

Human Capital as a Pillar of Economic Sustainability for Retired Professional Football Players

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Abstract

This study aims to examine the role of human capital as a pillar of economic sustainability among retired professional football players. Employing a Narrative Literature Review approach, the study synthesizes scholarly literature on human capital, financial literacy, career transition, and post-retirement economic outcomes in professional sports. The findings indicate that economic sustainability is influenced not only by athletes' sport-specific competencies but also by their ability to develop secondary human capital, including formal education, financial literacy, entrepreneurial capabilities, and social networks. The review further identifies a human capital gap, whereby excessive investment in athletic performance is often accompanied by insufficient development of transferable competencies required for post-retirement life. Financial literacy emerges as a strategic component of human capital that enables athletes to transform temporary sporting income into sustainable economic resources. This study contributes to the literature by extending Human Capital Theory into the context of professional sport and highlighting the importance of balanced human capital development in promoting long-term economic sustainability. The findings provide practical implications for football clubs, governing bodies, educational institutions, and policymakers seeking to strengthen athlete welfare beyond their playing careers.

Keywords: *human capital; economic sustainability; professional football players; financial literacy; career transition.*

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INTRODUCTION

The increasing economic value of professional football has significantly transformed athletes' income levels. Professional football players, particularly those competing in major leagues around the world, earn income from various sources, including playing contracts, performance bonuses, sponsorship agreements, image rights, and other commercial activities. In some cases, professional footballers rank among the highest-paid professionals globally. This condition has created a widespread perception that professional athletes enjoy a high level of economic well-being and long-term financial security. However, a growing body of literature

suggests that substantial earnings during an athlete's playing career do not necessarily guarantee long-term economic sustainability after retirement (Carlson et al., 2015; Hong & Fraser, 2021).

This phenomenon presents an intriguing paradox. On the one hand, professional football players often generate substantial income throughout their productive years. On the other hand, many former athletes encounter financial difficulties and even bankruptcy after retirement. Carlson et al. (2015) found that a considerable number of retired National Football League (NFL) players experienced bankruptcy within a few years after ending their professional careers despite earning exceptionally high incomes during their playing years. These findings indicate that financial prosperity is not solely determined by income levels but also by the ability to manage economic resources sustainably over time. In many cases, athletes face challenges associated with excessive consumption, poor investment decisions, inadequate financial planning, and limited financial literacy.

Financial vulnerability after retirement has also been observed among professional football players. Owusu et al. (2023) reported that many professional footballers experience financial hardship following retirement due to low levels of financial literacy and inadequate financial management capabilities during their active careers. This situation becomes increasingly complex because football often serves as the primary source of income for athletes, and that source disappears once their playing careers end. Consequently, athletes' economic success depends not only on the amount of income earned during their professional careers but also on their ability to manage and develop resources that can support their long-term economic well-being.

The career trajectory of professional athletes differs substantially from most other professions. Athletic careers are highly dependent on physical condition, health status, performance levels, and injury risks. In professional football, most players reach their peak performance between the ages of 20 and 30 and experience a gradual decline thereafter. Moreover, many athletes are forced to retire prematurely due to severe injuries. Barth et al. (2021) argued that athletic retirement is often unplanned because it is influenced by factors beyond athletes' control, including injuries, changes in team strategies, and declining competitive performance. As a result, many athletes have insufficient time to prepare for their transition into post-sport careers.

Beyond the loss of income, retirement also brings significant social and psychological changes. Athletes who once enjoyed social recognition, popularity, and a strong professional identity as football players must adapt to new roles outside the sporting environment. Knights et al. (2019) found that many retired athletes struggle to construct a new identity because most of their lives have been devoted to sports since adolescence. Such difficulties not only affect psychological well-being but also influence their ability to establish alternative careers capable of generating sustainable income.

In Indonesia, concerns regarding athletes' post-retirement welfare have gained increasing public attention in recent years. Media reports have highlighted several cases of former national athletes experiencing economic hardship after leaving professional sports. One notable example is Kurnia Meiga, a former goalkeeper of the Indonesian national football team, who faced severe financial difficulties after retiring due to health-related issues. This phenomenon illustrates that sporting success does not necessarily translate into long-term economic sustainability. Similar conditions have been observed among other retired athletes who have transitioned into low-income occupations, such as youth football coaching, informal employment, or small-scale entrepreneurship, to support their livelihoods.

These issues suggest that the primary challenge faced by retired athletes is not merely the amount of income earned during their careers but their ability to sustain economic well-being after their sporting careers end. From the perspective of Human Capital Theory, individuals can enhance productivity and well-being through investments in education, training, experience, and various forms of capacity development (Becker, 1993). Human capital represents an asset embedded within individuals that increases their ability to generate future income. Consequently, greater investments in human capital are expected to produce more sustainable economic benefits over time.

