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Business Model Analysis of Sports Trading Cards (Case Study: Kimdi)

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ABSTRACT

Objective: Today, sports trading cards have gained a distinctive position in the sports industry and marketing as collectible, cultural, and entertainment products. This study aims to analyze the business model of sports trading cards and adopts a qualitative approach using thematic analysis.

Method: To collect the data, a research focus group was formed consisting of experts in sports marketing, sports branding, and specialists from the collectible card industry.

Results: The findings indicate that the value proposition of sports trading cards is primarily based on a combination of nostalgia, scarcity features, digital experiences, and emotional appeal for fans. The customer segments include not only professional collectors but also general fans, teenagers, and families, each with different motivations and purchasing patterns. Diverse distribution channels—including physical and online stores, sports events, and mobile applications—along with continuous customer engagement through fan communities, card-trading competitions, and social media support, provide a platform for strengthening fan interaction and loyalty.

Conclusions: From the perspective of revenue streams, the direct sale of card packs, premium or limited editions with higher prices, advertising and sponsorship, and in-app purchases were identified as the main sources of revenue. In this regard, partnerships with sports leagues and federations to obtain legal licensing, as well as the efficient management of printing, design, and digital infrastructure development costs, play a crucial role in the sustainability and success of this business model. Accordingly, the present study, by explaining the key dimensions of the business model, demonstrates that integrating physical and digital components alongside fan-centered branding can create valuable opportunities for the sustainable development of sports trading card products.

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Introduction

Sport is a phenomenon that goes beyond mere competition and entertainment, encompassing social, cultural, and economic dimensions (Wicker & Hallmann, 2021). Today, the sports industry has evolved into one of the world's most dynamic and profitable sectors, including sports clubs, professional leagues, sponsors, sporting goods, specialized media, sports tourism, and many other related domains (Baena, 2021). Within this context, sports fans play a central role, as their behaviors, preferences, and consumption patterns directly influence the revenue generation and sustainability of the sports industry (Gilchrist & Franck, 2023).

Fan engagement creates an emotional and identity-based connection between supporters and their favorite teams or athletes. Fans often express their loyalty and identity by purchasing merchandise and memorabilia such as jerseys, posters, mugs, and other products (García-Fernández et al., 2022). Sports trading cards represent one of the longstanding products in this domain. Originating decades ago in sports such as baseball and basketball, they have expanded into other sports with technological advancements and have taken on new dimensions (Horn et al., 2024). These cards are not only recognized as collectible items, but also serve cultural and economic functions by providing player information, team logos, images, signatures, or holograms that evoke nostalgia and emotional value for fans (Aquino & Gershenson, 2024).

Sports trading cards are collectible products that typically contain information about players, teams, or sporting events, and they have gained significant popularity among fans since the early twentieth century (Funk et al., 2016; Fullerton, 2010). Historically, such cards were distributed mainly as nostalgic souvenirs, but today they have acquired cultural, emotional, and even investment-related value (Mullin et al., 2014; Bee et al., 2006). Overall, the fundamental nature of sports trading cards can be understood through several key dimensions:

1. **Collectible value:** Many fans and collectors seek rare or autographed cards, which hold significant material and symbolic value (Funk et al., 2016).
2. **Fan identity and nostalgia:** These cards reinforce fans' emotional connection with their favorite teams and athletes, enhancing their sense of closeness to the world of sports (Fullerton, 2010; Bee & Kahle, 2006).
3. **Economic and investment aspects:** Some individuals purchase and retain rare or unique cards as assets with the expectation of future value appreciation (Funk et al., 2016; Mullin et al., 2014).
4. **Digital expansion:** In recent years, producers have integrated technologies such as QR codes, mobile applications, and even NFTs alongside physical cards, enabling fans to enjoy more interactive experiences (Thompson et al., 2018; Sari et al., 2016).

Prominent examples of such cards include **Topps** and **Panini**. The American company Topps became well-known in the 1950s for its baseball cards and later expanded into other sports such as American football and basketball (Dolles et al., 2013). Beyond offering classic base-card designs, Topps produces premium and rare editions featuring autographs or limited serial numbers (Funk et al., 2016). From a sports marketing perspective, Topps' incorporation of digital features through apps such as "Topps Bunt" and "Topps Kick" has enabled collectors to trade and compete online (Thompson et al., 2018). A major factor behind Topps' success is

its official licensing agreements with professional leagues and clubs, which enhance the credibility and collectible value of its products (Dolles et al., 2013).

The Panini Group began in Italy in the 1960s with football sticker albums and rapidly grew into a leading global brand in collectible products (Fullerton, 2010). Panini's reputation is largely due to its close partnerships with major football competitions, especially the FIFA World Cup and top European leagues, which allow it to produce officially licensed stickers and cards (Bee et al., 2006). The interactive and challenge-based nature of Panini albums encourages fans to continually purchase new packs to complete their collections (Funk et al., 2016). In recent years, Panini has also expanded its digital offerings through online albums and card-scanning features (Thompson et al., 2018).

