From Athletic Capital to Entrepreneurial Action:
How former professional athletes' human capital impacts their entrepreneurial decision-making

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Abstract

This study examines how the human capital of former professional athletes impacts their entrepreneurial decision-making during the venture creation process. Using Human Capital Theory and the literature on entrepreneurial decision-making, this study explores how the dispositions, knowledge, and networks accumulated through an athletic career shape the reasoning logics through which former athletes create new ventures. The data was collected through a qualitative approach using semi-structured interviews with eleven former professional athletes in Germany who have transitioned into entrepreneurship as a second career, sampled through a combination of purposeful and snowball sampling. During the analysis five aggregated dimensions were developed, athletic human capital formation, sport-derived human capital and its transferability, network and identity as means, decision-making logic in venture creation, and human capital deployment across the venture creation pathway, resulting in a model. These findings demonstrate how athletic human capital functions as the foundational inventory from which athletepreneurs reason under either causal or effectual logic, while the dominant logic shifts across phases of the venture creation process, causal-leaning under forced transition, effectual-dominant at venture identification, and integrated at the functioning venture. The study expands on current theories of entrepreneurial decision-making and athlete career transition, specifically by conceptualising coexistence between causal and effectual logics as phase-structured and proposes practical recommendations for athletes and supporting institutions.

Keywords: Athletepreneur; Entrepreneurial decision-making; Effectuation; Causation; Human Capital Theory; Venture creation process; Athlete career transition; Qualitative research

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1. Introduction

Entrepreneurship begins before the venture does. It begins in the experiences, relationships, and dispositions an individual accumulates across a lifetime, the prior knowledge and human capital that form the raw material from which decisions are eventually made, opportunities are recognised, and ventures are built (Martin et al. 2013; Shane, 2000; Shane & Venkataraman, 2000). Understanding entrepreneurial decision-making therefore requires more than examining the choices entrepreneurs make under uncertainty; it requires understanding the human capital configurations that shape the reasoning behind those choices (Dimov, 2017; Martin et al. 2013). This is the central premise of the present study.

Entrepreneurship research has made significant progress in theorising both the cognitive and experiential antecedents of venture creation. Human Capital Theory (HCT) has established that the knowledge, skills, and abilities individuals develop through deliberate investment, in education, training, and work experience, do not merely determine what people know, but shape how they reason and act when confronted with novel, uncertain conditions (Martin et al. 2013). The uncertainty that characterises entrepreneurial decisions is not mere risk, which can be quantified and managed probabilistically, but Knightian uncertainty in Knight's (1921) original sense: genuine unpredictability for which no statistical inference is available and no expected return can be calculated. It is precisely under these conditions of genuine uncertainty that the cognitive and experiential resources an entrepreneur brings to the process become most consequential, determining not only what decisions are made but how the reasoning process through which they are reached is structured (Martin et al. 2013; Sarasvathy, 2001). The literature on entrepreneurial decision-making under uncertainty has established that this reasoning is governed by two principal logics, causation and effectuation, which coexist and shift dynamically across the conditions of the decision: causation begins from a defined goal and selects among means to achieve it, while effectuation begins from an inventory of available means, including who the entrepreneur is, what they know, and whom they know, and constructs possible futures from that inventory (Perry et al. 2012; Reymen et al. 2015; Sarasvathy, 2001; Smolka et al. 2018). Taken separately, HCT and the decision-making literature have each generated substantial scholarly attention. Taken together, they offer a powerful analytical lens for examining how specific career backgrounds impact entrepreneurial reasoning. This gap becomes particularly consequential when considering populations whose pre-entrepreneurial career trajectories are both highly distinctive and structurally underexplored. Yet athletic careers are structurally terminal. Research consistently finds that the average professional career spans between three and seven years depending on the sport, with most athletes retiring before the age of thirty (Boyd et al. 2021). This compressed earning window creates both financial vulnerability and the structural necessity of a second career at an age when most professionals are only beginning theirs, producing both financial and psychological pressure to identify viable alternative career pathways (Vilanova & Puig, 2014). It is in this context that entrepreneurship has emerged as a prominent and increasing second career choice among former athletes (Boyd et al. 2021; Kenny, 2015).

Athletic careers generate a markedly unusual configuration of human capital: years of structured high-performance training, sustained competitive exposure, public identity formation, and psychological conditioning under pressure produce a profile of dispositions, knowledge, and social capital that differs sharply from the backgrounds of most entrepreneurs studied in the literature (Boyd et al. 2021; Steinbrink et al. 2020). The phenomenon of the athlete-turned-entrepreneur, which this study terms the athletepreneur following Boyd et al. (2021) and Ratten (2015), is therefore both empirically observable and theoretically significant as a distinct entrepreneurial population. Yet the existing literature has largely treated this population's competencies as a catalogue of attributes rather than as a dynamic input into the entrepreneurial process, leaving underexplored the question of how that distinctive capital actually shapes the reasoning through which former athletes make decisions when creating new ventures.

Despite a growing body of literature documenting that athletes possess transferable competencies relevant to entrepreneurship (Hindle et al. 2021; Ratten, 2015; Steinbrink et al. 2020; Vidal-Vilaplana et al. 2025) and that causation and effectuation coexist as the principal logics of entrepreneurial decision-making under uncertainty (Perry et al. 2012; Reymen et al. 2015; Sarasvathy, 2001; Smolka et al. 2018), to our knowledge no study has examined how the distinctive human capital of former athletes impacts the operation of these logics during the venture creation process. The existing literature has largely catalogued what athletes bring to entrepreneurship, their competencies, personality traits, and identity resources, without explaining how those assets function as the operating input of entrepreneurial decision-making (Hindle et al.

2021; Ratten, 2015; Steinbrink et al. 2020). A recent systematic review of athlete career transition research, encompassing 151 peer-reviewed studies published between 1990 and 2023, confirmed that the sport-entrepreneurship pathway remains significantly underrepresented relative to the sport-education duality that dominates the field, and identified the empirical examination of entrepreneurial decision-making among former athletes as a direction requiring research attention (Fleischman et al. 2024). The athletepreneur population offers a setting in which this interaction is unusually visible.

This study addresses that gap by contextualising decision-making in the athletepreneur setting. Drawing on Human Capital Theory and the literature on entrepreneurial decision-making under uncertainty, it examines how the human capital of former professional athletes impacts their entrepreneurial decision-making in the venture creation process. The empirical basis is a qualitative study of eleven former professional athletes in Germany who have transitioned into entrepreneurship as a second career, conducted through semi-structured interviews and analysed using the Gioia methodology (Gioia et al. 2012). The analysis constructs a model that specifies the mechanisms through which athletic human capital impacts entrepreneurial reasoning across the venture creation process. The study contributes to three literatures: on athletes in entrepreneurship, on entrepreneurial decision-making under uncertainty, and on athlete career transitions, with the contributions developed across the findings and discussion chapters.

1.1 Aim of the Study

The aim of this study is to develop a deeper understanding of how the human capital that former professional athletes bring into entrepreneurship impacts their decision-making in the venture creation process. Building on existing knowledge of athletes as a distinctive entrepreneurial population and on the broader literature on entrepreneurial decision-making under uncertainty, the study examines how the human capital configuration accumulated across an athletic career impacts the reasoning through which former athletes approach the choices entailed in starting and running a venture.

1.2 Research Question

This study treats former athletes who have transitioned into entrepreneurship as the central unit of analysis. Rather than examining athletic competencies and entrepreneurial decision-making as separate phenomena, it explores how the human capital accumulated by professional athletes impacts the reasoning they apply when creating new ventures. Thus, the study addresses the following research question:

> *How does professional athletes' human capital impact their entrepreneurial decision-making?*

1.3 Disposition of the Thesis

The thesis is structured as follows. Chapter 2 develops the theoretical framework. Chapter 3 presents the methodology. Chapter 4 presents the empirical findings across five aggregate dimensions. Chapter 5 develops the conceptual model and situates the findings within the existing literature. Chapter 6 sets out the theoretical contributions, practical implications, and limitations.

2. Theoretical Framework

2.1 The Structural Necessity of a Second Career

Athletic careers are inherently limited in duration. Unlike most traditional professions, they are unavoidably terminal and comparatively short, typically lasting between three and six years (Boyd et al. 2021). Athletes are frequently confronted with the necessity of a second career through performance decline, injury, deselection, or the expiry of eligibility. This creates both financial and psychological pressure to identify alternative career pathways (Steinbrink et al. 2020).

Push Factors

Financial necessity represents a significant push factor. Given the limited earning window in professional sports and the absence of long-term income security for most athletes, entrepreneurship may serve as a means of economic self-sufficiency (Vilanova & Puig, 2014). Equally, the loss of athletic identity generates a strong need for role replacement. Athletes who have invested heavily in their sporting careers frequently experience identity disruption upon retirement (Boyd et al. 2021), and entrepreneurship offers a structured pathway to rebuild purpose, status, and professional identity.

Pull Factors

Research indicates a significant overlap between athletic and entrepreneurial characteristics, enabling identity continuity, the perception of resilience and competitiveness as stable aspects of personality that translate naturally into entrepreneurship (Boyd et al. 2021). The entrepreneurial environment provides goal-oriented challenges, measurable performance outcomes, and opportunities for achievement that closely resemble sport contexts (Ratten & Miragaia, 2020). Former athletes also frequently pursue entrepreneurship to create impact and remain connected to the sport industry, further strengthening this pull dynamic (Ratten & Miragaia, 2020).

2.2 Definition Athletepreneur

The term athletepreneur describes a specific subset of entrepreneurs whose pathway into venture creation is distinctively shaped by the human capital, identity, and capital resources accumulated through a professional sporting career. Unlike traditional entrepreneurs who may approach venture creation from a business or management background, the athletepreneur enters entrepreneurship from a context defined by high-performance training, competitive exposure, and economic dependence on sport, characteristics that generate a fundamentally different starting inventory of means from which entrepreneurial action is initiated (Boyd et al. 2021; Sarasvathy, 2001).

The athletepreneur can be understood as occupying the intersection of both a professional athlete and entrepreneur. Entrepreneurship, as defined in this study, is a dynamic process in which individuals leverage prior knowledge and alertness to identify opportunities, evaluate them under true uncertainty, and exploit them through innovative resource combinations (Hindle, 2010; Landström, 2020). The athlete is an individual who has competed at a professional level, derived a substantial portion of their income from sport-related activities, and committed to a structured training and competition schedule as a primary occupational role (European Commission, 2012; Hong & Fraser, 2021). The athletepreneur is therefore an individual who meets both definitions, either across sequential career stages or simultaneously, and who approaches entrepreneurship in a way that is shaped by the capital accumulated during their sporting career rather than representing a clean break from it. More specifically, athletepreneurs are characterised by three defining features. The first is identity overlap, in which the established athletic identity is co-managed and merged with a newly constructed entrepreneurial identity rather than abandoned upon retirement (Boyd et al. 2021). The second is capital conversion, the capacity to convert sport-specific symbolic capital (fame, prestige, public recognition) and social capital (networks with sponsors, teammates, coaches, and high-net-worth individuals) into entrepreneurial capital, bypassing barriers to entry that face entrepreneurs without such referent power (Hindle et al. 2021; Ratten, 2015). The third is a high-performance psychological skillset developed through years of structured competitive exposure, including resilience, discipline, the capacity to perform under pressure (Fletcher & Sarkar, 2012 cited in Steinbrink & Ströhle, 2024; Steinbrink et al. 2020), a higher risk propensity positively associated with entrepreneurial intention (Zhao et al. 2010 cited in Steinbrink et al. 2020), and the proactivity and tactical creativity that support adaptive problem-solving under uncertainty (Vidal-Vilaplana et al. 2025).

2.3 The Entrepreneurial Transition Process

The transition from sport to entrepreneurship is not a singular event but a multi-dimensional process. The Holistic Athletic Career Model of Wylleman and Lavallee (2004) treats transitions as interactions across athletic, psychological, psychosocial, and academic domains, with retirement from sport often as the most critical stage because it impacts development across all domains simultaneously. Transitions can be normative (predictable, such as age-related retirement) or non-normative (unpredictable, such as injury or deselection), with the latter particularly high-risk because they find the athlete psychologically and vocationally unprepared. Athletes with strong, exclusive athletic identities are especially vulnerable to crisis-transitions characterised by loss of self-worth and direction (Wylleman & Lavallee, 2004), and Moustakas et al. (2022) identify a corresponding pattern of differential vulnerability in which the degree of exclusive investment in sport during the active career shapes the difficulty of the eventual transition.

Despite their psychological and social capital, athletes face two central barriers to entrepreneurial transition. The first is an awareness gap: the tunnel vision produced by performance-centred career structures limits athletes' recognition of how their competencies apply beyond sport (McKnight et al. 2009), and effective skills transfer requires structured reflection to reinterpret those competencies for non-sport domains (Danish et al. 1993). The second is a knowledge gap: athletes often lack formal business knowledge, financial literacy, and structured entrepreneurial networks (Kenny, 2015; Vilanova & Puig, 2014), demonstrating high psychological capital and behavioural competencies but limited exposure to technical business education and venture development processes.

