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Comparative Study on Digital Transformation Modes of Technology Brand vs. Trendy Consumer Brand: A Dual-Case Analysis of Anker Innovations and Pop Mart

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Abstract: Why do firms in different brand categories pursue such divergent digital transformation pathways, even when they operate under comparable macroeconomic conditions and possess similar access to technology? This question animates the present inquiry, which juxtaposes the digital transformation trajectories of two Chinese consumer-facing firms—Anker Innovations, a technology brand competing in consumer electronics, and Pop Mart, a trendy consumer brand specializing in designer toys and blind-box collectibles. Drawing on digital transformation theory and the dynamic capabilities perspective, we examine four analytical dimensions: digital strategy formulation, omnichannel architecture, supply chain digitalization, and customer data analytics. Our cross-case comparison reveals that technology brands tend toward a product-driven, platform-enabled mode, prioritizing R&D digitalization, AI-powered operations, and deep embedding within cross-border e-commerce platforms. Trendy consumer brands, by contrast, gravitate toward an IP-driven, community-centric mode, emphasizing emotional engagement, data-driven IP lifecycle management, and proprietary private-domain community building. The underlying mechanisms—dynamic capabilities, platform embeddedness, and emotional value creation—operate with different configurations across the two brand types. These findings carry implications for how scholars theorize brand-type contingency in digital transformation and how managers align digital investments with their firm's competitive logic.

Keywords: Digital transformation; Technology brand; Trendy consumer brand; Anker Innovations; Pop Mart; Comparative case study

1. Introduction

Digital technologies have rewired how firms compete. Vial [1], after reviewing 282 works across information systems and management, characterizes digital transformation as a process through which entities trigger significant changes to their properties by combining information, computing, communication, and connectivity technologies. What makes the concept slippery—and intellectually productive—is that these "significant changes" look different depending on who is changing. A bank undergoing digital transformation bears little resemblance to a toy company doing the same, even if both use the same cloud platforms and analytics tools.

Verhoef et al [2]. unpack this complexity by distinguishing three sequential stages—digitization, digitalization, and digital transformation—arguing that the third stage demands holistic organizational change rather than incremental process improvement. Their framework has been influential, and rightly so. Yet it treats the firm as a generic unit of analysis, paying minimal attention to how the nature of a firm's products, brand positioning, and value proposition shape which digital capabilities matter most, which sequence of investments makes sense, and which failure modes pose the greatest risk.

Consider two firms that went public within months of each other in 2020. Anker Innovations, a Shenzhen-based consumer electronics company, listed on the ChiNext

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board having built a global business selling chargers, earbuds, and robot vacuums primarily through Amazon. Pop Mart, a Beijing-based designer toy company, listed on the Hong Kong Stock Exchange having built a domestic empire selling blind-box collectibles through experiential stores, automated vending machines, and WeChat mini-programs. Both are digitally sophisticated. Both serve young consumers. And yet their digital transformation paths could scarcely be more different. Anker built its ERP system in 2011, the year it was founded. Pop Mart, founded a year earlier, only began serious digital infrastructure investment around 2018—after seven years of offline retail. Why the divergence?

One might attribute the difference to industry category alone: consumer electronics versus collectible toys. That answer, we argue, is both true and incomplete. The real explanatory variable is brand type—the fundamental basis on which a brand creates customer value. Technology brands compete on functional performance, technical reliability, and iterative product improvement. Trendy consumer brands compete on emotional attachment, cultural currency, and community belonging. These different value creation logics demand different digital capabilities, different channel architectures, and different data strategies. Our central claim is that brand type moderates digital transformation pathways in systematic, theory-relevant ways.

We develop this argument through a comparative dual-case study of Anker and Pop Mart. The two firms offer an analytically productive contrast: both are Chinese, both went public in 2020, both have achieved substantial digital maturity, and yet they represent archetypal instances of two distinct brand types. By examining them along four dimensions—digital strategy formulation, omnichannel architecture, supply chain digitalization, and customer data analytics—we surface patterns that would be invisible in single-case or cross-sectional research.

What follows is organized into five sections. Section II situates the study within the digital transformation literature and identifies the research gap. Section III details the comparative case study methodology, including case selection rationale, data sources, and analytical dimensions. Section IV presents the within-case analyses followed by a cross-case synthesis. Section V discusses theoretical contributions and managerial implications. We close with limitations and directions for future research.

2. Literature Review

2.1. Digital Transformation: Definitions and Frameworks

Scholarly interest in digital transformation has grown at a pace that mirrors the phenomenon itself. Westerman, Bonnet, and McAfee [3], in one of the earliest book-length treatments, argued that digital transformation involves leveraging technology to radically improve enterprise performance across customer engagement, operational processes, and business models. Their framework distinguished between digital capability and digital leadership, contending that firms need both to avoid what they called the "digital trap"—investing heavily in technology without commensurate strategic coordination.

Fitzgerald et al [4]. lent empirical support to these claims, reporting survey evidence that digitally maturing organizations outperformed peers on revenue growth, profitability, and market valuation. These early works were important in establishing digital transformation as a legitimate research domain rather than a consulting buzzword. They also left important questions unanswered—not least of which is whether the same digital transformation playbook works for every type of firm.

Vial [1] systematized the field through a systematic review of 282 works, proposing a process-based definition that has since become a reference point. His framework identifies key dimensions—value creation paths, structural changes, and customer engagement mechanisms—and calls for more research on the conditions under which digital transformation succeeds or fails. Bharadwaj et al [5]. approached the question from a strategy lens, arguing that digital business strategy represents a qualitative shift from traditional IT strategy because digital technologies no longer merely support business

models but increasingly constitute them. Pagani [6] added nuance by framing a dynamic cycle of control points, wherein firms continuously reconfigure their digital value propositions to capture shifting market opportunities.