The significance of sports trading cards extends far beyond entertainment and collecting; this industry also holds substantial economic and cultural value. In many countries, rare or autographed cards can reach prices comparable to artworks and may be auctioned at remarkable values (Fullerton, 2010). Producers often use strategic marketing techniques—such as limited editions, numbered cards, and holograms—to increase the attractiveness and value of their products (Funk et al., 2016). With the growing influence of digital technologies and changing consumer behaviors, the sports trading card industry has undergone major transformations. Whereas collectors traditionally bought and stored paper cards in physical albums, mobile applications and specialized websites now enable the digital extension of this experience. Many companies now assign a digital version to each physical card, enabling fans to enjoy additional features such as scoring systems, digital trading, rewards, and card-based games (Yoshida et al., 2014).

Another emerging concept in this area is **value co-creation**, which has become increasingly relevant in the sports collectible market (Prahalad et al., 2004). Manufacturers encourage fans to participate in the design or selection of new cards by incorporating their preferences in subsequent releases. This process enhances customer satisfaction, creates deeper fan–product relationships, and fosters long-term loyalty (Smith et al., 2007). However, the industry also faces key challenges, particularly in managing image rights and licensing costs. Producers must pay significant fees to athletes or related organizations to use their names, images, or signatures. These costs directly increase production expenses and impact the final price of cards (Fullerton, 2010). Additionally, when a club's performance or popularity declines, the value of cards associated with that team or its players may also decrease. Thus, fluctuations in sports performance indirectly affect the trading card market.

In sports marketing, fan relationship management plays a decisive role in the success of collectible products. Traditionally, trading cards were tools for engaging die-hard fans of specific teams or athletes. Yet in recent years, startups and card manufacturers have expanded their target markets by introducing interactive features such as augmented reality and digital player-building systems, significantly enhancing fan loyalty (Mullin et al., 2014; Funk et al., 2016). However, empirical studies indicate that in some emerging markets, collectible culture is not yet fully established or is limited to specific sports such as football (Smith et al., 2007). In these markets, the main challenge for card producers is creating demand and raising consumer awareness of the cultural and economic appeal of trading cards. Moreover, in the

absence of strong, unified professional leagues, obtaining image rights and concluding licensing agreements can be difficult.

Although the production and consumption of sports trading cards in Iran has been growing—especially among teenagers and families seeking an affordable way to engage in fandom—the industry still faces structural challenges, such as image-rights costs and limitations in digital infrastructure. As a result, the business model of trading cards in Iran has not yet fully matured. Meanwhile, the combination of fan loyalty with digital innovations and NFTs has created new opportunities for transforming sports cards (Baker et al., 2022).

Therefore, the importance and necessity of this research can be explained from several perspectives:

- High economic potential: Sports cards are part of a multibillion-dollar global fan and entertainment market that is still in its early stages of development in Iran (Baena, 2021).
- Fan culture development: Such cards strengthen teenagers' sense of belonging to their preferred teams or athletes and serve as tools for promoting structured fan culture (García-Fernández et al., 2022).
- Need for localizing business models: Due to structural and legal differences between Iran and leading markets such as the United States, identifying local opportunities and constraints is essential to prevent business failure (Horn et al., 2024).
- Integration of physical and digital components: The convergence of physical cards with modern digital solutions (apps, NFTs, social platforms) adds new complexity and attractiveness to the business model, making deeper analysis necessary (Baker et al., 2022).
- Risk reduction for businesses: Awareness of cost structures, profitability, and image-rights management reduces the likelihood of business failure.

Finally, the primary research gap addressed in this study concerns the absence of systematic studies in Iran on the design, production, distribution, and consumption of sports trading cards within a localized business model framework. While many international studies focus on developed markets such as the United States and Europe (Dolles et al., 2013; Thompson et al., 2018; Funk et al., 2016), the present study seeks to examine the business model of sports trading cards in the Iranian context using a case study of one of the leading domestic brands (Kimdi) in the year 2024. Thematically, the research focuses on analyzing the components of the business model (based on the Business Model Canvas) and identifying success factors and challenges in the sports card industry.

Method

In this study, a qualitative approach was employed to gain an in-depth understanding of the business model of sports trading cards. The primary method for data collection was the focus group technique, allowing the identification of the dimensions and details of the business model through interaction and discussion among different stakeholders. The collected data were subsequently analyzed using thematic analysis (qualitative content analysis). The main stages of the research methodology are described below.

In the first stage, a comprehensive review of the literature and secondary sources was conducted, including academic articles, books, industry reports, and business case documents.

This review helped deepen the researcher's understanding of concepts related to sports marketing, fan management, and the historical development of sports trading cards.

In the second stage, the primary research data were collected through a focus group. A focus group is a qualitative research method in which experts or individuals involved in the research topic participate in structured yet flexible group discussions to express their views and interact with each other regarding the research questions (Krueger & Casey, 2015).

Sampling and Selection of Participants

The target population of this study consisted of the following groups:

- Managers or representatives of companies producing sports trading cards
- Experts and specialists in sports marketing
- Representatives of sports leagues or clubs (to provide insights into the use of athletes' images)
- Sports branding managers

Purposeful sampling was used to select participants, ensuring that they possessed substantial knowledge of the research topic or were direct stakeholders in the sports trading card industry (Patton, 2015).

