

Value Generation, Risk Transmission and Collaborative Governance of "Sports Takeout"

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Abstract. With the accelerated integration of digital platforms into the sports service sector, "sports takeout" has gradually become an emerging business format that meets personalized, instant and scenario-based fitness needs. To reveal its value generation logic and governance problems arising from its operation, this paper adopts the literature review method and logical analysis method to carry out research from three dimensions: platform organization, service fulfillment and risk transmission. The study concludes that through online matching, on-site fulfillment and continuous evaluation feedback, "sports takeout" reduces consumers' time and space costs, improves the accessibility of sports services and the efficiency of supply-demand matching, and can promote the shift of sports services from venue-centered to user-living-area-oriented. However, while platformization and mobilization create more convenient value, they also bring problems such as difficult identification of coach qualifications, difficulty in standardizing service quality, higher safety risk coefficients in non-fixed venues, insufficient personal information protection, and blurred boundaries of platform responsibilities. To promote "sports takeout" from a short-term consumption hotspot to a stable service format, we should take the service chain as the governance object, continuously improve mechanisms such as coach access, pre-class assessment, process traceability, data protection, liability insurance and dispute handling, and better build a collaborative governance system combining government supervision, platform accountability, industry self-discipline and consumer participation.

Keywords: digital platform, sports takeout, sports services, risk transmission, collaborative governance

1. Introduction

The 15th Five-Year Plan period is a critical period for consolidating the foundation and achieving all-round development for basically realizing socialist modernization. The Fourth Plenary Session of the 20th Central Committee of the Communist Party of China made systematic arrangements for economic and social development during this period, emphasizing adherence to high-quality development, building a modern industrial system, and continuously improving people's well-being [1]. In the field of sports, the *Opinions on Comprehensively Strengthening and Improving School Physical Education in the New Era* requires strengthening the educational function of school physical education, improving students' physical education evaluation, and scientifically

determining and gradually increasing the score of physical education in the senior high school entrance examination [2]. On the one hand, the above policy arrangements have elevated the institutional status of sports in national development and talent training; on the other hand, they have effectively promoted the continuous release of demand for professional, convenient and personalized sports services from residents, especially adolescent families.

The key to improving the quality and expanding the scale of sports consumption is not simply to increase the number of products, but to transform unmet sports needs into stable and sustainable consumption behaviors. The *Opinions of the General Office of the State Council on Unleashing the Potential of Sports Consumption and Further Promoting the High-Quality Development of the Sports Industry* proposes to expand sports consumption scenarios and cultivate emerging models of intelligent, customized and experiential sports consumption [3]. Wang Jiahong and Cui Liming further pointed out that the release of sports consumption potential requires value transformation and dynamic balance of supply and demand, and consumption trust should be guaranteed by the improvement of market mechanisms [4]. Under the combined effect of policy guidance, digital technology penetration and segmented consumer demand, the supply of sports services has gradually shifted from consumers going to fixed venues to online matching, appointment scheduling and services actively reaching living scenarios.

"Sports takeout" has entered the public eye precisely in this transformation process. Studies have attributed the rise of home-based sports training to the upgrading of service consumption, internet integration and the development of the "home service economy", and also pointed out that it faces a series of problems such as service quality, security guarantee, ethical responsibility and curriculum norms [5]. Further research through SWOT analysis points out that the direct advantages of adolescent home-based sports training include reducing parental pick-up and drop-off, flexible scheduling and personalized guidance [6]. The above studies show that sports takeout is not simply a spatial relocation of traditional personal training, but a simultaneous reconstruction of demand access, service organization and risk bearing methods. However, existing studies mostly carry out research in parallel with the "value-dilemma-path" framework, failing to fully explain why value and risk are generated by the same operating mechanism, and rarely discussing how platforms reconstruct the responsibility relationship among platforms, coaches and consumers through information display, order allocation and data accumulation. Based on this, this paper defines sports takeout as "mobile sports services mediated by digital platforms", uses literature review method and logical analysis method to construct an analytical framework of "demand transformation – value generation – risk transmission – governance response", and focuses on analyzing how platforms create value, how risks are generated along the service chain, and how governance measures should correspond to specific risk links.

