

A Study on the Symbiotic Business Model of the Pet Economy and Public Welfare Assistance under a P2P Framework

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Abstract: The burgeoning pet consumption market in China is experiencing continuous expansion, concurrently escalating the pressures of stray animal governance. Existing conventional pet service frameworks are generally characterized by low supply-demand matching efficiency, a disconnect between commercial operations and public welfare assistance, and a lack of standardized service protocols. This project leverages a P2P (peer-to-peer) service model to establish a comprehensive platform integrating temporary pet boarding, regulated adoption, health and wellness care, and public welfare support. This initiative aims to organically unite market-driven pet services with animal protection advocacy. Through multi-dimensional industry analysis utilizing PEST, SWOT, and Porter's Five Forces models, the project clarifies the platform's overall positioning, service architecture, operational strategies, and developmental trajectory. It also constructs mechanisms for risk mitigation, compliant operations, and synergistic collaboration between commercial and public welfare endeavors, thereby achieving a unification of economic, social, and ecological value. Practical analysis indicates that this model can effectively enhance the operational efficiency of pet services, reduce instances of pet abandonment, and optimize urban stray animal management structures, demonstrating significant market feasibility and promotional significance.

Keywords: Pet economy; P2P model; Public welfare rescue; Regulated adoption; Platform operations; Human-animal harmony

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1. Project overview

1.1. Project background

In recent years, with the continuous improvement of residents' quality of life, significant changes have occurred in family structures, demographic compositions, and emotional needs ^[1]. Pets have increasingly transitioned from traditional companionship roles to integral emotional members of the family, driving the rapid development of the pet-related industry. Data indicates that by 2024, the overall market size of China's

pet industry will have surpassed 300 billion yuan, with an average annual growth rate maintained at around 15% (according to survey data) ^[2]. Sectors such as pet food, medical care, services, and supplies have all shown stable growth, with a particularly notable rise in demand for services like boarding, fostering, and health management.

Concurrently with the industry's high-speed development, issues such as pet abandonment, a surge in stray animal populations, and public health risks have become increasingly prominent. The national stray animal population now exceeds 40 million, while the annual effective rescue proportion is less than 2% [based on official data from World Stray Animal Day 2024 (online data)] ^[3]. Traditional rescue organizations universally face challenges of financial constraints, insufficient manpower, limited space, and difficulty in sustained operation. On one hand, commercialized pet service providers are primarily profit-oriented, with limited coverage of public welfare areas such as stray animal rescue. On the other hand, public welfare rescue organizations are highly dependent on donations and volunteer efforts, lacking stable self-sustaining revenue streams, which hinders the formation of a scalable and long-term governance system. This prolonged separation between the two sectors not only constrains the healthy development of the pet industry but also leaves urban stray animal governance in a perpetually reactive state ^[3].

Against this backdrop, exploring a hybrid model that balances commercial sustainability with public welfare implementation, leveraging a digital platform to integrate resources, enhance efficiency, and reinforce the concept of responsible pet ownership, holds significant practical necessity and innovative value for the industry.

1.2. Project core positioning

PawCare (Paw Print Chain) establishes a comprehensive service platform based on a P2P (peer-to-peer) service model, connecting pet owners, foster families, rescue organizations, pet medical institutions, and animal welfare volunteers. The platform de-emphasizes traditional intermediary roles, enabling direct matching between demanders and service providers. Under the principles of safety, standardization, and traceability, it offers diversified services including temporary pet accommodation, regulated adoptions, health monitoring, custom accessory services, exotic pet care, and stray animal rescue ^[4].

The platform adheres to the fundamental tenet of “commercial cyclability and public welfare implementability.” It ensures stable platform operation through market-oriented management and promotes scientific governance of stray animals via professional mechanisms. While enhancing service efficiency and user experience, it guides society towards establishing awareness of civilized and responsible pet ownership, thereby fostering a more orderly and harmonious urban coexistence environment for humans and pets.

1.3. Core objectives

1.3.1. Business development goals

Establish an integrated online-offline pet service network, achieving closed-loop operations for boarding, adoption, rehoming, and public welfare rescue. Gradually expand from regional pilot programs to multiple cities, enhancing the platform's reach and influence in pet services and animal rescue.

1.3.2. Functional and technical goals

Utilize technologies such as intelligent matching, blockchain for evidence preservation, and AI for health monitoring to provide users with precise, secure, and traceable service experiences. Enhance modules

for identity verification, credit scoring, and risk early warning to reduce service disputes and bolster overall platform credibility.

1.3.3. Operational management goals

Adopt an asset-light operation model to minimize fixed investments and daily costs, optimize service processes, and establish a standardized management system. Improve organizational flexibility and expand service coverage through a “core team + volunteers” model.