The number of participants in a focus group typically ranges between 6 and 12 individuals depending on the diversity of the target population. If necessary, more than one focus group session may be conducted to ensure comprehensive coverage of the topic. In this study, seven participants were selected as members of the focus group, and three discussion sessions were held.

Data Collection Instruments and Focus Group Procedure

A list of main and subsidiary questions was developed based on the dimensions of the Business Model Canvas (Osterwalder et al., 2010) as well as findings from the literature review. These questions addressed topics such as value propositions, revenue streams, marketing approaches, image-rights challenges, and digitalization strategies.

A moderator who was familiar with the research topic facilitated the discussion sessions and ensured balanced participation among participants as well as proper time management during the discussions (Krueger et al., 2015).

Data Analysis

After conducting the focus group sessions and transcribing the recorded discussions, the qualitative data were analyzed using qualitative content analysis (thematic analysis) (Elo & Kyngäs, 2008). The analysis followed the six-stage framework proposed by Braun and Clarke (2006):

1. Familiarization with the data
 - Accurate transcription of audio recordings from interviews and focus group sessions
 - Repeated reading of transcripts to gain a general understanding and note preliminary ideas
2. Initial coding
 - Identifying meaningful units related to the dimensions of the sports trading card business model

- Assigning codes to key statements and phrases such as “autographed card advantage,” “image-rights costs,” “sports branding,” and “online games”
- 3. Searching for themes
 - Grouping similar codes into broader categories and forming conceptual clusters (e.g., “value proposition,” “fan loyalty,” “special events,” and “key resources”)
 - Merging and summarizing codes to generate preliminary themes (Maguire et al., 2017)
- 4. Reviewing themes
 - Evaluating the internal coherence of each theme and examining relationships among themes and the overall dataset
 - Eliminating insignificant themes or merging overlapping ones
- 5. Defining and naming themes
 - Clarifying the boundaries and content of each theme and assigning clear, descriptive names
 - Preparing concise explanations of each theme and providing illustrative examples from the discussions
- 6. Reporting
 - Presenting the analytical findings and interpreting them within the framework of the Business Model Canvas.

Research Question

What are the main components of the business model of sports trading cards in Iran?

Findings of the Research

This section presents the findings of the study in order to address the main research question and provide a clear understanding of the different dimensions of the sports trading card business model and the factors influencing it. To better understand the context in which the discussions and interviews were conducted, the characteristics of the research sample are first examined in Table 1. This table presents information regarding the diversity of participants’ expertise, professional experience, and occupational positions.

Following this overview, the main findings are presented based on the themes extracted from the qualitative analysis and organized within the framework of the Business Model Canvas. This structure enables a clearer explanation of the relationships among the key concepts and their overlaps within the context of sports trading cards.

Table 1. Focus group demographics

Alias	Position / Field of Expertise	Work Experience (Y)	Reason for Selection / Key Feature
P1 (A)	Senior Sports Marketing Consultant	11	Experience in developing advertising and sports branding strategies in the Iranian Premier Football League
P2 (B)	Business Development Manager at a Card Production Company	8	Involved in the design and distribution of trading cards
P3 (C)	Legal Expert / Sports Contracts	10	Legal specialist working with sports federations
P4 (D)	Sports Club Marketing Manager	7	Familiar with fan engagement processes and fan campaign development

P5 (E)	Sports Branding Consultant	6	Specialist in sports branding
P6 (F)	University Lecturer / Sport Management	15	Research background in sports consumer behavior
P7 (G)	Sports Application Development Specialist	5	Experience in designing digital platforms for interactive sports products

The business model of sports trading cards is presented in the following section based on the nine components of the Business Model Canvas. Table 2 outlines the key value propositions associated with sports trading cards.

Table 2. Illustrative Interview Quotes Supporting the Value Proposition in the Business Model

Business Model Theme	Sub-Themes	Illustrative Interview Quotes
Value Proposition	Integration of nostalgia and collectible experience: Professionally designed physical cards of athletes and sports champions (e.g., football, basketball, volleyball, martial arts) featuring signatures or holograms.	“In sports branding, any symbolic or nostalgic element has a strong impact on fan loyalty. Collectible cards can strengthen this emotional bond.” (Sports Branding Consultant) “An autograph or hologram of a star athlete is a key differentiator that creates high value in the card market and motivates fans to make repeated purchases.” (Club Marketing Manager)
	Emotional value and fan attachment: Collecting these cards creates a stronger sense of closeness and identification between fans and their favorite athletes or teams.	
	Digital dimension: Integration of QR codes or mobile applications to create digital albums, online games, and gamification-based interactions.	
	Special and limited editions: Production of limited series cards with official athlete autographs to attract collectors and generate higher perceived value.	

Table 3 presents the customer segments of sports trading cards. These segments include the different groups of individuals and organizations that purchase or engage with trading cards. Identifying these customer groups provides a clearer understanding of the target market and helps explain how companies tailor their products and marketing strategies to meet the needs of various audiences.