Within professional football, human capital is commonly associated with technical skills, physical abilities, competitive experience, and sport-specific competencies. However, contemporary literature suggests that athletes' human capital extends beyond sporting performance. Formal education, financial literacy, entrepreneurial skills, communication competencies, and social networks constitute important dimensions of human capital that influence athletes' ability to achieve economic sustainability after retirement (Hong & Fraser, 2021; Moolman, 2023). Unfortunately, many professional athletes invest heavily in sport-related human capital while paying limited attention to the development of non-sport competencies.

This imbalance creates a structural gap in athletes' human capital portfolios. During their active careers, technical and physical skills serve as critical determinants of success. However, once a sporting career ends, the types of competencies required for economic survival change substantially. Retired athletes need alternative skills that enable them to participate in the labor market, engage in entrepreneurship, or pursue other income-generating activities. When investments in non-sport human capital remain limited, opportunities to secure alternative employment or establish sustainable income sources become increasingly constrained. Consequently, the risk of post-retirement economic vulnerability rises significantly.

The perspective of Behavioral Finance also offers valuable insights into athletes' financial behavior. Thaler (2016) argued that individuals frequently make economic decisions influenced by psychological biases rather than rational calculations. Among professional athletes, biases such as *overconfidence*, *present bias*, and *lifestyle inflation* are

commonly observed. High earnings during active careers often encourage consumption patterns that are inconsistent with long-term financial capacity. Furthermore, the belief that sporting careers will continue indefinitely may lead athletes to underestimate the risks of injury or early retirement. As a result, financial decisions made during active playing years can adversely affect economic conditions after retirement.

Financial literacy has therefore emerged as a critical factor in studies examining athletes' financial well-being. Financial literacy encompasses not only knowledge of money management but also the ability to make sound financial decisions, plan investments, manage risks, and prepare for future financial needs. Hong and Fraser (2021) emphasized that financial literacy is an essential competency for professional athletes because of the uncertainty and relatively short duration of sporting careers. Athletes with higher levels of financial literacy are generally better equipped to manage income, establish emergency funds, and develop alternative sources of income following retirement.

Despite growing scholarly interest, research examining the relationship between human capital, financial literacy, and the economic sustainability of retired professional football players remains limited, particularly in developing countries such as Indonesia. Existing studies have predominantly focused on career transition, athletic identity, and psychological well-being after retirement. Studies that explicitly integrate human capital and financial literacy perspectives to explain post-retirement economic vulnerability remain scarce. A more comprehensive understanding of these relationships is necessary to formulate policies and development programs that can enhance athletes' long-term economic sustainability.

Against this background, this article seeks to explain the phenomenon of financial vulnerability among retired professional football players through the lens of human capital. Specifically, the study aims to identify the forms of human capital possessed by professional football players and to explain the factors contributing to post-retirement economic vulnerability. By doing so, this study contributes to the growing literature on human capital and economic sustainability in professional sports and offers insights for policymakers, football organizations, and educational institutions seeking to promote sustainable post-career outcomes for athletes.

METHODOLOGY

This study employs a narrative review approach to examine and synthesize the existing body of knowledge on human capital, financial literacy, career transition, and the economic sustainability of retired professional football players. A narrative review is particularly appropriate when the objective is to develop a comprehensive understanding of a complex phenomenon by integrating theoretical perspectives and empirical findings from diverse disciplines rather than statistically aggregating evidence as in a systematic review (Baumeister & Leary, 1997; Green et al., 2006). This approach enables researchers to identify patterns, conceptual relationships, and

emerging themes across a broad range of studies, thereby facilitating theory development and conceptual advancement (Ferrari, 2015).

The choice of a narrative review is also justified by the exploratory nature of the research topic. Although studies on athlete retirement, career transition, and financial literacy have grown over the past decade, research explicitly linking human capital to the economic sustainability of retired professional football players remains fragmented and limited, particularly in developing countries such as Indonesia. Consequently, a narrative review provides the flexibility required to integrate findings from multiple disciplines, including accounting, economics, finance, sport management, human resource management, and sport psychology (Snyder, 2019).

The literature reviewed in this study was obtained from reputable academic databases and scholarly sources. To ensure the quality and relevance of the selected studies, a set of inclusion and exclusion criteria was established. The inclusion criteria comprised: (1) studies discussing human capital, financial literacy, financial well-being, career transition, retirement, or post-career experiences of professional athletes; (2) articles published in peer-reviewed academic journals; and (3) studies directly or indirectly related to professional sports, particularly professional football. The exclusion criteria included: (1) non-peer-reviewed publications; (2) opinion pieces, news articles, and popular publications lacking academic rigor; and (3) studies focusing solely on technical or performance-related aspects of sport without discussing human resource development, financial management, or long-term economic outcomes.