1.3.4. Comprehensive benefit goals

Strive to achieve a 30% reduction in comprehensive service costs, a 40% increase in service response efficiency, and maintain user satisfaction above 95% within three years. Effectively lower the pet abandonment rate within the region and promote the upgrading of the pet service industry towards standardization, digitalization, and humanization.

2. Macro environment and market analysis

2.1. PEST Analysis

2.1.1. Policy environment

Continuous refinement of national and local laws and regulations concerning animal epidemic prevention, pet management, and personal information protection provides institutional safeguards for industry development. The “Law of the People’s Republic of China on Animal Disease Prevention” clearly defines the responsibilities of pet owners, while local pet management regulations further standardize ownership behaviors, travel protocols, and abandonment restrictions ^[5]. The government encourages social participation in TNVR (Trap-Neuter-Vaccinate-Release) initiatives for stray animals and supports youth innovation and social welfare projects, thereby offering policy support and a compliant operational space for platform development ^[6].

2.1.2. Economic environment

Rising resident consumption capacity is driving an upgrade in the structure of pet-related expenditures, with a continuous increase in the proportion of service-based consumption. Younger demographics are emerging as the primary consumer group, exhibiting higher acceptance and willingness to pay for services such as boarding, medical care, and training. The platform adopts a lean asset model, leveraging mini-programs and a cooperative network to deliver services. This approach minimizes initial investment pressures and allows for diversified revenue streams through service commissions, product sales, insurance partnerships, and corporate co-branding, demonstrating strong economic viability.

2.1.3. Social environment

Public awareness of animal welfare and willingness to participate in public service initiatives have significantly increased, with the concept of “adopt, don’t shop” gradually gaining traction ^[7]. The emotional value attributed to pets is becoming increasingly prominent, offering significant psychological solace to single young adults, the elderly, and families with children. However, the industry still faces distinct pain points: the prevalence of impulsive pet ownership, a scarcity of emergency boarding options, a lack of

transparency in adoption processes, insufficient support for elderly pet owners, and fragmented rescue resources. Survey data indicate that nearly 70% of pet owners are willing to explore integrated, standardized, and innovative pet services, underscoring a solid foundation of market demand.

2.1.4. Technological environment

Technologies such as big data algorithms, blockchain-based evidence preservation, and mobile mini-program development are increasingly mature, supporting the implementation of functionalities like intelligent user matching, pet health record management, service process supervision, and credit system construction. The widespread adoption of mobile internet, a well-developed online payment system, and diverse social dissemination channels further reduce platform promotion costs and user access barriers, providing technological support for a lightweight and broadly covered operational model.

2.2. Market demand and pain points

2.2.1. Core pain points

- 1) Insufficient emergency boarding resources: In scenarios such as business travel, medical treatment, or unforeseen circumstances, temporary pet accommodation presents challenges. Traditional institutions are often cost-prohibitive and have limited capacity, while individual boarding lacks standardization and security.
- 2) Non-standardized adoption processes: Dispersed information, simplistic screening, and a lack of post-adoption follow-up result in low matching success rates and high rates of repeat abandonment. Rescue organizations, constrained by limited manpower, struggle with meticulous management.
- 3) Fragmented stray animal governance: Rescue resources are disconnected, TNVR implementation is insufficient, and urban management remains in a reactive state.
- 4) Significant disconnect between public welfare and commerce: Commercial platforms rarely participate in rescue efforts, and rescue organizations lack operational capacity, hindering resource circulation and undermining sustainability.

2.2.2. Target users

The platform primarily targets families with children, young pet owners, elderly pet owners, public welfare enthusiasts, and university students. It offers differentiated service solutions tailored to the needs of diverse demographics, covering various scenarios such as boarding, adoption, care, experiential activities, and rescue, thereby precisely filling market gaps.

2.3. Competitiveness analysis

2.3.1. SWOT analysis

Strengths: The P2P model reduces intermediary links, resulting in lower costs and faster response times; diverse service scenarios covering fostering, adoption, health, exotic pet care, and public welfare, demonstrating clear differentiation; the team possesses interdisciplinary backgrounds and frontline rescue experience; the combined business and public welfare model garners higher social recognition.

Weaknesses: Low brand recognition during the startup phase requires a period for user trust establishment; limited seed funding restricts market promotion efforts; the service standardization system necessitates continuous optimization.

Opportunities: Continued growth in the pet industry and increasing animal welfare awareness; mature technology lowers platform development and operational costs; policies encouraging innovation and entrepreneurship, along with social governance innovation, create a generally favorable external environment.

