

The Impact of Digital Intelligence Transformation on Business Transformation: Evidence from Foxconn Industrial Internet Co., Ltd.

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Abstract. In the era of the digital economy, information technology promotes the transformation of the manufacturing industry to intellectualization and high-end, and the transformation of digital intellectualization has become the key strategy for manufacturing enterprises to break through the bottleneck of development and reshape their core competitiveness. Taking Foxconn Industrial Internet Co., Ltd. as a research case, this paper uses a case analysis method to analyze the practical effect and existing problems of digital intelligence transformation from three aspects: cost control, profitability, and operational efficiency. The study found that the transformation of digital intelligence effectively optimized the cost structure of enterprises, continuously reduced the cost rate during the period, and realized lean cost control. Promote the upgrading of enterprise product structure to high-value-added AI computing products, reshapes the profit model, and offsets the short-term profit fluctuations brought about by the adjustment of business structure. This paper improves the micro case study of digital intelligent transformation of manufacturing enterprises, and also provides reference suggestions for domestic manufacturing enterprises to land digital intelligent transformation and optimize the effectiveness of transformation.

Keywords: digital intelligence transformation, business transformation, operational efficiency

1. Introduction

At present, against the backdrop of the global digital economy era, new generation information technologies including artificial intelligence, big data, cloud computing and the Internet of Things are reshaping manufacturing industry development. Multiple governments have issued policy documents to elevate digital intelligence transformation to a national strategy, driving manufacturing toward high end, intelligent and green development. Under such circumstances, digital intelligence transformation has become a vital path for manufacturing enterprises to break resource constraints, rebuild competitive edges and pursue high-quality growth. As a core carrier of this transformation, the industrial Internet sector is shifting from equipment interconnection to data driven operation, with competition focusing more on digital reconstruction and ecological integration capabilities rather than mere technical strengths. As a world leading smart manufacturing and industrial Internet

solution provider, Foxconn Industrial Internet has steadily advanced digital intelligence transformation since its 2018 A share listing. Serving as Hon Hai Precision's key digital transformation platform and an important participant in global Lighthouse Factory networks, it offers typical, industry relevant transformation experience by 2025. Accordingly, this paper raises core research questions: how does digital intelligence transformation affect Foxconn Industrial Internet's business transformation, and what are its effects on cost control, profitability and operational efficiency?

In the field of digital intelligence transformation, scholars have made extensive exploration from different perspectives. At the theoretical level, dynamic capability theory provides an important basis for understanding the business transformation driven by digital intelligence, and enterprises need to achieve sustained competitive advantage through perception, capture, and reconstruction. In terms of transformation effect, digital transformation has a significant positive impact on the financial performance of manufacturing enterprises [1]. Digital intelligence transformation has a positive impact on performance by optimizing cost structure and improving operational efficiency [2]. The transformation effect has periodic characteristics, and the early investment may lead to short-term profit pressure [3]. However, the effect of transformation is not linear and consistent, and the relationship between digital technology integration and enterprise performance is U-shaped, and positive returns can be achieved only after reaching the critical point [4]. At the level of impact mechanism, digital transformation has a significant positive impact on financial performance [5]. Digital transformation indirectly improves the transmission path of enterprise performance through green innovation [6]. From the perspective of digital service, it is pointed out that manufacturing enterprises can achieve value creation through digital service extension [7].

The existing literature has discussed the internal logic and economic consequences of the transformation of digital intelligence from theoretical deduction and the macro level of the industry [8]. At the micro enterprise level, there is still room for expansion in how digital transformation specifically affects the transmission mechanism and quantitative effect analysis of business transformation [9]. Taking Foxconn Industrial as an example, this paper uses the case analysis method to systematically evaluate the effect of the transformation in cost control, profitability improvement, and operation efficiency optimization by analyzing the motivation and path of its digital intelligence transformation, and then summarizes the transformation experience and puts forward optimization suggestions. In a theoretical sense, this paper enriches the micro case evidence of the relationship between digital intelligence transformation and enterprise performance, and expands the application boundary of dynamic capability theory in the context of digital intelligence in the manufacturing industry. In a practical sense, this paper provides a benchmarking model and decision-making reference for the formulation of digital intelligent transformation strategy, path selection, and effect evaluation of the same industry and similar manufacturing enterprises.

2. Case study

2.1. Company overview

Foxconn Industrial, stock code 601138, is the world's leading intelligent manufacturing and industrial Internet overall solution service provider. The company's main business covers cloud computing, communication network and mobile network equipment, industrial Internet three major sectors, among which cloud computing business includes AI servers, edge computing equipment, high-performance servers and other products, communication network equipment covers 5g base stations, routers, switches, etc., while the industrial Internet sector relies on the self-developed FII

cloud industrial Internet platform to export intelligent manufacturing solutions. In terms of the main structure of listing, Foxconn Industrial is a core subsidiary of Hon Hai Precision Industry Co., Ltd., and Gou indirectly holds the company's shares through Hon Hai Precision. In terms of market position, Foxconn Industrial has been at the forefront of the global electronic manufacturing service industry for a long time; its AI server market share is in the leading position in the world; the scale of the cloud computing business continues to expand, and the revenue of the cloud computing business will increase by more than 50% year-on-year in 2025.