2.4 Entrepreneurial Decision-Making Under Uncertainty

Entrepreneurship is, at its core, a decision-making activity conducted under conditions of genuine uncertainty (Knight, 1921; McMullen & Shepherd, 2006; Sarasvathy, 2001). The choices entrepreneurs face when creating new ventures are not reducible to risk calculations with known probability distributions, but require reasoning where information is incomplete and outcomes cannot be inferred from past patterns alone (Knight, 1921; McMullen & Shepherd, 2006). How entrepreneurs reason under these conditions has been one of the central concerns of entrepreneurship research, and the literature has converged on the recognition that entrepreneurial decision-making is not governed by a single mode of reasoning but by multiple, coexisting logics whose relative prominence shifts with the conditions of the decision (Reymen et al. 2015; Sarasvathy, 2001; Smolka et al. 2018).

Two of these logics have received particular attention. Causation describes a goal-driven, analytical mode of reasoning in which the entrepreneur begins from a defined objective and selects among means to achieve it. Effectuation describes a means-driven mode of reasoning in which the entrepreneur begins from an inventory of available means and selects among possible outcomes that can be generated from them (Sarasvathy, 2001). These two logics are widely treated in contemporary research as complementary rather than oppositional, coexisting within the same entrepreneur, the same venture, and often the same decision (Perry et al. 2012; Reymen et al. 2015; Smolka et al. 2018). The distinction between them and the conditions under which each becomes dominant therefore provides the analytical scaffolding through which the present study examines how the human capital of former athletes impacts their entrepreneurial decision-making.

2.5 The Principles of Causal and Effectual Reasoning

Sarasvathy (2001, p.245) defines the fundamental distinction between the two logics as follows:

> *Causation processes take a particular effect as given and focus on selecting between means to create that effect. Effectuation processes take a set of means as given and focus on selecting between possible effects that can be created with that set of means.*

In practical terms, causation involves many-to-one mappings, where multiple means are funnelled toward a single predetermined goal, while effectuation involves one-to-many mappings, where a given set of means can generate several possible outcomes (Sarasvathy, 2001). Causation is therefore effect-dependent and actor-independent, concentrating on the predictable aspects of an uncertain future. Effectuation is actor-dependent, emphasising the controllable aspects of an unpredictable future and leveraging existing assets and partnerships to generate new possibilities rather than requiring the entrepreneur to predict or control a future market.

Following the position established in the literature (Perry et al. 2012; Sarasvathy, 2001; Smolka et al. 2018), this study treats causation and effectuation as coexisting rather than oppositional logics that can be employed simultaneously, overlapping and intertwining across different decisions and contexts. They are orthogonal rather than contradictory: high causation does not imply low effectuation, and their effectiveness depends on contextual levels of uncertainty (Perry et al. 2012; Smolka et al. 2018).

Entrepreneurs engaged in effectual reasoning begin from three primary categories of means: *who they are*, encompassing their traits, tastes, and abilities; *what they know*, including their knowledge corridors and areas of expertise; and *whom they know*, comprising their social and professional networks (Sarasvathy, 2001). These means form the starting inventory from which the effectuating entrepreneur imagines and selects among possible ventures, rather than working backward from a predefined goal. The causal counterpart to this starting position is a predefined goal from which the entrepreneur works backward to assemble the means required to achieve it. Each of the two logics thus implies a distinct stance toward means, ends, and the relationship between them, and these stances are operationalised through a set of principles that the following section sets out.

2.5.1 Causal and Effectual Reasoning

Sarasvathy (2001) articulates effectual logic through four core principles, each representing a specific decision-making heuristic that distinguishes effectuation from causation.

The first principle concerns affordable loss rather than expected returns. Where causation models focus on maximising the potential returns for a decision by selecting optimal strategies, effectuation predetermines how much loss is affordable and experiments with as many strategies as possible within those bounds (Sarasvathy, 2001). This approach prioritises the creation of more options in the future over the maximisation of immediate returns, allowing entrepreneurs to act under uncertainty without requiring accurate forecasts of outcomes. However, Smolka et al. (2018) introduce an important qualification here: their empirical findings reveal that strictly adhering to the affordable loss principle actually has a negative relationship with venture performance. While limiting downside risk may allow an entrepreneur to fail cheaply and restart, scaling a successful venture ultimately requires committing substantial resources, meaning extreme loss aversion can be detrimental to long-term financial performance. This paradox is reinforced by Galkina et al. (2022), who demonstrate empirically that entrepreneurs experience genuine tension when asked simultaneously to calculate expected returns and estimate affordable losses, resolving this through a mechanism they term beforehand cushioning, preparing fallback positions by negotiating multiple funding routes in parallel so that the failure of any single route does not prove fatal.

The second principle concerns strategic alliances rather than competitive analyses. Whereas causation models emphasise detailed competitive analyses as the foundation for strategy, effectuation prioritises gaining early precommitments from stakeholders as a means of reducing uncertainty and helping to co-create the market itself (Sarasvathy, 2001). Rather than analysing and then selectively approaching potential partners, effectual entrepreneurs make early commitments with self-selecting stakeholders willing to invest resources, knowledge, or networks into the venture. Smolka et al. (2018) identify securing stakeholder precommitments as one of the two primary drivers of effectuation's positive impact on venture performance, noting that achieving this requires the entrepreneur to act as a skilled social actor who relates empathetically to stakeholders in order to build credible commitments and jointly co-create the venture's future. This is reflected at the networking level in what Galkina and Jack (2022) describe as routinised collective creativity, a hybrid behaviour in which scheduled routines deliberately create the structural conditions for open-ended co-creation and exploratory opportunity development with partners.

The third principle concerns the exploitation of contingencies rather than preexisting knowledge. While causation models treat unexpected events as deviations from the plan to be managed or avoided, effectuation treats them as opportunities to be seized and incorporated into the venture (Sarasvathy, 2001). The capacity to identify and exploit contingencies, turning the unexpected into an asset, is a defining characteristic of effectual reasoning. Galkina et al. (2022) show that when entrepreneurs simultaneously follow known rules and encounter the unexpected, tensions emerge that can only be resolved by reconciling the known and unexpected, an activity in which prior causal knowledge is re-evaluated in the light of new information to produce novel, adaptive solutions.

The fourth and overarching principle concerns controlling an unpredictable future rather than predicting an uncertain one. Sarasvathy (2001, p.252) captures this logic succinctly:

> *Causation processes focus on the predictable aspects of an uncertain future. The logic for using causation processes is: To the extent that we can predict the future, we can control it. Effectuation, however, focuses on the controllable aspects of an unpredictable future. The logic for using effectuation processes is: To the extent that we can control the future, we do not need to predict it.*

A corollary of this principle is that effectuation reconceptualises the market itself not as a pre-existing entity to be discovered and captured, but as the residual of a process of building partnerships and precommitments (Sarasvathy, 2001). Galkina et al. (2022) illustrate that when entrepreneurs must simultaneously project causal predictability to external stakeholders while operating effectually internally, they resort to *camouflage*, presenting a coherent, goal-driven facade while continuing to reason from available means, as a coping strategy for navigating this inter-organisational tension.

2.5.2 Analytical Position and the Adoption of Both Logics

Effectuation theory is not without its critics. Kitching and Rouse (2020) argue that by reducing venture creation to a decision-making logic, the theory pays insufficient attention to social-structural and cultural contexts and implicitly grants entrepreneurs excessive powers of individual agency. This represents an important boundary condition for the present study, since athlete-entrepreneurs are not context-free agents but socially and institutionally positioned individuals whose available means, networks, and identities are shaped by their sporting careers.

A related debate concerns the conceptual status of effectuation itself. Sarasvathy and Venkataraman (2011) reframe entrepreneurship as a method of human action analogous to the scientific method, and position effectuation as a candidate for the dominant logic of this entrepreneurial method. The framing is deliberately provisional: effectuation is presented as the logic best supported by empirical evidence on expert entrepreneurial reasoning, but not as the exclusive or settled logic of the field. The position adopted in this study is intermediate. Effectuation and causation are treated as the two principal logics of entrepreneurial decision-making under uncertainty, both relevant and both empirically tractable through the principles set out above. Neither is privileged as the analytical lens. The analytical interest of the study lies in how the human capital configuration of former athletes relates to the operation of these two logics, not in confirming the dominance of one over the other.

2.6 Human Capital Theory

Human Capital Theory (HCT) is a foundational economic framework originally established to explain the relationship between individual capabilities and performance outcomes.The core premise is that these capabilities are not merely natural but are acquired through deliberate investments, primarily education, vocational training, and work experience, which lead to future returns in the form of higher productivity, earnings, or performance (Gabrielsson & Politis, 2012). Martin et al. (2013) distinguish between Human Capital Investments (the inputs, such as time and money spent on training) and Human Capital Assets (the actual capabilities acquired from those investments), noting that individuals may experience the same investment but extract different functional assets depending on the context. Marvel et al. (2016) categorise these assets into a typology of knowledge (understanding of principles and facts), skills (proficiency in performing tasks), and abilities (enduring traits like cognitive reasoning).

Human capital is best understood as a formative construct, a unique configuration of experiences rather than a single sum score (Dimov, 2017). Entrepreneurial success is often determined by conjunctional causation, where specific combinations of attributes (such as industry experience combined with managerial skills) jointly determine the outcome (Dimov, 2017). In the context of venture creation, this configuration often favours a “Skill Variety” or “Jack-of-all-trades" profile (Lazear, 2005), in which individuals with a diverse portfolio of cross-functional experiences are more likely to succeed than those with deep, narrow specialisation (Krieger et al. 2021).

2.6.1 Human Capital in the Athletic-Entrepreneurial Transition

Athletes make massive human capital investments during their sporting careers, characterised by extensive deliberate practice within a closed training environment (Tian & Yang, 2025). While this hyper-specialization often leads to occupational delay regarding traditional labor market experience (Wylleman & Lavallee, 2004), it generates a high stock of non-cognitive human capital assets or abilities, specifically resilience, discipline, varying risk propensities, and leadership, which are highly congruent with the psychological profile of successful entrepreneurs (Ratten, 2015; Steinbrink et al. 2020).

2.6.2 Human Capital as Foundation for Entrepreneurial Decision-Making

The non-cognitive and cognitive assets accumulated through an athletic career do not exist in isolation but form the foundational inventory from which athlete-entrepreneurs reason when creating new ventures. This is the point at which Human Capital Theory and the literature on entrepreneurial decision-making converge: Human Capital Theory specifies what entrepreneurs bring into the venture creation process, while the decision-making literature specifies how those assets are deployed under uncertainty (Martin et al. 2013; Sarasvathy, 2001).

The deployment can proceed through either logic. Effectual reasoning treats accumulated human capital as the means inventory from which possible ventures are generated, with the three categories of who the entrepreneur is, what they know, and whom they know mapping directly onto the dispositions, knowledge, and networks human capital comprises (Boyd et al. 2021; Sarasvathy, 2001). Causal reasoning treats the same accumulated assets as the capabilities through which a predefined goal is pursued, with knowledge supporting analytical evaluation, structured experience supporting systematic planning, and networks supporting the targeted assembly of resources required to achieve the goal (Dimov, 2017; Martin et al. 2013). The two logics therefore draw on a common human capital base but mobilise it differently. Which logic dominates at a given moment depends on the conditions of the decision rather than on the human capital itself (Reymen et al. 2015; Smolka et al. 2018).

2.7 Final Synthesis & Gap

The two theoretical frameworks at the core of this thesis correspond directly to the elements of the research question. Human Capital Theory identifies and categorises the distinctive configuration of human capital that athletes bring into entrepreneurship (Boyd et al. 2021; Dimov, 2017; Martin et al. 2013; Steinbrink et al. 2020), and the literature on entrepreneurial decision-making under uncertainty explains how that configuration is mobilised, with causation and effectuation treated as coexisting and dynamically shifting logics whose relative prominence depends on the conditions of the decision (Perry et al. 2012; Reymen et al. 2015; Sarasvathy, 2001; Smolka et al. 2018). Together, the two frameworks make it possible to examine how the human capital configuration of professional athletes impacts the entrepreneurial decision-making through which they create new ventures.

Despite the growing body of literature on both athlete career transitions and entrepreneurial decision-making, a gap remains at their intersection. The existing literature has established that athletes possess transferable competencies relevant to entrepreneurship (Ratten, 2015; Steinbrink et al. 2020) and that causation and effectuation coexist as the principal logics of entrepreneurial decision-making under uncertainty (Perry et al. 2012; Sarasvathy, 2001; Smolka et al. 2018). How the distinctive human capital configuration of former athletes relates to the operation of these two logics during the venture creation process remains unexamined. The present study addresses this gap, using the principles of causal and effectual reasoning as the analytical resolution at which the empirical material is examined.