Threats: Intensifying market competition, with pressure from similar platforms and traditional organizations; evolving industry regulations may introduce compliance challenges due to policy adjustments; potential impacts from animal epidemics and public health events.

2.3.2. Porter's five forces analysis

The platform leverages differentiated services, technological empowerment, and public welfare endorsements to establish competitive barriers, creating a threshold advantage for new entrants. Traditional pet stores and rescue stations offer limited functions, posing less substitutability. Collaborative win-win relationships with veterinary hospitals, suppliers, and rescue organizations result in relatively balanced bargaining power. User demand is relatively inelastic, with low price sensitivity. Currently, the industry lacks an absolute market leader, giving a significant first-mover advantage. Overall, the platform demonstrates strong market competitiveness.

3. Platform design and service system

3.1. Platform architecture

The platform adopts a three-terminal separated architecture encompassing the user end, foster family end, and management backend. Core modules include real-name authentication, credit evaluation, intelligent matching, online contracting, payment settlement, public welfare zone, health monitoring, and community interaction. Primarily utilizing WeChat Mini Programs as its carrier, the platform offers a user-friendly interface and broad accessibility, effectively lowering the barrier to entry for users and enhancing service coverage and outreach efficiency.

3.2. Online-offline synergy mechanism

The online platform facilitates functions such as demand posting, intelligent matching, agreement signing, payment settlement, health record inquiries, dynamic tracking, public welfare donations, and community interaction, thereby achieving end-to-end online, visualized, and traceable operations. Offline, a "6+N" cooperative network is established, integrating pet hospitals, rescue organizations, food suppliers, grooming salons, insurance institutions, and lifestyle service venues. Temporary shelters are also set up in key areas to ensure the implementation of offline services like emergency response, on-site handover, health checks, and rescue execution, forming a complete service loop where online channels drive offline fulfillment.

3.3. Core service content

3.3.1. Temporary pet placement services

This service provides family-style fostering and emergency boarding, establishing a rapid response mechanism with the aim of achieving placement within 2 hours of response and 4 hours of completion, effectively addressing pet care challenges for owners facing unforeseen circumstances.

3.3.2. Standardized adoption system

Through user condition assessment, pet characteristic matching, household qualification review, pet care knowledge training, a 7-day trial period, and regular follow-ups, a comprehensive and standardized adoption mechanism is constructed to mitigate the incidence of abandonment and repeat abandonment at the source.

3.3.3. Health monitoring and care services

An electronic health record system for pets is established to document information such as immunizations, deworming, and physical examinations. The service offers daily care advice, alerts for abnormal conditions, and recommendations for medical resources, thereby promoting scientific pet ownership practices.

3.3.4. Customized peripheral services

Centering on emotional companionship needs, this service offers customized products, including pet collars, daily necessities, and smart devices, enhancing the emotional bond between owners and their pets ^[5].

3.3.5. Professional exotic pet care services

Specialized guidance on husbandry, environmental setup, and safety management is provided for exotic pets such as reptiles, rodents, and birds, filling a gap in the market for specialized services.

3.3.6. Public welfare rescue services for stray animals

In collaboration with rescue organizations across various regions, this service supports the implementation of TNVR projects, facilitates virtual adoptions, online donations, public education campaigns, and volunteer activities, thereby promoting the normalization and scientific management of stray animal populations.

4. Operational management and business model

4.1. Organizational structure

The project establishes an Operations Management Department, Technology Department, Marketing Department, Exotic Pet Services Department, Risk Control Department, and Finance and Legal Department. It adopts a lightweight operational model of a “core team + volunteers” to reduce labor costs and increase social participation. Volunteers undergo unified training, assessment, and certification before being deployed. They participate in tasks such as animal care assistance, public awareness campaigns, event execution, and offline engagement, forming a stable, socialized support system.

4.2. Standardized service processes

The platform has established standardized operating procedures throughout the entire process to ensure stable and controllable service quality.

Intake Process: Information Registration—Qualification Review—Agreement Signing—Information Release—Intelligent Matching

Care Process: Health Record Establishment—Standardized Care—Dynamic Updates—Anomaly Alert—Disposition Feedback

Adoption Process: Questionnaire Completion—Intelligent Matching—Qualification Review—Training and Certification—Trial Period—Formal Adoption—Regular Follow-up

Tracking Process: Regular Follow-up—Data Archiving—Credit Evaluation—Service Optimization—Credit Incentives

4.3. Business model

The platform employs a sustainable model of “free basic services + charged value-added services + dedicated public welfare support.” Basic services such as information inquiry, adoption consultation, and fundamental health records are offered free of charge to enhance user attraction. Profit is generated through value-added services via commissions, product sales, insurance revenue sharing, corporate partnerships, and government project contracting. A fixed percentage of each commercial transaction is allocated to public welfare funds, specifically for sterilization, vaccination, rescue, and educational outreach for stray animals, thereby enabling commercial revenue to subsidize public welfare initiatives and ensure their stability and sustainability.

