

Research on the impact mechanism of cross-border mergers and acquisitions on the transformation and upgrading of manufacturing industry: Taking enterprises in the Pearl River Delta region as an example

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ABSTRACT

The convergence of global value chain restructuring and China's manufacturing upgrades has driven Pearl River Delta (PRD) manufacturing enterprises to view cross-border mergers and acquisitions (M&A) as a key strategy for overcoming development bottlenecks and achieving a leap in performance. This article focuses on the practices of enterprises in the region and systematically analyzes the mechanisms by which cross-border M&A drives manufacturing upgrades. The study finds four core driving mechanisms: technological leapfrogging synergy, brand and channel integration, management paradigm upgrades, and value chain restructuring. On the technological level, reverse spillovers, R&D integration, and ecosystem development significantly enhance enterprises' core technological capabilities; brand and channel integration facilitates rapid access to high-end international markets and increases brand premiums; management upgrades strengthen enterprises' internal driving forces through optimized governance and operational efficiency; and value chain restructuring supports enterprises' migration from low- and mid-end processing to high-value-added segments such as R&D, design, and brand marketing. Empirical evidence shows that the effectiveness of M&A integration depends heavily on strategic fit, cultural integration, resource synergy, and dynamic adaptability. At the same time, geopolitical factors, cultural conflicts, and integration risks pose a triple obstacle. Pearl River Delta enterprises urgently need to strengthen strategic foresight, deepen due diligence, cultivate an inclusive culture, enhance integration capabilities, and leverage regional policies and cluster ecosystems. This study provides theoretical support for understanding the inherent logic of cross-border mergers and acquisitions in promoting manufacturing upgrades, and contributes practical guidance to regional and corporate decision-making.

KEYWORDS

Cross-border mergers and acquisitions; Manufacturing transformation and upgrading; Influencing mechanisms; Technology acquisition; Brand enhancement; Value chain reconstruction; PRD enterprises; Dual circulation

1. INTRODUCTION

As a frontier of China's reform and opening-up and a global manufacturing hub, the Pearl River Delta's development reflects China's integration into the global economy. Leveraging labor costs and open policies, the region has developed an export-oriented processing trade system, becoming the "world's factory." However, with the fading demographic dividend, tightening resource and environmental constraints, intensifying international competition, and the restructuring of the global industrial chain, its reliance on a low-cost, OEM export model faces severe challenges. Climbing up

the middle and high end of the global value chain and achieving the leap from "manufacturing" to "intelligent manufacturing" and "creation" has become a core task for survival and development.

During this transitional period, cross-border mergers and acquisitions have become a key external channel for Pearl River Delta manufacturing companies to acquire core technologies, international brands, and market channels, rapidly enhancing their competitiveness. Compared to lengthy independent development, M&A offers significant efficiency advantages. Examples include Midea's acquisition of Kuka, TCL's integration of Thomson and Alcatel, and numerous "hidden champion" acquisitions of overseas technology companies, all demonstrating how Pearl River Delta companies are leveraging this approach to drive transformation.

However, cross-border M&A inherently carries significant investment and risk. A successful transaction is only the starting point; the effectiveness of integration is the core value. Integration challenges such as cultural conflict, management friction, technological assimilation difficulties, and synergy failures often lead to M&A failures and even backfire on companies. Therefore, it is crucial to deeply analyze the specific mechanisms by which cross-border M&A drives manufacturing upgrades in the Pearl River Delta, clarifying key pathways and potential risks. This study focuses on systematically analyzing these underlying mechanisms, drawing on practical experience from local cases, and providing theoretical and practical support for regional enterprises to effectively utilize cross-border M&A and achieve high-quality development.

2. CORE MECHANISMS OF CROSS-BORDER M&A DRIVING THE TRANSFORMATION AND UPGRADING OF THE PEARL RIVER DELTA'S MANUFACTURING INDUSTRY

The Pearl River Delta's manufacturing industry is leveraging cross-border mergers and acquisitions to drive transformation and upgrading. This success stems from the synergy of multiple core mechanisms:

Technological Leapfrogging and Integrated Innovation: Acquisitions of leading technology companies in developed countries provide Pearl River Delta manufacturers with direct access to cutting-edge technologies, core patents, and high-end talent, significantly accelerating the pace of technological catch-up. A typical example is Midea's acquisition of Kuka, which not only secured access to cutting-edge robotics technology but also, through the deep integration of its technology with a vast array of local applications, drove intelligent production line upgrades and innovation tailored to local needs. It even spawned new technological paths, helping companies transform from followers to leaders in specific sectors [1].