3. Methodology

3.1 Research Philosophy

This study applies a constructive realist position. Reality is understood as both objective and subjective, since human interpretation always enters the picture (Ylönen & Aven, 2023), and knowledge is treated as something created rather than discovered, shaped by individuals and their experiences (Madzia, 2013). The objective aspect is fixed by the selection criteria set out in section 3.3: a verifiable athletic background and a subsequent move into entrepreneurship as a second career, neither of which is open to interpretation by the researcher or the participant. The subjective aspect lies in what participants make of their own paths, the experiences, reflections, and interpretations they bring to the venture creation process (Madzia, 2013). Since the aim is to understand how professional athletes' human capital impacts their entrepreneurial decision-making, those subjective interpretations are central to the research. Holding the objective and subjective sides together (Lektorsky, 2023) kept the study adaptive as new themes emerged during data collection.

3.2 Research Design

Previous research examining human capital, athletic career transitions, and entrepreneurial decision-making has largely relied on quantitative approaches (Boyd et al. 2021; Ratten, 2015; Steinbrink et al. 2020; Tian & Yang, 2025; Vidal-Vilaplana et al. 2025; Vilanova & Puig, 2014), which identify broad patterns across populations but do not reveal how individual athletes reason and make decisions during venture creation. The cognitive and identity-related dynamics of transitioning from professional sport into entrepreneurship, including how athletes recognise and deploy their competencies, how they navigate uncertainty, and how their decision-making logic is shaped by their athletic background, are better understood through qualitative exploration.

An abductive research approach is the most suitable for this purpose (Magnani & Gioia, 2023). It allows the study to connect existing theories of human capital and entrepreneurial decision-making to a new context, former professional athletes, while inductively analysing the interviews to generate new themes and connections, ultimately producing a model. Theory and empirical observation inform each other as the research unfolds, rather than the framework being treated as a fixed hypothesis to be tested or as a lens applied only once data collection is finished.

3.3 Sampling Strategy

A purposeful sampling strategy was applied (Bouncken et al. 2025) to identify participants whose backgrounds align with the phenomenon under investigation: former professional athletes who have transitioned into entrepreneurship as a second career. Purposeful sampling selects individuals with direct experience of the phenomenon being studied (Palinkas et al. 2015), making it well suited to this research.

Three criteria guided participant selection. First, participants had to qualify as athletes under the definition adopted in this study: individuals who either held a professional contract with a sport employer or were officially recognised by a sporting organisation as having elite status, and who derived a significant share of their income from sport-related activities (Hong & Fraser, 2021). Second, participants had to qualify as entrepreneurs under the definition adopted in this study, which combines opportunity-recognition and venture creation economic traditions to frame entrepreneurship as a dynamic process of identifying, evaluating, and exploiting opportunities under uncertainty (Hindle, 2010; Landström, 2020). To ensure participants had accumulated sufficient experience for meaningful reflection on decision-making within venture creation, a minimum of five years of self-employment as a founder was required.

Third, participants had to have established their entrepreneurial career as a second career following their professional athletic career, ensuring that reflections on the venture creation process could be informed by both prior athletic experience and subsequent entrepreneurial practice.

Participant	Gender	Years as Professional Athlete	Sport	Entrepreneurial Industry	Years as Entrepreneur
Participant 1	m	6	Canoe slalom	E-commerce	19
Participant 2	m	19	Football	Industrial manufacturing	14
Participant 3	m	25	Swimming	Coaching & consultancy	13
Participant 4	m	10	Bobsleigh	E-commerce	30
Participant 5	m	9	Archery	Consultancy	7
Participant 6	m	16	Football	Ticketing	15
Participant 7	m	14	Football	Coaching, data analysis & consultancy	6
Participant 8	m	19	Swimming	Supplements	21
Participant 9	m	6	Football	Coaching	6
Participant 10	f	15	Skiing	Coaching	12
Participant 11	m	5	Football	Coaching	5

Table 3.1 Overview of the Interviewees

Table 3.1 provides an overview of the research participants across five dimensions, each of which is directly relevant to the aims and theoretical framework of this study. Gender is included to provide transparency regarding the composition of the sample. The sample is predominantly male, which reflects the broader gender imbalance in professional sport participation and is acknowledged as a limitation of the study's representativeness. Sport is recorded to document the range of sporting backgrounds represented in the sample. The sample includes participants from both team sports (such as football) and individual sports (such as canoe slalom, swimming, archery, and bobsleigh), reflecting the variety of athletic contexts within professional sport. Years as a professional athlete speaks to the depth and duration of human capital investment. Entrepreneurial industry is included to examine whether participants gravitate toward sport-adjacent ventures, such as coaching, consultancy, supplements, or ticketing, or whether they cross into unrelated sectors such as e-commerce or industrial manufacturing. Finally, years as an entrepreneur is recorded to verify that participants meet the minimum threshold of five years of self-employment.

3.4 Data Collection Strategy

Data was collected through semi-structured interviews. The format keeps the conversation guided but flexible (Brinkmann, 2013; Flick, 2014), producing a consistent dataset for cross-case comparison while leaving participants room to contribute what matters to them and allowing new themes to emerge as the research unfolds. An interview guide was prepared to keep the conversations focused and to ensure each interview produced sufficient material to address the research question.

The interview guide was developed from the theoretical framework and structured as a funnel, moving from broader open questions toward increasingly specific ones. Beginning with reflective questions about the participants' sporting careers and transition allowed them to settle into the conversation and establish their own narrative before being guided toward more analytically targeted material (Brinkmann, 2013). The middle section focused on decision-making during venture creation, including how participants approached risk, early partnerships, and resource mobilisation, drawing on the effectual means categories (Sarasvathy, 2001). The final section invited reflection on the relationship between athletic background and entrepreneurial behaviour, including perceived advantages, gaps, and identity continuity (Flick, 2014).

Reaching a sufficient number of eligible participants proved challenging given the specificity of the target population. Approximately 150 potential participants were contacted across multiple channels, including LinkedIn, direct email, and institutions and organisations supporting athlete career transitions, with four participants identified through snowball referrals (Naderifar et al. 2017). A significant proportion of contact attempts received no response, consistent with the documented difficulty of accessing hard-to-reach populations in qualitative research (Naderifar et al. 2017), and several individuals who had confirmed participation did not appear at the agreed interview and could not be rescheduled. This attrition required continuously active outreach throughout the data collection period.

All interviews were conducted online via Google Meet due to the geographically dispersed participant pool. Both researchers aimed to be present, though scheduling constraints meant seven interviews were conducted with one researcher present. Interviews were held individually and audio-recorded with explicit prior consent (Kang & Hwang, 2023), transcribed using the AI software Sunetscribe and manually corrected for accuracy. They were conducted in March and April 2026 and ranged between 25 and 55 minutes, with one shorter interview of 18 minutes that nonetheless yielded analytically relevant material, reflecting that interview length alone is not a reliable indicator of data quality (Brinkmann, 2013). One participant unable to schedule a spoken interview provided detailed written responses to the guide, which were included in the analysis and treated consistently with the transcribed material, with reduced conversational depth noted as a limitation (Flick, 2014).

3.5 Data Analysis

For this research, the Gioia methodology was used, grounded in thematic analysis (Gioia et al. 2012). This method allows for structure in qualitative data by organising the interviews and findings through first-order codes, second-order themes, and aggregated dimensions, systematically connecting participants' narratives to the theoretical framework. This approach keeps the raw data transparent while allowing theory to be built up from it in a structured way. Thematic analysis is then used to identify, categorise, and analyse the patterns that emerge across the dataset (Braun & Clarke, 2006).

The first phase was familiarisation (Braun & Clarke, 2006; Flick, 2014): active listening during the interviews and detailed work through the transcripts, including manual correction, which built familiarity with each participant's language and framing of the link between sporting background and entrepreneurial decision-making, and surfaced both conscious reflections and patterns participants had not explicitly named.

In the second phase we developed first-order codes, identifying meaningful segments of the data and labelling them descriptively, staying close to how participants themselves described their experiences (Braun & Clarke, 2006; Gioia et al. 2012). Coding was conducted manually and differentiated between semantic codes, capturing explicitly expressed ideas, and latent codes, capturing underlying meanings not directly stated (Flick, 2014).

In the third phase, the first-order codes were organised into second-order themes based on similarities and frequency. AI software assisted with the initial detection of patterns across the volume of coded data, but all groupings were subsequently reviewed, renamed, and restructured manually by both researchers to ensure they reflected the content and meaning of the transcriptions rather than surface-level linguistic similarity (Magnani & Gioia, 2023). Some themes were developed into concepts in direct dialogue with Human Capital Theory and Effectuation Theory, while others emerged solely from patterns within the data. In the fourth phase, themes were reviewed and refined: overlapping themes were merged, irrelevant ones removed, and new conceptual groupings developed where appropriate (Gioia et al. 2012). This phase involved continuous dialogue between the researchers to challenge interpretations and ensure the emerging structure reflected the data and theoretical framework rather than researcher assumptions.

In the fifth phase, the second-order themes were grouped into aggregate dimensions representing both the theoretical framework and the participants' lived experiences (Gioia et al. 2012; Magnani & Gioia, 2023). The final dimensions are presented and discussed in the chapters that follow.

In the final sixth phase, the codes, themes, and aggregate dimensions were structured into a full written analysis.

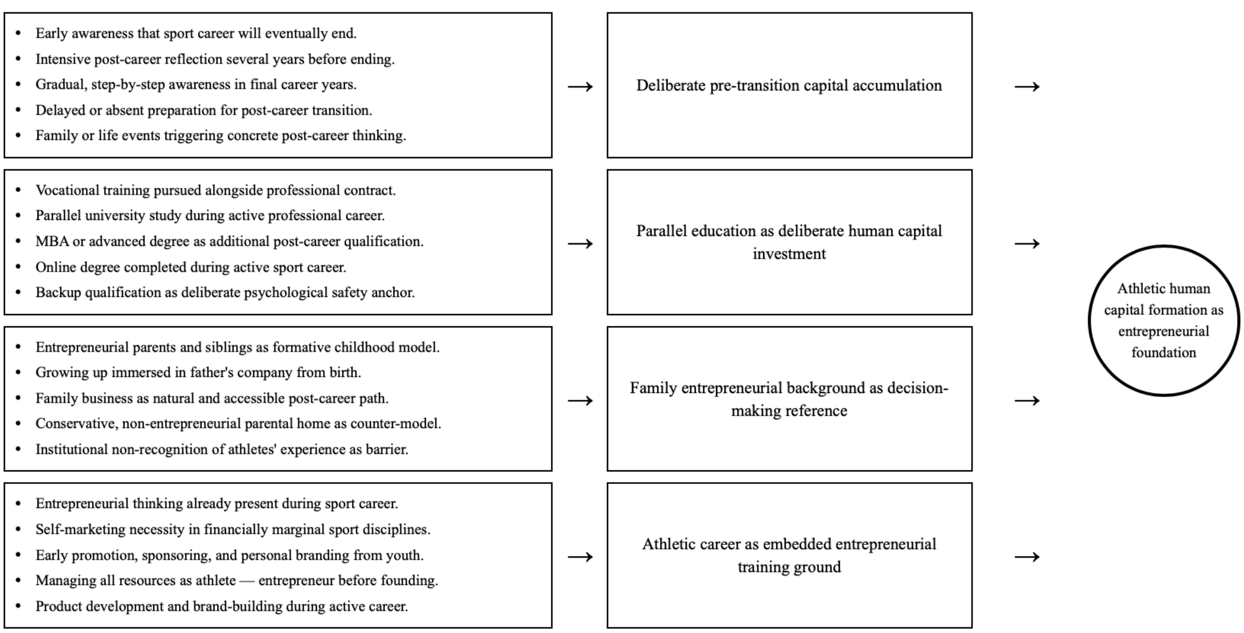

Figure 3.1 Data structure for athletic human capital formation as entrepreneurial foundation