4.4. Marketing strategy

Online, content dissemination is leveraged through platforms like Xiaohongshu, Douyin, and WeChat Official Accounts, enhancing brand influence with educational content, rescue narratives, user stories, and themed events. Offline, public welfare activities, adoption days, and civilized pet ownership campaigns are conducted in communities, campuses, and commercial areas to improve user experience and emotional connection. Cross-industry collaborations with pet organizations, non-profit groups, and university clubs are initiated to reinforce the brand image of “responsible pet ownership, scientific care, and charitable rescue.”

5. Risk assessment and control

5.1. Market risks

Intensified market competition, slow user trust establishment, and demand fluctuations may impact the platform’s development pace. The platform enhances risk resilience by strengthening differentiated advantages, piloting before expansion, building trust through word-of-mouth, and flexibly adjusting service strategies.

5.2. Operational risks

Uneven service quality, imbalances in supply and demand matching, and an unclear definition of responsibilities are the primary operational risks. The platform ensures service stability through multiple measures, including unified entry standards, an intelligent matching system, standardized operating manuals, a service evaluation system, third-party supervision, and insurance coverage.

5.3. Legal and compliance risks

Key risks include incomplete qualifications, personal information leakage, contract disputes, and ambiguous liability allocation. The platform strictly adheres to the Personal Information Protection Law, the Animal Epidemic Prevention Law, and local pet management regulations. It ensures compliant operations throughout the entire process by employing data encryption, access control, standardized agreements, and partnerships with certified institutions.

5.4. Risk of balancing public welfare and commercial interests

To mitigate public opinion controversies such as “exploiting goodwill”, the platform implements public disclosure of income and expenditure, dual-track operations, independent oversight, and specialized management of public welfare funds. This ensures transparency, standardization, and traceability of public welfare fund utilization, upholding the initial charitable mission while maintaining commercial sustainability.

5.5. Capital exit plan

The platform designs diversified exit paths, including Initial Public Offering (IPO), strategic mergers and acquisitions, share buybacks, and social impact investments ^[8]. Core evaluation metrics include user scale, operational data, profitability, and social value. This phased approach aims to achieve a virtuous cycle of capital and ensure the project’s long-term stable development.

6. Social benefits and value

6.1. Benefits of stray animal governance

Through comprehensive TNVR support, standardized adoption matching, abandonment early warning intervention, and public education campaigns, the project reduces the increment of stray animals at the source, optimizes the structure of existing governance, and shifts urban stray animal management from passive rescue to scientific prevention, thereby enhancing governance efficiency and sustainability.

6.2. Public safety and ecological value

This initiative mitigates risks associated with stray animals, such as injuries to humans, disease transmission, and traffic hazards. It also reduces predatory pressure on urban small wildlife, thereby maintaining regional ecological balance. Promoting civilized pet ownership, improving community environments, and reducing neighborhood conflicts contribute to enhanced public safety.

6.3. Social welfare and humanistic value

Disseminating life education and responsible pet ownership concepts reduces impulsive pet acquisition and arbitrary abandonment. It provides the public with accessible channels for charitable participation while offering emotional companionship to isolated elderly individuals and young adults, thereby fostering social warmth and resident well-being.

6.4. Industry demonstration value

The project establishes a replicable and scalable model integrating commerce and public welfare, setting service standards for integrated fostering, adoption, and rescue. It propels the pet industry toward standardization, digitalization, and public-spirited development, serving as a practical reference for similar innovative entrepreneurial projects.

7. Conclusion and outlook

PawCare (Paw Print Chain), centered on a P2P model, bridges the gap between the pet economy and public welfare rescue. Through technological empowerment, service innovation, and mechanism refinement, it

effectively addresses long-standing industry pain points such as emergency pet fostering, regulated adoption, and stray animal governance, achieving both commercial sustainability and the realization of public welfare value. The project demonstrates robust feasibility across policy, economic, social, and technological dimensions, supported by a comprehensive risk control system, yielding significant economic and social benefits.

Moving forward, the platform will continue to optimize its functional modules, expand its offline collaboration network, refine service standards and credit systems, and promote cross-regional replication of its operational model. The commitment is to become an influential pet-friendly service platform in China, advancing the construction of a harmonious human-pet society through digitalization, and providing innovative support for the high-quality development of the pet industry and the progress of urban civilization.

Disclosure statement

The authors declare no conflict of interest.

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