

Analysis of Synergy Effect of Corporate M&A -- The Case of Jingdong Logistics' M&A of Deppon Stocks

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Abstract: Under the current background of global economic integration and digital transformation, the logistics industry is experiencing rapid development and fierce competition. In order to cope with market changes and enhance their comprehensive strength, more and more enterprises have chosen to realize resource integration and synergy effects through mergers and acquisitions. The successful acquisition of Deppon shares by Jingdong Logistics in 2022 marks a new competitive pattern in the logistics industry. This paper employs a multi-methodological approach, including literature review, case study, comparative analysis, and event study, to examine the M&A transaction between Jingdong Logistics and Deppon. It aims to delineate the financial and operational synergies realized through this merger and acquisition. The study shows that the M&A not only significantly enhanced the short-term and long-term solvency of Jingdong Logistics, but also improved the overall profitability by optimizing the customer structure and improving the transportation network. Ultimately, the powerful combination of Jingdong Logistics and Deppon has realized the effective allocation of resources and complementary advantages, provided new impetus for the sustainable development of enterprises, and promoted the overall development and prosperity of China's logistics industry.

Keywords: Corporate mergers and acquisitions, Synergy analysis, Logistics industry, Case study

1. Introduction

In recent years, with the increasingly fierce competition in China's logistics industry, many logistics companies turn to M&A to realize resource integration and synergy effects. The research elucidates various dimensions of synergies arising from mergers and acquisitions. Stefano et al. show that M&A synergies enhance stock value and improve financial ratios, emphasizing the important role of sustainability factors in post-merger firms [1]. However, Cao Cuizhen et al. discover short - term significant financial synergies that decline over time [2].

This paper uses case and comparative analysis [3], taking JD Logistics' acquisition of Deppon as an example. It analyses the financial synergies through the Solvency and financial situation before and after the M&A of enterprises, and operational synergies from network, customer structure, and profitability aspects. Besides, this paper adopts the method of event study by calculating the BHAR values before and after the M&A company, and testing whether the M&A event has a significant

impact on the enterprise's share price with the help of Stata software. Through this research, it is hoped that other peer companies understand the path of synergistic realization, optimize resource allocation to achieve sustainable development, and promote the positive and healthy development of the logistic industry. It also helps investors evaluate M&A value and risk for rational decisions.

2. Case Profile

In this paper, we will take Jingdong Logistics' merger and acquisition of Debang shares as an example, and conduct data analysis of synergies generated by the merger and acquisition of enterprises through the relevant data of Jingdong Logistics' 2019-2023 corporate annual report and the relevant information of Debang shares before the merger and acquisition of the company.

Since 2007, Jingdong Group has started to build its own logistics system and formally established Jingdong Logistics Group in April 2017. In May 2021, Jingdong Logistics was successfully listed on the main board of the Hong Kong Stock Exchange. As China's top technology-driven supply chain solution provider and logistics service enterprise, Jingdong Logistics' core business focuses on integrated supply chain logistics services. Founded since 1996, Deppon's revenue reached RMB 2.6 billion in 2010, and after its listing on the main board of the Shanghai Stock Exchange on 16 January 2018, it has fully invested in the transformation of its large-volume express delivery business. However, from 2018 - 2021, its "express business" revenue continues to decline, 'express business' growth is slow, net profit in 2021 fell nearly 90%. Facing problems such as internal management problems and fading market dividends, on 28 February 2022, Deppon suspended trading, and the secretary's office of the board of directors said: it will be acquired.

On 12 March 2022, Deppon formally announced that Jingdong Group would acquire 66.497% of the shares held by Deppon Holdings for RMB8.975 billion, becoming an indirect controlling shareholder of Deppon. On 21 July of the same year, the shareholders' general meeting of both parties passed a resolution on the acquisition, and on 28 July, BOE Logistics achieved indirect control of 66.497% of the shares held by Deppon Holdings. Jingdong Logistics acquisition of Deppon shares belongs to the 'strong combination' mode of mergers and acquisitions.