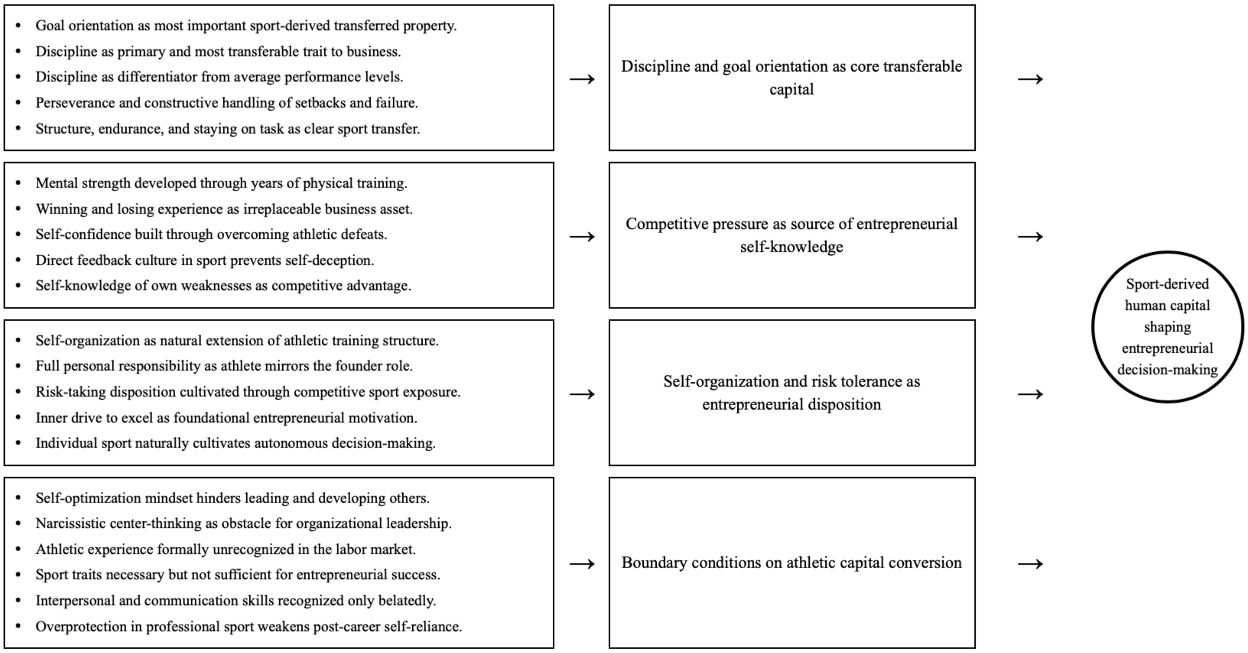

Figure 3.2 Data structure for sport-derived human capital shaping entrepreneurial decision-making

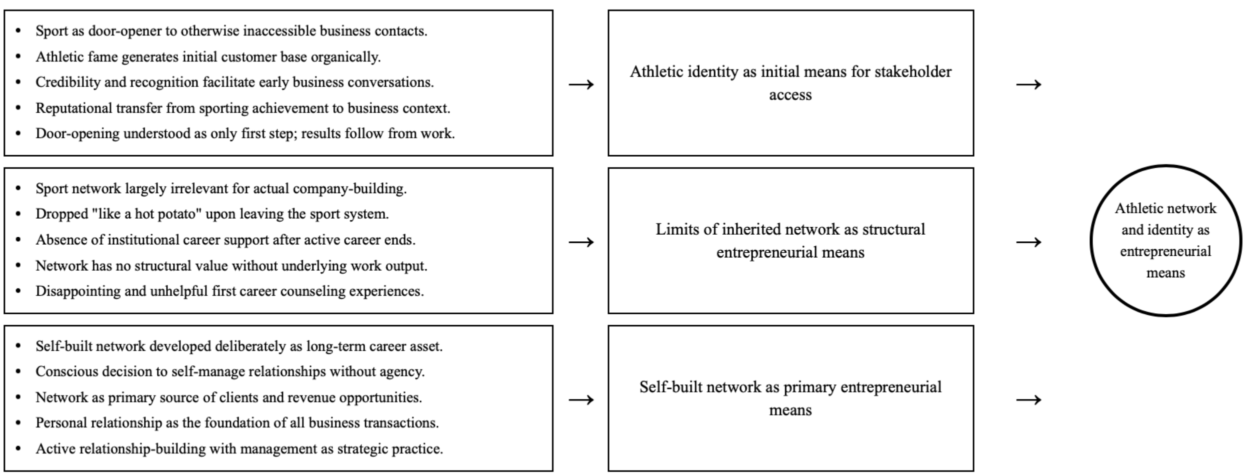

Figure 3.3 Data structure for athletic network and identity as entrepreneurial means

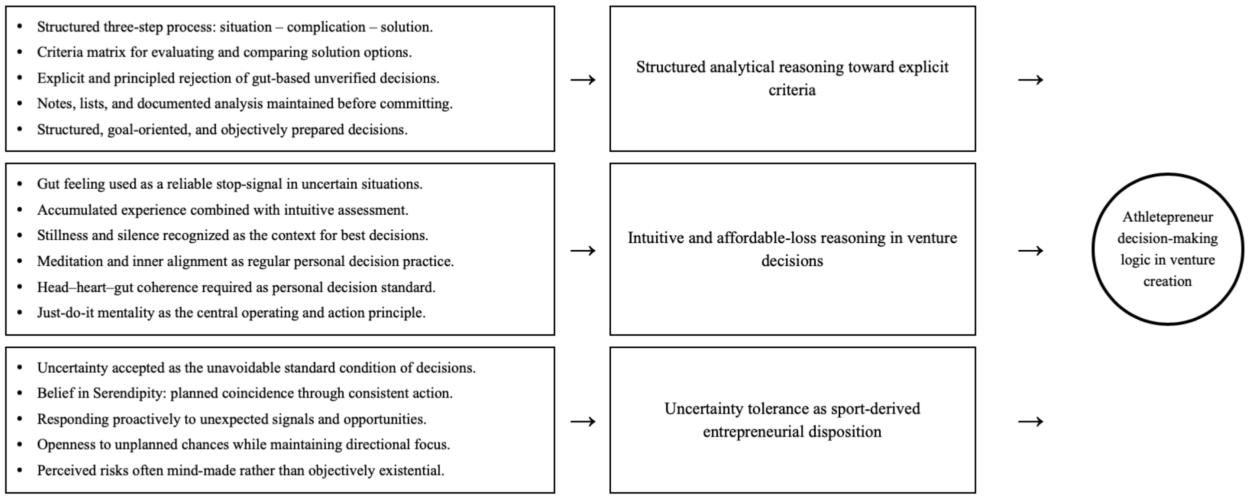

Figure 3.4 Data structure for athletepreneur decision-making logic in venture creation

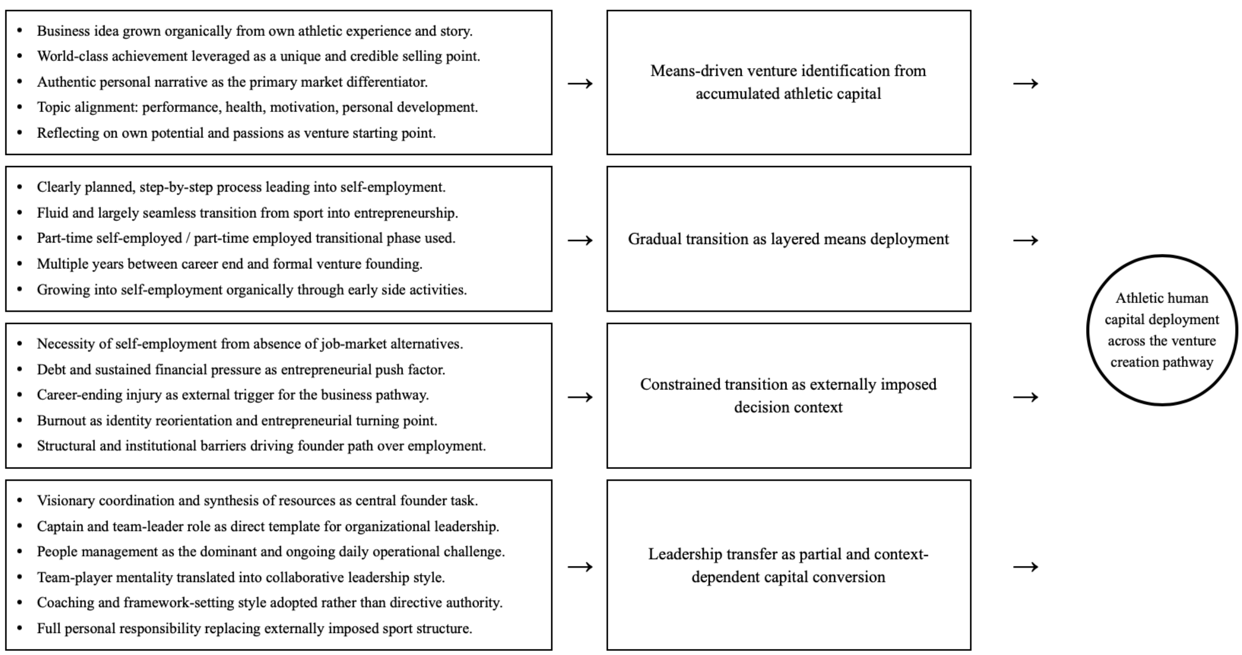

Figure 3.5 Data structure for athletic human capital deployment across the venture creation pathway

The data structures presented in Figures 1–5 are explained in detail in Chapter 4, where each figure is discussed in relation to the empirical findings and theoretical framework.

3.6 Ethical Considerations

Every study raises ethical dilemmas that need careful thought. For a qualitative study that aims to understand personal careers, transitions, and decision-making behaviours, ethical considerations are of importance to ensure that participants' integrity and anonymity are protected. For qualitative research specifically, three major challenges require attention: the interaction between participants and the researcher, the researcher's subjective interpretation of the data and conclusions, and the chosen research design (Laryeafio & Ogbewe, 2023).

As for the interaction between participants and researchers, we made it clear to all participants that all information shared in the interviews will be used solely for the research purpose of the study. The researchers' subjective interpretation of the data has also been taken into account. To mitigate the risk of bias, both authors worked together throughout the analytical process, continuously challenging each other's interpretations to ensure a balanced and grounded analysis.

Further ethical considerations have been made regarding anonymity and confidentiality, upheld throughout the study to protect the integrity of the participants and to ensure that participation does not harm them in any way (Kang & Hwang, 2023). Participants have been informed that their names and any other identifying information will be either removed or replaced with pseudonyms in the final study (Wiles et al. 2008).

Participants were informed about the purpose of the study and their right to withdraw at any time without consequence. Prior to each interview, participants were informed about and asked to consent to the recording of the interview. They were also informed that recordings would be used solely as a data collection tool to assist the researchers in accurately understanding and interpreting participants' experiences and would not be shared with any third parties.

4. Empirical Data & Findings

4.1 Athletic Human Capital Formation as Entrepreneurial Foundation

This dimension documents four layers of pre-entrepreneurial capital formation: the timing of pre-transition awareness, parallel education as deliberate investment, family entrepreneurial background as a socialised interpretive frame, and the athletic career itself as an embedded training ground in which effectual reasoning habits were practised before any formal entrepreneurial identity had been constructed.

4.1.1 Deliberate Pre-Transition Capital Accumulation

Most participants reported having developed an awareness of the finite nature of their athletic career well before that career actually ended. This awareness varied in timing and intensity, ranging from a general sense that the end would come at some point to concrete reflection processes initiated several years in advance. What makes this awareness analytically significant is not its psychological dimension but its productive one: it triggered investment decisions. Participants who developed this awareness began allocating time and energy toward assets outside sport, which means the capital available at the moment of entrepreneurial transition was partly a function of how early and how deliberately this awareness had been acted upon.

Several participants described the awareness as something that had accompanied them throughout their career. Participant 1 recalled an early consciousness of the need to plan for what came after. Participant 3 situated this reflection in concrete terms: "*I started thinking about it intensively about four years before the end of my career.*" Participant 5 described a similar pattern of forward-looking thought already during his active years, and Participant 4 framed it as a matter of looking ahead rather than waiting for events to force the issue. For Participant 7, the trigger was biographical rather than purely professional: "*Starting a family was what really got me thinking about how things would continue.*"

For others, the awareness developed more gradually and crystallized only in the final years of the career. Participant 10 described a step-by-step process of coming to terms with the end: "*It came* *to me bit by bit, and at some point I just accepted that it would be over*." This acceptance of finitude, rather than denial of it, was a recurring feature.

Two participants acknowledged that the anticipatory work had not really happened. Participant 6 reflected that he had missed the chance to prepare adequately, and Participant 11 noted that he only began thinking about what would come next once the thought of stopping had already entered his mind.

4.1.2 Parallel Education as Deliberate Human Capital Investment

Alongside their athletic careers, most participants invested in formal qualifications, alternative income sources, or institutional fallback options. These parallel investments served as insurance against the structural uncertainty of professional sport and, in several cases, became the foundation for the venture that followed. In HCT terms they are human capital investments in the precise sense (Martin et al. 2013), populating the "what I know" category of the effectual means inventory (Sarasvathy, 2001) and shaping which venture types could later be imagined.

Formal education was the most common parallel investment. Participant 3 described his studies as a basic safeguard and later added an MBA as further preparation. Participant 5 pursued a degree in sports management with the explicit intention of building a bridge to a post-athletic career. Participant 2 combined a vocational apprenticeship with his professional contract, which he described as a deliberate strategy: "*I always had this safety anchor, that I had something else alongside the football.*" Participant 4 completed a business degree in parallel to his career, and Participant 7 negotiated a clause into his contract that protected his ability to study while playing. Participant 8 pursued medical studies during his career without requesting any special treatment from the university, and Participant 9 completed an online degree alongside his sport.