The initial search process generated a broad collection of publications related to the topic under investigation. Subsequently, screening procedures were conducted by reviewing article titles, abstracts, and full texts to assess their relevance to the objectives of the study. Publications that demonstrated significant contributions to discussions on human capital, financial literacy, career transition, and post-retirement economic sustainability were retained for further analysis. The selected studies were then categorized according to recurring themes and conceptual similarities identified in the literature.

Data analysis was conducted through three stages. The first stage involved literature identification, which focused on collecting and cataloguing relevant studies. The second stage was literature classification, whereby articles were grouped according to their theoretical perspectives, research focus, and key findings. The third stage involved narrative synthesis, through which insights from different studies were integrated to identify common patterns, theoretical relationships, and major themes related to athletes' economic sustainability after retirement. Narrative synthesis is particularly valuable in studies where evidence originates from diverse methodological traditions and disciplinary perspectives, allowing researchers to develop a coherent conceptual interpretation of the literature.

To enhance the credibility and robustness of the review, source triangulation was employed by comparing findings across studies conducted in different geographical, cultural, and institutional contexts. This process enabled a more comprehensive understanding of the factors influencing athletes' post-retirement economic sustainability. Furthermore, the analysis was informed by Human Capital Theory (Becker, 1993) and Behavioral Finance Theory (Thaler, 2016). Human Capital Theory provides a framework for understanding how investments in education, skills, experience, and competencies contribute to long-term economic outcomes, while Behavioral Finance Theory helps explain how cognitive biases and financial decision-making influence athletes' economic well-being after retirement. By integrating these theoretical perspectives, the study develops a richer conceptual explanation of the relationship between human capital and economic sustainability among retired professional football players.

RESULT AND DISCUSSION

1. Human Capital in Professional Football Careers

Human capital has long been recognized as a fundamental theoretical framework for explaining how individuals develop productive capacities that generate economic value throughout their lives. Human Capital Theory posits that investments in education, training, skills, and experience enhance individuals' productivity and future earning potential (Becker, 1993). Unlike physical assets, human capital is embodied within individuals and serves as a critical source of economic productivity and long-term value creation. Contemporary perspectives further emphasize that human capital not only contributes to income generation but also enhances individuals' adaptability to changing social and economic environments, thereby supporting long-term sustainability and resilience (Crook et al., 2011; Wright & McMahan, 2011).

Within professional football, human capital possesses unique characteristics compared with most other professions. Professional football players devote substantial time and resources to developing technical, tactical, physical, and psychological competencies that directly influence competitive performance. Such investments often begin at an early age through football academies, youth development systems, and professional club programs. Consequently, athletes' human capital is developed intensively within a sport-specific context and becomes a key determinant of professional contracts, sporting success, and commercial earnings (Barth et al., 2021).

Recent literature suggests that athletes' human capital can be categorized into two broad dimensions: primary human capital and secondary human capital (Knights et al., 2019; Stambulova et al., 2021). Primary human capital refers to competencies directly associated with sporting performance, whereas secondary human capital encompasses broader capabilities that support athletes' success beyond sport and

contribute to their long-term economic sustainability after retirement.

Table 1. Classification of Human Capital among Professional Football Players

Human Capital Dimension	Components	Primary Contribution
Primary Human Capital	Technical playing skills	Enhances athletic performance and market value
	Physical fitness and conditioning	Extends career longevity and competitiveness
	Competitive experience	Increases opportunities for professional contracts and career advancement
Secondary Human Capital	Formal education	Expands alternative career opportunities
	Financial literacy	Supports effective financial management and long-term economic planning
	Social networks	Facilitates access to employment, business opportunities, and professional connections
	Entrepreneurial competencies	Creates alternative and sustainable income sources

Source: Adapted from Becker (1993), Knights et al. (2019), Barth et al. (2021), and Stambulova et al. (2021)

Primary Human Capital: The Foundation of Professional Athletic Careers

Primary human capital includes technical skills, tactical understanding, physical fitness, competitive experience, and psychological attributes that support athletic performance. In professional football, these competencies constitute the core assets that determine an athlete's market value. Higher levels of sporting human capital increase opportunities to secure lucrative contracts, compete at higher levels, and generate greater financial returns throughout a playing career.

Barth et al. (2021) argue that investments in sport-specific human capital enable athletes to achieve professional status and maintain competitiveness within elite sporting environments. Competitive experience also represents an important form of human capital because it enhances decision-making abilities, leadership skills, teamwork, and adaptability under pressure. Furthermore, participation in international competitions often increases athletes' economic value by enhancing their reputation, visibility, and commercial attractiveness.

Despite its importance, primary human capital possesses inherent limitations. Unlike many professional competencies that remain relevant throughout an individual's working life, sport-specific human capital is highly dependent on physical performance and athletic capability. As athletes age or experience serious injuries, the economic value of these competencies tends to decline significantly. Consequently, the skills that once generated substantial income may no longer provide comparable economic benefits after retirement (Knights et al., 2019; Barth et al., 2021).