2. Conceptual boundaries and analytical framework

2.1. Conceptual boundaries of sports takeout

"Sports takeout" refers to a service model where consumers obtain information, select coaches and make appointments through platforms, mini-programs, social media or instant communication tools, and coaches carry necessary sports equipment to agreed locations such as homes, communities, parks or office buildings to provide face-to-face sports guidance. The complete process includes service display, demand matching, pre-class communication, venue confirmation, offline training, result feedback, payment evaluation and rights dispute handling. Discussions on home-based sports training show that the core feature of home-based sports services is that trainers actively move to the

scenarios designated by consumers and provide sports guidance around individual needs [5]. With the intervention of digital platforms, services are no longer simply "coaches coming to the door"; platforms also participate in transaction organization through information classification, payment rules, evaluation systems and data records.

There are obvious differences between sports takeout and traditional venue personal training, pure online follow-along training and general home services. Traditional personal training takes fixed venues as the organizational center, and venues, equipment and personnel are usually included in unified organizational management; pure online fitness lacks coaches' instant judgment in real sports scenarios; general home services such as housekeeping and delivery usually do not involve professional issues such as exercise load, physical contact, injury prevention and training effects. "Sports takeout" needs to have attributes such as platform matching, coach mobility, non-standardized scenarios, physical exercise risks and delayed effect benefits at the same time. Only by examining these attributes in a unified service chain can we more accurately judge its value source and governance boundaries.

2.2. Analytical framework of "demand transformation – risk transmission"

The operation of "sports takeout" is first and foremost a process of demand transformation. Consumers may already have the willingness to exercise, but are constrained by scattered coach information, high commuting and pick-up costs, mismatched fixed class times or lack of professional judgment. Platforms reduce access costs through centralized display and appointment matching; coaches embed services into living scenarios through spatial movement; training records and feedback extend single experiences into continuous services. Thus, fitness needs that only stay at the level of consumers' willingness obtain transaction conditions, allowing consumers to choose services according to their own spatial and temporal conditions.

However, while "sports takeout" improves service convenience and supply-demand matching efficiency, it does not necessarily bring about a synchronous improvement in service quality. Platformization, home-based delivery and digitalization have changed the organization methods of traditional sports services, and the links where risks occur and the rights-responsibility relationships have also changed accordingly. Platforms focus on displaying coach qualifications, service experience and past user evaluations. Although this reduces the cost for consumers to search and compare services, online information such as certificates and ratings cannot fully reflect the actual teaching ability of coaches, and consumers may still face the problem of insufficient identification of professional level. The "home-based" and "instant" sports services reduce consumers' time for traveling to and from venues and transportation costs, but they also detach training activities from the facility guarantee and on-site supervision of fixed venues, increasing the difficulty of ensuring venue facility safety, teaching norms and controllable sports injuries. Regular training records and health data of consumers help coaches formulate personalized exercise prescriptions and training plans, but the need to continuously collect information such as physical conditions and location trajectories will also expand the risks of personal information leakage and improper use. In addition, platforms hold the power of coach display, order allocation and transaction rule formulation. If accident handling and responsibility bearing mechanisms are not clarified, mutual shirking among platforms, coaches and consumers is prone to occur when disputes arise. Based on this, this paper takes the service chain of "sports takeout" as the main research line, examines how its value is formed, how risks are generated and transmitted, and accordingly identifies the governance control points required for different links (Table 1).

