

A Study on the Success Strategies of Chinese Aerial Work Platform Manufacturers in the Korean Market: Focusing on the Case of Dingli

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Received: 07 January 2025

Revised: 15 May 2025

Accepted: 30 November 2025

Published: 27 February 2026

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Abstract: Background/Purpose: The Korean Aerial Work Platform (AWP) market has grown significantly since the 1990s, driven by demands for improved safety and efficiency in construction and industrial sectors. Chinese manufacturers, particularly Dingli, have disrupted this market. This study examines how Dingli achieved market leadership in Korea, providing strategic insights for global firms entering competitive markets. Study Design/Methodology/Approach: This is a qualitative case study analyzing Dingli's Korean market entry and growth strategy through the lens of the 4P marketing mix framework (Product, Price, Place, Promotion). Data were gathered through industry reports, market data from the Association of Equipment Manufacturers (AEM), and secondary sources covering the period 2016–2024. Findings: Dingli entered the Korean market in 2016 but initially struggled due to quality concerns. Following the COVID-19 pandemic, the company implemented aggressive marketing, improved product quality, established local inventory, and offered flexible payment terms. By 2023, Dingli achieved a 29% market share, surpassing established North American manufacturers. Originality/Value: This study provides a comprehensive 4P analysis of a Chinese manufacturer's successful penetration of a mature, competitive market previously dominated by premium Western brands. The findings offer actionable lessons for global companies seeking to enter the Korean market or similar competitive environments.

Keywords: Aerial Work Platform; Korean market entry; Dingli; 4P marketing mix; Chinese manufacturer; market strategy

1. Introduction

The Korean Aerial Work Platform (AWP) market has undergone substantial transformation since the 1990s. Prior to this period, scaffolding (Scaffold) was the predominant method for elevated work in construction sites, factories, and shipyards. However, scaffolding presented significant drawbacks including safety risks, inefficiency, long installation and dismantling times, weather vulnerability, and excessive space requirements. As large-scale government-driven infrastructure projects—such as the Incheon International Airport construction (1996), the Seoul Metro Lines 5–8 expansion, and the Busan New Port construction—were initiated alongside a booming shipbuilding industry, demand arose for safer, more efficient equipment (Kim, 2023).

AWPs began to be imported from abroad in earnest in the 1990s. Initially, only equipment manufactured by advanced-economy companies such as Snorkel, Genie, JLG (USA), and Skyjack (Canada) was distributed domestically through local importers dealing primarily in used equipment. In the early 2000s, Genie, JLG, Skyjack, and Haulotte (France) established direct sales entities or dealerships in Korea, leading to increased sales of new equipment. Although the 2008 global financial crisis temporarily reduced demand, the market resumed its upward trajectory and continued to grow through the 2010s. The COVID-19 pandemic (2020) further accelerated demand, fueled by major construction projects including logistics centers (e.g., Coupang), large semiconductor fabrication facilities (Samsung Electronics, SK Hynix), and the third-phase new town development projects in the Seoul metropolitan area (AEM, 2023).

Against this backdrop, China's Dingli became the first Chinese AWP manufacturer to enter the Korean market in

2016. Despite initial difficulties related to product quality and limited customer trust, Dingli reversed its fortunes after 2020, implementing aggressive sales strategies and delivering improved product quality. By 2023, Dingli had achieved the top market share position (approximately 29%), surpassing long-dominant North American manufacturers.

This study analyzes Dingli's strategic approach to market entry and growth in Korea, with the objective of extracting transferable lessons for global firms seeking to penetrate competitive, mature markets. The analysis is organized as follows: Section 2 presents the theoretical framework and background on the AWP industry; Section 3 provides the case analysis; and Section 4 offers conclusions, implications, and research limitations.

2. Theoretical Framework

2.1. Understanding the Aerial Work Platform Industry

2.1.1. Definition of Aerial Work Platforms

An Aerial Work Platform (AWP)—also known as a Mobile Elevating Work Platform (MEWP)—is equipment designed to provide temporary access for workers to elevated areas. Structurally, AWP's consist of a platform where workers stand, a lifting mechanism that allows the platform to reach working height, and self-propulsion capability (self-propelled), enabling the equipment to move independently on a worksite.