This limitation highlights a critical challenge in professional football: the very competencies that create economic success during athletes' playing careers may have limited transferability to post-sport occupations. As a result, relying exclusively on

primary human capital may expose athletes to economic vulnerability once their professional careers end.

Secondary Human Capital and Post-Retirement Economic Sustainability

Beyond sporting competencies, an increasing body of literature emphasizes the importance of secondary human capital in shaping athletes' post-retirement outcomes. Secondary human capital includes formal education, financial literacy, communication skills, managerial competencies, social networks, and entrepreneurial capabilities that can be utilized across diverse economic activities outside professional sport (Moolman, 2023; Stambulova et al., 2021).

Research on athlete career transitions consistently demonstrates that successful post-retirement adaptation is strongly associated with the development of competencies beyond sport (Knights et al., 2019). However, many professional athletes invest disproportionately in sport-related competencies while placing less emphasis on educational and career development opportunities outside their sporting careers.

The performance-oriented nature of elite sports systems often reinforces this imbalance. Athletes are encouraged to prioritize training and competition, frequently at the expense of formal education and broader skill development. Consequently, when retirement occurs, many athletes face significant limitations in accessing alternative employment opportunities or establishing sustainable business ventures.

Knights et al. (2019) found that many retired athletes struggle to enter the labor market because of limited work experience outside sport. This challenge is further intensified by the fact that most athletes spend their formative years within highly specialized sporting environments, leaving little opportunity to acquire transferable skills. As a result, post-career transitions are often more difficult for athletes than for individuals in other professions.

Secondary human capital also encompasses social capital, which plays an important role in post-retirement economic sustainability. Relationships with coaches, clubs, sponsors, player agents, and sporting communities can provide access to employment opportunities, entrepreneurial ventures, and professional networks. Former athletes with extensive social networks are more likely to secure positions as coaches, commentators, analysts, sport managers, or entrepreneurs within the sports industry. Conversely, athletes with limited professional networks may experience greater difficulties identifying alternative income sources after retirement.

Financial Literacy as Strategic Human Capital

Over the past decade, financial literacy has increasingly been recognized as a strategic dimension of human capital among professional athletes. Financial literacy refers to an individual's ability to understand financial concepts, make informed economic decisions, and effectively manage financial resources over time (Lusardi & Mitchell, 2014).

For professional football players, financial literacy is particularly important because their earnings profile differs significantly from that of most workers. Athletes

often earn substantial incomes over a relatively short period, creating a unique need for long-term financial planning and resource management. Consequently, the ability to manage wealth effectively during active playing years becomes a critical determinant of post-retirement economic sustainability.

Hong and Fraser (2021) argue that financial literacy is an essential life skill for professional athletes due to the uncertainty and brevity of sporting careers. Similarly, Owusu et al. (2023) found that professional football players with higher levels of financial literacy exhibited healthier financial behaviors, including saving, investing, and long-term financial planning. In contrast, athletes with limited financial literacy were more likely to allocate income toward short-term consumption and were more vulnerable to economic hardship following retirement.

Moolman (2023) further contends that financial education should no longer be viewed as an optional supplement but rather as an integral component of athlete development programs. Competencies related to investment management, risk assessment, retirement planning, and entrepreneurship enable athletes to transform temporary sporting income into sustainable long-term wealth.

The Human Capital Gap in Professional Football

The literature suggests that one of the primary causes of post-retirement economic vulnerability among professional football players is the existence of a human capital gap, defined as an imbalance between investments in primary and secondary human capital. Many athletes possess exceptionally high levels of sport-specific human capital but fail to develop complementary competencies necessary for life beyond sport.

This imbalance explains why sporting success does not automatically translate into long-term economic sustainability. Athletes who invest in secondary human capital from an early stage are generally better prepared for career transitions and more capable of maintaining economic well-being after retirement. Conversely, athletes who rely exclusively on sport-specific competencies often face substantial challenges when their primary source of income disappears.

Therefore, human capital in professional football should be conceptualized more broadly than athletic performance alone. It represents a combination of sporting and non-sporting competencies that collectively determine athletes' capacity to achieve both professional success and long-term economic sustainability. This broader perspective provides an important foundation for understanding why some retired athletes successfully maintain economic well-being while others experience severe financial hardship following the end of their playing careers.

2. Economic Vulnerability Among Retired Professional Football Players

Salah satu tema yang paling dominan dalam literatur adalah tingginya risiko krisis finansial yang dialami atlet profesional setelah pensiun. Berbagai penelitian menunjukkan bahwa berakhirnya karier olahraga sering kali diikuti oleh penurunan

drastis pendapatan, perubahan gaya hidup, dan ketidakpastian ekonomi. Dalam banyak kasus, mantan atlet menghadapi kesulitan finansial meskipun pernah memperoleh pendapatan yang relatif tinggi selama masa aktif bermain.

