technologies. For a considerable period, China's primary role in the global economy was largely confined to manufacturing for international brands, lacking mastery over high-value technological processes. The global technological landscape was dominated by established Western multinationals, rendering conventional catch-up strategies exceptionally difficult for a latecomer like China. Entry barriers were substantial, competition was intense, and profit margins were narrow.



Similarly, most of Muslim nations currently struggle with economic systems overly dependent on natural resource exports, limited indigenous innovation capacity, and insufficient technological self-sufficiency. Many face challenges in economic diversification and building competitive advantages in high-value industries, often finding themselves positioned as consumers rather than creators of advanced technologies.

It was within this context that China strategically adopted the concept of (huàndào chāochē) — “Lane-Change Overtaking.” Rather than engaging in direct competition within mature industries, China strategically turned to emerging fields, creating opportunities to leapfrog ahead and fundamentally reshape the competitive landscape. This strategic approach offers valuable insights for Muslim countries striving to overcome their own developmental limitations and forge a path towards sustainable progress and greater economic independence.

Cultivating a Mindset for Creative Disruption and Long-Term Vision

The “Lane-Change Overtaking” strategy firstly requires a shift in mindset, fostering creative thinking to break away from established developmental trajectories. For many Muslim countries, this necessitates a transition from economies heavily reliant on natural resources towards innovation-driven models, mirroring China’s adoption of the National Strategy for Innovation-Driven Development in 2016. This requires Muslim governments to transition their policy focus from short-term gains to long-term sustainability and strategic autonomy. While the initial shift towards an innovation-driven economy may present challenges and costs, it offers the potential for sustained growth and, crucially, greater economic independence. China’s strategic policy shift from being the “world’s factory” to aspiring to become a “world innovation hub” is a text example of this transformative mindset.

Strategic Self-Awareness and Proactive Future Alignment

A critical lesson from China's experience is the imperative for rigorous strategic self-awareness coupled with proactive future-oriented planning. Just as China meticulously assessed its internal strengths and weaknesses alongside external opportunities, Muslim countries must undertake a similar comprehensive evaluation. This involves an honest appraisal of current technological and infrastructural limitations, without allowing these to become impediments to ambition. Simultaneously, it demands a forward-looking approach to identify and strategically align with emerging global trends. For instance, the burgeoning field of artificial intelligence presents a significant



opportunity. While some Western nations and China currently hold a lead, the industry is still relatively new, with fewer established barriers to entry. Several Muslim countries such as Turkey and Malaysia already possess clusters of expertise, skills, and human capital in this field, offering a solid foundation for future development. Furthermore, the dynamic nature of scientific and technological progress means that disruptive innovation from newcomers can rapidly shift the competitive landscape.

Strategic Talent Acquisition and Retention

Innovation is intrinsically linked to talent cultivation and strategic investment. For Muslim countries to effectively implement a "lane-change" strategy, a focused effort to attract and retain top-tier talent is crucial, with a particular emphasis on engaging the global Muslim diaspora. This requires creating an environment that offers not only competitive employment packages but also access to world-class research infrastructure, fosters intellectual freedom, and actively encourages international collaboration.

The double standards of Western countries in upholding human rights – especially in response to the Gaza genocide and the United States' unconditional support for Israel – have deeply disappointed and alienated many talented Muslims living in the West. This presents a unique opportunity for Muslim nations, particularly those offering a stable and conducive environment like Malaysia with its attractive natural surroundings and socio-political stability, to attract these skilled individuals. Moreover, the provision of an Islamic environment and educational opportunities that align with their values can be a significant draw for many Muslim professionals and their families. Proactive policies, including streamlined processes for granting permanent residency and even citizenship to highly skilled individuals, are essential to capitalize on this opportunity.

Establishing Collaborative Regional Innovation Hubs

Strategic investments in the development of regional innovation centers are paramount. Muslim countries can establish such hubs at regional or cross-regional levels to pool resources and expertise. Targeted policies and incentives are necessary to attract strategic investments, particularly from within the Muslim world. These hubs should actively foster meaningful collaborations between government bodies, academic institutions, and industry stakeholders from across the region and beyond, drawing inspiration from the success of China's Special Economic and Technological Zones. The focus of these innovation centers should be on developing key technologies aligned with the specific developmental needs and potential of participating countries.



Building Collaborative Regional Innovation Ecosystems

The "Lane-Change Overtaking" strategy is not a solitary pursuit; it thrives on robust collaboration and the development of strong regional ecosystems. Given that many Muslim countries individually may face limitations in resources and technological capacity, fostering collaboration, particularly among themselves, is crucial for building effective innovation ecosystems. By leveraging complementary strengths and sharing resources, Muslim countries can create more efficient and impactful regional ecosystems. Organizations such as the Organization of Islamic Cooperation (OIC) can play a vital role in facilitating cross-border cooperation and resource sharing in science, technology, and innovation.

Furthermore, these regional ecosystems can be strategically expanded through mutually beneficial collaborations with technologically advanced nations in Europe, Japan, China, and Russia, among others. While these partnerships can provide access to valuable experience and infrastructure, they must be carefully structured to ensure genuine technology transfer, skills development, and the creation of long-term value, moving beyond mere resource exploitation.

CONCLUSION

China's "Lane-Change Overtaking" strategy constitutes a significant paradigm for countries aspiring to accelerate their developmental trajectories and enhance their competitive positioning within the global system. This strategic framework—centered on innovation, the disruption of path dependency, and the construction of dynamic industrial ecosystems—has facilitated China's transformation from a technological follower to a leader in critical sectors. The Chinese experience underscores the importance of aligning internal development needs with global trends, fostering disruptive innovation, and cultivating strategic collaborations across institutional boundaries.

For Muslim-majority countries, the adoption of analogous strategic principles necessitates a deliberate transition toward innovation-driven economies. This includes forward-looking policy planning, targeted human capital development, and the establishment of interconnected regional innovation ecosystems. By internalizing and adapting these lessons to their unique socio-economic contexts, Muslim countries may overcome structural developmental constraints, pursue sustainable advancement, and assert a more influential role in the global knowledge and innovation landscape.



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