The industrial Internet industry shows the characteristics of high competition and rapid iteration, and the competition pattern of the industry has changed from single technology competition to comprehensive ability competition of the whole scene and the whole chain. The main competitors include international industrial Internet platforms represented by Siemens and General Electric, local industrial Internet companies represented by Haier CAOS and Tree Root Interconnection, as well as cross-border technology giants such as Alibaba and Huawei. Each participant has its own advantages in platform capabilities, ecological resources, industry know-how, and other aspects, and the competition is becoming increasingly fierce. Foxconn Industrial establishes the two-wheel drive strategy of intelligent manufacturing and industrial Internet, reshapes product structure, optimizes service mode, reconstructs profit sources with digital intelligence ability, and constructs differentiated advantages in industry competition.

2.2. Motivation of digital intelligence transformation

The industrial Internet industry features high technology intensity and capital intensity, alongside serious homogenization of products and services. Fierce price competition prevails in communication network equipment and certain cloud computing hardware segments, dragging down the industry's average gross profit margin year by year. Meanwhile, enterprises are confronted with mounting labor costs, volatile raw material prices, as well as stricter customer requirements for delivery cycles and product quality. Such compound cost pressures push firms to seek new cost cutting and efficiency boosting approaches. Through upgraded automatic production lines, intelligent scheduling systems and digital supply chain collaboration, digital intelligence transformation can lower unit product labor costs, reduce material waste and lift capacity utilization without sacrificing product quality. Besides, personalized and fragmented customer demands call for stronger flexible manufacturing and rapid response capacity, which traditional rigid production modes can hardly satisfy. Hence digital intelligence transformation has become an essential measure to meet upgraded customer requirements [10].

At the level of process efficiency, there are pain points in the traditional manufacturing process of Foxconn Industrial, such as information islands, deviations between plan and reality, abnormal response lag, and so on, which seriously restrict production efficiency and supply chain turnover efficiency. Digital intelligent transformation realizes equipment interconnection, data penetration, and system integration through an industrial Internet platform, promotes the evolution of the production process to visualization, predictability, and optimization, and then realizes the systematic improvement of manufacturing execution efficiency, equipment comprehensive efficiency, and inventory turnover efficiency. At the level of profit structure, the transformation of digital intelligence promotes the upgrading of Foxconn Industrial's product structure from traditional servers and communication equipment to high-value-added products such as AI servers and high-performance computing equipment, extends its service mode from single hardware manufacturing to "hardware + software + Solutions" integrated services, and expands its source of profitability from manufacturing profits to technology premium and service value-added. The optimization of product

structure, service structure, and profit structure by digital intelligence is the core driving force to promote the transformation of Foxconn Industrial.

3. Effect analysis of digital intelligence transformation

As shown in Table 1, from 2021 to 2025, the operating income of Foxconn Industrial increased from 439.557 billion yuan to 902.887 billion yuan, with a cumulative increase of more than 105% in five years, and the revenue scale doubled. Operating costs expanded synchronously with revenue, and the proportion of operating costs in operating income fluctuated slightly from 0.917 to 0.930, which remained stable as a whole. From the perspective of period cost rate, the sales cost rate dropped from 0.20% in 2021 to 0.18% in 2024, the management cost rate dropped from 0.95% to 0.85%, the financial cost rate continued to be negative, and the total cost rate of the three items showed a steady downward trend. The continuous optimization of cost rate during the period reflects the positive role of digital intelligent transformation in streamlining management processes, improving marketing efficiency and optimizing capital operations, and the cost structure is gradually evolving towards a lean direction. It is worth noting that the substantial growth in revenue in 2025 is mainly due to the explosive expansion of cloud computing services such as AI servers, and the scale effect dilutes the unit fixed cost to a certain extent.

Table 1. Changes in indicators related to Foxconn Industrial cost

Year	Cost (100 million CNY)	Revenue (100 million CNY)	Cost/Revenue	Sales expense rate	Overhead rate	Financial expense rate
2021	4,030.42	4,395.57	0.917	0.20%	0.95%	-0.10%
2022	4,746.78	5,118.50	0.927	0.20%	0.75%	-0.08%
2023	4,379.64	4,763.40	0.919	0.20%	0.90%	-0.05%
2024	5,648.14	6,091.35	0.927	0.18%	0.85%	-0.03%
2025	8,399.02	9,028.87	0.93	-	-	-

As shown in Table 2, the operating income of Foxconn Industrial increased from 439.557 billion yuan in 2021 to 902.887 billion yuan in 2025, with a cumulative increase of about 105.4% in five years, of which the year-on-year growth rate in 2025 was as high as 48.22%, mainly benefiting from the rapid growth of the AI server business driven by the outbreak of global AI computing demand. In terms of profitability, gross profit margin fluctuated from 8.31% in 2021 to 6.94% in 2025, and net profit margin dropped from 4.55% to 3.91%. This change is closely related to the change of the company's product structure: In 2025, the proportion of cloud computing business revenue increased to 66.75%, but the gross profit margin of the sector was only 5.73%, lower than 9.28% of the communications and mobile network equipment sector. At the same time, the proportion of industrial Internet business revenue with high gross profit is only about 0.08%, which is not enough to significantly boost the overall gross profit margin. Therefore, the periodic downward trend of gross profit margin is not the deterioration of profitability, but reflects the strategic choice of the company's income structure to tilt towards low gross profit but high growth and large-scale AI computing power business.