Despite the substantial financial rewards associated with professional football, a growing body of literature suggests that many athletes experience significant economic challenges following retirement. This phenomenon represents a paradox within professional sports, as individuals who once earned considerable incomes often struggle to maintain their economic well-being after their playing careers end. Research indicates that post-retirement economic vulnerability is not merely the result of declining income but rather a multidimensional phenomenon shaped by career structures, financial behavior, human capital development, and institutional support systems (Barth et al., 2021; Knights et al., 2019).

Professional football careers are inherently characterized by uncertainty and limited duration. Unlike most occupations that allow individuals to accumulate earnings over several decades, football players typically earn the majority of their lifetime income within a relatively short period. Consequently, retirement often results in an abrupt transition from financial abundance to economic uncertainty. The ability to navigate this transition depends largely on how athletes prepare for life beyond sport and how effectively they convert their sporting success into sustainable economic resources (Stambulova et al., 2021).

Short Career Duration and Temporary Income Streams

One of the defining characteristics of professional football is the brevity of athletic careers. Most players reach peak performance between the ages of 20 and 30 and experience declining competitiveness thereafter. In addition, injuries, health problems, and changes in club strategies frequently force athletes into premature retirement (Barth et al., 2021).

From the perspective of the Life Cycle Hypothesis, individuals are expected to allocate income earned during productive years in a manner that supports consumption and well-being throughout their lifetime (Modigliani & Brumberg, 1954). However, professional athletes face unique challenges because their earnings are concentrated within a relatively short period. As a result, effective long-term financial planning becomes essential for maintaining economic sustainability after retirement.

Evidence suggests that many athletes struggle to adjust to this reality. Carlson et al. (2015) found that a considerable proportion of former NFL players experienced financial distress and bankruptcy shortly after retirement despite having earned substantial salaries during their careers. Although the study focused on American football players, its findings highlight a broader pattern observed across professional sports, including football, where high earnings do not necessarily translate into long-term economic security.

The temporary nature of athletic income therefore creates a structural vulnerability. Athletes who fail to diversify their economic resources or develop

alternative sources of income often face significant challenges once their sporting careers end.

Career Transition Failure and Economic Consequences

Career transition has emerged as one of the most important determinants of post-retirement outcomes among professional athletes. Retirement from sport involves not only the loss of employment but also substantial changes in identity, social status, daily routines, and professional networks (Knights et al., 2019).

According to Schlossberg's Transition Theory, successful adaptation to major life changes depends on individuals' resources, support systems, and coping capacities (Schlossberg, 1981). For athletes, retirement represents a particularly challenging transition because their identities are often deeply intertwined with their sporting roles. Consequently, many retired athletes struggle to redefine themselves in non-sport contexts.

Research consistently shows that athletes who prepare for career transitions while still actively competing experience more positive post-retirement outcomes (Stambulova et al., 2021). Conversely, athletes who devote all their resources to sporting success without investing in alternative competencies often face difficulties securing meaningful employment after retirement.

The economic implications of unsuccessful career transitions can be substantial. Limited education, lack of work experience outside sport, and inadequate professional networks may restrict employment opportunities and reduce earning potential. Consequently, former athletes may experience declining living standards and increased financial dependence on family members or informal employment.

Lifestyle Inflation and Consumption Patterns

Behavioral Finance Theory provides another useful perspective for understanding post-retirement economic vulnerability among professional athletes. According to Thaler (2016), individuals frequently make economic decisions that deviate from rational models due to cognitive biases and psychological influences.

Professional athletes are particularly susceptible to a phenomenon known as **lifestyle inflation**, whereby rising income leads to increased consumption and higher living standards. During their active careers, athletes often purchase luxury goods, expensive properties, and status-related assets that reflect their professional success and social identity.

While such consumption patterns may be financially manageable during peak earning years, they often become unsustainable after retirement. Former athletes frequently encounter difficulties adjusting their spending habits to reduced income levels, thereby increasing their exposure to economic hardship (Hong & Fraser, 2021).

Furthermore, overconfidence bias may encourage athletes to underestimate retirement risks or overestimate future earning opportunities. This often results in inadequate savings, poor investment decisions, and insufficient preparation for post-career life.

Limited Financial Literacy and Long-Term Economic Outcomes

Financial literacy has emerged as one of the most consistently identified predictors of economic sustainability among retired athletes. Financial literacy encompasses knowledge, skills, and behaviors related to budgeting, saving, investing, debt management, and retirement planning (Lusardi & Mitchell, 2014).

Athletes with higher levels of financial literacy are generally more capable of managing their earnings effectively and making informed financial decisions. Hong and Fraser (2021) emphasize that financial literacy is particularly important for professional athletes because of the uncertainty and short duration of sporting careers.