Verhoef et al [2] synthesized this sprawling literature into a multidisciplinary research agenda spanning technological, organizational, societal, strategic, customer, managerial, structural, supply chain, and industry perspectives. Their review is notable for acknowledging that digital transformation looks different in different contexts—a point Matt, Hess, and Benlian [7] elaborated through a four-dimensional framework encompassing technological, structural, organizational, and individual dimensions. Even so, the question of how brand type conditions digital transformation pathways remains largely unaddressed in these frameworks.

2.2. Digital Transformation in Retail and Consumer Goods

Turning to the retail and consumer goods domain, the concept of omnichannel retailing has occupied center stage. Rigby [8] coined the term in a Harvard Business Review article, arguing that the future of shopping would involve seamless integration of online, mobile, and physical channels—not as separate silos but as a single, unified customer experience. This insight has proven prescient. What Rigby could not fully anticipate is how different types of consumer brands would implement omnichannel strategies. A functional product like a charger and an emotional product like a collectible toy make different demands on the channel architecture. The former thrives on marketplace platforms where specifications and reviews reduce information asymmetry; the latter thrives on experiential retail and community engagement where the product's value cannot be captured in a spec sheet.

Supply chain digitalization has attracted growing attention in the consumer goods literature, with researchers examining how real-time data analytics, IoT-enabled tracking, and AI-driven demand forecasting are transforming linear supply chains into adaptive, networked ecosystems. For consumer brands, the ability to link point-of-sale data back to production planning has emerged as a critical differentiator. But what kind of data matters most? For technology brands, it is likely functional feedback—battery life, durability, compatibility. For trendy consumer brands, it is likely emotional feedback—design resonance, social sharing, collection completion. These different data types require different analytics systems, different organizational structures, and different decision-making cadences.

2.3. Brand Type, Platform Embeddedness, and Digital Innovation

The relationship between brand type and digital strategy has received surprisingly little systematic attention. The platform literature has established how network effects can create winner-take-most dynamics across industries. That logic helps explain why Anker chose to embed deeply within Amazon's ecosystem rather than build its own marketplace from scratch. It also helps explain why Pop Mart invested so heavily in its own proprietary data infrastructure—because the value of an IP-driven brand depends on direct customer relationships that platforms cannot mediate without extracting rent.

Oviatt and McDougall [9] introduced the concept of "born global" firms—ventures that internationalize rapidly from inception, often enabled by digital technologies. Anker fits this archetype almost perfectly: founded in 2011, it was selling globally through Amazon within years. Pop Mart does not fit; it spent a decade building domestic dominance before accelerating overseas. The born-global concept, in other words, applies differently depending on brand type. Technology products can be evaluated remotely through specifications and reviews; trendy consumer products often require tactile, experiential engagement that digital channels cannot fully replicate. This observation points toward a broader contingency: brand type shapes not only what digital transformation looks like but also how fast it can proceed internationally.

Nambisan, Wright, and Feldman [10] examined how digital transformation reshapes innovation and entrepreneurship, contending that digital platforms lower barriers to entry by democratizing access to technologies, data, and user communities. Teece [11]

connected this line of thinking to the dynamic capabilities framework, positing that firms must continuously sense, seize, and reconfigure resources to maintain competitive advantage in rapidly changing digital environments. Both constructs provide useful analytical leverage for examining how Anker and Pop Mart build and leverage digital capabilities specific to their brand types. The sensing function, for instance, operates through VOC analysis in Anker's case and through PDC social media monitoring in Pop Mart's case—different tools, same underlying capability logic.

2.4. Research Gap

The literature is rich in frameworks and empirical evidence, yet a gap persists at the intersection of brand type and digital transformation. Most studies examine digital transformation at a generic level or focus on a single firm within one sector. Comparative studies that explicitly contrast digital transformation modes across brand types—particularly across the technology-versus-trendy-consumer divide—remain scarce. Why does this gap matter? Because without it, managers risk importing digital transformation playbooks from firms in fundamentally different brand categories, wasting resources on capabilities that do not align with their competitive logic. Scholars, meanwhile, risk theorizing a universal digital transformation process that does not exist in practice. This paper addresses that gap by bringing two archetypal cases into analytical dialogue under a common framework.

3. Methodology

3.1. Research Design

A comparative dual-case study design guides this inquiry, following the methodological tradition established by Yin [12], Eisenhardt [13], and Stake [14]. Case study methodology is particularly suited to research questions that ask "how" and "why," that examine phenomena deeply embedded in real-world contexts, and that resist clean separation between phenomenon and context. The dual-case design, as Stake [14] elaborated, enables cross-case analysis that strengthens theoretical claims by revealing both shared patterns and idiosyncratic divergences. Each case functions as an independent experiment; cross-case comparisons serve to confirm, disconfirm, or extend emerging theoretical propositions [13].

Our two cases were selected for maximum variation on the independent variable of interest—brand type—while holding other factors roughly constant. Both firms are Chinese consumer-facing companies. Both went public in 2020. Both have achieved substantial digital maturity. And both compete in categories where consumer preferences evolve rapidly. Where they differ decisively is in the basis of their brand value: Anker competes on functional performance and technical innovation; Pop Mart competes on emotional attachment and cultural currency. This contrast makes the pair analytically productive for examining how brand type shapes digital transformation pathways.