Brand Reshaping and Global Network Integration: To overcome low-end lock-in and international market barriers, acquisitions of established international brands have become a key strategy. Pearl River Delta companies are leveraging this to rapidly enhance their international brand image and premium pricing, while effectively integrating their established global distribution and service systems. For example, TCL, through the integration of Thomson televisions and Alcatel mobile phones, successfully built a global brand matrix and market channels, laying a solid foundation for its transformation into a global smart technology company.

Internalizing and Reinventing Management Experience: Cross-border mergers and acquisitions provide a valuable window into advanced management practices in developed countries. After acquiring Volvo, Geely deeply internalized its global operations system, stringent quality control standards, and R&D processes, systematically incorporating these experiences into its own R&D, manufacturing, and quality control systems, significantly improving operational efficiency and product quality. This has become a core driver supporting its brand's upward trajectory and international competitiveness.

Restructuring Value Chain Positioning and Value Capture: Through vertical or high-value-added mergers and acquisitions, Pearl River Delta companies are able to move upstream and break free from

their reliance on low-end manufacturing. Mindray Medical's series of overseas M&A strategies clearly demonstrate this: By integrating overseas companies with core technologies, Mindray not only strengthened its high-end R&D capabilities but also established a global marketing and service network, successfully transforming itself from a device manufacturer to a comprehensive solutions provider, significantly enhancing its strategic position and value capture capabilities in the global value chain.

The key lies in synergy: These four mechanisms support each other. Technological advancement is the cornerstone of brand upgrading; management optimization ensures efficiency and quality, supporting growth along the value chain; and global network integration is key to market expansion and value realization. The successful transformation of the Pearl River Delta's manufacturing industry is a comprehensive reflection of the deep coordination of these mechanisms, overcoming obstacles and releasing merger and acquisition potential.

3. ANALYSIS OF TYPICAL PRACTICES AND EFFECTIVENESS OF CROSS-BORDER MERGERS AND ACQUISITIONS BY PEARL RIVER DELTA ENTERPRISES

Cross-border mergers and acquisitions by companies in the Pearl River Delta present a diverse range of cases, with varying motivations, integration, and outcomes, providing rich material for research.

A representative example of technology-driven mergers and acquisitions: Midea's acquisition of Kuka. Midea anticipated the trend toward intelligent manufacturing and aimed to rapidly acquire cutting-edge technologies, core patents, and high-end talent in the industrial robotics field. Following the acquisition, Midea adopted a prudent strategy: ensuring Kuka's operational independence while fostering technological, market, and application collaboration between the two parties. Significant results: Midea's manufacturing automation levels surged, Kuka's technology was rapidly implemented within China's vast manufacturing system, and joint development of products better suited to local needs enabled Midea to successfully enter the new industrial robotics market, accelerating its transformation into a global technology group [2]. Kuka, in turn, received funding and extensive market support from Midea.

A typical example of brand- and market-driven mergers and acquisitions: TCL's series of mergers and acquisitions. To overcome bottlenecks in internationalization, TCL acquired Schneider Electric, Thomson's color TV business, and Alcatel's mobile phone business, targeting international brands, established channels, and market share. However, initial integration faced significant challenges: misjudgment of Thomson's loss-making businesses and outdated technology, underestimation of European market regulations, labor costs, and cultural conflicts, resulting in a costly outcome. After years of arduous adjustments, TCL has gradually mastered the art of cross-border brand management, channel integration, and cultural integration. The ultimate results are evident: through continuous investment and optimization, TCL has successfully transformed the resources of acquired brands into global competitiveness, particularly in the television and mobile phone sectors, establishing a broad international presence and laying the foundation for its growth into a global smart device giant. This profoundly reveals the risks and long-term benefits of such mergers and acquisitions.

Furthermore, technology-enhancing mergers and acquisitions by numerous "hidden champions" in the Pearl River Delta are equally crucial. These companies, with strengths in niche areas, often strategically acquire small overseas technology companies with specialized processes or patents to overcome technological bottlenecks or enter high-end markets. These integrations focus on technology assimilation, localized production, and R&D integration. Successful integrations can significantly enhance product performance, attract high-end customers, strengthen bargaining power, and achieve a leap up the value chain. This is an effective path for technology-intensive SMEs to upgrade their businesses.

4. KEY DRIVERS OF THE EFFECTIVE INFLUENCING MECHANISM

Whether cross-border mergers and acquisitions can drive manufacturing upgrades in the Pearl River Delta depends crucially on the effective operation of core elements after the acquisition.