Similarly, Owusu et al. (2023) found that financial literacy positively influences financial behavior and financial well-being among professional football players. Athletes who possess stronger financial knowledge are more likely to engage in saving, investment, and long-term planning activities, thereby improving their economic sustainability after retirement.

In contrast, athletes with limited financial literacy often prioritize short-term consumption over long-term wealth accumulation, increasing their vulnerability to economic hardship once their primary source of income disappears.

Economic Sustainability as a Human Capital Outcome

The literature reviewed suggests that post-retirement economic sustainability should be understood not merely as a financial issue but as an outcome of broader human capital development. Athletes who invest in education, financial literacy, professional networks, and transferable skills are generally better equipped to navigate career transitions and maintain economic well-being after retirement (Becker, 1993; Stambulova et al., 2021).

Conversely, athletes who rely exclusively on sport-specific competencies often face greater difficulties adapting to post-sport life. This observation reinforces the argument that human capital extends beyond athletic performance and plays a critical role in shaping long-term economic sustainability.

Ultimately, economic vulnerability among retired professional football players reflects a complex interaction between career structures, behavioral factors, and human capital development. Understanding these relationships is essential for designing policies and athlete development programs that promote sustainable livelihoods beyond professional sport.

3. Financial Literacy as a Strategic Component of Human Capital and Economic Sustainability

The increasing complexity of financial markets and the unique earning patterns of professional athletes have elevated financial literacy from a desirable skill to a critical component of human capital. While traditional interpretations of Human Capital Theory primarily emphasize education, training, and professional competencies (Becker, 1993), contemporary scholarship increasingly recognizes

financial literacy as an important form of human capital that contributes directly to long-term economic well-being and sustainability (Lusardi & Mitchell, 2014; Moolman, 2023).

For professional football players, financial literacy is particularly important because their income profile differs substantially from that of most workers. Athletes typically earn significant amounts of income during a relatively short period, creating a unique financial challenge that requires effective resource management, long-term planning, and strategic decision-making. Consequently, the ability to manage financial resources effectively becomes a crucial determinant of whether athletes can transform temporary sporting income into sustainable economic prosperity beyond their playing careers (Hong & Fraser, 2021).

Recent literature suggests that financial literacy should not be viewed merely as financial knowledge but rather as a multidimensional competency comprising financial knowledge, financial attitudes, and financial behavior. These dimensions collectively influence individuals' capacity to make informed financial decisions and maintain economic well-being over time (Lusardi & Mitchell, 2014).

Financial Knowledge and Economic Decision-Making

Financial knowledge refers to an individual's understanding of fundamental financial concepts such as budgeting, saving, investment, inflation, diversification, debt management, and retirement planning. This knowledge enables individuals to evaluate financial alternatives and make informed economic decisions.

Within professional football, financial knowledge is particularly important because athletes often encounter financial opportunities and risks at a relatively young age. Professional contracts, sponsorship agreements, investment offers, and entrepreneurial opportunities require athletes to make decisions that may have long-term consequences for their economic future. Athletes who possess sufficient financial knowledge are generally better equipped to evaluate these opportunities and avoid decisions that may compromise their financial stability (Hong & Fraser, 2021).

Moolman (2023) argues that many professional athletes possess exceptional sporting skills but limited financial knowledge, creating a gap between income generation and wealth preservation. Consequently, athletes may accumulate substantial earnings during their careers while simultaneously lacking the competencies necessary to manage those resources effectively.

Financial Attitudes and Long-Term Orientation

Financial attitudes represent individuals' beliefs, values, and perceptions regarding money management and financial planning. Positive financial attitudes encourage long-term thinking, prudent spending, and proactive financial planning, whereas negative attitudes often contribute to impulsive consumption and inadequate preparation for future economic challenges.

The literature suggests that athletes frequently operate within environments that reinforce short-term performance goals. Success is often measured through

immediate sporting achievements, contract negotiations, and public recognition. Such conditions may unintentionally encourage present-oriented financial behavior, where immediate consumption is prioritized over long-term wealth accumulation (Thaler, 2016).

From the perspective of economic sustainability, developing positive financial attitudes is essential because retirement represents a predictable yet often underestimated phase of athletes' careers. Athletes who recognize the temporary nature of sporting income are generally more motivated to save, invest, and prepare for future transitions. As a result, financial attitudes play an important role in shaping the economic sustainability of retired athletes.

Financial Behavior and Sustainable Economic Outcomes

While knowledge and attitudes provide the foundation for financial decision-making, actual financial behavior ultimately determines economic outcomes. Financial behavior refers to the actions individuals take regarding budgeting, saving, investing, debt management, and retirement planning.