3.2. Case Selection

Anker Innovations warrants study for several reasons. It represents a successful born-global firm [9] that achieved international distribution primarily through digital channels from inception. Its digital transformation spans multiple dimensions—e-commerce, supply chain, R&D, customer analytics—that map cleanly onto our analytical framework. Its 2020 ChiNext listing provides audited financial data that enables quantitative grounding of qualitative claims. And prior academic studies have examined aspects of its digital strategy [15], providing a basis for triangulation.

Pop Mart was selected on parallel grounds. It pioneered the blind-box retail format in China, achieving explosive growth through a combination of IP licensing, community marketing, and omnichannel distribution. Its digital transformation integrates data-driven IP management, emotional community building, and smart supply chain operations—dimensions that map onto the same analytical framework while manifesting

in radically different configurations. Academic analyses [16] and industry analyst reports further support data triangulation.

3.3. Data Sources and Analytical Framework

Data were drawn from four categories of sources to ensure convergent evidence [12]. First, corporate annual reports and official disclosures from Anker (2020–2023) and Pop Mart (2020–2024) provided audited financial and operational data. Second, industry case studies from technology partners offered granular detail on specific digital initiatives. Third, peer-reviewed academic papers on both firms [15–17], provided independent scholarly analysis. Fourth, industry analyst reports and verified business media coverage supplied contextual and comparative data. This multi-source approach mitigates single-source bias and strengthens construct validity.

The analytical framework comprises four dimensions, derived inductively from the literature and the empirical context: (a) digital strategy formulation, encompassing the strategic logic guiding digital initiatives and the organizational mechanisms for prioritization; (b) omnichannel architecture, capturing how firms configure online and offline channels and the degree of platform dependence versus proprietary infrastructure; (c) supply chain digitalization, examining the integration of data systems into production, logistics, and inventory management; and (d) customer data analytics, assessing how firms collect, analyze, and act on consumer data and for what strategic purposes. These dimensions interact dynamically, and the analysis attends to their interconnections rather than treating them as discrete silos.

3.4. Limitations

Several limitations warrant acknowledgement. The study relies on publicly available data rather than internal company access, which constrains the depth of process-level insight into decision-making dynamics. The two cases, while analytically contrasting, are both Chinese firms that went public in the same year, potentially introducing contextual confounds related to the institutional environment and timing of capital market access. As with all case study research, the generalizability of findings to other contexts requires cautious interpretation and further empirical validation. We return to these limitations in the conclusion, where we also suggest directions for research that could address them.

4. Case Analysis

4.1. Anker Innovations: Technology Brand Digital Transformation

4.1.1. Company Background

Steven Yang, a former Google engineer, founded Anker in 2011 with a simple premise: sell high-quality charging accessories on Amazon's marketplace at prices below those of first-party brands. The company expanded rapidly. By 2023, it reported RMB 17.51 billion in revenue across six product brands—Anker (charging), soundcore (audio), eufy (smart home), Nebula (projectors), AnkerWork (video conferencing), and AnkerMake (3D printing). Operations span over 140 countries, serving more than 200 million users. R&D expenditure reached RMB 1.41 billion—8.08% of revenue—with R&D personnel constituting 47.75% of the workforce.

Yang's "shallow sea strategy" frames the company's approach to market selection. Rather than competing in "deep sea" categories—smartphones, PCs, and other fiercely contested red-ocean markets where incumbents spend billions on R&D—Anker targets "shallow sea" segments with sufficient market size, unmet consumer pain points, and no dominant player. This strategic positioning has shaped every dimension of the company's digital transformation. Operating in fragmented categories across diverse geographies, Anker needed digital channels and data-driven decision-making not merely as advantages but as prerequisites for market discovery and resource allocation.

4.1.2. Digital Strategy Formulation

Anker's digital strategy evolved through four discernible phases, each building on the capabilities developed in the previous one. During 2011–2015, the firm operated as a

channel brand, relying almost entirely on Amazon for distribution and using SEO optimization and review management to drive organic traffic. The 2015–2017 period brought entry into Walmart's offline channels and broadening of the product portfolio, marking the brand improvement stage. From 2017 to 2022, the multi-brand shallow sea strategy and aggressive global expansion defined the leading brand phase. Since 2023, Anker has entered what might be called a global innovation platform phase, consolidating all brands under a unified identity and deploying AI across the enterprise.

What is striking about this trajectory is how early Anker began investing in proprietary digital infrastructure. The self-developed ERP system, initiated in 2011 when the company was barely a startup, stands out as an unusually prescient investment. Most Amazon sellers of that era relied on third-party tools and spreadsheets. Anker, by contrast, built its own system from the beginning—a decision that founder Yang justified on the grounds that understanding customer data was too important to outsource. This early investment created a data foundation that later enabled sophisticated AI deployment, illustrating what we call the digital maturity spiral: initial digital investments create data assets that enable subsequent, more sophisticated digital capabilities.

The AI phase of Anker's digital transformation accelerated dramatically in 2023. In March, the company integrated ChatGPT into its enterprise collaboration system (Feishu/Lark), granting every employee access to AI tools. By July, it had become the second company in Greater China—after ByteDance—to deploy Microsoft's enterprise GPT-4 service. Anker built an internal AI platform called AIME, connected to multiple large language models and supporting over 300 AI agents deployed across R&D, marketing, customer service, and supply chain functions. These agents accumulated over 10 million invocations. The deployment philosophy is notable: AI was integrated into routine operational workflows rather than confined to a specialized innovation lab, reflecting the technology brand's ethos of using tools to amplify engineering productivity.