The primary prerequisite is a strong strategic fit and precise objectives. M&A must be closely aligned with the company's transformation strategy—is it about acquiring technology, building a brand, expanding the market, or strengthening management? Objectives must be clear, specific, and measurable. Successful M&A cases demonstrate strong synergies, with the target directly addressing weaknesses or opening up new growth areas. M&A with vague objectives or focused solely on "expansion" often leads to wasted resources and integration difficulties. A thorough strategic assessment upfront to ensure a deep alignment between the target business and the company's long-term vision, core capabilities, and market positioning is the foundation for value creation.

Deep cultural integration is the "soft power" that determines success or failure. Pearl River Delta companies differ significantly from their European, American, Japanese, and Korean counterparts in management philosophies, decision-making methods, and communication habits. Improperly handling cultural clashes can easily lead to talent loss, poor collaboration, and management failures, ultimately derailing the project. Successful integration requires dedicated effort: conducting cultural due diligence to identify risks; developing a systematic integration plan to foster mutual understanding; establishing inclusive communication mechanisms; and management leading by example to promote open integration. For example, when Geely integrated Volvo, it advocated "Geely is Geely, Volvo is Volvo." While respecting its cultural independence, it fostered collaboration through platforms like joint R&D, a successful practice.

Efficient resource integration and synergy are the hard work required to realize potential. This requires:

Technology R&D: Establishing a shared platform to promote knowledge transfer and joint innovation, avoiding duplication of investment.

Operational Supply Chain: Optimizing global presence, sharing procurement channels, standardizing standards, reducing costs and increasing efficiency.

Market Branding: Clearly planning the brand portfolio and positioning, integrating channels and customer resources, and enabling cross-selling.

Human Resources: Stabilizing the core team, establishing fair incentives, and promoting talent mobility and knowledge sharing. This requires strong project management and flexible execution.

Strong adaptability and continuous learning are essential for coping with change and achieving long-term value. The post-merger environment is volatile. Companies must possess keen insight to identify changes, flexible adaptability to revise strategies, and continuous innovation to generate new advantages. It is essential to establish mechanisms for learning from, reflecting on, and solidifying knowledge from M&A experiences, transforming each integration into organizational capabilities to support future strategies. As "latecomers" in international mergers and acquisitions, enterprises in the Pearl River Delta particularly need to hone this dynamic ability to manage complex integration [3].

5. MAJOR CHALLENGES AND RISKS OF CROSS-BORDER MERGERS AND ACQUISITIONS

Pearl River Delta manufacturing companies are seeking upgrades through cross-border mergers and acquisitions, but the process is complex and risky, requiring precise responses to core challenges.

Integration difficulties are paramount. Cultural differences can easily lead to management conflicts, employee resistance, and the loss of key talent, weakening organizational capabilities. Different

management styles lead to inefficiency and internal friction. Expected technology transfer, channel sharing, and supply chain synergy often fail, resulting in a "1+1 less than 2" situation or even value destruction. These issues often stem from insufficient due diligence, poor planning, poor execution, or undue optimism, as evidenced by TCL's initial losses in its acquisition of Thomson.

High costs and financial pressures follow. When bidding for high-quality targets, international competitors often force Pearl River Delta companies to pay excessive premiums. The huge capital, agency fees, and investment required for the transaction itself and subsequent integration can easily drive up debt and tighten cash flow. This not only squeezes R&D and marketing investment but can also trigger a debt crisis if earnings fall short of expectations, becoming a heavy burden on continued operations.

Geopolitical and stringent scrutiny risks are escalating. Regulators in the US and Europe are tightening their scrutiny of Chinese mergers and acquisitions involving key technologies, infrastructure, or data, with an increasing number of rejections or the imposition of stringent conditions [4]. Amidst the trend of technological decoupling, Western governments are erecting walls, hindering Pearl River Delta companies' access to cutting-edge technology through mergers and acquisitions. This has led to lengthened transaction cycles, increased uncertainty, and even the extreme risk of forced asset divestitures.

Inadequate technological assimilation and innovation threaten long-term value. Acquiring technology is only the starting point; the ability to absorb and innovate further is crucial. Companies with weak R&D foundations, talent shortages, and inadequate innovation mechanisms are prone to "digestion"—technology stuck in application, struggling to develop independent iteration capabilities, and ultimately relying on external resources, deviating from the original purpose of technological independence. Over-reliance on mergers and acquisitions can also stifle internal innovation.

6. STRATEGIES AND SUGGESTIONS FOR PROMOTING SUCCESSFUL CROSS-BORDER MERGERS AND ACQUISITIONS FOR PEARL RIVER DELTA ENTERPRISES TO PROMOTE UPGRADING

To drive the upgrading of the Pearl River Delta's manufacturing industry, the effective use of cross-border mergers and acquisitions requires a dual focus on corporate capabilities and the regional ecosystem.