Beyond formal education, several participants invested in alternative assets or institutional positions. Participant 2 invested in real estate as a second pillar of income and described a deliberate orientation toward security: "*At HSV I always thought about having a backup plan.*" Participant 6 described his position with the police as a safety net that shaped his decision to sign a professional contract in the first place, since the institutional fallback made the risk of full commitment to sport more bearable.

4.1.3 Family Entrepreneurial Background as Decision-Making Reference

The family of origin emerged as a significant, though uneven, source of entrepreneurial socialization. Some participants grew up in households where business ownership and self-employment were features of daily life, while others described environments oriented toward stable employment within established institutions. Both patterns shaped, in different ways, the eventual move into entrepreneurship, not by determining whether it happened, but by shaping the cognitive reference frame from which the decision was made. In effectuation terms, the family background contributes to the "who I am" category of means: it forms part of the identity and interpretive framework from which the participant reasons when confronted with the decision of whether and how to found a venture (Sarasvathy, 2001).

Several participants described direct entrepreneurial influence within the immediate family. Participant 1 referenced the formative role of entrepreneurial parents and siblings. Participant 2 traced his orientation back to childhood: "*My father was an entrepreneur, so I was raised with it from day one.*" His path involved taking over an existing family business rather than founding from scratch, and he described his father's example as one of courage as much as of business acumen. For those who grew up in entrepreneurial households, the family business therefore represented a natural and immediately accessible post-career pathway, distinct from the venture-creation-from-scratch trajectory followed by most other participants. Participant 9 similarly identified his parents and broader family as a formative entrepreneurial influence.

Others described the opposite pattern, in which the family environment pointed toward employment within large, established firms. Participant 11 captured this orientation: "*Bosch, Porsche, or Daimler, that was the model for life in my family.*" He described himself as the outlier within his family, the one who broke with the conservative pattern by pursuing football professionally in the first place. The shift toward entrepreneurship later in life was, in his case, a continuation of that earlier divergence rather than a fulfillment of family expectations.

The role of partners and spouses also surfaced in this theme, particularly at the moment of transition. Participant 6 described consulting his family before making his career decision. Participant 11 described his wife as a counterweight to his more conservative tendencies, someone whose own drive for freedom shaped the household's appetite for risk and who explicitly supported his step into self-employment: "*She kept my back free when I made the decision to quit.*"

The presence or absence of entrepreneurial socialization in the family of origin did not determine the eventual move into entrepreneurship, but it shaped the meaning of that move and the psychological activation energy required to make it. For some, founding a venture extended a familial tradition; for others, it represented a deliberate departure from the model they had grown up with. A further contextual factor shaping the family background's role as a reference point was the formal non-recognition of athletic experience in the labour market: for participants whose family environment had modelled conventional employment, this institutional barrier reinforced the entrepreneurial pathway as the more accessible alternative.

4.1.4 Athletic Career as Embedded Entrepreneurial Training Ground

A further source of pre-entrepreneurial human capital was the entrepreneurial activity that participants engaged in while still actively competing. These activities were rarely framed as businesses at the time, but they involved self-marketing, sponsorship management, network building, and in some cases the development of early products. In retrospect, they functioned as a training ground for the venture creation that followed. Their analytical significance is that they represent the earliest form of effectual reasoning in the sample: participants who managed their own sponsorships, built their own commercial relationships, and experimented with products while still competing were already practising the logic of beginning from available means rather than from a predefined goal (Sarasvathy, 2001), before they had any formal entrepreneurial identity.

Several participants described forms of self-marketing and direct commercial engagement during their playing years. Participant 5 mentioned early self-employment through promotional activities, and Participant 3 described a deliberate decision to manage his own marketing rather than work through an agency: "*I made the conscious choice not to use an agency. I wanted to build the network myself, because I knew it would be useful long term.*" His framing presents network construction as a long-horizon investment rather than a short-term commercial decision. Participant 4 described becoming the first professional bobsledder to operate on a sponsorship basis and the multitasking burden this entailed alongside studies, training, and team management.

Other participants pointed to sponsorship and brand contacts that accumulated during the active career. Participant 10 described how relationships with sponsors and brands during her playing years left her with a stock of contacts she could later draw on, and Participant 7 described the period of active competition as a time of network construction in itself. Participant 8 described an unplanned but consequential entry into commercial activity through press contacts: "*Through the press contacts, business just sort of came to me. It wasn't really planned*." He also referenced his own product mixing activities as far back as 1994, well before any formal entrepreneurial step. This unplanned, contingency-driven emergence of commercial activity already reflects the third principle of effectuation, the exploitation of contingencies, operating within the athletic career itself.

4.2 Sport-Derived Human Capital Shaping Entrepreneurial Decision-Making

This dimension documents three layers of transferable capital, discipline and goal orientation as sustained commitment, competitive pressure as a source of calibrative self-knowledge, and self-organisation and risk tolerance as a decision-making posture, followed by a fourth theme on boundary conditions that reflects Dimov's (2017) configurational view that the entrepreneurial value of accumulated capital depends on the conditions of its mobilisation.

4.2.1 Discipline and Goal Orientation as Core Transferable Capital

Discipline was the most frequently cited transfer from sport to entrepreneurship across the sample. Participants described it not as a single trait but as a cluster of related dispositions, including persistence under setbacks, structured work habits, and a sustained orientation toward goals. Its relevance to the research question is that it shapes not which decision is made but how the consequences of that decision are enacted: discipline is the mechanism by which an entrepreneurial commitment made under uncertainty is sustained across the obstacles and reversals that follow.

Several participants placed discipline at the center of what sport had given them. Participant 3 described it as the most important of the sporting attributes and added that it was what set him apart from the average: "*Discipline is the thing that distinguishes you from the average*."

Participant 5 framed discipline together with structure as a direct carryover from his sporting years, and Participant 9 called it the core lesson of his time as a professional. For Participant 6, the framing was broader still: discipline as a general precondition for life, not only for entrepreneurship.

Persistence and the ability to deal with setbacks were closely linked to discipline in participants' accounts. Participant 2 identified goal orientation as the single most important transfer from sport and tied it to what he called persistence in the face of setbacks: the capacity to keep working when things were not going well. Participant 10 identified discipline and resilience together as her main transfers from her playing years. Participant 4 connected discipline to a step-by-step mentality, the willingness to break down a long path into smaller, repeated efforts.

A further variant of this cluster was an internal drive toward achievement. Participant 3 described an inner drive as the foundation of success, and Participant 2 connected the orientation toward winning that he had developed in competition to the way he now approached business. Participant 9 offered a more sober formulation: "*Endurance is the formula, but luck plays a part too.*" His framing acknowledges persistence as necessary without overstating its sufficiency.

4.2.2 Competitive Pressure as Source of Entrepreneurial Self-Knowledge

Beyond the work-habit dispositions described in the previous theme, participants identified a second category of transfer that concerns the inner life under conditions of pressure. This includes the capacity to absorb criticism, to recognize one's own limitations honestly, and to maintain composure in high-stakes situations. Its relevance to the research question is calibrative: this form of self-knowledge corrects the distortions of self-assessment that are common in entrepreneurial contexts, and provides a tested emotional framework for managing the uncertainty that venture creation decisions involve.

The exposure to public evaluation during the athletic career was described by several participants as a formative experience for self-reflection. Participant 2 framed this in two ways: as a school of being criticized, and as the basis for an honest reading of one's own performance. The constant requirement to perform under public scrutiny had, in his account, taught a form of self-awareness that he now drew on in business. Participant 7 made a similar point about the permanent obligation to prove one's performance, which he described as a defining feature of athletic life.

Several participants emphasized a kind of brutal honesty with oneself as a sport-derived asset. Participant 8 described it directly: "*As an athlete you can't lie to yourself. The clock or the result tells you the truth*." He linked this to a recognition of his own weaknesses as a competitive advantage rather than a vulnerability. This inversion, treating self-knowledge of limitation as an asset rather than a deficit, reflects the effectual starting point of reasoning from who one actually is (Sarasvathy, 2001). Participant 4 connected mental strength to the physical training itself, treating the two as inseparable products of sustained athletic practice.

Participants also described how the experience of winning and losing repeatedly had built a particular kind of confidence. Participant 3 called this experience an unpayable asset and noted that sport had built up his confidence in his ability to absorb defeat: "*Sport gives you the self-confidence to handle losses.*" Participant 2 framed the same dynamic in terms of error acceptance, treating mistakes as a learning process rather than as failures, a disposition that maps onto the third principle of effectuation, which treats unexpected outcomes as contingencies to be exploited rather than as deviations from a plan (Sarasvathy, 2001).

A more specific carryover concerned the management of acute stress in performance situations. Participant 5 described the analogy directly between a pitch presentation and a competitive moment: "*A pitch in front of investors is basically the same situation as standing at the start. The body reacts the same way.*" Participant 6 described a formative early experience of being whistled at by spectators as a learning trigger, an episode that taught him to tolerate negative feedback in real time.

4.2.3 Self-Organization and Risk Tolerance as Entrepreneurial Disposition

A third cluster of transferable capital concerns the relationship between the individual and the structure within which they operate. Participants described how athletic life, particularly in individual sports, had cultivated a strong sense of personal ownership, the capacity to organize themselves without external supervision, and a willingness to accept risk as a normal feature of decision-making. The relevance to the research question is dispositional: these assets shape not the method by which a decision is reached but the posture from which all decisions are approached, accepting responsibility, tolerating ambiguity, and acting without the need for external structure.

Self-organization featured prominently in several accounts. Participant 3 described self-employment as a direct extension of the self-organization he had practiced as an athlete and characterized the comprehensive responsibility of running a business as analogous to the responsibility he had carried as a competitor. Participant 8, who came from an individual sport, framed it as a school of decision-making: "*In an individual sport you have to make every decision yourself. Nobody else is going to do it for you*." The structural parallel to the founder role is precise: in both contexts, the absence of an external decision-making authority requires the individual to internalise the full weight of choice and its consequences. This maps onto the effectual principle that the entrepreneur controls the venture by acting from their own means rather than waiting for market conditions to become predictable (Sarasvathy, 2001).

Ownership in the broader sense surfaced as a related disposition. Participant 7 described his recognition of the importance of taking responsibility through his role as a mentor, suggesting that the disposition was visible to him not only in his own behavior but in what he found himself teaching others.

Risk tolerance was the third element of this cluster. Participant 2 described risk-readiness as a characteristic of athletes generally, and Participant 8 framed it as part of his sporting inheritance. Participant 9 connected it more specifically to the capacity for fast decisions, which he attributed to athletic reflexes carried over into business contexts. This has direct decision-making relevance: risk tolerance shapes the speed and decisiveness with which bounded commitments are made under uncertainty, reducing the hesitation that excessive caution generates when conditions cannot be fully resolved in advance.

Two participants offered more cautious framings. Participant 1 observed that sporting values, while important, were necessary but not sufficient for entrepreneurial success: "*You need them, but they're not enough on their own.*" Participant 8 identified adaptability as a central transfer, framing it as the capacity to adjust to changing circumstances rather than to apply a fixed formula, a description that aligns with the fourth principle of effectuation, which prioritises control over an unpredictable future rather than prediction of it (Sarasvathy, 2001).

4.2.4 Boundary Conditions on Athletic Capital Conversion

The fourth theme of this dimension addresses the explicit limits of the transfer. Participants did not describe their sporting background as uniformly advantageous. Several identified specific traits, dispositions, or structural conditions in which the athletic inheritance was either actively unhelpful or insufficient on its own. These boundary conditions are analytically necessary because they qualify the positive claims made in the preceding themes and reflect Dimov's (2017) configurational view that the entrepreneurial value of accumulated human capital depends on the conditions of its mobilisation, conditions that are not always favourable.

Some participants pointed to dispositions that, in their view, hindered rather than helped entrepreneurial work. Participant 1 described self-optimization as a sporting trait that could become an obstacle in business contexts and added that a narcissistic orientation toward being the center of attention was similarly counterproductive when the central task shifted from individual performance to leading and developing others. Participant 8 identified athletic aggression as a trait that he had deliberately not transferred into his business life: "*The kind of aggression that worked in sport doesn't belong in business*." Participant 2 described a deliberate decision to close the chapter on his sporting career after it ended, treating the clean break as a precondition for moving on.

A second set of limitations concerned the structural recognition of athletic experience in the post-career context. Participant 4 described his sporting record being dismissed in the German labour market: "*In Germany, your sporting career doesn't count as professional experience. It's almost like a disadvantage.*" In his case, the limitation of sport-derived capital was external, a matter of how that capital was valued by others rather than of what it contained.

Participant 9 identified the moment of disciplinary transfer as a critical inflection point: discipline in sport did not automatically translate into discipline in a different domain, and the assumption that it would was itself a risk. He also referenced the public visibility of professional athletes' financial struggles after their careers as a cautionary backdrop.

A structural dimension of this theme was the overprotection characteristic of professional sport environments, where logistics, scheduling, and career management are handled by clubs and federations, perceived by several participants as having weakened their post-career self-reliance and left them less equipped to manage the unstructured autonomy that entrepreneurship demanded.