4.1.3. Omnichannel Architecture

Anker's channel architecture reflects its technology brand positioning: digital-first, platform-dependent, and globally distributed. Amazon remains the primary sales channel, contributing approximately 55–61% of total revenue across 2020–2023. Anker's official stores ranked second on Amazon US by user review volume, with top-ranking products including the Anker 20W charger (number two on Amazon US, behind Apple) and soundcore earbuds (number one on Amazon Japan). Deep platform embeddedness provides advantages in traffic, trust signals, and fulfillment efficiency. It also concentrates dependency on a single intermediary whose policies, algorithms, and fee structures lie outside Anker's control—a strategic vulnerability the company has sought to mitigate.

The mitigation strategy centers on DTC expansion. In 2020, Anker migrated 16 e-commerce sites for four brands within three months using Shopify Plus—an aggressive timeline made possible by the company's underlying digital infrastructure. The portfolio later expanded to over 50 global online stores with multi-currency support and checkout customization. These DTC sites generated RMB 1.24 billion in 2023, representing 83.87% year-on-year growth—the fastest-growing channel in the portfolio. Even so, DTC revenue remains dwarfed by Amazon revenue, underscoring how difficult it is for a technology brand to reduce platform dependency once it has built its business on marketplace foundations.

Social commerce represents a newer channel layer. Anker integrated TikTok Shop for product discovery and conversion, leveraging unboxing trends and live-stream events—particularly for the soundcore audio brand. The tiered influencer strategy pairs high-authority reviewers such as MKBHD for major launches with thousands of micro-influencers for conversion-oriented content. This tiered approach mirrors how technology brands have historically used both expert reviews and word-of-mouth recommendations to build credibility. What has changed is the scale and precision with which digital platforms enable these strategies to be executed.

Advertising has undergone its own digital transformation. Using Amazon SageMaker, Anker developed a proprietary advertising system for automated bidding, AI-driven keyword targeting, and retargeting optimization. The system manages over 20,000 ad campaigns, with approximately 20% of on-platform advertisements fully automated by AI. Reported improvements include roughly 15% higher click-through rates and approximately 10% higher conversion rates in the first half of 2023. These numbers are self-reported and should be interpreted with appropriate caution; even so, they illustrate the scale at which a technology brand can apply algorithmic optimization to marketing operations.

4.1.4. Supply Chain Digitalization

Anker's supply chain digitalization is deeply integrated with its product-driven strategy. The self-developed ERP system, initiated in 2011, was later supplemented by a partnership with Lingxing ERP for cross-border e-commerce data integration, transmitting business data directly to Anker's internal analytics platforms. The firm implemented a comprehensive Sales and Operations Planning (S&OP) system covering demand planning, e-commerce channel management, offline retail planning, new product introduction, product lifecycle and SKU governance, supply planning, and procurement.

The strategic logic underlying this investment is intimately connected to the technology brand's competitive dynamics. Anker operates in fast-evolving electronics categories with short product lifecycles and fragmented consumer demand across geographies. In such an environment, the ability to synchronize demand sensing, production planning, and logistics in real time constitutes a core competitive capability rather than a cost-saving measure. Over 100 supply chain partners are coordinated through digital systems that optimize production planning, logistics routing, and warehouse inventory efficiency. For a company selling hundreds of SKUs across 140+ countries, supply chain digitalization is not a nice-to-have; it is the mechanism through which the shallow sea strategy becomes operationally feasible.

4.1.5. Customer Data Analytics

Central to Anker's digital transformation is the Voice of Customer (VOC) system, which aggregates user feedback from Amazon reviews, DTC site interactions, and customer support tickets. AI-driven semantic analysis processes this data using over 1,000 user pain-point tags to identify market demand gaps. The GaN charger story illustrates how this works in practice: analysis of Amazon review data identified consumer frustration with bulky chargers and slow charging speeds, signaling an opportunity for gallium nitride technology. The resulting product line captured 35% of European and American markets—a concrete example of data-driven product innovation.

The VOC system creates what Anker terms "two-way communication" between consumers and the supply side. This framing is revealing. In a technology brand, customer data flows back into R&D and product development, compressing time-to-market for new products and improving functional performance. In a trendy consumer brand, as we will see, customer data flows into IP management and community operations, sustaining emotional engagement and extending product lifecycles. Same data, different destination, different strategic purpose.

Customer service has undergone its own digital transformation. Anker deployed a multilingual intelligent support system built on AWS Connect, resolving approximately 70% of support tickets via AI. The system integrates a knowledge base through embedding into vector databases, combined with ChatGPT for multi-language support, and is being extended to include AI-powered voice assistance. In software development, the firm uses Amazon Q Developer to generate production-ready code from natural language descriptions, reaching a milestone where 50% of code is AI-generated. The marketing team reduced image creation time from two hours to 15 minutes using AI, while the packaging team saved RMB 400,000–500,000 annually in translation costs. These efficiency gains, while individually modest, accumulate across the organization to create

what might be termed the "AI productivity multiplier" characteristic of technology brand digital transformation.

4.2. Pop Mart: Trendy Consumer Brand Digital Transformation

4.2.1. Company Background

Wang Ning founded Pop Mart in Beijing in 2010 as a fashion accessories retailer. The turning point came in 2016, when the company introduced its first blind-box series featuring the Molly character—an instant commercial success that redefined the firm's identity. Pop Mart's business model now centers on acquiring and incubating intellectual properties—including Molly, SKULLPANDA, Dimoo, and LABUBU—and commercializing them through blind-box packaging, limited-edition releases, and a growing portfolio of derivative products. The company listed on the Hong Kong Stock Exchange in December 2020 (stock code: 9992.HK).