In Korea, AWP's are classified under the Occupational Safety and Health Act (산업안전보건법) as 'vehicular cargo handling and transport machinery – aerial work platforms,' though they are not included in the Construction Machinery Management Act (건설기계관리법) as registered construction machinery, unlike excavators, cranes, or forklifts. Table 1 summarizes the relevant classification distinctions.

Table 1. Classification of construction machinery under the Occupational Safety and Health Act and the Construction Machinery Management Act.

산업안전보건법	건설기계관리법	
양중기	이동식 크레인	07 기중기 (궤도 또는 타이어식) 중 스스로 이동하면서 중량물을 매달아 상하좌우로 운반하는 설비. 단, 드래그라인, 크랩셀 등 크레인형 굴착기계는 차량계 건설기계로 분류
	타워크레인	27 타워크레인 (원동기 또는 전동기를 가진 것)
	건설용 리프트	-
차량계 하역운반기계	화물자동차 (트럭)	-
	고소작업대	-
	지게차	04 지게차 (타이어식)
차량계 건설기계	도저형 건설기계	01 불도저 (궤도 또는 타이어식)
	굴착기	02 굴착기 (궤도 또는 타이어식)
	로더	03 로더 (궤도 또는 타이어식)
	스크레이퍼	05 스크레이퍼 (자주식)
	덤프트럭	06 덤프트럭 (12톤 이상)
	모터그레이더	08 모터그레이더 (자주식)
	콘크리트 믹서트럭	14 콘크리트 믹서트럭 (자주식)
	콘크리트 펌프카	15 콘크리트 펌프 (원동기를 가진 이동식, 트럭 적재식)

	항타 및 항발기	23 항타 및 항발기 (원동기를 가진 해머중량 0.5톤 이상)
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Source: 건설공무_PRO (2023).

2.1.2. Types of Aerial Work Platforms

AWPs can be classified by power source (battery/electric, diesel engine, or hybrid), terrain type (standard or rough terrain), or structural form. The most common classification by form distinguishes between vehicle-mounted (truck-mounted, 고소작업차/스카이차) and self-propelled (자주식) units. Self-propelled AWP—the primary focus of this study—are further divided into three main types: Scissors Lifts, Boom Lifts (subdivided into Articulated/Knuckle and Telescopic), and Vertical Lifts.

Figure 1. Classification of self-propelled aerial work platforms by structural type (Source: Dingli official website; Horyong special purpose vehicle website).

2.1.3. Use and Distribution of Aerial Work Platforms

AWPs are widely used across sectors including construction (facade work, painting, ceiling installation, electrical wiring), manufacturing (facility inspection, maintenance, warehouse operations), energy (power line and wind/solar facility maintenance), telecommunications (antenna installation), aerospace (aircraft maintenance), shipbuilding, agriculture, events, and general building maintenance.

The dominant distribution channel is rental: rental companies purchase AWP from manufacturers and lease them to construction contractors. This rental model accounts for approximately 90% of total AWP distribution in Korea. According to one industry report, the Korean AWP rental market was valued at approximately USD 530.57 million in 2023 and is projected to grow at a CAGR of 9.9% to reach USD 1.36 billion by 2033 (SPHERICAL INSIGHTS, 2024).

A smaller segment (approximately 10%) involves direct purchase by non-construction sector enterprises (manufacturers, energy companies, airports, shipyards) for self-managed, in-house use. This segment is gradually shifting toward rental due to maintenance and staffing considerations.

2.2. Korean AWP Market Overview

2.2.1. Market Size

Driven by infrastructure development, industrial expansion, and increased focus on workplace safety, the Korean AWP market has grown continuously since the 1990s. Measured in terms of new equipment sales by manufacturers active in Korea, the market grew from approximately USD 18 million in 2013 to USD 58 million in 2019, and reached USD 103 million in 2023 (AEM, 2023).

2.2.2. Competitive Landscape

Since 2000, when Genie established its Korean sales subsidiary, manufacturers have entered the Korean market directly. JLG, Skyjack, and Haulotte followed between 2000 and 2010. Dingli became the first Chinese manufacturer to enter Korea in 2016. Subsequently, Sinoboom, XCMG, LGMG, Mantall, and Zoomlion entered in the late 2010s and after 2020. By 2023–2024, JCB (UK), Sunward (China), and Noble Lift (China) had also entered the market. Table 2 summarizes the current competitive landscape.