Table 1. Value generation, risk transmission and governance control points of sports takeout

Service Mechanism	Value Generation	Risk Transmission	Governance Control Points
Information centralization and platform display	Reduces search costs and makes services comparable	Complex capabilities are compressed by certificates, star ratings and prices	Information verification, classified display, multi-dimensional evaluation
Coach mobility and on-site fulfillment	Reduces commuting, pick-up and time coordination costs	Training is detached from unified venues, and risks are regenerated with each order	Project grading, venue verification, emergency response
Data recording and course feedback	Improves adaptability and perceptibility of training process	Health, location and family information continue to accumulate	Minimum necessity, purpose limitation, user control
Platform matching and multi-stakeholder participation	Expands supply scope and improves transaction efficiency	Centralized control while responsibilities are dispersed to both ends	Platform first response, responsibility allocation based on control capability

Source: Compiled by the author based on relevant literature and the service process of "sports takeout"

3. Value generation mechanism of sports takeout

3.1. Information visibility transforms scattered supply and demand into tradable services

In traditional sports training, information on coach ability, course content, time and price is scattered among institutions, venues and acquaintance networks, requiring repeated consultation and comparison by consumers. Relevant research on the sports O2O model points out that the O2O model can aggregate scattered coaches, venues and consumer demands, and improve resource allocation with the help of online platforms [7]. "Sports takeout" continues this logic: platforms can transform coaches' identities, relevant experiences, responsible projects, available appointment times, prices and user evaluations into searchable information, enabling consumers to complete preliminary screening, and also providing individual coaches and small studios with a relatively stable display entry.

The information presented by "sports takeout" platforms does not necessarily fully reflect the real situation of services. Platforms influence the presentation and exposure of service information through course classification, recommendation ranking and evaluation rules. Therefore, they are not simply information release channels, but important organizers of the "sports takeout" market. The first layer of value of "sports takeout" lies in transforming originally scattered supply and demand information into queryable, comparable and reservable "instant home-based" services. However, whether this value can be truly realized does not depend on how much information the platform displays, but on whether the relevant information can accurately reflect the professional ability, service experience and fulfillment quality of coaches, so as to help consumers make more reasonable and effective choices.

3.2. Spatial mobility of service providers reduces consumer participation costs

Traditional venue-based sports services usually require consumers to arrange their schedules according to fixed time slots, which may generate non-price costs such as commuting, pick-up and drop-off, waiting for classes and family time coordination. For adolescent families, these additional burdens not only increase the cost of youth sports participation, but may also become a practical obstacle to continuous professional sports training. Existing studies show that home-based sports training can effectively reduce the time and energy invested by parents in pick-up and drop-off, and improve the flexibility of course arrangement [5]; at the same time, it can adjust teaching content according to children's physical conditions and training needs, enhancing the pertinence of services [6]. When coaches actively enter the living space where consumers are located, sports services shift from "consumers adapting to venue arrangements" to "instant services embedded in consumers' daily lives", thereby improving the possibility of parenting families, workplace groups and people far from professional venues to obtain professional sports guidance.

However, this supply method does not truly eliminate spatial constraints, but redistributes spatial costs. Consumers' travel burden can be reduced, while coaches need to bear more travel time. Platforms must also judge the venue conditions, equipment configuration and project suitability of different service scenarios according to the situation. Therefore, the time and space convenience of "sports takeout" is not unconditionally established, but depends on whether effective matching can be formed among training scenarios, sports events and service objects. Without necessary venue inspection, equipment safety guarantee and exercise risk assessment, time and space convenience may translate into declining service quality and rising safety risks.

3.3. Personalized matching improves the perceived value of services

"Sports takeout" services have obvious experiential attributes, and it is difficult for consumers to judge the teaching effect before purchase. Relevant studies show that through a survey of sports O2O consumers, past consumption experience, product or service quality, industry supervision, web platforms and information security jointly affect consumer perception, among which service experience and product factors have more prominent impacts [8]. This indicates that merely providing an appointment portal is not enough for platforms to form stable consumption; consumers also need to feel the matching between courses and their own needs in actual training.

"Sports takeout" can understand age, sports foundation, goals and available training space through pre-class communication, and then coaches adjust course content and load. Compared with unified group classes, this "instant" service adaptation is easier to meet differentiated needs such as adolescent physical fitness, short-term workplace exercise, low-intensity exercise for the elderly, or postpartum recovery. The value of "sports takeout" does not lie in infinitely catering to consumers' needs, but in transforming professional judgment into training goals, phased feedback and adjustment basis that consumers can understand, thereby reducing trial and error costs and improving the perceptibility of service effects.