By 2024, revenue reached RMB 13.04 billion, more than doubling year-on-year. Overseas revenue constituted 38.9% of total sales, reflecting the company's accelerating global expansion. The firm operated 401 retail stores in mainland China, 130 stores overseas, and over 2,300 Roboshop automated vending machines. Market capitalization peaked at HKD 336.8 billion in June 2025—a staggering valuation for a company that, a decade earlier, was a small chain of lifestyle stores.

The Pop Mart case forces a rethinking of what digital transformation means for a trendy consumer brand. Unlike Anker, whose products derive value from functional performance metrics—charging speed, audio fidelity, cleaning efficiency—Pop Mart's products derive value from emotional attachment, aesthetic appreciation, and collectibility. The product itself is a vinyl figure; the value is in the story, the community, the hunt, and the display. This fundamental difference in value proposition shapes every dimension of Pop Mart's digital transformation, from the data it collects to the capabilities it builds. Digital tools serve not to improve product specifications but to amplify the emotional economics of IP-driven consumption.

4.2.2. Digital Strategy Formulation

Pop Mart's digital strategy can be characterized as IP ecosystem orchestration. Rather than treating digital technology primarily as an operational efficiency lever—as in Anker's case—Pop Mart deploys digital infrastructure to manage the entire lifecycle of its intellectual properties: from artist discovery and design validation to production planning, retail distribution, and community engagement. The strategic logic is straightforward: in a trendy consumer brand, the IP itself is the core asset, and digital technology serves to maximize the emotional and commercial value extracted from each IP over its lifecycle.

The PDC (Pop Data Center) platform embodies this strategy. PDC monitors TikTok play counts and social media engagement metrics in real time to predict IP market potential. The system replaces traditional aesthetic judgment—relying on designers' and managers' intuitions about what will be popular—with quantitative decision-making for IP incubation. This data-driven approach enables what Pop Mart terms "layered IP operation": extending the lifecycle of top-tier IPs (Molly's retention rate was 74% in 2023) while rapidly iterating or retiring underperforming ones. Pre-sale quantity data feeds back into production capacity decisions, creating a closed loop between demand signals and supply planning.

We should not overstate the degree to which data has replaced human judgment. Pop Mart's success has always depended on Wang Ning's eye for design and his ability to spot emerging artists. What digital transformation has done is augment that human judgment with data, reducing the risk of catastrophic misses and increasing the hit rate of IP investments. This is a different configuration of technology and human expertise than what we see at Anker, where AI generates 50% of code and 70% of customer service tickets are resolved without human intervention. In a trendy consumer brand, human creativity remains the irreducible core; digital tools enhance it rather than replace it.

4.2.3. Omnichannel Architecture

Pop Mart's channel architecture reflects the trendy consumer brand's imperative to create immersive, emotionally resonant consumer touchpoints. The firm operates across multiple channels, each with a distinct role in the customer journey. Tmall generated RMB 630 million in 2024 (+95% year-on-year), serving as a mainstream discovery channel. Douyin livestream commerce provides entertainment-driven shopping experiences. The WeChat mini-program "Pop Draw" generated RMB 729.3 million in 2023, functioning as a private-domain engagement and purchase channel. The Pop Mart app—topped the US App Store shopping chart in May 2025—serves as a global community and commerce hub. Offline, the company maintains experiential retail stores and 2,300+ Roboshop automated vending machines.

The Roboshop network deserves closer examination as a digital-physical hybrid unique to the trendy consumer brand context. These automated vending machines, equipped with touch-screen interfaces and RFID/barcode scanning, function as low-cost, data-generating retail points deployed in commercial complexes and transportation hubs across multiple city tiers. Their cloud-based inventory system monitors sales velocity, predicts refill needs, and flags anomalies—a capability critical given that many themed collections run for only 4–8 weeks before retirement. The Roboshop, in other words, is not merely a vending machine; it is a data-collection node and a trend-detection sensor. For a brand that must constantly gauge which IPs are heating up and which are cooling down, having thousands of real-time data points across the country is strategically invaluable.

Pop Mart's omnichannel integration is unified through an Alibaba Cloud-powered data middle office employing OneID technology to integrate multi-channel user identities into comprehensive consumer profiles. Data flows from online browsing and purchase behavior (Tmall, Douyin) and offline consumption (stores, Roboshops) back into the system in real time, enabling precision marketing and IP design decisions. The WeChat mini-program and community groups create private-domain viral loops, with a reported community K-factor of 1.8 and a 27% improvement in conversion rate [16]. This private-domain architecture—starkly different from Anker's reliance on third-party platforms—reflects the trendy consumer brand's need for direct, emotionally engaged customer relationships that marketplace interfaces cannot sustain.

4.2.4. Supply Chain Digitalization

Pop Mart's supply chain digitalization addresses the distinctive challenges of trendy consumer goods: short product lifecycles, uncertain demand for new IPs, and the need for limited-edition scarcity management. The firm upgraded its warehouse management system (WMS) with automated guided vehicles (AGV) and RFID traceability, improving sorting efficiency and reducing fulfillment errors. The "3A supply chain" model—agile, adaptive, and automated logistics—integrates AI-powered demand forecasting with OEM partner coordination.

For overseas expansion, Pop Mart implemented the Oracle NetSuite platform for real-time cross-border e-commerce and inventory management, dynamically routing goods based on regional sales velocity. This capability proved essential as the firm scaled from zero to 130 overseas stores in six years. An interesting pattern emerged: Pop Mart uses domestic China sales data to predict trends in new markets such as France and Thailand. The logic is that if an IP resonates with Chinese Gen Z consumers, it will likely resonate with Gen Z consumers in other markets as well—an assumption that reflects the globalization of youth culture and the role of social media in diffusing trends across borders. Whether this pattern holds as Pop Mart enters more culturally distant markets remains an open question.