Enterprises must strengthen their internal capabilities:

Strategy First, Careful Investigation: Mergers and acquisitions must be anchored in long-term strategies, with clear objectives aligned with transformation. In-depth due diligence goes beyond financial and legal considerations, focusing on technology transferability, genuine brand value, secure market access, cultural fit, potential risks, and management team capabilities to avoid blind decisions.

Plan First, Steady Integration: Develop a detailed integration plan prior to closing, clearly defining the scope, steps, and responsibilities. For complex mergers and acquisitions, adopt a gradual approach, prioritizing breakthroughs in key areas to build confidence before deepening integration. Establish a dedicated integration office for efficient coordination.

Build a Cultural Foundation, Break Down Communication Barriers: Consider cultural integration the key to success. Identify differences and common ground, and systematically promote integration. Open two-way communication channels, disseminate information promptly and transparently, listen to employee voices, build mutual understanding, and respect the legitimate independence of the acquired party.

Technology Digestion, Leap Forward to Innovation: M&A is the starting point for technological advancement. Invest resources to build teams and vigorously promote the digestion, local adaptation,

and knowledge sharing of imported technologies. Encourage application innovation and iteration, achieving a qualitative shift from "acquisition" to "leading."

Dynamic risk control, proactive preparedness: Systematically identify risk points throughout the entire process, establish early warning and response mechanisms, and strengthen risk control talent. Maintain high vigilance against geopolitical risks and prepare contingency plans.

Regional policies and ecosystems require strong support:

Optimize policy supply: Local governments must provide key support: Establish M&A guidance/risk compensation funds to reduce costs; streamline overseas investment processes to improve efficiency; provide high-end consulting services in legal, financial, tax, and valuation areas; and organize experience sharing and talent training.

Build a professional service platform: Leveraging the Pearl River Delta's industrial and service advantages, integrate information, financing, legal, and talent resources to create a "one-stop" platform. Attract top international intermediaries to establish a case database to provide information support [5].

Stimulate cluster synergy: Encourage industry associations and leading companies to take the lead in organizing industry chain enterprises to "go global together" to reduce risks, increase bargaining power, and promote the sharing of results. Build a post-merger collaboration network within the cluster. Deepen international cooperation and regulatory alignment: Actively participate in international regulatory negotiations at the provincial level to secure high-level investment protection. Leverage Hong Kong and Macao's international networks and regulatory experience. Strengthen communication with governments and chambers of commerce in key investment countries to optimize the external environment.

7. CONCLUSION

This study focuses on manufacturing enterprises in the Pearl River Delta (PRD), exploring how cross-border mergers and acquisitions (M&A) drive transformation and upgrading. Analysis reveals that this exogenous path primarily operates through four interrelated mechanisms:

Technological Leapfrogging: Directly acquiring key technologies through M&A, integrating global R&D resources, and accelerating technological upgrading and collaborative innovation.

Brand and Channel Upgrading: Rapidly acquiring international brand assets and established distribution networks, penetrating high-end markets, and enhancing brand value.

Management Optimization: Introducing and integrating advanced international management concepts and processes to improve governance, operational efficiency, and global resource allocation capabilities.

Value Chain Restructuring: Extending to high-value-added links such as upstream R&D and design, core components, or downstream brand marketing, freeing companies from low-end processing lock-in, enhancing value capture and market share.

The practices of PRD enterprises have validated the effectiveness of these mechanisms. However, cross-border M&A carries significant risks: integration failure, financial burdens, tightening geopolitical scrutiny, and difficulties in technology assimilation can all derail the intended transformation and even lead to crises.

Thus, PRD enterprises need to adopt a systematic strategy: strengthening strategic guidance and conducting in-depth due diligence; meticulously planning integration, with particular attention to cultural integration; building capabilities for technology assimilation and re-innovation; and establishing a dynamic risk management system. At the regional level, we should optimize policy

support, build professional platforms, leverage the advantages of cluster synergy, deepen alignment with international rules, and foster a favorable ecosystem.

Against the backdrop of global economic adjustments and China's "dual circulation" strategy, cross-border mergers and acquisitions remain a key tool for the Pearl River Delta's manufacturing industry to break through bottlenecks, connect with global high-end resources, and achieve a leap up the value chain. Only by deeply understanding these mechanisms and prudently addressing risks can the Pearl River Delta steadily leverage external resources to stimulate internal momentum, complete its transformation from a "world factory" to a "global hub of intelligent manufacturing innovation," and contribute its experience to the high-quality development of China's manufacturing industry.

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