3.4. Digital feedback extends single transactions into continuous services

The effect of physical exercise depends on continuous training and phased accumulation, and a single course usually cannot fully reflect the professional value of sports services. Existing studies point out that after digital technology is embedded in fitness and leisure services, it can improve the pertinence of sports service supply through user information analysis, demand identification and

continuous optimization of service processes [9]. In the specific "sports takeout" scenario, pre-class physical condition assessment, training process records, post-training phased effect feedback and subsequent program adjustment can form a connected service process. Coaches can grasp consumers' physical changes and training completion accordingly, and consumers can also understand training progress through phased records, thereby reducing the uncertainty of judging service effects caused by mere verbal promises.

However, continuous recording of training data does not necessarily lead to improved service quality; its effect mainly depends on whether data collection and use can serve professional training. If platforms mainly use training records to send renewal reminders and marketing information, data can only become a business tool to promote repurchase, and it is difficult to improve course quality; only when phased goals are based on physical assessment and training laws, and training content is adjusted in time according to feedback, can data be used to judge training progress, identify exercise risks and optimize subsequent programs. Therefore, the core value of digital feedback is not to increase the time users spend on the platform, but to enable the training process to be recorded, training effects to be judged, and training programs to be adjusted in a timely manner.

4. Risk transmission mechanism of sports takeout

4.1. Professional capabilities are compressed by platform labels

The quality of sports guidance depends on various abilities such as professional knowledge, movement demonstration, communication skills, safety awareness and on-site adjustment. Research on coach competence shows that the competence of fitness coaches cannot be measured only by basic knowledge and skills, but also involves multi-dimensional characteristics such as professional literacy, communication services and continuous development [10]. However, to improve comparison efficiency, platforms often compress these complex capabilities into certificates, years of practice, star ratings and sales volume. Certificates can prove part of the learning experience, but cannot automatically prove that coaches are suitable for different groups such as adolescents, the elderly or postpartum women.

This labeling may form new information asymmetry. Consumers are more likely to make choices based on high star ratings, low prices and short-term evaluations, but instant evaluations after the course are more likely to reflect punctuality, service attitude and interactive experience, making it difficult to judge whether the training plan conforms to exercise laws. If platforms directly convert positive review rates into passenger flow, professional capabilities may be replaced by marketable service performance, and coaches may also compete for orders through low prices and effect promises. Platforms improve information visibility, but may not improve the identifiability of professional capabilities.

4.2. Non-standard scenarios cause safety risks to regenerate with each order

Mobile fulfillment transfers training from unified fixed venues to scenarios such as family living rooms, community open spaces, park trails and areas consumers consider safe. These spaces have obvious differences in flooring, protection, lighting, equipment and emergency conditions. Relevant research on home-based sports services points out that home-based sports training services have problems such as uneven coach quality, equipment and venue limitations, and hidden safety hazards in the training environment [6]. This means that the environmental inspection completed once in fixed venues must be transformed into dynamic verification before each service in sports takeout.

Some studies also point out that teacher quality, venue equipment, safety guarantee and service supervision are listed as key issues to be solved in adolescent home-based sports training [11]. If platforms only confirm whether orders can be completed without requiring health information confirmation, project risk grading and venue adaptation judgment, the convenience of services will transfer safety costs to consumers and coaches. Especially in family spaces, sports injuries will overlap with personal, property and privacy risks, and simply purchasing general accident insurance cannot solve all liability problems.

4.3. Data accumulation may shift from precise services to over-identification

Personalized services need to process consumer-related information such as age, physical condition, sports experience, location, family schedule and training records, some of which are highly sensitive. Research on sports apps points out that mobile platforms can improve consumers' usage experience through data recording and personalized functions, but at the same time there are problems of personal privacy, security exposure and improper advertising placement [12]. Although this conclusion is not directly aimed at sports takeout, it reveals the common contradiction of digital sports services: the more platforms rely on data to provide personalized services, the more they need to clarify the boundaries of data collection and use.