Table3. Interview Quotes and Extracted Sub-Themes for Customer Segments in the Business Model

Business Model Main Theme	Sub-Themes	Illustrative Interview Quotes
Customer Segments	Professional collectors: Individuals who recognize the economic and emotional value of collectible cards and are willing to pay higher prices for rare or special editions (e.g., autographed or numbered cards).	“We are dealing with multiple customer groups; collectors clearly understand the economic and emotional value of the cards and are willing to pay higher prices.” (Sports Industry Expert) “Teenagers often see the cards as recreational items and, due to their lower prices, they tend to make repeated purchases, which is important for volume-
	Casual fans and teenagers: Purchase reasonably priced cards mainly for entertainment and for their interest in favorite players and teams across different sports such as football, basketball, and volleyball.	
	Families: Purchase collectible cards as gifts or as a form of family entertainment.	

Specialized fans: Individuals who closely follow specific sports events and tournaments such as football, basketball, and martial arts. based revenues.” (Sports Marketing Researcher)

Factor Table 4 addresses the customer relationship channels for sports trading cards. These channels illustrate the ways through which companies interact with and maintain relationships with their customers and collectors. Understanding these mechanisms helps explain how trading card brands build engagement, strengthen customer loyalty, and sustain long-term connections with their audience.

Table 4. Interview Quotes and Derived Sub-Themes for the “Customer Relationships”

Business Model Main Theme	Sub-Themes	Illustrative Interview Quotes
Customer Relationships	Fan community development: Establishing official or informal collector clubs and forums that enable continuous engagement and card-exchange interactions among fans.	“In fan-engagement approaches, establishing official and unofficial collector clubs is crucial. Continuous interaction with them leads to the formation of a strong fan community.” (Sports Management Lecturer) “Organizing autograph or card-exchange events not only foster a sense of belonging but also significantly increases customer retention.” (Sports Business Development Manager)
	Digital interaction channels: Creating a mobile application or official website for card registration, participation in challenges, and earning engagement points.	
	Organized fan events: Hosting card-exchange competitions or exclusive autograph events featuring athletes to strengthen community bonding.	
	Online support and social media engagement: Providing responsive online customer service and maintaining active communication through social platforms to share updates, news, and product announcements.	

Table 5 presents the distribution channels of sports trading cards. These channels include the various platforms and intermediaries through which trading cards are delivered to customers and collectors. Identifying these channels helps to better understand how companies reach their target markets and facilitate access to sports trading cards in the marketplace.

Table 5. Interview Quotes and Derived Sub-Themes for the “Channels”

Business Model Main Theme	Sub-Themes	Illustrative Interview Quotes
Channels	Physical retail channels: Distribution of card packs through supermarkets, bookstores, and sports equipment stores to provide easy in-person access for consumers.	“If we focus on only one channel, we will lose a large portion of customers. Both physical and online environments must be covered.” (Sports Marketing Consultant) “In major events such as league competitions and the World Cup, dedicated marketing campaigns should be designed.” (CEO of a Sports Card Manufacturing Company)
	Online distribution platforms: Dedicated websites and online marketplaces (e.g., DigiKala) enabling convenient and wide-scale purchasing.	
	Mobile applications: Platforms that enable in-app purchases, activation of digital cards, and participation in online competitions or gamified experiences.	
	Sports events and exhibitions: Direct presence at sports events (e.g., football, basketball,	

martial arts competitions) to introduce and sell products and strengthen brand visibility.

Table 6 presents the revenue streams of sports trading cards. These revenue streams represent the different ways through which companies generate income from the production and sale of trading cards. Identifying these sources of revenue helps provide a clearer understanding of the financial sustainability and economic structure of the sports trading card business model.

Table 6. Interview Quotes and Derived Sub-Themes for the “Revenue Streams”

Business Model Main Theme	Sub-Themes	Illustrative Interview Quotes
Revenue Streams	Direct sales of card packs: Selling standard and premium card packages through retail and online channels as the primary source of revenue.	
	Premium and limited editions: Higher-priced cards such as autographed cards, hologram cards, or limited numbered series designed particularly for collectors and dedicated fans.	“A multi-revenue model allows us to distribute risk; physical card sales remain the core pillar, but digital services and sponsorships are also profitable.” (Senior Sports Marketing Expert) “Special editions primarily target collectors and passionate fans. These customers are looking for items that have rarity value.” (Sports Branding Consultant)
	In-app purchases: Monetization through mobile applications by offering access to game modes, digital albums, and participation in online competitions.	
	Advertising and sponsorship: Displaying sports brand advertisements or sponsorship placements on card packages or within the mobile application environment.	
	Accessories and complementary products: Production and sale of related merchandise such as physical card albums, action figures, and booklets about players’ histories.	

Table 7 presents the cost structures of sports trading cards. These cost structures include the major expenses involved in the design, production, marketing, and distribution of trading cards. Examining these costs helps provide a clearer understanding of the operational requirements and financial dynamics of the sports trading card business model.