3. Analysis of M&A synergies

3.1. Analysis of financial synergies

The financial synergies brought by the M&A behaviour to the enterprise enable the enterprise to make effective use of the tax policy, financial planning, and thus reduce the tax burden; to achieve the optimal allocation of resources; and to improve the efficiency of the use of funds, and thus to increase revenues. Mergers and acquisitions (M&A) facilitate financial synergies that empower enterprises to effectively leverage tax policies and financial planning, thereby alleviating their tax burden. Moreover, these activities foster the optimal allocation of resources and enhance the efficiency of capital utilization, ultimately leading to increased revenues. This paper mainly measures the short-term solvency of Jingdong Logistics from the current ratio and quick ratio, and its long-term solvency from the gearing ratio.

From Table 1, though it can be seen that the current ratio and quick ratio of Jingdong Logistics after the acquisition of Deppon shares are not as good as that of 2021, there is a certain degree of growth compared with 2019 and 2020, and the current ratio and quick ratio are both greater than 1. It indicates that the enterprise's short-term solvency capacity is good after the merger and acquisition. In terms of long-term solvency, after the acquisition of Deppon shares, the asset-liability ratio of Jingdong Logistics is lower than the average level before the M&A. In general, the act of acquiring Deppon shares effectively enhances the long-term solvency of Jingdong Logistics, which allows Jingdong Logistics to better utilise the tax offset effect of liabilities, thus reducing corporate finance

costs. In addition, it also indirectly for the Jingdong Logistics played an effective role in of lower taxes of ROI [4].

In addition, after the acquisition of Deppon, both net cash flow from operating activities and operating revenue of Jingdong Logistics showed a continuous upward trend. The abundant cash flow created a good investment opportunity for the enterprise. Due to the impact of factors such as the intensification of market competition among enterprises in the same industry and changes in the macro-environment, the annual growth rate of the operating revenue of Jingdong Logistics has dropped significantly, after the occurrence of this M&A. However, the entrepreneur has doubled its turnover in 2020-2023, so that its market competitiveness has been further improved, being in the leading position in the industry. The data indicates that during the merger and acquisition of Deppon, Jingdong Logistics has realized financial synergies through the integration of assets and operations, thereby enhancing the company's overall strength and competitive advantages. This has had a positive impact on the strategic development and business expansion of Jingdong Logistics.

Table 1: Solvency and financial Indicators for JDP 2019-2023

	2019	2020	2021	2022	2023
Current Ratio	1.32	1.11	1.85	1.68	1.44
Quick Ratio	1.30	1.09	1.82	1.66	1.42
Asset-liability Ratio	105.2%	105.3%	47.40%	50.13%	50.95%
Net Cash Flow from Operating Activities(billions)	26.30	102.01	62.07	133.14	163.52
operating revenue(billions)	498.48	734.45	1046.93	1374.02	1666.25
Annual growth rate of operating income	—	47.34%	42.95%	31.24%	21.27%

3.2. Analysis of operational synergies

3.2.1. Improving transport networks

Before the merger, Jingdong Logistics was no match for the industry's top express delivery companies in terms of network coverage, trunk line transport and transit. Prior to the acquisition, Deppon operated over 30,000 terminal outlets, achieving a 94.8% coverage rate in rural areas nationwide, and managed more than 2,000 trunk lines along with 140 distribution centers. The acquisition of Deppon by Jingdong Logistics has quickly made up for the lack of network coverage and weak transport capacity, significantly improved point-to-point service and independent operation capability, and further promoted the development of integrated supply chain, facilitating the construction of a smart logistics management system. The behavior has comprehensively improved the enterprise's overall strength of integrated logistics services and market competitiveness.

3.2.2. Improvement of customer structure

Prior to the acquisition, Jingdong Logistics' operating revenue was heavily reliant on Jingdong Mall, with revenues from integrated supply chain customers constituting 68% of its total operating revenue [5]. Although this situation has a stable source of orders, the source of customers is more concentrated and single. However, amidst the intensification of market competition in the logistics industry, Jingdong Logistics urgently needs to expand its customer base, increase its scale, and enhance the proportion of external customer orders, which is imminent. Deppon, renowned as the 'king of LTL,' possesses a diverse clientele and can leverage Jingdong Logistics' superior e-commerce channels and

stable order sources to tap into new potential markets. After the completion of the merger, Jingdong Logistics from other external customers of the operating income from 32% to 51%. It can be seen that the acquisition has broadened the source of customers of Jingdong Logistics, promoting diversification of its customer structure.