"Sports takeout" also incorporates location and family scenarios into the data chain. If health information is used for irrelevant marketing, home addresses are stored for a long time, or users cannot modify the labels formed by the platform, precise matching will turn into over-identification. Platform recommendations may also give priority to commissions, low prices and conversion rates, rather than project adaptation and safety levels. What consumers see is the service filtered by platform rules, so platforms must bear corresponding responsibilities for information display, recommendation logic and data use.

4.4. Special group needs are easily replaced by simple marketing instead of professional boundaries

"Sports takeout" usually regards silver-age sports, postpartum recovery and adolescent physical fitness as segmented scenarios, but the more specific the needs of these groups, the clearer the professional boundaries need to be. Relevant studies show that elderly sports services face insufficient professional guidance, insufficient age-appropriate supply and obstacles to the use of digital services, and graded guidance and risk assessment should be established according to differences among the elderly [13]. Therefore, home-based services for the elderly cannot only take "convenient exercise at home" as a selling point, but also need to identify risks such as chronic diseases, balance ability and exercise intensity.

Research on postpartum women shows that postpartum women's participation in physical exercise is affected by factors such as physical recovery, parenting burden, insufficient time and lack of professional support, and training plans should be combined with medical advice and individual recovery status [14]. If platforms package general fitness courses as "postpartum repair" or attract consumers with deterministic effects, personalized services may evolve into anxiety marketing. Special group scenarios are not labels for expanding orders, but an important basis for improving qualifications, assessment and responsibility requirements.

4.5. Mismatch between platform control capability and responsibility bearing

Sports takeout transactions may involve consumers, coaches, platforms, training institutions and venue managers. Platforms master the capabilities of information display, order allocation, payment settlement and evaluation disposal, which can affect whether transactions are established and how services are selected; but after an accident, platforms may also take "information intermediary" as an excuse to shift the main responsibility to coaches and consumers. What is formed is not a lack of responsibility, but an asymmetry between control power and responsibility.

Responsibilities for different risk links should be divided according to actual control capabilities. Consumers should truthfully provide necessary health information; coaches should implement training within their capabilities and make on-site judgments; platforms should ensure the authenticity of key information, set necessary procedures and handle abnormalities in a timely manner; venue managers shall bear corresponding obligations for facility maintenance. If responsibilities are not implemented to specific links, dispute handling can only revolve around repeated arguments about faults after the accident, and cannot form advance prevention mechanisms.

5. Collaborative governance path of sports takeout

5.1. Implement hierarchical access based on service objects and project risks

The access system should answer "who can provide what services for whom", rather than only judging whether a coach holds a certain certificate. Platforms should verify identity, special qualifications, project experience and first-aid ability, and set permissions according to service objects, exercise intensity, physical contact degree and scenario complexity. Basic access can be implemented for general adult low-risk physical activities; for adolescent special training, elderly sports, postpartum recovery and services with rehabilitation characteristics, corresponding special knowledge, health screening ability and continuing education records should be required.

Coach ability should also shift from static certificates to dynamic verification. Platforms can form ability files through trial lectures, training plan reviews, course spot checks, abnormal event records and regular retraining, and evaluate service attitude, teaching organization, movement guidance and safety management separately. This can not only avoid "one certificate for all", but also prevent excluding low-risk services with excessively high thresholds, realizing the connection between unified bottom lines and differentiated supply.

5.2. Embed safety governance into pre-class, in-class and post-class stages

The focus of pre-class governance is to identify whether services can occur safely. Platforms should provide health information confirmation and risk notification templates; after arriving at the site, coaches shall inspect the ground, space, obstacles, equipment, lighting and emergency exits; when conditions do not meet requirements, they should be allowed to adjust projects, change locations or cancel without liability. For adolescents, the elderly, postpartum women and other objects, the boundary between general sports guidance and medical rehabilitation should also be clarified, and fitness services are prohibited from replacing diagnosis and treatment.