Table 7. Interview Quotes and Derived Sub-Themes for the “Cost Structure”

Business Model Main Theme	Sub-Themes	Illustrative Interview Quotes
Cost Structure	Production and printing costs: Graphic design, high-quality paper, professional printing services, and packaging materials.	“Due to rising prices of raw materials and printing costs, we must produce intelligently; otherwise, the final price will not be competitive.” (Sports Economics Analyst) “Obtaining licensing and image rights from different leagues makes up a significant portion of the cost; without these rights, no official card can be produced.” (Legal Director of a Sports Company)
	Licensing and image rights costs: Payments to federations, leagues, or athletes for legal use of names, photos, and official branding.	
	Digital infrastructure development: Expenses related to building and maintaining the mobile application, website, servers, and technical support teams.	

Advertising and marketing costs: Media promotion, digital advertising campaigns, and participation in sports events for brand visibility.

Logistics and distribution expenses: Transportation of card packages to retail outlets, warehousing, and inventory management.

Table 8 presents the key partners of sports trading cards. These partners include the organizations, institutions, and stakeholders that play essential roles in enabling the production, licensing, distribution, and marketing of trading cards. Identifying these key partners helps clarify the collaborative ecosystem required to support the sports trading card business model and ensure its effective operation.

Table 8. Interview Quotes and Derived Sub-Themes for the “Key Partnerships”

Business Model Main Theme	Sub-Themes	Illustrative Interview Quotes
Key Partnerships	Sports leagues and federations: Partnerships to obtain official licenses for the use of team logos, athlete images, and league branding on collectible cards.	“Establishing formal agreements with sports leagues is a fundamental step in building the brand of the cards, because fans of these leagues will also trust our products.” (Senior Marketing Manager) “The more clubs interact with us and participate in joint events, the more both sides benefit, as they also gain a new source of revenue.” (Sports Club Market Development Manager)
	Sports clubs: Collaboration with clubs to organize promotional events, product launches, and athlete appearances to increase fan engagement.	
	Retail and online distribution partners: Cooperation with chain stores and online marketplaces to ensure wide distribution and accessibility of card packages.	
	Sponsors and commercial brands: Strategic collaboration in joint marketing campaigns and sports-related promotional activities.	
	Design and printing companies: Partnerships with specialized firms to ensure high-quality graphic design, printing, and packaging of collectible cards.	

Table 9 presents the key activities of sports trading cards. These activities include the essential processes involved in the design, production, promotion, and distribution of trading cards. Understanding these key activities helps clarify the operational processes that support the creation of value and the effective functioning of the sports trading card business model.

Table 9. Interview Quotes and Derived Sub-Themes for the “Key Activities”

Business Model Main Theme	Sub-Themes	Illustrative Interview Quotes
	Card design and production: Selecting athletes, securing image rights, performing graphic design, and executing high-quality printing and packaging.	“Using attractive packaging and distinctive design is what differentiates our product on
	Digital application and service development: Building features such as card-scanning,	

Key Activities	card-based games, and managing an online fan community.	store shelves; this key activity should never be underestimated.” (Sports Branding Consultant) “Launching an app with card-scanning and an online league feature is exactly what attracts teenage and young audiences.” (Sports Digital Transformation Specialist)
	Marketing and promotional campaigns: Executing advertising initiatives, participating in sports events, and conducting digital and offline promotional activities.	
	Supply chain management: Warehousing, distribution to retail centers, inventory tracking, and logistics coordination.	
	Interactive fan events: Organizing card-exchange competitions, autograph sessions, and athlete-appearance events to engage customers.	

Table 10 presents the key resources of sports trading cards. These resources include the critical assets—both tangible and intangible—that enable companies to design, produce, market, and deliver trading cards effectively. Identifying these key resources helps explain the foundational capabilities that support value creation and ensure the sustainability of the sports trading card business model.

Table 10. Interview Quotes and Derived Sub-Themes for the “Key Resources”

Business Model Main Theme	Sub-Themes	Illustrative Interview Quotes
Key Resources	Image and name licensing rights: Official licensing agreements with leagues and athletes to legally use their names, images, and branding on collectible cards.	“Without official image and licensing rights, producing authentic sports cards would not be possible.” (Sports Industry Legal Expert) “Without a strong design team and printing specialists, the quality of the cards declines and the brand value is damaged.” (Sports Branding Consultant) “A strong digital infrastructure with reliable servers guarantees stability and user convenience in games and in-app purchases.” (Senior Technology Expert in the Sports Industry)
	Specialized professional team: Skilled designers, application developers, printing specialists, and packaging experts responsible for product quality and innovation.	
	Digital infrastructure: Reliable servers, user databases, mobile applications, and websites to support online services, gaming features, and in-app purchases.	
	Distribution channels (physical and online): Strategic access to chain stores, supermarkets, and online platforms to ensure wide product availability.	
	Brand reputation and fan community: The intangible asset formed through the engagement of collectors, fans, and athletes, strengthening market presence and loyalty.	

Using this nine-component structure, the sports trading card business gains a clear understanding of its value proposition, target customers, distribution channels, and other key components. This framework provides guidance for planning and successfully implementing the idea in the market. The model is presented in Figure 1.