Research consistently demonstrates that sound financial behavior is positively associated with financial well-being and long-term economic security (Lusardi & Mitchell, 2014). For professional football players, healthy financial behaviors include maintaining emergency funds, diversifying investments, controlling consumption, and preparing for post-retirement income needs.

Owusu et al. (2023) found that professional football players with higher levels of financial literacy exhibit more responsible financial behaviors, which in turn contribute to greater financial well-being. Their findings suggest that financial literacy influences economic sustainability indirectly through behavioral mechanisms. In other words, athletes do not achieve economic sustainability simply by possessing financial knowledge; they achieve it by translating that knowledge into effective financial actions.

This relationship is particularly important in professional sport, where income volatility and career uncertainty create significant financial risks. Athletes who engage in responsible financial behaviors are generally better positioned to withstand economic shocks and maintain stable living standards after retirement.

Financial Literacy and Post-Retirement Economic Sustainability

The concept of economic sustainability extends beyond short-term financial security and encompasses an individual's capacity to maintain economic well-being over the long term. In the context of retired professional football players, economic sustainability refers to the ability to sustain acceptable living standards, generate alternative income sources, and adapt successfully to post-sport careers.

The literature increasingly identifies financial literacy as a key determinant of post-retirement economic sustainability. Hong and Fraser (2021) emphasize that athletes who receive financial education during their playing careers demonstrate greater confidence in managing financial resources and preparing for retirement.

Similarly, Moolman (2023) argues that financial literacy enables athletes to convert temporary earnings into sustainable assets capable of generating long-term economic value.

Importantly, financial literacy contributes to economic sustainability not only through wealth accumulation but also through risk management. Athletes who understand investment diversification, insurance, and retirement planning are better able to protect themselves from economic uncertainty associated with injuries, career interruptions, and retirement transitions.

Consequently, financial literacy should be viewed as a strategic component of human capital that supports long-term economic sustainability. Rather than functioning solely as a financial skill, it serves as a mechanism through which athletes transform sport-related earnings into enduring economic resources.

Implications for Athlete Development

The findings reviewed in this study suggest that financial literacy should be integrated into athlete development programs from an early stage of athletic careers. Traditional development systems have primarily focused on enhancing sporting performance, often neglecting competencies required for life after sport. However, as professional football increasingly operates within complex economic environments, financial literacy has become an essential capability alongside technical and tactical skills.

Integrating financial education into athlete development programs can strengthen athletes' capacity to manage income, prepare for retirement, and pursue alternative career opportunities. Such initiatives may include financial planning workshops, investment education, entrepreneurship training, and mentoring programs involving former athletes who have successfully navigated career transitions.

From a Human Capital Theory perspective, investments in financial literacy represent investments in productive capabilities that generate long-term economic returns. Therefore, athlete development should not be evaluated solely in terms of sporting achievements but also in terms of its contribution to athletes' long-term economic sustainability and quality of life after retirement.

4. Discussion

The findings of this review demonstrate that the economic sustainability of retired professional football players is not solely determined by the level of income earned during their active careers. Instead, long-term economic well-being is shaped by a combination of human capital development, financial literacy, career transition readiness, and institutional support mechanisms. The literature consistently suggests that athletes who invest in both sport-specific and transferable competencies are more likely to achieve sustainable economic outcomes after retirement than those who rely exclusively on athletic performance-related capabilities.

The discussion presented in this section highlights three key insights emerging from the literature. First, economic vulnerability among retired football players should be understood as a human capital issue rather than merely a financial problem. Second, financial literacy functions as a strategic mechanism through which human capital contributes to economic sustainability. Third, the Indonesian football ecosystem faces significant challenges in preparing athletes for post-retirement economic realities.

Human Capital and the Economic Sustainability of Retired Football Players

One of the most significant findings emerging from the literature is that economic sustainability after retirement is strongly influenced by the breadth and quality of athletes' human capital portfolios. While primary human capital enables athletes to achieve professional success and generate substantial income during their active careers, secondary human capital plays a crucial role in sustaining economic well-being beyond sport.

This finding extends Human Capital Theory beyond its traditional focus on productivity and earnings. In the context of professional football, human capital should not be viewed solely as a mechanism for maximizing sporting performance. Rather, it should be understood as a long-term resource that enables athletes to adapt to changing economic circumstances and maintain sustainable livelihoods throughout different stages of life.

The concept of a human capital gap, identified in this review, provides an important explanation for why some athletes experience severe economic difficulties after retirement. Many football players accumulate substantial sport-specific competencies but fail to develop transferable skills, educational qualifications, entrepreneurial capabilities, or financial management competencies. Consequently, when their sporting careers end, they possess limited resources for generating alternative income.

This finding is consistent with previous research emphasizing that successful career transitions require investments in competencies beyond sport (Knights et al., 2019; Stambulova et al., 2021). Therefore, long-term economic sustainability should be considered an outcome of balanced human capital development rather than sporting success alone.