During classes, training items, load changes and abnormal conditions should be recorded, and emergency contacts, one-click help and nearby medical information should be configured. Process traceability should follow the principle of necessity. Priority can be given to check-in, training

records and abnormal confirmation, and full audio and video recording in family space should not be enabled by default. After classes, mechanisms for adverse event reporting, complaint investigation and evidence preservation should be established, and combined insurance should be configured according to consumer accidents, coaches' professional liability, platform liability and third-party liability, so that risk sharing matches the control capabilities of each subject. While digital technology empowers the convenience of national fitness, it increases the complexity of supervision, and information risk has become the core of prevention and control. Under the traditional model, fitness data is stored locally with controllable circulation and low privacy risk; after the embedding of digital technology, a large amount of sensitive information is collected, circulation increases while controllability decreases, and misconduct such as malicious leakage occurs frequently [15].

5.3. Implement platform responsibilities in information, recommendation, data and dispute links

First, platforms should display verifiable information on coaches' identities, professional abilities, service scope, price composition and insurance status, and commercial promotion and ordinary display should be clearly distinguished. Second, recommendation rules should take project adaptation, safety level, time and distance into consideration, and cannot determine exposure only by commission, low price or order conversion rate. Third, health, location and family scenario data should follow the principles of minimum necessity, purpose limitation and time limit control, and users should be able to view, modify and delete unnecessary information. Fourth, platforms should establish a first-response system for disputes, and promptly suspend order taking and initiate review for qualification fraud, repeated complaints and serious safety incidents.

These responsibilities do not require platforms to replace coaches in making all professional judgments, but require them to be responsible for the links they can control. Chen Yiqing et al. found that industry supervision and information security will affect the perceived value of sports O2O consumers [8]. Therefore, platform governance is not an external cost, but an integral part of long-term trust and stable repurchase of sports takeout.

5.4. Form governance interfaces connecting government, industry organizations and communities

The government should not approve sports takeout order by order, but should establish rules around platforms and high-risk links. Sports departments can be responsible for project classification, coach ability and course safety guidance; market supervision departments are responsible for prices, advertisements and consumer rights and interests; cyberspace administration departments are responsible for compliance of data use and recommendation rules; public security, communities and property management participate in personal safety of home services and public space use management. For serious complaints, qualification fraud and safety accidents, a cross-departmental shared risk list and disposal interface should be established.

Industry organizations can undertake service standards, continuing education, third-party ability evaluation and dispute mediation, preventing platforms from both formulating rules and evaluating themselves independently. Communities and property management can clarify spaces, time periods and basic safety requirements suitable for low-risk courses, providing relatively stable public scenarios for home services. The purpose of collaborative governance is not to turn mobile services

back into fixed venues, but to establish enforceable responsibility connections among different subjects, so that innovation efficiency and public safety can be maintained simultaneously.

6. Conclusion

The essence of sports takeout is the reorganization of information, time, space and responsibility relationships of sports services by digital platforms. Information visibility reduces search costs; the mobility of service providers reduces consumers' commuting and coordination costs; personalized matching improves service adaptability; digital feedback enables single courses to have the possibility of extending into continuous health services. As a result, sports takeout can transform some sports needs constrained by realistic conditions into actual consumption.

But value and risk arise from the same mechanism. Information structuring may obscure real capabilities; time and space convenience may transfer venue risks to each order; data accumulation may break through privacy boundaries; and there may also be a mismatch between platform control capability and responsibility bearing. Therefore, governance cannot stay at principled statements such as "strengthen supervision and improve services", but should set specific control points along the service chain: determine access permissions based on risk levels, control fulfillment risks through pre-class, in-class and post-class procedures, define platform responsibilities through information, recommendation, data and dispute handling, and establish collaborative interfaces through the government, industry organizations and communities. Only by forming verifiable professional standards, enforceable safety procedures and traceable responsibility chains can sports takeout transform from short-term convenient services into a credible, stable and sustainable sports consumption format.

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