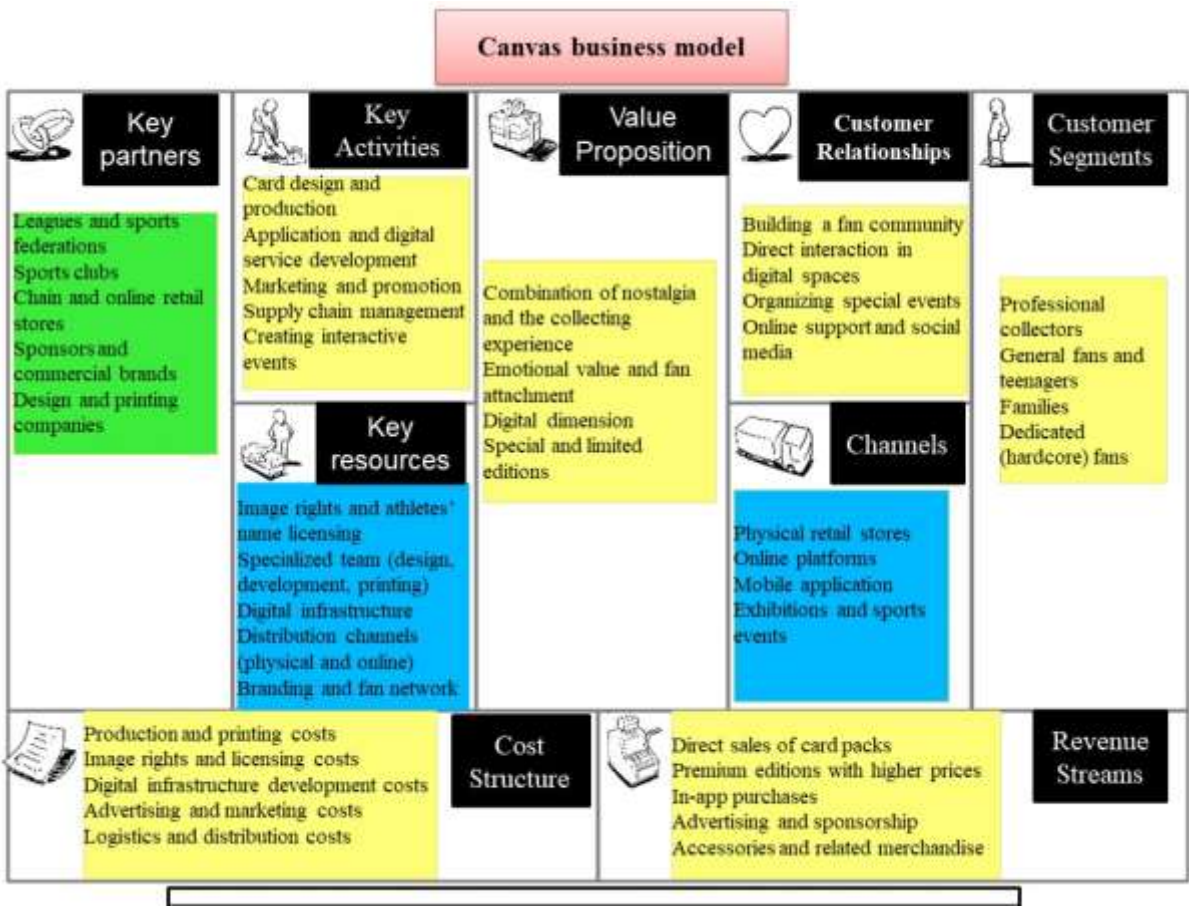


Figure 1. canvas business model of sport trade cards

Discussion

Examining the business model of sports trading cards based on the nine component Business Model Canvas indicates that this industry can create valuable market opportunities by leveraging the cultural, emotional, and economic dimensions surrounding sports. The discussion and conclusions regarding each component of the model, supported by relevant academic literature, are presented below.

Value Proposition

The value proposition of sports trading cards combines nostalgia, a sense of collecting, and fan loyalty. Research has shown that sports audiences often seek products that carry emotional and commemorative value, which aligns with the findings of this study (Funk et al., 2016; Fullerton, 2010). The addition of digital features such as QR code scanning and companion applications also enhances the attractiveness and interactivity of the product (Thompson et al., 2018). Therefore, the core value proposition emerges from the integration of sports identity, a unique collecting experience, and customer engagement within digital environments. These findings are also consistent with the works of Horn et al. (2024) and Aquino and Gershenson (2024), which demonstrate that nostalgic feelings and the emotional connection between fans and sports stars play a key role in the value and popularity of trading cards. Based on the focus group evidence and the business model analysis, the value proposition of sports trading cards rests on three main pillars: the nostalgic and identity dimension that responds to

fans' emotional attachment to memorable moments and team achievements; the collectible aspect that provides long-term economic and investment potential for serious collectors; and digital capabilities that enable online interaction, card scanning, and participation in virtual games. The integration of these elements allows producers to offer a product that goes beyond a simple souvenir. By incorporating emerging technologies—despite certain limitations—it becomes possible to increase engagement among younger audiences. Overall, maintaining a balance between nostalgic authenticity and digital innovation will be a key factor in differentiating sports trading cards within the Iranian market.