4.3 Athletic Network and Identity as Entrepreneurial Means

The three themes of this dimension form a progression rather than parallel descriptions: what the inherited network provides, where it falls short, and the constructive response several participants developed in reply. The social capital dimension of the means inventory is shown to be a dynamic resource whose entrepreneurial value depends on active construction work rather than on the inherited network alone.

4.3.1 Athletic Identity as Initial Means for Stakeholder Access

Participants consistently described their athletic identity as a resource that opened doors. The recognition that came with a professional sporting career, and in some cases with a championship-level achievement, gave them access to people, conversations, and early customers that would have been considerably harder to reach otherwise. This access function is the how-mechanism by which athletic identity shapes early-stage decision-making: it determines which stakeholders can be approached at the outset, which early commitments can be sought, and which market positions are initially visible as starting points for the venture.

The "door-opener" framing recurred across the sample. Participant 2 described the athletic network as his preferred door-opener, and Participant 3 explained that sport gave him access to people who would otherwise have been unreachable: "*Sport opens doors to people you'd never get in front of otherwise*." Participant 9 described the athletic network as a starting booster and added a more general formulation: "*Without good contacts, you don't survive as an entrepreneur*." Participant 8 made the same point in commercial terms, describing how the athletic network helped him reach his first customers, and added a qualifying observation: "*Being known helps, but in the end it's trust that counts*." This qualification is important: the initial access function operates at the entry level of relationships, but sustaining those relationships requires a substantive offering that athletic recognition alone cannot provide.

Other participants emphasized the trust dimension more directly. Participant 10 described her network as a basis of trust rather than as a list of contacts, and characterized the door-opening function as initial assistance rather than as the endpoint of the relationship. Her formulation captures a recurring distinction in this theme: athletic identity provided the entry, but the substance of the relationship had to be built afterwards.

Institutional resources tied to the athletic identity also surfaced as relevant. Participant 5 described the role of a mentor and the *Stiftung Deutsche Sporthilfe* as central nodes in his network, and identified the Sporthilfe Start-up Academy specifically as a springboard for his entrepreneurial activity, showing that the social capital dimension of the means inventory extends beyond personal contacts to the broader institutional ecosystem surrounding professional sport.

A more specific use of athletic identity concerned its function as a marker of differentiation. Participant 3 described his world championship status as a unique selling point and added that an authentic personal story could itself serve as a differentiator: "*Your own story, if it's real, is something nobody else has.*"

4.3.2 Limits of Inherited Network as Structural Entrepreneurial Means

A second group of accounts diversified the picture established in the previous theme. Several participants described the realization that the athletic network, on closer inspection, did not translate into structural support for building a business. The recognition arrived in different ways and with different intensities, but the underlying observation was consistent: name recognition alone did not produce commercial outcomes, and institutional support for the post-athletic transition was, in their experience, inadequate. This limitation is directly relevant to the research question because it specifies the conditions under which the "whom I know" means category fails to generate the stakeholder access and early commitments that effectual reasoning predicts (Sarasvathy, 2001) and shapes the decision-making logic that follows as a result.

Participant 1 articulated the position most directly. He described the athletic network as irrelevant for the actual work of building a company and added that the network had no structural value without sustained work to activate it.

Participant 4's account was the most extensive and the most critical. He described the athletic network as worthless for the purposes of building a business and connected this to a broader institutional failure: "*There was nobody who actually accompanied us through the transition. Nobody.*" Several participants described the experience in terms of an abrupt severance: relationships and institutional support that had been structurally present throughout the athletic career effectively ceased upon retirement, leaving them without the relational scaffolding they had assumed would carry over. He described his first encounter with formal career counseling as disappointing and identified the absence of mentors as a defining gap in his transition. In his account, the disillusionment was not only with the network itself but with the institutions that had, in his view, failed to construct meaningful bridges between athletic and post-athletic life.

Other participants offered more measured versions of the same observation. Participant 6 described what he called a realistic understanding of networks, in which the relationships had to be tested rather than assumed. Participant 3, who in the previous theme described sport as a door-opener, also acknowledged the limit of that function: opening a door was only the first step, and what happened afterwards depended on whether something substantive could be built.

4.3.3 Self-Built Network as Primary Entrepreneurial Means

The third theme describes the response that several participants developed to the limitations identified in the previous theme. Rather than treating the athletic network as a given resource, they approached relational capital as something to be deliberately constructed, maintained, and integrated into the operating model of the venture. This is the how-mechanism through which the "whom I know" category of the means inventory becomes functional: not through passive activation of inherited contacts but through active relationship management treated as a core business function rather than as a background resource.

Several participants described networks not as a passive endowment but as the central engine of their business activity. Participant 7 identified networks as the central driver of incoming work and described the deliberate cultivation of relationships with management as a strategic activity in itself. He framed people management as a core business function rather than as a soft skill alongside the technical work. Participant 6 put the underlying observation in plain terms: "*Without relationships, nothing in this business works. Everything is built on them.*"

The deliberate construction extended into the operational work of the venture. Participant 3 described networks and what he called the people business as the foundation of his sales activity, and he added a further reframing: rather than positioning his offering as a sporting story, he framed it as the transmission of self-management capacities, which gave companies a substantive reason to engage with him beyond his athletic identity. This reframing shows how the athlete moves from relying on symbolic capital alone to constructing a substantive offering around which the self-built network can be activated.

Other participants described a slower, more incremental form of relational construction. Participant 9 described encounters as delayed key coincidences, suggesting that the value of a given contact was often not visible at the time but emerged later when circumstances aligned, reflecting the third principle of effectuation operating at the relational level. Participant 5 described his network as a field of possibilities that could be activated at the right moment, framing relational capital as latent rather than continuously active. Participant 9 also described consulting a small circle of trusted contacts on important questions, indicating that the constructed network served not only commercial but also advisory functions.

Read together, the three themes of this dimension speak to the strategic-alliances principle of effectual reasoning (Sarasvathy, 2001). Where causal logic would orient the entrepreneur toward systematic competitive analysis and the selective targeting of potential partners, the participants' accounts describe a different practice: relational capital is constructed through early commitments with self-selecting stakeholders, latent contacts are held open for future activation rather than instrumentally pursued, and people-management is treated as a core business function rather than as a soft skill alongside the technical work. The activation of athletic networks varied across the sample, with the inherited network functioning as an effectual means for some participants and requiring deliberate construction for others, but the underlying orientation in both patterns is means-driven rather than competitor-driven.

This active relationship management corresponds to the strategic-alliances principle of effectual reasoning, in which stakeholder commitments and partnerships co-create the conditions of the venture rather than emerging from competitive analysis (Sarasvathy, 2001).

4.4 Athletepreneur Decision-Making Logic in Venture Creation

This dimension documents two divergent modes of reasoning applied to venture-creation decisions, structured criteria-driven reasoning corresponding to causation, and means-driven reasoning corresponding to effectuation (Sarasvathy, 2001), together with a third theme that captures the sport-derived uncertainty tolerance that makes both modes viable. The first-order codes within the themes show that the two logics are not mutually exclusive, with several participants describing both operating within the same decision-making practice, anticipating the integrated logic finding developed in the discussion chapter.

4.4.1 Structured Analytical Reasoning Toward Explicit Criteria

A first cluster of accounts described decision-making as a structured, analytical process oriented toward measurable inputs and explicit criteria. Participants in this group framed good decisions as the product of deliberate methodology rather than of judgment in the moment. The athletic origin of this reasoning mode lies in the performance evaluation culture of professional sport: the constant measurement of outcomes against objective criteria, the direct and unambiguous feedback of competition results, and the discipline of preparing decisions through structured analysis all transfer into a causal decision logic in the entrepreneurial context (Sarasvathy, 2001).

Participant 1 gave the most explicit description of an analytical method: "*I work with the McKinsey decision-making model. I lay out scenarios, define the criteria, and then weigh the options against each other.*" He described the process as a structured three-step sequence moving from situation analysis, through identification of the core complication, to generation and comparison of solution options, with a criteria matrix used to structure the final comparison. Within this framework, the final step still involved a subjective weighing of the future, but the subjectivity was bounded by the prior analytical work. He was explicit about the position this implied toward intuition: "*I don't believe in gut decisions. They've burned me too often.*" Participant 4 also described a structured process, though framed in more practical than methodological terms, involving notes and lists used to organize the decision before it was made.

For Participant 3, the analytical orientation was framed as a learning outcome from sport. He described objectivity as something he had developed through his athletic career and identified measurability as the foundation of good decisions: "*If you can't measure it, you can't really decide on it.*" The framing connects the analytical disposition directly to the discipline of objective performance evaluation that his sport had required, illustrating how the causal reasoning logic is grounded in sport-derived human capital rather than in formal business training.

Participant 10 described her decisions as structured and goal-oriented, and added a qualification that recurs in other participants' accounts: "*I prepare carefully, but you never have full certainty. At some point you have to decide.*" Her formulation acknowledges the limits of analytical preparation without rejecting it as the appropriate starting point. Other participants connected the analytical mode to specific decision criteria. Participant 1 identified market timing and the window of opportunity as a structured input into his decision process. Participant 7 described developing his own ideas independently and then subjecting them to challenge by external experts before committing, treating expert input as an analytical filter on his own judgment. Participant 9 framed the weighing of risk as a rational obligation rather than as an option, suggesting that the analytical work was a matter of duty rather than preference.

4.4.2 Intuitive and Affordable-Loss Reasoning in Venture Decisions

A second cluster of accounts described decisions made on the basis of gut feeling, situational judgment, or pragmatic action, often with explicit acknowledgment that prolonged analysis was either impossible or counterproductive in the situation at hand. This cluster documents the effectual dimension of athletepreneur decision-making: the mode that acts from accumulated experience, frames risk through affordable-loss rather than expected return, and treats the gut as a legitimate decision instrument rather than as a noise source to be suppressed (Sarasvathy, 2001).

The overlap anticipates the integrated logic finding developed in Chapter 5, where causal and effectual reasoning are shown to operate simultaneously rather than alternately at the functioning venture stage. Several participants described intuition not as the opposite of analysis but as something integrated with it. Participant 1, who in the previous theme rejected gut decisions as a primary mode, also identified the gut as a stop signal: a warning function that intervened when the analytical process was pointing in a direction that did not feel right. Participant 3 described risk-weighing as containing a gut-feeling component alongside the analytical work. Participant 4 also referred to what he called an analytical gut, developed through experience: "*After enough decisions, your gut starts to know things your head can't articulate yet.*" These formulations show that the boundary between analytical and intuitive reasoning in this sample is not sharp but graduated, participants move along it depending on the type of decision and the information available.

Participant 5 offered the most developed account of intuition as a deliberate decision-making practice. He described silence as the place where his best decisions were made and identified meditation as a working tool for decision-making rather than as a separate practice. His criterion was the alignment of head, heart, and gut: "*When all three say the same thing, the decision is right. When they don't, I wait.*" He also described the consequences of neglecting his gut feeling, which he connected to a burnout episode, and characterized his trajectory as a development from a more rational to a more intuitive decision style. The account suggests that the intuitive mode, in his case, was not a default but a learned orientation that had developed through experience, shaped by, though not reducible to, his athletic background.

Other participants framed the intuitive mode in more pragmatic terms. Participant 7 described making gut decisions despite operating in what he characterized as a data culture, suggesting that the intuitive mode coexisted with rather than replaced analytical work. Participant 9 described what he called a central golden rule: "*Just do it. You can analyze forever, but at some point you just have to start.*" He applied this orientation specifically to risk-weighing situations and described his preference for pragmatic action over extended planning. This maps closely onto the affordable-loss principle of effectuation (Sarasvathy, 2001): rather than optimising for the best possible outcome, the decision is framed around what loss is acceptable if the action does not work out, lowering the threshold for action under uncertainty. Participant 5, who otherwise described intuition positively, also acknowledged that spontaneity itself carried risk in some decision contexts.

4.4.3 Uncertainty Tolerance as Sport-Derived Entrepreneurial Disposition

Uncertainty was treated by several participants as the default rather than the exception. Participant 1 characterized uncertainty as the standard condition of any decision: "*Every decision you make is under uncertainty. That's not the exception. That's the situation.*" A related orientation was the belief that consistent action generates its own form of luck: several participants described a disposition toward what might be called planned coincidence, in which showing up, staying active, and maintaining directional momentum created the conditions for unexpected but consequential encounters and opportunities. This reflects the fourth principle of effectuation, controlling an unpredictable future rather than predicting it, and mirrors the sport-derived experience of achieving outcomes through consistent preparation under conditions that could never be fully controlled (Sarasvathy, 2001). Participant 10 described clear action under uncertainty as a transferable disposition from sport, and Participant 10 added patience as a separate but related entrepreneurial necessity, suggesting that operating under uncertainty required not only the willingness to act but also the willingness to wait for the consequences of action to become visible.