Financial Literacy as a Bridge Between Human Capital and Economic Sustainability

A second major insight emerging from this review is the strategic role of financial literacy in linking human capital to economic sustainability. The literature demonstrates that athletes' ability to generate income does not automatically translate into financial security or long-term economic well-being. Rather, sustainable economic outcomes depend on how effectively athletes manage, preserve, and grow their financial resources.

Financial literacy contributes to economic sustainability through several mechanisms. First, it enables athletes to make informed decisions regarding savings,

investments, and retirement planning. Second, it reduces susceptibility to behavioral biases that often undermine financial decision-making. Third, it supports the development of long-term financial strategies that extend beyond the relatively short duration of professional sporting careers.

The findings of Hong and Fraser (2021), Moolman (2023), and Owusu et al. (2023) collectively suggest that financial literacy should be considered a strategic form of human capital. In this regard, financial literacy functions not only as a technical competency but also as a capability that enables athletes to convert temporary sporting income into sustainable economic resources.

From a sustainability perspective, financial literacy can therefore be viewed as a mechanism that transforms short-term economic success into long-term economic resilience. This interpretation aligns with broader discussions in sustainability literature emphasizing the importance of capability development for maintaining well-being across time.

Challenges Within the Indonesian Football Context

Although much of the literature reviewed originates from developed sporting systems, the findings have important implications for the Indonesian context. Professional football in Indonesia has experienced substantial growth in recent years, yet systems supporting athletes' post-retirement development remain relatively limited.

Most athlete development programs continue to prioritize competitive performance, technical skills, and physical preparation. Comparatively little attention is devoted to financial education, career planning, entrepreneurship, or post-retirement preparation. Consequently, many athletes enter retirement without adequate resources to navigate economic transitions successfully.

Several publicly documented cases involving former Indonesian football players illustrate the challenges associated with insufficient post-career preparation. While these cases vary in their specific circumstances, they collectively highlight broader structural issues related to athlete welfare, financial preparedness, and long-term economic sustainability.

The findings of this review suggest that athlete development should be approached from a life-cycle perspective. Rather than focusing exclusively on performance outcomes during active playing years, football institutions should recognize that athlete welfare extends beyond retirement. Preparing athletes for post-sport careers should therefore become an integral component of football development systems.

CONCLUSION

This study aimed to examine the role of human capital as a pillar of economic sustainability among retired professional football players through a narrative review of the existing literature. The findings demonstrate that athletes' long-term economic

well-being is influenced not only by the income earned during their professional careers but also by their ability to develop and utilize various forms of human capital throughout and beyond their sporting lives.

The review reveals that human capital in professional football consists of two interrelated dimensions: primary human capital and secondary human capital. Primary human capital, including technical skills, tactical competencies, physical abilities, and competitive experience, plays a critical role in determining athletic performance and career success. However, these competencies are largely dependent on athletes' physical capabilities and therefore have limited economic value after retirement. In contrast, secondary human capital, such as formal education, financial literacy, entrepreneurial skills, communication competencies, and social networks, provides transferable capabilities that support successful career transitions and long-term economic sustainability.

The findings further indicate that post-retirement economic vulnerability often emerges from an imbalance between these two dimensions of human capital. Many professional football players invest heavily in sport-specific competencies while allocating insufficient attention to the development of non-sport capabilities. As a result, they may face difficulties adapting to new economic realities once their playing careers end. The study also highlights the importance of financial literacy as a strategic component of human capital. Financial literacy enables athletes to manage income effectively, make informed financial decisions, prepare for retirement, and transform temporary sporting earnings into sustainable economic resources.

From a theoretical perspective, this review extends Human Capital Theory by demonstrating that human capital contributes not only to career success and income generation but also to long-term economic sustainability after retirement. The study further integrates insights from Human Capital Theory, Behavioral Finance Theory, and athlete career transition literature to provide a more comprehensive understanding of the factors shaping athletes' post-retirement economic outcomes.

Practically, the findings suggest that athlete development programs should adopt a more holistic and life-course-oriented approach. Professional football clubs, governing bodies, educational institutions, and policymakers should move beyond a sole focus on athletic performance and incorporate financial education, career planning, entrepreneurship development, and dual-career opportunities into athlete development systems. Such initiatives can strengthen athletes' capacity to navigate career transitions and maintain economic well-being beyond their sporting careers.

In conclusion, economic sustainability among retired professional football players should not be viewed merely as a financial issue but as an outcome of comprehensive human capital development. Sustainable post-retirement livelihoods are more likely to be achieved when athletes develop both sport-specific and transferable competencies that enable them to adapt, generate alternative income opportunities, and maintain economic well-being throughout their lives. Therefore,

human capital represents not only a source of competitive advantage during athletes' playing careers but also a fundamental pillar of economic sustainability beyond the final whistle.

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