Table 2. Foreign AWP manufacturers currently operating in the Korean market.

제조기업 (Company)	국가 (Country)	형태 (Type)
Genie	미국 (USA)	한국 판매 법인
JLG	미국 (USA)	대리점
Skyjack	캐나다 (Canada)	한국 판매 법인
Haulotte	프랑스 (France)	대리점
Dingli	중국 (China)	한국 판매 법인

LGMG	중국 (China)	한국 판매 법인 & 대리점
Mantall	중국 (China)	한국 판매 법인
Sinoboom	중국 (China)	대리점
Zoomlion	중국 (China)	대리점
XCMG	중국 (China)	대리점
Sunward	중국 (China)	대리점
JCB	영국 (UK)	대리점
Noble Lift	중국 (China)	한국 판매 법인

Source: Authors' compilation based on industry data.

2.3. The 4P Marketing Mix Framework

The 4P Marketing Mix, introduced by E. Jerome McCarthy in the 1960s, provides a systematic framework for analyzing marketing strategy. The four elements—Product, Price, Place, and Promotion—represent the core controllable variables a firm deploys to address market needs. This framework has been widely applied in market entry research and is particularly useful for analyzing how a new entrant positions itself against established competitors (Kim, 2023). In this study, the 4P framework structures the analysis of Dingli's Korean market strategy.

3. Case Analysis

3.1. Introduction to Dingli

Dingli Machinery Co., Ltd. (鼎力机械) was established in 2005 in Huzhou, Zhejiang Province, China. As a specialist AWP manufacturer, Dingli produces Boom Lifts, Scissors Lifts, Vertical Lifts, and Stock Pickers. The company employs approximately 5,000 staff and exports to over 80 countries worldwide. Dingli holds 265 patents (including 120 invention patents and 81 international patents) and has independently developed over 200 AWP models. Its products carry European CE and American ANSI certifications.

Dingli emphasizes eco-friendly product development and carbon emission reduction, integrating smart manufacturing technology. The company has made strategic investments in MAGNI (Italy), MEC (USA), and TUPEN (Germany), and operates R&D centers in China, Italy, and Germany. As of 2022, Dingli ranked 5th globally among AWP manufacturers by turnover (USD 871 million), as shown in Table 3.

Table 3. Global AWP manufacturer rankings by turnover, 2022.

Rank 2022	Rank 2021	Company	2022 Turnover (USD mil)	2021 Turnover (USD mil)	12-Month % Change
1	1	JLG Industries	2,408	2,102	14.2%
2	2	Terex AWP (Genie)	1,801	1,579	1.4%
3	5	XCMG	1,058	753	40.4%
4	4	Skyjack	906	788	15.0%
5	3	Dingli	871	799	9.0%
6	6	Haulotte	790	646	22.2%
7	9	Zoomlion	735	536	37.0%
8	8	Time Manufacturing	725	610	20.5%

9	7	LGMG	673	628	7.2%
10	10	Aichi Corporation	592	525	12.4%

Source: Youdale (2023). *accessM20: World's top access equipment manufacturers in 2023*. Access International.

3.2. Dingli's Market Share in Korea

Dingli entered the Korean market in 2016, initially selling to a limited number of rental companies including Lotte Rental. However, quality and service issues, combined with a perception of Chinese equipment as low-quality and low-cost, resulted in poor sales performance. North American manufacturers (Genie, JLG, Skyjack) maintained a combined market share of approximately 90% at that time.

From the second half of 2022, Dingli intensified its sales efforts, and market share began to grow. Key enabling factors included stabilized product quality after several years of iteration, COVID-19-related supply chain disruptions that delayed competitors' deliveries while Dingli maintained relatively short lead times, and competitive pricing combined with flexible payment terms. In 2019, Dingli held approximately 14% market share (USD 9 million of a USD 57.6 million market). By 2023, the total market had grown to USD 103 million, and Dingli achieved USD 20 million in sales, representing a 20% market share and the number-one ranking among all AWP manufacturers in Korea.