4.5 Athletic Human Capital Deployment Across the Venture Creation Pathway

This dimension documents how the same underlying means inventory is mobilised under different conditions. The two transition themes, gradual and constrained, describe divergent pathways that shape which decision-making logic dominates: effectual experimentation from accumulated means under gradual conditions, more causal goal-orientation under forced or constrained ones. The venture identification theme shows that the choice of venture idea is predominantly means-driven across the sample regardless of the transition pathway. Together, these themes describe how the entrepreneurial activity emerged in practice and what shaped its concrete form.

4.5.1 Means-Driven Venture Identification from Accumulated Athletic Capital

In most participants' accounts, the venture idea did not emerge from a systematic search for market opportunities but from the immediate stock of resources available to the participant: their own biographical experience, their domain knowledge, and the relationships they had built. The starting point was the self, in the broadest sense, rather than the market. This is a direct expression of effectual reasoning.

Several participants described keeping an ongoing list of ideas as a basic entrepreneurial practice. Participant 1 described it as a duty: "*Every entrepreneur should have an idea list. You write things down, you let them sit, and at some point, one of them is the right one.*" Participant 4 described his idea list as a continuous companion. Participant 1 also identified the visionary role of the entrepreneur as the central pivot of the venture, framing idea generation as a defining function rather than as a preparatory step. Both framings present idea generation as a process of interrogating the means inventory rather than of scanning the market: the question being asked is not "what does the market need?" but "what can I do with what I have?"

The biographical origin of the venture idea was the most consistent pattern across the sample. Participant 3 described his business idea as having grown out of his own experience as an athlete, and Participant 9 similarly traced his coaching idea back to his sporting career. Participant 3 described his coaching product as a transmission of athletic learning content into business contexts. Participant 10 described the thematic anchoring of her venture in performance, health, and motivation, all directly continuous with her athletic background, and identified two further criteria that had shaped her choice: alignment with her own story, and credibility: "*If I'm not credible in the topic, I shouldn't be doing it.*" This credibility framing treats the personal means inventory not only as the starting point of the venture but as a constraint on it, some ventures are excluded because the founder's stock of means does not support the credibility they require.

Other participants described the venture as emerging from a reflection on potential and on what they characterized as the human factor. Participant 5 described the founding as based on this kind of reflection rather than on opportunity analysis. Participant 4 described door-to-door selling as his early operating mode and identified the emergence of the internet in the mid-1990s as a business opportunity he had recognized and acted on, including through early domain registration as a foundation for the business, reflecting the third effectual principle of exploiting contingencies. Participant 8 used a colloquial expression to describe how his business had come about, comparing it to "*the way the virgin came to the child*", meaning that the business had appeared without any deliberate intention on his part. He also described becoming a manufacturer because the product he needed did not exist, treating the manufacturing decision as a response to a concrete necessity rather than as a strategic choice. Participant 9 described his business as developing out of encounters, and Participant 7 described what he called a synergy trio as the basis of his founding, suggesting that the venture had emerged from the combination of available people rather than from a single founder's plan.

4.5.2 Gradual Transition as Layered Means Deployment

The transition from athletic career to entrepreneurial activity was rarely described as a single moment of decision. Most participants described it as a process that extended over months or years, often included intermediate stages, and was shaped by events and recognitions that they had not planned in advance. The how-mechanism of this transition type is effectual in character: participants experimenting with venture activity within bounded commitments, deploying their accumulated means in layers rather than committing to a single predefined course of action (Sarasvathy, 2001).

Several participants described stepwise transitions in which entrepreneurial activity was layered onto existing employment. Participant 5 described entering self-employment on a 50 percent basis, allowing him to build the venture while still operating within an employment structure, and identified a values conflict at his employer as the trigger for the move. He framed the transition partly in terms of impact: "*As an employee in a corporate role, I felt my reach was limited. I wanted to do more than what was possible there.*" Participant 1 described his process as clearly planned in advance, contrasting with the more improvisational accounts elsewhere in the sample.

Other participants described the transition as fluid rather than discrete. Participant 10 characterized her movement from sport to entrepreneurship as a flowing transition rather than a moment of rupture and described self-employment as a longer process rather than a single event: "*It wasn't one moment. It was a longer process of becoming self-employed.*" Participant 11 described a six- to seven-year gap between the end of his athletic career and the beginning of his entrepreneurial activity, indicating that the transition was not always continuous in time.

Participant 6 described a more institutionally complex transition. He took a follow-on contract after his athletic career as a transitional position, but the contract was eventually dissolved due to a lack of clarity about its content. Following the dissolution, he described an active outward orientation as he sought new opportunities and eventually entered as a partner in an existing business through contacts he had already established. For some participants, the transition was punctuated by specific personal events. Participant 5 identified a burnout in 2011 as a turning point in his trajectory. Participant 11 described a period of self-work in the mental domain following his career end, with writing a book serving as his entry point into coaching, and a world trip functioning as what he called an eye-opener for other ways of living: "*The trip showed me that there are completely different ways to live than the one I'd been on.*"

4.5.3 Constrained Transition as Externally Imposed Decision Context

A subset of participants described transitions that were not freely chosen but driven by financial, health-related, or structural pressures that left limited alternatives. These cases differ analytically from the gradual transition in that the decision-making logic is more causal in character: where specific constraints impose specific objectives, the effectual freedom to experiment from accumulated means is replaced by the need to meet those objectives within whatever means are available (Sarasvathy, 2001). Understanding this distinction matters for the research question because it shows that the dominant decision-making logic at the transition stage is not determined solely by the athlete's accumulated capital, but by the conditions under which the transition occurs.

Financial pressure was the most acute form of constraint described. Participant 4's account is the most extensive in the sample. He described an insolvency following the dot-com crash, a debt trap caused by a fraudulent sponsor, and ten years of financial pressure following the end of his athletic career. He described the lowest point in concrete terms: "*I sold everything I owned. Everything.*" Participant 7 also described existential pressure following a payment default by his club, an event that contributed to the conditions under which he turned to entrepreneurial activity.

For Participant 5, the constraining event was burnout, which both ended his existing trajectory and reoriented his path toward entrepreneurship. Health-related constraints shaped the transitions of several participants. Participant 9 described his career as injury-plagued and identified cartilage damage as the health condition that ended his career. He framed the end as a deliberate decision under those conditions: "*At 23 my cartilage was finished. I made a clear decision to end it and go* *the studies route.*" Participant 11 also described ending his career at 23, in his case for mental rather than physical reasons.

Structural conditions of the sport itself created constraints for other participants. Participant 3 described low prize money as a financial driver and identified the necessity of self-marketing as a structural condition of being in a marginal sport in Germany. Participant 5 put the structural constraint in plain terms: "*As an archer in Germany, you can't make a living from the sport. That's just a fact you have to accept.*" His recognition of the financial impossibility of his sport in Germany became, in effect, a determining condition for the path that followed.

5. Discussion

5.1 Overview of the Model

Figure 5.1 Model of athletic human capital and entrepreneurial decision-making across the venture creation process

The model (Figure 5.1) describes how athletic human capital shapes entrepreneurial decision-making across the venture creation process. The model is organised in three columns. The left column presents the venture creation process, beginning with the formation of athletic human capital and ending with the functioning venture. Between these two anchors sit two overlapping phases, transition and venture identification, which the findings show to occur concurrently rather than in strict sequence. The middle column presents the decision-making logic operating at each phase, paired horizontally to the process box from which it proceeds. The right column states the empirical implication of each logic, allowing the reader to see what each pairing means in practical terms.

Two structural features of the model carry analytical weight. First, transition and venture identification are framed as overlapping phases rather than sequential stages. The empirical degree of overlap varies across participants, with some describing a more linear path from career exit to venture identification and others describing identification work that began while the athletic career was still active. Second, dashed influence lines connect athletic human capital to each downstream decision-making box. These lines represent the central claim of the model: the human capital formed during the athletic career impacts how decisions are made at every subsequent phase, not only at the moment of venture identification.

A further element appears to the left of the athletic human capital box: a smaller, secondary box labelled boundary conditions. This element captures a set of frictions identified by a subset of participants in the conversion of athletic capital into entrepreneurial capital, including self-optimisation orientations that hinder the leading and developing of others, formal labour-market non-recognition of athletic experience, and the overprotection characteristic of professional sport environments. Its visual placement to the side rather than within the main column reflects its empirical scope: it is a real but conditional feature of the conversion process, applying to some participants rather than functioning as a structural part of the pathway. The model includes it to mark the limits of the conversion claim without overstating its prevalence.

The model draws on three established theoretical streams. From Human Capital Theory it takes the configurational view of capital as a set of assets formed through deliberate investment with context-dependent returns (Dimov, 2017; Martin et al. 2013). From Effectuation Theory it takes the distinction between causal and effectual reasoning and the principle that the two logics coexist rather than oppose one another (Perry et al. 2012; Sarasvathy, 2001; Smolka et al. 2018). From the literature on athletes in entrepreneurship it takes the recognition that athletes accumulate a distinctive configuration of human capital through their sporting careers (Boyd et al. 2021; Hindle et al. 2021; Ratten, 2015). The sections that follow develop the model's claims in turn.

5.2 Athletic Human Capital as the Means Inventory

The first claim of the framework is that athletic human capital functions as the means inventory of effectual reasoning. The findings show this capital accumulates across three sub-elements: athletic dispositions including discipline, resilience, and ownership; domain knowledge built through structured training and parallel education; and identity and networks generated through public competition. These map directly onto Sarasvathy's (2001) three categories of means: who I am, what I know, and whom I know. Athletic dispositions populate the who-I-am category, domain knowledge populates the what-I-know category, and athletic identity and networks populate the whom-I-know category. The integration of Human Capital Theory and Effectuation Theory at the level of the means inventory is the foundational theoretical move of the framework: Human Capital Theory identifies what athletes accumulate (Boyd et al. 2021; Martin et al. 2013), and Effectuation Theory frames how those assets function as the starting point of entrepreneurial action under uncertainty (Sarasvathy, 2001). Dimov's (2017) configurational view is particularly relevant: human capital is not a sum score but a specific configuration whose entrepreneurial value depends on how it is mobilised.

The whom-I-know category requires further specification. Six of eleven participants described their athletic relationships as door-openers, sources of trust, or routes to first customers, populating the category as Sarasvathy (2001) predicts. The network did not function uniformly across the sample, however. Several participants described it as worthless for the actual work of building a company, and others described relational capital as something that had to be actively constructed rather than passively activated. The whom-I-know category is populated in the means inventory of every athletepreneur in the sample, but its activation is contingent rather than automatic. This extends the effectuation literature by identifying a population for which one of the three means categories is structurally present but functionally contingent.

This contingency is one instance of the broader pattern of conversion frictions captured by the boundary conditions element of the framework. The mainline claim holds: athletic human capital functions as the means inventory of effectual reasoning.

5.3 Transition and Venture Identification as Overlapping Processes

The second claim of the framework is that transition and venture identification are not strictly sequential stages but overlapping phases of the venture creation process. The empirical degree of overlap varies across participants. Some describe a more linear trajectory in which the athletic career ended before serious venture work began, while others describe identification activity that began during the athletic career and continued as the transition unfolded. The framework accommodates both patterns by placing the two phases within a shared frame rather than imposing a fixed order.

The transition phase takes two forms. Some participants moved gradually, layering entrepreneurial activity onto existing employment, completing parallel studies, or extending earlier business engagements until the entrepreneurial role became their primary occupation. Others entered entrepreneurship under forced or constrained conditions, driven by financial pressure, injury, or the structural impossibility of continuing in their sport. These pathways correspond to the normative and non-normative transitions described by Wylleman and Lavallee (2004) and reflect the differential vulnerability identified by Moustakas et al. (2022).

The venture identification phase takes four forms, distinguished by which means category most strongly drove the identification. Identity-driven ventures use the athletic name and reputation as the central offering. Skills-driven ventures transfer competencies developed during the sporting career into a new domain. Network-driven ventures emerge through athletic relationships that operate as door-openers, sources of trust, or routes to first customers. Inheritance-based ventures mobilise family or institutional resources into a succession arrangement. The distribution across these four types is uneven, with skills-driven the largest category, and the sample as a whole skews strongly toward sport-adjacent ventures: nine of eleven participants founded ventures within the sport ecosystem.

The sport-adjacent skew is a direct consequence of means-driven reasoning. Where the means inventory is heavily populated with sport-specific human capital, the venture types most readily generated from it are sport-adjacent. The two sport-independent cases in the sample illustrate the conditions under which the pattern can be broken: one participant through inherited family resources that pre-existed the sporting career, and another through a means inventory in which transferable dispositions outweighed sport-specific identity or domain knowledge. This extends the existing literature on capital conversion in athletes (Hindle et al. 2021; Ratten, 2015) by showing that the conversion process produces a gravitational pull toward sport-adjacent venture domains, and that crossing into sport-independent domains requires either pre-existing non-athletic capital or a means inventory in which transferable competencies dominate.

5.4 Decision-Making Logic Across the Venture Creation Process

The third claim of the framework is that the dominant decision-making logic shifts across the venture creation process rather than remaining fixed. The framework specifies three shifts, paired horizontally to the phases in the left column.