3.2.3. Enhance the overall profitability of the business

As illustrated in Table 2, both the net profit margin on sales and the return on equity (ROE) for Jingdong Logistics exhibit an upward trend from 2021 to 2023. Notably, in 2022, following the acquisition of Deppon, there was a significant enhancement in profitability indicators, with the net profit margin on sales increasing by approximately 95% and the ROE by approximately 97% compared to the preceding year. It can be seen that the profitability of Jingdong Logistics has been significantly enhanced after the merger, and the merger has generated positive operating synergies.

Table 2: Profitability Indicators of JDP, 2021-2023

	2021	2022	2023
Net Profit Margin on Sales	-14.96%	-0.79%	0.70%
ROE	-96.61%	-3.31%	1.30%

3.3. Analysing the long-term performance of M&A

BHAR (Buy-and-Hold Abnormal Return) represents the excess return derived from purchasing and retaining a stock, thereby quantifying the abnormal return of a stock across varying levels of volatility. The BHAR model incorporates a diverse array of factors, thereby precisely delineating the interrelation between stock risk and volatility [6]. The derived BHAR values are analyzed utilizing Stata software to ascertain the impact of M&A activities on the stock prices of companies involved in mergers and acquisitions.

The formula for BHAR is: $BHAR_{it} = \prod_{t=0}^T (1 + R_{it}) - \prod_{t=0}^T (1 + R_{mt})$ (1)

Where: R_{it} denotes the monthly JDP individual stock return

R_{mt} denotes monthly market returns

T denotes the time interval examined, i.e., 10 months before and after the M&A event.

In this paper, the Hang Seng Index is chosen as the market return indicator, so as to effectively reflect the changes in the market.

Table 3: BHAR value data of the incident of JDP acquiring Deppon Stocks

Date	2022/8/31	2022/9/30	2022/10/31	2022/11/30	2022/12/30	2023/1/31	2023/2/28	2023/3/31	2023/4/28	2023/5/31
Rit (%)	5.51	-18.05	-20.58	27.37	8.31	14.55	-19.17	0.71	-13.48	2.62
Rmt (%)	-1.00	-13.69	-14.72	26.62	6.37	10.42	-9.41	3.10	-2.48	-8.35
BHAR	0.065	0.010	-0.042	-0.048	-0.034	0.001	-0.105	-0.129	-0.223	-0.120

Table 3 presents the BHAR value data of the incident of JDP acquiring Deppon Stocks. The long-term performance BHAR value is determined through a series of complex calculations, and in order to further test the relationship between it and the stock price movement, as well as the impact of this merger and acquisition on the stock price volatility in the long term, it is necessary to effectively verify the BHAR value.

In this paper, T-variable is used to test the significance of BHAR values. Since the sample size is less than 30, a hypothesis test is required here.

The test hypothesis is: $H_0: BHAR = 0$, alternative hypothesis: $H_1: BHAR \neq 0$

Table 4: JDP BHAR value one-sample test results

one-sample t test						
H0: BHAR=0						
Variable	Obs	Mean	Std.Err.	Std.Dev.	[95%Conf.Interval]	
BHAR	10	-0.0625	0.2631	0.08319	-0.1220	-0.0030

Pr(|T|>|t|)=0.0415

As is shown in Table 4, the original hypothesis is rejected at the 0.05 level of significance, implying that the alternative hypothesis is valid. In the long run, the merger and acquisition event has a substantial impact on the share price of JDP.

4. Conclusions

The acquisition of Deppon shares by Jingdong Logistics has generated synergies in both financial and operational domains, facilitating the reorganization of resources and the leveraging of complementary advantages, thereby achieving a mutually beneficial outcome.

In terms of financial synergies, the M&A has produced positive effects. After the M&A, as a community of interest of both parties to enhance the solvency, make full use of the debt tax effect in order to reduce financial costs; cash flow is more abundant, thus improving the return on investment, and related diversified operations can reduce financial risks. In terms of operational synergy, Jingdong Logistics has integrated the advantages of both parties, perfected the logistics map, optimized the customer structure, thus enhancing profitability, and also enabled Deppon to get rid of the development difficulties and obtain stable orders and resources. After the integration, the market share of the enterprise is expanded, the comprehensive strength is enhanced, and significant operational synergies are generated. Additionally, the BHAR model analysis shows that the M&A has a significant impact on the share price of Jingdong Logistics.

However, this paper only takes Jingdong Logistics' acquisition of Deppon as an example, and the sample should be enlarged to benchmark the same type of enterprises, so as to obtain more comprehensive conclusions.

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