The strategic logic of supply chain digitalization differs meaningfully from Anker's. Whereas Anker's supply chain digitalization optimizes for functional product efficiency across stable geographies, Pop Mart's optimizes for trend responsiveness across rapidly expanding, culturally distinct markets. Same tools—WMS, AI forecasting, ERP—different configuration, different purpose. This observation reinforces our broader argument:

brand type shapes not just what digital tools are adopted but how they are configured and what strategic objectives they serve.

4.2.5. Customer Data Analytics

Pop Mart's customer data infrastructure is arguably its most distinctive digital capability. By the end of 2024, the firm had accumulated 46.083 million registered members in mainland China, contributing 92.7% of total sales. The repurchase rate reached 49.4% in 2024 (50.8% in the first half of 2025), with academic research finding that core-user repurchase rates reached 72% [16]. These numbers are extraordinary by any retail standard and reflect a data ecosystem designed not merely for transactional efficiency but for emotional engagement and loyalty cultivation.

The tiered membership system offers points redemption, birthday gifts, and early access to new products—incentives calibrated to the collector psychology that drives blind-box consumption. The gamified Pop Mart app simulates the offline unboxing experience, driving engagement and purchase satisfaction among users who may not have access to physical stores. Annual Pop Toy Conventions integrate digital operations throughout events, capturing creative inspiration and user interaction feedback data to create a "user creation → official incubation" virtuous cycle. Community-driven data loops, where core consumers serve simultaneously as primary buyers and social sharing nodes, represent a fundamentally different model of customer data analytics than Anker's VOC-driven product improvement system.

Wang [16] proposed the D-CODE Growth Model (Data-Community-Operation-Design-Emotion) to capture Pop Mart's digital management approach, finding through multi-source data triangulation that the community K-factor of 1.8 and conversion rate improvement of 27% stem from the interplay of data infrastructure, community operations, design iteration, and emotional resonance. The model's name itself tells a story: emotion sits alongside data and design as a core engine of growth. For a technology brand, the equivalent acronym might be D-ROP (Data-R&D-Operations-Platforms)—emotion would not make the list. That difference, more than any specific technology or metric, captures the essence of how brand type shapes digital transformation.

5. Comparative Analysis

Table 1 synthesizes the cross-case comparison along the four analytical dimensions plus additional contextual variables. Several patterns warrant elaboration; we focus on four that carry particular theoretical weight.

Table 1. Cross-case comparison of digital transformation modes between Anker and Pop Mart.

Dimension	Anker (Technology Brand)	Pop Mart (Trendy Consumer Brand)
Value proposition	Functional performance, technical innovation	Emotional attachment, collectibility, cultural currency
DT strategic logic	Product-driven, platform-enabled: AI-powered R&D and operations	IP-driven, community-centric: data-driven IP lifecycle management
Primary digital channels	Amazon (~55–61%), Shopify DTC (50+ stores), TikTok Shop	Tmall, WeChat mini-program, Pop Mart app, Roboshops (2,300+)
Platform dependency	High: deeply embedded in Amazon ecosystem	Low: proprietary data middle office with private-domain communities
Supply chain focus	S&OP, self-developed ERP, 100+ partners, AI demand forecasting	WMS + AGV + RFID, 3A supply chain, Oracle NetSuite for overseas

Customer data system	VOC system (1,000+ pain-point tags, AI semantic analysis)	OneID data middle office, PDC platform, 46M members (92.7% of sales)
AI deployment	300+ AI agents, 50% AI code, 70% AI ticket resolution, AIME platform	PDC IP prediction, AI demand forecasting, gamified app experience
Internationalization	Born global (140+ countries from inception), digital-first expansion	Domestic-first, digital-assisted overseas (130 stores, 38.9% overseas revenue)
Key metric	R&D 8.08% of revenue; online 70.3% of sales	Repurchase 49.4%; members 92.7% of sales

5.1. Strategic Logic: Product-Driven Vs. IP-Driven

The most fundamental divergence lies in the strategic logic governing digital transformation. Anker's digital initiatives serve a product-driven imperative: digital tools are deployed to accelerate R&D cycles, optimize functional product performance, and discover unmet consumer pain points through data analysis. The VOC system exemplifies this logic—user feedback is processed as technical input for product improvement, creating a data-to-design pipeline. Every digital investment, from the self-developed ERP to the AIME AI platform, ultimately feeds into better products developed faster and launched more precisely.

Pop Mart's digital initiatives, by contrast, serve an IP-driven imperative: the PDC platform monitors social media engagement to predict which IPs will resonate emotionally, while the D-CODE model orchestrates community operations to amplify emotional attachment. The data infrastructure is designed to maximize the commercial and emotional lifecycle of cultural assets, not to improve product specifications. A vinyl figure's physical properties—material, weight, paint application—matter, but they matter insofar as they serve the IP's emotional value proposition. Digital tools serve that end.

This difference in strategic logic cascades through the entire digital transformation architecture. It explains why Anker's AI agents target operational efficiency (code generation, customer service, advertising) while Pop Mart's AI targets creative prediction (IP resonance, trend forecasting). It explains why Anker's customer data flows into R&D while Pop Mart's customer data flows into community operations. And it explains why Anker measures success in R&D intensity and market share gains while Pop Mart measures success in repurchase rates and membership contribution.

5.2. Platform Embeddedness: Dependent Vs. Proprietary

A second key divergence concerns platform strategy. Anker is deeply embedded in third-party platforms—particularly Amazon, which contributes over half of its revenue. This embeddedness provides access to global traffic, fulfillment infrastructure, and trust signals that would be prohibitively expensive to build independently. It also concentrates dependency on a single intermediary whose policies, algorithms, and fee structures lie outside Anker's control. Anker's DTC migration through Shopify Plus represents a hedging strategy, yet the primary channel remains platform-dependent.