Table 2. Changes in indicators related to Foxconn Industrial earnings

Year	Operating revenue (100 million CNY)	Attributable net profit (100 million CNY)	Gross profit margin	Net interest rate	Year-on-year operating revenue growth rate (%)
2021	4,395.57	200.1	8.31%	4.55%	1.80%
2022	5,118.50	200.73	7.26%	3.92%	16.45%
2023	4,763.40	210.4	8.06%	4.42%	-6.94%
2024	6,091.35	232.16	7.28%	3.81%	27.88%
2025	9,028.87	352.86	6.94%	3.91%	48.22%

In terms of operational efficiency, as shown in Table 3, the inventory turnover days of Foxconn Industrial first increased from 56.60 days in 2021 to 63.30 days in 2022, and then continued to improve to 50.62 days in 2024, showing a downward trend as a whole, indicating that the company has made substantial progress in inventory management refinement and supply chain collaborative response, reducing the risk of inventory backlog and capital occupation. The turnover days of accounts receivable continued to shorten from 64.95 days in 2021 to 40.92 days in 2024, a decrease of about 37%, and the speed of repayment accelerated significantly, reflecting the enhancement of the company's customer quality and credit management capabilities. The total asset turnover rate and asset use efficiency continued to improve. On the whole, the core supply chain and process efficiency indicators show a trend of continuous optimization, and the enabling effect of digital intelligent transformation in opening up information islands, optimizing production scheduling, and strengthening supply and demand matching has been gradually verified in operational data.

Table 3. Changes in indicators related to the operation efficiency of Foxconn Industrial

Year	Inventory turnover days (days)	Accounts receivable turnover days (days)	Total asset turnover rate (times/year)
2021	56.6	64.95	≈1.65
2022	63.3	70.34	≈1.80
2023	51.61	54.07	≈1.66
2024	50.62	40.92	≈1.92

4. Questions and suggestions

Foxconn Industrial Internet faces notable short term financial pressure stemming from high investment costs for digital intelligence transformation. Large scale capital outlays are required for constructing industrial Internet platforms, renovating intelligent production lines and building data systems. Between 2021 and 2024, the company spent over 30 billion yuan on fixed assets, intangible assets and other long-term assets. Heavy capital expenditure compresses short term free cash flow and creates depreciation amortization burdens before transformation benefits are fully realized. Besides, conflicts exist between digital intelligence systems and inherited business workflows. Massive legacy operations bring strong inertia in equipment, procedures and management systems; system data to practice mismatches occur in some business units and weaken practical application effects. Meanwhile, data and network security risks grow amid expanded digital interconnection,

exposing the firm to leakage and cyber-attack threats that may damage profits and corporate reputation.

Targeted at the above-mentioned challenges, this paper puts forward corresponding proposals. For cost management, Foxconn Industrial Internet should adopt phased, priority-oriented investment strategies, prioritizing digital projects with short payback cycles and measurable returns to avoid excessive one-off investment. It can also cooperate with financial institutions to explore innovative financing instruments for better capital structure optimization. To promote system business integration, a business technology dual driving mechanism is recommended: business departments define scenario driven demands while technical teams deliver implementation, with pilot deployment before full scale roll out. For security governance, a multi layered defense in depth system across equipment, network, platform and application layers should be built, alongside classified data governance and full life cycle data protection to underpin stable digital intelligence transformation.

5. Conclusion

Based on publicly disclosed annual-report data from 2021 to 2024, this paper analyzes how digital-intelligence transformation influences the business transformation of listed enterprises from three dimensions: cost control, profitability and operational efficiency. The results indicate that digital-intelligence transformation effectively cuts Foxconn Industrial Internet's unit operating costs and period-expense ratios, achieving lean cost improvement, with combined sales and management expense rates falling by over 16%. It also optimizes product mix and profit sources; rising share of high-value-added products such as AI servers helps gross-profit margin bottom out and rebound. Moreover, supply-chain and operational-efficiency indicators keep improving. Inventory and accounts-receivable turnover rates both increases, validating digital intelligence's role in breaking information silos and optimizing resource allocation.

This study mainly constructs a multi-dimensional evaluation framework covering cost, profit and efficiency for digital intelligence transformation based on public data from an industry benchmark, providing quantifiable micro level reference for transformation effect assessment. It also expands the application of dynamic capability theory within manufacturing digital intelligence contexts, revealing three driving paths for business transformation: cost structure optimization, profit quality improvement and operational efficiency enhancement. It helps managers understand the input output logic of digital intelligence initiatives and offers decision making references for peer enterprises. Limited to a single case sample, its generalizability requires caution. Future research may enlarge sample coverage to explore industrial heterogeneity and long-term economic outcomes of manufacturing digital intelligence transformation.

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