At the transition phase, the dominant logic varies with the conditions of the transition itself. Where the transition is gradual and layered, decision-making leans effectual: participants experiment with venture activity within bounded commitments, drawing on accumulated means without committing to a fixed goal. Where the transition is forced or constrained, decision-making leans causal: the conditions impose specific objectives, often financial, and decisions are made to meet those objectives within the available resources. Read at the principle level, the gradual pathway shows the effectual principles of affordable loss and exploitation of contingencies operating prominently, as participants experiment within bounded commitments and incorporate unexpected events as resources. The constrained pathway shows a different pattern: the controlling-an-unpredictable-future principle weakens as specific objectives are imposed, and goal-oriented reasoning over predefined ends takes its place. This phase-conditional variation in dominant logic aligns with Reymen et al.'s (2015) finding that the relative dominance of causation and effectuation shifts dynamically with the conditions of the decision, and connects directly to the normative and non-normative transition patterns identified in the athletic career literature (Moustakas et al. 2022;

Wylleman & Lavallee, 2004): the structural conditions of the transition determine the reasoning mode the athlete brings into venture creation.

At the venture identification phase, the dominant logic is effectual, with three of the four identification pathways operating through means-driven reasoning. Identity-driven, skills-driven, and network-driven ventures all proceed from accumulated means to generated outcomes, corresponding directly to Sarasvathy's (2001) characterisation of effectual reasoning as a one-to-many mapping. At the principle level, all three means-driven pathways operate through the bird-in-hand orientation captured by Sarasvathy's three categories of means, with the strategic-alliances principle active in network-driven identification specifically. Inheritance-based ventures are the exception: the goal is pre-defined by the inherited structure and the participant adapts means to it, producing a more causal pattern at the moment of identification. This refines the standard effectual account by showing that within a population otherwise dominated by effectual reasoning, a specific pathway can produce a causal pattern when the venture itself is structurally given rather than generated.

At the functioning venture, participants described both causal and effectual reasoning operating in their decision-making, applied selectively to the type of decision at hand. The decisions at this phase concern the continuous choices of running the organisation, including strategic direction, resource allocation, partner selection, and response to unexpected events. Several articulated structured analytical processes, including a McKinsey-style scenario model with a criteria matrix, a process organised around notes and lists, and the framing of measurability as the foundation of good decisions. Alongside these accounts, participants described intuitive and means-driven reasoning operating in the same ventures: silence and meditation as the place where the best decisions emerged, gut decisions taken despite a data-driven organisational culture, and a deliberate rejection of growth pressure as a means-driven choice about the venture's model. Several participants described the two modes operating together rather than alternating. The principle-level pattern at this phase is mixed: structured criteria-driven reasoning operates on some decisions while affordable-loss framing and the exploitation of contingencies operate on others, often within the same participant. One participant who explicitly rejected gut decisions as a primary mode also described the gut as a stop signal that intervenes when the analytical process points in a direction that does not feel right. Another described what he called an analytical gut formed through experience, an intuitive overlay on the structured process. The framework labels this pattern integrated logic. It corresponds to the conceptualisation of causation and effectuation as orthogonal rather than oppositional logics in the existing literature (Perry et al. 2012; Sarasvathy, 2001; Smolka et al. 2018), but the framing in the framework proceeds from the empirical pattern in the data rather than from the theoretical category.

The stage-specific shift in logic is the framework's central analytical contribution. It extends the existing treatment of causal and effectual logics as coexistent (Perry et al. 2012; Smolka et al. 2018) and the empirical work on dynamic shifts within ventures (Reymen et al. 2015) by showing that, in the athletepreneur population, coexistence is not uniform across the venture creation process but structured by the phase at which decisions are being made.

5.5 Synthesis and Contribution

The framework presented in this chapter answers the research question by showing how professional athletes' human capital impacts their entrepreneurial decision-making across the venture creation process. Four claims constitute the contribution.

First, athletic human capital functions as the foundational inventory from which athletepreneurs reason in venture creation. Under effectual logic the inventory operates as the means base from which possible ventures are generated; under causal logic the same inventory supports analytical evaluation and goal-driven resource assembly. The three sub-elements of this capital, athletic dispositions, domain knowledge, and identity and networks, map directly onto Sarasvathy's (2001) categories of who I am, what I know, and whom I know. The mapping is empirically observable rather than metaphorical and extends the existing literature on capital conversion in athletes (Boyd et al. 2021; Hindle et al. 2021; Ratten, 2015) by specifying the mechanism through which the conversion proceeds. The whom-I-know category requires particular qualification: it is populated in every athletepreneur in the sample but its activation is contingent rather than automatic, functioning as Sarasvathy predicts for some participants and requiring active construction for others. The framework captures this and other frictions in a boundary conditions element placed to the side of the main pathway.

Second, transition and venture identification operate as overlapping phases rather than sequential stages. The empirical degree of overlap varies across participants, and the framework accommodates this variation by placing the two phases within a shared frame. Venture identification takes four forms, distinguished by which means category most strongly drove the identification: identity-driven, skills-driven, network-driven, and inheritance-based. The sport-adjacent pattern of the sample is a direct consequence of means-driven reasoning operating on a means inventory heavily populated with sport-specific human capital.

Third, the dominant decision-making logic shifts across the phases of the venture creation process. At transition, logic varies with the conditions of the transition itself, leaning causal under constraint and effectual under gradual pathways. At venture identification, effectual reasoning dominates for three of the four pathways, with inheritance-based ventures producing a more causal pattern because the goal is structurally given. At the functioning venture, causal and effectual reasoning operate together as integrated logic, producing strategic planning with adaptive responsiveness. This stage-specific shift extends the existing treatment of causal and effectual logics as coexistent (Perry et al. 2012; Smolka et al. 2018) and the empirical work on dynamic shifts within ventures (Reymen et al. 2015) by showing that, in the athletepreneur population, coexistence is structured by the phase at which decisions are being made. Across all four claims, the framework reads the data through the four principles of effectual reasoning and their causal counterparts (Sarasvathy, 2001), making the principle-level pattern the empirical foundation of the phase-shifting argument.

Fourth, athletic human capital influences decision-making at every phase of the process, not only at venture identification. The dashed influence lines in the framework represent this continuous shaping. The means inventory formed during the athletic career is not consumed at venture creation but remains the operating input of every subsequent decision the athletepreneur makes.

6. Conclusion and Implications

This study set out to examine how professional athletes' human capital impacts their entrepreneurial decision-making in the venture creation process. The framework developed across the findings and discussion answers this question in three moves. It conceptualises athletic human capital as the foundational inventory from which athletepreneurs reason under either logic. It identifies transition and venture identification as overlapping phases through which that inventory becomes operational. And it traces the shifting decision-making logic across the venture creation process, from causal-leaning conditions at transition, through effectual-dominant reasoning at venture identification, to integrated logic at the functioning venture. The framework conceptualises athletepreneurs as a population in which Human Capital Theory and the literature on entrepreneurial decision-making under uncertainty can be brought together to specify the mechanism through which accumulated capital impacts the reasoning of former athletes in venture creation. The sections that follow set out the theoretical contribution, practical implications, and limitations of the study.

6.1 Theoretical Contribution

The study contributes to three established literatures. To the literature on athletes in entrepreneurship (Boyd et al. 2021; Hindle et al. 2021; Ratten, 2015) it contributes a mechanism for capital conversion: athletic human capital functions as the foundational inventory from which athletepreneurs reason in venture creation. Under effectual logic the inventory operates as the means base from which possible ventures are generated, with athletic dispositions, domain knowledge, and identity and networks mapping directly onto Sarasvathy's (2001) categories of who I am, what I know, and whom I know; under causal logic the same inventory supports analytical evaluation and goal-driven resource assembly. To the literature on entrepreneurial decision-making under uncertainty (Perry et al. 2012; Reymen et al. 2015; Sarasvathy, 2001; Smolka et al. 2018) it contributes a population in which the whom-I-know category is structurally present in every participant but functionally contingent, requiring active construction rather than passive activation for a subset of the sample. This identifies a boundary condition on the standard effectual account and supports the configurational view of human capital advanced by Dimov

(2017), in which the entrepreneurial value of accumulated capital depends on the conditions of its mobilisation.

The framework further contributes to the existing treatment of causal and effectual logics as coexistent by showing that coexistence is structured by the phase at which decisions are being made rather than uniform across the venture creation process. Logic leans causal under forced transition, becomes effectual-dominant at venture identification for three of the four pathways identified in the data, and integrates causal and effectual reasoning at the functioning venture. This stage-specific shift refines the existing literature (Perry et al. 2012; Reymen et al. 2015; Smolka et al. 2018) by conceptualising coexistence as phase-structured.

Beyond the athletepreneur case, the framework suggests that distinctive pre-entrepreneurial career trajectories more generally may shape the interaction between accumulated capital and decision-making logic in ways conventional career backgrounds do not make visible. The analytical move, conceptualising career-derived human capital as the foundational inventory through which causal and effectual logics operate across phases of venture creation, is portable to other populations such as military veterans or professional musicians.

6.2 Practical Implications

For athletes considering entrepreneurship, the framework offers a way to read their own accumulated capital as the starting point of venture creation. The findings suggest that ventures are most likely to emerge from the specific configuration of dispositions, domain knowledge, and networks the athletic career has produced, and that the conditions of the transition shape which decision-making logic dominates. Athletes anticipating a forced transition may benefit from preparing in a goal-driven manner in advance, defining concrete objectives and identifying the resources needed to meet them. Those positioned for a gradual transition can instead use the layered period to experiment within bounded commitments, drawing on accumulated means without committing to a fixed goal.

A further practical implication concerns the relationship between the end of the athletic career and the beginning of the venture. The framework treats transition and venture identification as overlapping rather than sequential phases, which means that venture work does not need to wait until the athletic career has formally ended. Several participants began identification activity while still competing, drawing on accumulated means to shape a venture in parallel with the closing phase of their sporting life. Treating venture creation as a process that can run alongside the athletic career rather than after it allows the means inventory to be mobilised earlier and reduces the abruptness of the transition itself.

Finally, the boundary conditions element of the framework carries a practical warning. Athletic excellence is not automatically entrepreneurial readiness. Self-optimisation orientations developed through individual performance can hinder the leading and developing of others, formal labour-market structures often fail to recognise athletic experience, and the structural overprotection characteristic of professional sport can weaken post-career self-reliance. Recognising these frictions in advance allows athletes to address them deliberately rather than encountering them as unexpected obstacles in the venture creation process.

6.3 Limitations and Future Research

The first limitation is the sample size. The study draws on eleven interviews, which is adequate for producing a framework grounded in the Gioia methodology but limits the scope for within-sample comparison and broader generalisation. A larger sample would strengthen the findings and create the conditions for analytical subgroups, including the examination of how athletepreneurial decision-making may differ by gender. Future research could extend the sample and include gender as a comparative dimension to test whether the framework holds across these conditions.

A second limitation concerns the selection of participants. One participant did not found a business but operated as an entrepreneur within an inherited family enterprise, which broadens the operational definition of entrepreneurship used in the study. The sample is also confined to participants based in Germany, where political, institutional, and cultural conditions specific to the national context may shape the findings in ways the study cannot isolate. Future research could replicate the study in other national contexts to test the framework's transferability.

A third limitation is the biographical specificity of the sample. Future research could compare athletepreneurs with other populations that accumulate distinctive human capital through pre-entrepreneurial careers to test whether the framework's claims extend to other career-to-entrepreneurship transitions.

Finally, the data are cross-sectional, capturing participants' accounts at a single point in time after the venture had been established. A longitudinal design tracking athletes from the late athletic career through transition, venture identification, and the running venture would allow the temporal claims of the framework, particularly the overlap between transition and venture identification, to be tested more directly.

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8. Appendix

Appendix A: Interview Questions

Background and Athletic Career

1. Can you tell me about your athletic career, what sport did you compete in, at what level, and for how long?
2. When did you first start thinking about life after sport, and what triggered that?

Transition to Entrepreneurship

3. How did you end up becoming an entrepreneur? Was it something you planned during your athletic career or did it happen more organically after retirement?
4. Did you have a specific business idea before retiring, or did the idea come later?
5. Was entrepreneurship a conscious choice, or did it feel more like the natural next step given your circumstances?

Decision-Making and Venture Creation (Effectuation vs. Causation)

6. When you decided to start your business, did you begin with a clear goal in mind (business plan), or did you start from what you already had, your skills, network, and resources, and build from there?
7. How did you decide which business to start? Walk me through that process as concretely as possible.
8. How did you approach risk when starting your venture, did you set a limit on what you were willing to lose, or did you focus more on the potential upside?

Human Capital Transfer

9. Looking back at your athletic career, which specific skills, traits, or experiences do you feel gave you the biggest advantage as an entrepreneur?
10. Were there any competencies from sport that you initially underestimated but later realized were highly valuable in business?

11. Did your athletic network, teammates, coaches, sponsors, play a role in your business, and if so, how?