Pop Mart, conversely, has invested heavily in proprietary digital infrastructure: the Alibaba Cloud-powered data middle office, the WeChat mini-program, the Pop Mart app, and the Roboshop network collectively constitute a self-contained ecosystem where customer data, engagement, and transactions are owned rather than mediated. This proprietary stance aligns with the trendy consumer brand's need for direct emotional relationships, which are difficult to cultivate through impersonal marketplace transactions. Platform fees may be lower on Amazon, but emotional engagement is harder to extract.

This pattern reveals what we call the platform embeddedness paradox: the technology brand, despite its greater digital sophistication, is more platform-dependent, while the trendy consumer brand, operating in a seemingly less technology-intensive

domain, has built more proprietary digital infrastructure. The paradox dissolves when one recognizes that platform dependency is a function not of digital maturity but of the transactional nature of the brand's value proposition. Functional products can be evaluated and purchased through marketplace interfaces; emotional products require owned experiential channels to sustain engagement.

5.3. Temporal Pattern: Born Global Vs. Domestic-First

The internationalization trajectories of the two firms further illuminate how brand type shapes digital transformation timing. Anker, as a born-global firm [9], leveraged Amazon's marketplace to achieve distribution across 140+ countries within five years of founding. Digital channels were not a supplement to physical expansion; they were the primary—and initially sole—channel for global reach. The technology product's evaluability through specifications and reviews made this model viable. Consumers in Germany or Japan could read the specs, check the reviews, and buy with confidence without ever touching the product.

Pop Mart, by contrast, spent a decade building domestic dominance before accelerating overseas expansion. Its digital infrastructure for internationalization—Oracle NetSuite for cross-border inventory, social media engagement for market evaluation, localized product strategies informed by domestic data—serves as a support system for physical store expansion rather than as a replacement for it. The temporal difference reflects the distinct economics of trendy consumer products, which often require tactile, experiential engagement to unlock their emotional value. A vinyl figure looks different in person than on a screen; the unboxing experience is part of the product; and community belonging is harder to establish across cultural distances without a physical presence.

5.4. AI Deployment: Operational Efficiency Vs. Creative Prediction

Both firms have embraced AI, but the deployment logic differs sharply. Anker's AI applications target operational efficiency: 300+ agents automating R&D documentation, customer service (70% AI resolution), code generation (50% AI-written), and advertising optimization (20,000+ campaigns). The AIME platform exemplifies a technology brand's use of AI to compress development cycles and reduce operational friction. AI here is a productivity multiplier applied to engineering and operations.

Pop Mart's AI applications, while also present in supply chain forecasting, are oriented toward creative prediction: the PDC platform uses social media data to forecast which IPs will resonate, replacing subjective aesthetic judgment with quantitative market signals. AI here serves as a creative decision-support tool, not merely an efficiency enhancer—a distinction that mirrors the fundamental difference between optimizing for function and optimizing for emotion. Even within the same technology, brand type shapes where and how the technology is deployed and what outcomes it is expected to produce.

6. Discussion

6.1. Theoretical Contributions

This study makes three theoretical contributions to the digital transformation literature. First, we introduce brand type as a moderator of digital transformation pathways—a construct that, to our knowledge, has not been explicitly theorized in prior frameworks [1,2,7]. By demonstrating that technology brands and trendy consumer brands pursue systematically different digital transformation modes, we challenge the implicit assumption in much of the literature that digital transformation follows a universal logic. The functional versus emotional value proposition that distinguishes brand types shapes not only what digital tools are adopted but how they are configured, sequenced, and integrated into competitive strategy. Digital transformation, in other words, is not one thing; it is a family of related processes whose shape depends on the brand type through which it is enacted.

Second, we extend the dynamic capabilities perspective [11] by showing how the sensing, seizing, and reconfiguring functions manifest differently across brand types. For

Anker, sensing entails AI-driven semantic analysis of user pain points; seizing entails rapid product iteration and platform-optimized distribution; reconfiguring entails ERP integration and S&OP systems. For Pop Mart, sensing entails social media monitoring for IP resonance signals; seizing entails community-driven viral loops and gamified engagement; reconfiguring entails the D-CODE model's integration of data, community, and emotional design. These are not merely different tools but different operationalizations of the same underlying capability logic, conditioned by brand type. The dynamic capabilities framework, we suggest, would benefit from greater attention to how value proposition shapes capability configurations.

Third, we contribute to the platform embeddedness literature by revealing the platform embeddedness paradox noted above: the technology brand, despite its greater digital sophistication, is more platform-dependent, while the trendy consumer brand, operating in a seemingly less technology-intensive domain, has built more proprietary digital infrastructure. This counterintuitive finding suggests that platform dependency may be a function not of digital maturity but of the transactional nature of the brand's value proposition. Functional products can be evaluated and purchased through marketplace interfaces; emotional products require owned experiential channels to sustain engagement. The implication for platform strategy research is that platform embeddedness is not simply a function of technological capability but of strategic fit with the brand's value proposition.

6.2. Managerial Implications

For managers in technology brands, Anker's case carries several takeaways. The early investment in a self-developed ERP system—initiated in 2011 when the firm was still a startup—illustrates the value of building proprietary data foundations even when third-party platforms seem to provide everything needed. That early investment created a data asset that later enabled the VOC system, AI deployment, and the S&OP infrastructure. Technology brand managers who treat platform data as sufficient may find themselves locked into dependent positions that are difficult to escape. The VOC system's role in identifying the GaN charger opportunity, meanwhile, illustrates how customer data analytics, when integrated with R&D processes, can generate product innovations that capture significant market share. Customer feedback is not just a customer service input; it is a strategic resource for product innovation.