3.3. Dingli's Marketing Strategy: A 4P Analysis

3.3.1. Product

Dingli produces over 200 AWP models across all major categories. In Korea, the primary products are Scissors Lifts and Boom Lifts. Dingli differentiates its Scissors Lift lineup by power source—diesel engine, battery (electric), and hybrid (engine + electric)—with maximum working heights of 32.0 m, 35.0 m, and 37.0 m, respectively. These specifications substantially exceed competitor offerings (typically 18 m for engine-type and 16 m for electric Scissors Lifts), providing a meaningful competitive advantage for high-reach applications.

A key element of Dingli's product strategy is responsiveness to Korean customer requirements. When customers request specific configurations, options, or improvements, Dingli incorporates these inputs into new models or hardware modifications within months to approximately one year. Moreover, Dingli proactively develops innovative products: for example, its Oil-free Scissors Lift (which eliminates hydraulic oil for ease of maintenance) and models with working heights exceeding 30 m were developed in advance of explicit customer demand, positioning Dingli as a market innovator rather than a follower.

3.3.2. Price

When Dingli entered the Korean market, it priced its equipment at 20–30% below comparable North American brands. As competitors adjusted their own pricing, the gap narrowed to approximately 10–20% depending on model. This pricing advantage became particularly significant during the COVID-19 period, when the continued appreciation of the US dollar drove up KRW-equivalent prices for Genie, JLG, and Skyjack equipment (which is invoiced in USD), while Korean rental company margins were already compressed by lower rental rates.

Beyond list price, Dingli offered uniquely favorable payment terms: six months deferred payment at a time when Genie offered approximately two months and JLG offered one month. This arrangement allowed rental companies—many of which are small owner-operated businesses with limited cash reserves—to generate rental income over six months before making payment, substantially improving cash flow. Additionally, Dingli absorbed ancillary costs such as option installation fees and equipment transport costs, and offered the option of contracting in Chinese yuan (CNY) to mitigate exchange rate risk for Korean buyers.

Dingli also maintained price stability across model years, unlike competitors who raised prices annually or upon new model releases. This predictability further enhanced its appeal to cost-conscious rental operators.

3.3.3. Place (Distribution and Logistics)

Korean rental companies frequently require rapid delivery—often placing orders and expecting delivery within days. In Dingli's early years, with low sales volumes, equipment was shipped from China following order placement and delivered directly to customers' depots after customs clearance at Busan Port. As sales volume grew, Dingli established a local depot in Anseong, Gyeonggi Province in 2022—a logistics hub strategically located near a concentration of AWP rental companies—where it maintains stock of key models and spare parts for rapid delivery. For urgent orders where local stock is unavailable, equipment continues to be shipped direct

from China.

In addition to equipment supply logistics, Dingli's after-sales service model supports its distribution strategy: when delivering equipment, Dingli provides key spare parts at no charge, enabling rental companies to carry out rapid field repairs without waiting for parts supply from the manufacturer. This policy significantly reduces equipment downtime and supports rental operators' asset utilization and profitability.

3.3.4. Promotion

Dingli's promotional strategy focused on overcoming skepticism about Chinese product quality, particularly among larger, more sophisticated rental companies. A pivotal milestone was securing a large-volume contract with AJ Networks—Korea's largest AWP rental company—which required equipment to support Samsung Electronics' semiconductor plant construction in Pyeongtaek. Dingli offered a three-year warranty (vs. one-to-two years from competitors) and, as the first AWP manufacturer in Korea to do so, proposed a buyback arrangement (whereby Dingli would repurchase the equipment from AJ Networks after an agreed period). These terms addressed quality and residual value risk, enabling the contract to proceed. The contract's scale—and AJ Networks' status as the market leader—functioned as an implicit endorsement of Dingli's quality across the rental industry, triggering follow-on purchases by other operators.

Beyond direct sales promotion, Dingli engages in relationship-building initiatives with Korean customers, including invitations to international trade exhibitions and factory visits to Dingli's headquarters in China. These visits provide customers with direct exposure to Dingli's manufacturing capabilities and corporate culture, reinforcing trust and brand loyalty.