Customer Segments

The diversity of customer segments identified in this study—including professional collectors, general fans, teenagers, and families—is consistent with the work of Mullin et al. (2014) and Kotler et al. (2016), both of which emphasize the importance of market segmentation and addressing the diverse needs of sports audiences. More recent research by García-Fernández et al. (2022) also indicates that younger generations tend to prefer digital experiences, a finding that aligns with the present study. However, some studies on NFTs (Mereu, 2023) refer to a new group of customers interested exclusively in digital assets. Such a segment has not yet fully emerged in Iran or remains very limited, which reflects a mismatch with the conditions of the domestic market. This diversity of customers highlights the necessity of designing differentiated strategies for each market segment. For professional collectors, rarity and investment value are key factors, and limited editions or signed cards can be targeted toward them. For teenagers and families, affordability and entertainment value are more important; therefore, lower-priced packages and gamified purchasing experiences may be effective. In a competitive market, addressing these varied groups simultaneously can increase market penetration. Experienced collectors are attracted by the historical and economic identity of cards, while casual fans seek to experience the excitement of fandom at a lower cost. This multifaceted market provides valuable opportunities for Iranian producers to expand their presence in both domestic and potentially regional markets through effective management of pricing, quality, and design.

Customer Relationships

The importance of interaction and fan retention has been emphasized in classic sports marketing studies (Bee & Kahle, 2006; Adamson et al., 2006), and the findings of this study are fully consistent with this perspective. Collecting sports trading cards is not merely a one-time purchase; rather, it requires ongoing engagement through card-trading competitions, online communities, or autograph events. More recent research (Gilchrist & Franck, 2023) has examined fan engagement through blockchain platforms and NFTs, which can foster the development of digital communities. However, such approaches have not yet become widespread in Iran and may reflect structural barriers to implementing similar models. Establishing continuous relationships with fans allows the experience of owning sports cards to extend beyond a simple collectible product and evolve into a dynamic interaction among

clubs, athletes, card producers, and consumers. In practice, customer relationship management within the sports industry must go beyond traditional after-sales services and include initiatives such as periodic events, loyalty rewards for frequent buyers, and exclusive content within digital applications. When implemented consistently and effectively, these activities strengthen fans' sense of belonging and loyalty, ultimately increasing repeat purchases. At the same time, sports clubs or leagues benefit from this reciprocal relationship, as it enhances the visibility of their brands and star athletes while fostering a more cohesive fan community.

Distribution Channels

The findings of this study regarding the integration of physical and digital channels align with what Sari and Tuominen (2016) describe as a multichannel approach. Smith and Stewart (2010) also suggest that combining physical retail stores with online platforms improves accessibility for users in markets for cultural and collectible goods, a conclusion supported by the results of this research. From the perspective of NFTs, some studies (Schlimm et al., 2024) indicate that fully digital distribution channels can generate high returns in advanced markets. However, as this study shows, due to infrastructural and cultural differences, the widespread use of entirely digital channels in Iran is not yet common, creating a noticeable gap. A multichannel distribution strategy is therefore essential for reaching different groups of sports fans. Physical retail outlets—such as bookstores, sports shops, or supermarkets—provide convenient access for teenagers and families and make the product tangibly available. Meanwhile, online channels—including official websites, well-known marketplaces, or mobile applications—enable professional collectors to acquire special or rare editions directly. The simultaneous use of these approaches not only increases market penetration but also allows for integrated online-offline marketing campaigns. Consequently, strengthening digital infrastructure and enhancing user experience across all channels should be considered central objectives for the sustainable expansion of this business model.

Revenue Streams

A diversified revenue model—including the sale of card packs, premium editions with higher prices, digital products, and even sponsorship agreements—is essential for ensuring the financial sustainability of this business. Research in the sports and entertainment industries shows that diversified revenue sources reduce risk and enhance long-term stability (Mullin et al., 2014). Furthermore, digital content and in-app purchases have become major revenue generators in many entertainment businesses, a finding that is consistent with the results of this study (Kaplan & Haenlein, 2010). However, although recent studies (Mereu, 2023; Schlimm et al., 2024) highlight the transformative role of NFTs in the sports trading card market, infrastructural and cultural limitations in Iran mean that this dimension has not yet fully developed. Therefore, unlike some international findings that identify NFTs as a major revenue source, their application in the Iranian context remains at an early stage.

Cost Structure

Studies suggest that image rights and official licensing typically represent a significant portion of costs in sports trading card production (Dolles & Söderman, 2013), and this study confirms that the same situation exists in Iran. In more mature markets, the process of paying image rights is generally more transparent and systematic (Gilchrist & Franck, 2023). In contrast, the fragmentation of decision-making authorities in Iran can increase costs or prolong administrative processes. This difference highlights a lack of alignment between the legal and regulatory frameworks of Iran and those of more developed markets. Based on participant insights and case study evidence, physical production costs—such as design, printing, and packaging—along with image rights represent the primary cost categories. Additionally, initial investment in digital infrastructure, including application development, server maintenance, and gamification features, can be significant. However, when managed effectively, these investments can enhance customer loyalty and reduce future marketing costs. Cost pressures may be mitigated through long-term agreements and negotiations with clubs and federations to create more flexible financial arrangements. Similarly, long-term collaboration with specialized printing companies may reduce unit production costs. Overall, optimizing the supply chain and managing these cost factors effectively will be critical for the success of sports trading cards in the Iranian market.