For managers in trendy consumer brands, Pop Mart's case demonstrates that digital transformation should be organized around the IP lifecycle rather than around operational processes. The PDC platform's use of social media data to predict IP potential, the tiered membership system's role in sustaining 49.4% repurchase rates, and the Roboshop network's deployment as data-generating retail nodes collectively illustrate how digital infrastructure can amplify the emotional economics of trend-driven products. The private-domain community strategy—building owned channels rather than relying on marketplace traffic—proves particularly valuable for brands whose competitive advantage depends on sustained emotional engagement. Platforms can drive discovery; they cannot, on their own, build community.

More broadly, the comparison suggests that digital transformation is not a one-size-fits-all journey but a brand-type-contingent process. Firms should diagnose their value proposition—functional or emotional—and configure digital initiatives accordingly. Attempting to replicate another firm's digital playbook without accounting for brand-type differences risks misallocating resources toward capabilities that do not align with the firm's competitive logic. A technology brand that invests heavily in community-building infrastructure without connecting it to product improvement will likely see lower returns than a brand that invests those same resources in R&D digitalization. A trendy consumer brand that invests heavily in code-generation tools without connecting them to IP management will similarly underperform. The right digital investments are the ones that reinforce the brand's core value proposition.

6.3. Cross-Case Patterns and Boundary Conditions

Two cross-case patterns merit emphasis. First, both firms exhibit a digital maturity spiral wherein initial digital investments create data assets that enable subsequent, more sophisticated digital capabilities. Anker's early ERP investment enabled the VOC system, which in turn enabled AI-driven product selection; Pop Mart's data middle office enabled the PDC platform, which in turn enabled the D-CODE model. This spiral dynamic suggests that digital transformation is path-dependent: the sequencing and configuration of early investments constrain later possibilities, and brand type influences which entry points are most productive. Technology brands may find ERP and supply chain digitalization to be the most productive entry points; trendy consumer brands may find customer data and community infrastructure to be more productive.

Second, both firms demonstrate what we term digital-emotional convergence—a trend wherein technology brands increasingly need emotional engagement (Anker's influencer strategy, brand consolidation for emotional resonance) and trendy consumer brands increasingly need technological sophistication (Pop Mart's AI-powered IP prediction, smart supply chain). Anker's consolidation of six brands under a single "Anker" identity in 2024 reflects a recognition that emotional brand architecture matters as much as technical product performance. Pop Mart's deployment of AI for IP prediction reflects a recognition that data-driven decision-making matters as much as creative intuition. This convergence suggests that the boundary between technology and trendy consumer brands may be blurring, as digital tools enable functional brands to cultivate emotional communities and emotional brands to leverage technical infrastructure.

Whether this convergence eventually erodes the brand-type moderation identified in this study remains an open question. It is possible that, as digital-emotional convergence advances, the digital transformation playbooks for technology and trendy consumer brands will become more similar rather than more different. It is also possible that the fundamental difference in value proposition—functional versus emotional—will continue to generate distinct digital transformation configurations even as both sides adopt similar tools. Only time will tell; what we can say with confidence is that, at the current historical juncture, brand type continues to shape digital transformation pathways in meaningful and theoretically interesting ways.

7. Conclusion

This paper has conducted a comparative dual-case analysis of digital transformation in a technology brand (Anker Innovations) and a trendy consumer brand (Pop Mart), revealing two distinct modes: a product-driven, platform-enabled mode characteristic of technology brands and an IP-driven, community-centric mode characteristic of trendy consumer brands. The comparison demonstrates that brand type—specifically, the functional versus emotional basis of value proposition—moderates the strategic logic, channel architecture, supply chain configuration, customer data systems, and AI deployment patterns that constitute digital transformation. Digital transformation is not a single process with a single optimal trajectory; it is a family of related processes whose shape depends on the brand through which it is enacted.

The theoretical contribution lies in three moves: introducing brand type as a moderating construct in digital transformation theory, extending the dynamic capabilities perspective to account for how different value propositions shape the sensing, seizing, and reconfiguring functions, and revealing a platform embeddedness paradox that challenges assumptions about the relationship between digital maturity and platform dependency. The managerial contribution lies in providing a diagnostic framework for aligning digital transformation initiatives with brand-type-specific competitive logics—helping managers avoid the trap of importing digital playbooks from firms in fundamentally different brand categories.

Several limitations bound these contributions. The two-case design, while analytically productive, limits statistical generalizability. Both firms are Chinese, listed in the same year, and operating in consumer markets—contextual factors that may influence the observed patterns. The reliance on publicly available data restricts insight into internal

decision-making processes and the political dynamics of digital transformation within organizations. And the cross-sectional nature of the comparison means that we can describe differences but cannot fully trace the causal mechanisms through which brand type shapes digital transformation over time.

Future research could extend the framework in several directions. Adding service brands and industrial brands would test whether the brand-type moderation identified here holds across a broader range of value propositions. Firms in other institutional contexts—particularly Western firms with different regulatory environments and consumer expectations—would help establish boundary conditions. Longitudinal designs that track how the digital-emotional convergence trend evolves over time could illuminate whether the brand-type distinction strengthens, weakens, or transforms as digital technologies become more ubiquitous and as emotional engagement becomes more central to competition. And research that examines the microfoundations of digital transformation—how individual employees, teams, and departments experience and shape digital change—could complement the firm-level analysis presented here. These questions, among many others, await empirical attention.

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