4. Discussion

Dingli's trajectory in the Korean AWP market illustrates several broader strategic lessons for market entry in mature, quality-sensitive markets. The company's initial failure to gain traction—despite competitive pricing—confirms that price alone is insufficient to displace entrenched incumbents when quality credibility is absent. Dingli's reversal, however, demonstrates that sustained quality improvement combined with strategic relationship-building can overcome reputational deficits within a compressed timeframe.

The COVID-19 pandemic created structural disruptions that provided Dingli with a window of opportunity: supply chain delays at North American competitors temporarily equalized the competitive landscape on delivery reliability, allowing Dingli to demonstrate its operational capabilities to risk-averse customers. This finding echoes broader observations in the market entry literature that exogenous shocks can serve as market entry catalysts for challengers (Kim, 2023).

The AJ Networks transaction merits particular attention as a marketing mechanism. By targeting the market leader and offering terms (extended warranty, buyback) specifically designed to neutralize that buyer's primary concerns, Dingli transformed a single large transaction into a market-wide credibility signal. This 'lighthouse customer' strategy—securing a high-visibility reference account to overcome market skepticism—has parallels in industrial marketing and technology diffusion literature.

Dingli's localization of product development also represents a sophisticated approach. Rather than selling standardized global products, the company invested in rapid iteration based on Korean customer feedback and proactive market monitoring. The development of Oil-free Scissors Lifts and ultra-high-reach models ahead of explicit market demand reflects a 'lead user' approach to product innovation that enabled Dingli to move from market follower to market leader in specific product segments.

5. Conclusions

This study examined the strategic factors underlying Dingli's remarkable growth in the Korean AWP market, from an initial failed entry in 2016 to market leadership with approximately 20–29% share by 2023–2024. The analysis, structured around the 4P marketing mix, identifies the following principal success factors:

- **Product:** Rapid, customer-responsive product development and proactive innovation in specifications (working height, oil-free systems) differentiated Dingli from competitors selling standardized global offerings.
- **Price:** Consistent pricing 10–20% below North American competitors, combined with price stability across model years and absorption of ancillary costs, provided a compelling value proposition, particularly for smaller rental operators with constrained margins.

- Place: Establishment of a local inventory depot in Anseong enabled Dingli to deliver on Korean customers' expectation of rapid fulfillment. Parts supply at the point of equipment delivery further distinguished Dingli's after-sales service model.
- Promotion: A focused 'lighthouse customer' strategy—targeting the market leader with customized terms (extended warranty, buyback) to generate an industry-wide credibility signal—was pivotal in reversing Dingli's initial quality perception deficit. Customer engagement through factory visits and trade show invitations reinforced long-term loyalty.

Beyond these 4P elements, Dingli's success reflects its ability to exploit a structural opportunity created by COVID-19-related supply disruptions and to sustain commitment to the Korean market through a period of initial underperformance. The case offers broadly applicable lessons for global firms—particularly those from emerging markets—seeking to enter developed markets characterized by strong incumbent brands and quality-sensitive buyers.

5.1. Research Limitations and Future Directions

This study is subject to several limitations. First, market share and revenue data are drawn from secondary sources and industry reports; primary data from Dingli or its competitors were not directly accessible, which may affect data precision. Second, the analysis focuses on a single case, limiting generalizability. Third, the study period (2016–2024) captures only Dingli's initial growth phase; longer-term sustainability of its market position remains to be examined.

Future research should apply quantitative analysis of financial and operational performance data, conduct comparative analysis across multiple Chinese AWP manufacturers entering the Korean market, and extend the time horizon to assess whether Dingli's market share gains are durable in the face of competitive responses from North American and European manufacturers. Cross-industry and cross-country comparative studies would also be valuable in assessing the transferability of the strategic lessons identified here.

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<그림 1> 고소작업대 종류

차량 탑재형	자주식 (Self-propelled)			
고소작업차/ 스카이차 (Sky)	시저스 리프트 (Scissors Lift)	붐 리프트 (Boom Lift)		버티컬 리프트 (Vertical Lift)
		굴절식 (Articulated)	직진식 (Telescopic)	
				

자료 : Dingli 홈페이지, 호룡 특장 홈페이지