Key Partners

The importance of collaboration with leagues, federations, retailers, and sponsors identified in this study aligns with the findings of Adamson et al. (2006) and Funk et al. (2016), who emphasize that such partnerships strengthen product credibility and broaden access to fan bases. Baker et al. (2022) further argue that without official licensing and image rights, trading cards hold little value for collectors, directly supporting the findings of this research. However, differences emerge in the legal context. Gilchrist and Franck (2023) note that advanced markets possess well-defined intellectual property frameworks, whereas in Iran the existence of multiple regulatory bodies can hinder coordination and complicate partnerships. Key partners form the foundation of a coherent business model in the sports trading card industry. Federations and clubs provide official authorization and sometimes support promotional activities, thereby increasing product credibility while also benefiting financially. Retailers and online marketplaces facilitate broad distribution and visibility. Additionally, athletes themselves can generate significant emotional value for fans through autograph events or social media promotions. To address legal challenges, consistent and long-term agreements with all stakeholders should be pursued to minimize regulatory conflicts and ensure the sustainability of the business model.

Key Activities

The integration of card design and production with the development of digital applications is consistent with the research of Pan and Lee (2003), which emphasizes the importance of design processes and supply chain management. Furthermore, Bee and Kahle (2006) and Kotler and Keller (2016) confirm the critical role of marketing and promotion in introducing sports

products, a finding also reflected in this study. Recent studies such as Horn et al. (2024) highlight the significance of organizing special events, including card-trading competitions or online auctions, which aligns strongly with the findings presented here. As in other sections, the main divergence relates to purely digital or NFT-based events, which are not yet widespread in Iran. The design process involves selecting player photographs, incorporating digital signatures or holograms, and using distinctive graphic elements that shape the visual appeal of the product. In parallel, developing an application with card-scanning capabilities, gamification features, and online events can enhance engagement among younger users and improve the interactive experience. Effective supply chain management—from coordination with printing facilities to distribution in retail outlets—is also crucial for timely delivery and cost control. In marketing, promotional campaigns should be conducted through both traditional channels (such as television, posters, and retail displays) and digital platforms (including social media and in-app advertising) to maximize brand awareness. Finally, organizing creative events such as trading competitions or athlete autograph sessions not only enhances fan enjoyment but also stimulates ongoing sales cycles.

Key Resources

According to Adamson et al. (2006) and Dolles et al. (2013), official agreements with athletes and leagues regarding image rights represent the most important intangible assets in the sports trading card industry, and the findings of this study support this conclusion. Horn et al. (2024) demonstrate that cards officially endorsed by leagues typically have higher market value. In Iran, however, inconsistencies in legal regulations can weaken the effectiveness of this resource. Additionally, digital infrastructure—including servers and online platforms—has emerged as another crucial resource, as highlighted in recent studies (Baker et al., 2022), which emphasize its importance for attracting younger generations of fans. Within this business model, key resources extend beyond printing equipment and design teams. What truly gives sports trading cards their unique value are legal rights (official agreements with clubs and athletes) and social capital in the form of a loyal fan community. Without these elements, even the most sophisticated card designs would lack the credibility necessary to become collectible or economically valuable products. At the same time, digital infrastructure enabling applications, online games, and customer behavior analytics represents a strategic resource that competitors cannot easily replicate. Ownership or effective control of these resources allows card producers to offer high-value products and establish a distinctive long-term position in the market.

Conclusion

Overall, comparing the findings of this research with previous studies indicates that many of the results align with international literature, particularly regarding the role of nostalgia and collectible value, the importance of continuous fan engagement, the necessity of multichannel distribution, the need for diversified revenue streams, and the critical role of legal licensing

agreements. However, infrastructural and legal challenges in Iran mean that some aspects of the business model—such as the widespread adoption of NFTs and blockchain technologies or the establishment of transparent licensing frameworks—have not yet been fully implemented. From an analytical perspective, integrating digital capabilities with the cultural and emotional identity of sports represents the distinguishing feature of this model. If supported by strategic partnerships and effective cost management, this integration could create a sustainable and profitable future for sports trading cards in Iran. Moreover, a multidimensional marketing approach—including differentiated product versions for various customer segments, diverse distribution channels, and loyalty programs—will be essential for attracting a broader range of sports fans. Ultimately, successful implementation of this model requires coordinated collaboration among clubs, federations, printing companies, and digital specialists so that sports trading cards can evolve beyond a simple entertainment product into a cultural and economic instrument within Iran's sports industry.

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Generative artificial intelligence and AI-based technologies were not used in the writing process.

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The authors declare no conflict of interest.

Ethical considerations

The authors avoided data fabrication, falsification, and plagiarism, and any form of misconduct.

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