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Determinants of Sport Entrepreneurship

Sylwester Bernacki

Universitat Autònoma de Barcelona

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An Institutional Economics and

Dynamic Capabilities Perspective

S. Bernacki

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Determinants of Sport Entrepreneurship: An Institutional Economics and Dynamic Capabilities Perspective

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Sylwester Bernacki

Thesis supervisors:

Dr. Prof. David Urbano

& Dr. Sebastian Aparicio

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Department of Business, School of Economics and Business,

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

Abbreviations

GEM Global Entrepreneurship Monitor

WDI World Development Indicators

WGI World Governing Indicators

R&D Research and Development

SME Small-To-Medium-Sized Enterprises

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Abstract

Sport-based entrepreneurship has been an emerging research field over the past decade and is often examined in a multidisciplinary approach. There are multiple unexplored research paths in this area, and further research is required to understand the determinants sport entrepreneurship. There is limited understanding of how institutions influence entrepreneurial activity in the sport sector. Sport organisations require entrepreneurial competence and dynamic capabilities to adapt to the demanding sport industry. Drawing on institutional economics and dynamic capabilities as a theoretical framework, the primary aim of this study was to understand the institutional factors that affect sport-based entrepreneurship. An empirical quantitative approach was used to identify and analyse the institutional factors among European countries using panel data and a linear regression model. The main finding of this thesis is the significant effect of government support and corruption on sport startups. Sport entrepreneurship depends on the level of economic growth influenced by the perception of corruption, government support, and political stability. Furthermore, the results revealed how human capital (i.e., tertiary education) plays a crucial role in sport startup survival. Perceived capabilities, supportive tax, and low bureaucracy also contribute to the success of the survival of sport firms. The results show that supportive tax bureaucracy moderates how human capital resources are used to drive the survival of sport startups. Finally, research, and development at the country level affects sport enterprises, for both sport startups' creation and survival. Government support is the primary facilitator of innovation in sport entrepreneurship. There are implications for sport firms and organisations. The thesis contributes to the current literature, broadening the understanding of sport entrepreneurship from an institutional perspective. Sport startups must consider a broader economic and institutional context, especially when entrepreneurs start a sport sector business. Our findings emphasise the importance of institutions and their effect on entrepreneurial activity in sport, helping sport firms survive and gain competitive advantage.

Keywords: *Sport Entrepreneurship, Innovation, Sport Startups, Sport Enterprises, Institutions, Dynamic Capabilities*

CHAPTER ONE

GENERAL INTRODUCTION

1.1. INTRODUCTION

Business has been an inherent part of the sport since its early development in the 1800s, and today, it is a billion-dollar industry (Porter & Vamplew, 2018). The sport industry represents 34 percent of the global recreation market and contributes to economic growth. Entrepreneurial activity is important to the sport sector, as it develops new products, services and technologies, creates innovative strategies for sport organisations, enables to organise sustainable sport events, and allows athletes to pursue entrepreneurial endeavours (Ratten, 2018). As such, entrepreneurship is important for the growth of economies, governments and policymakers must create policies to shape a conducive environment for entrepreneurial activity (North, 1990). Growth occurs through entrepreneurial activity and innovation. Entrepreneurship is critical to the growth of any industry, including the sport sector. Examining entrepreneurship and its driving factors within the sport industry is important for athletes and sport clubs, professionals working in sport, sport policymakers, and academics in the field. Entrepreneurial activity is essential to sport industry in a variety of ways, as it creates value and wealth, fosters innovation and technological advancements, and provides opportunities for market advancement, contributing to economic growth and employment (Ball, 2005). Such advancements are essential to drive athletic performance, professional and amateur athletes, organisational performance, fan engagement and increase sport consumption (Ratten & Jones, 2020).

Innovation for athletes, for example, provides tracking technology to improve athletic performance (Jones et al., 2020). Other technology can increase fan engagement, providing virtual reality experiences for spectators or virtual training technology for athletes (Escamilla-Fajardo, Núñez-Pomar, Ratten et al., 2020). Other startups create software for data analytics to improve the decision-making and strategic management of sport clubs and

organisations (Binsaeed et al., 2023). Technology improvements and innovations contribute to the advancement of the sport industry and benefit all sport stakeholders.

Furthermore, studying entrepreneurship in the sport sector is important to identify and tackle new challenges and issues and help adapt sport organisations to changing market demands. Sport small and medium-sized enterprises (SMEs) and organisations face many challenges, including lack of government funding and support, low profitability, and market entry barriers (Ahonen & Savolainen 2017). Sport entrepreneurs often choose the sport industry out of passion for sport and emotional connection to a particular sport, rather than the lucrative returns (Ahonen & Savolainen 2017). Economically speaking sport SMEs do not gain enough market to benefit from the high profits of sport, like the major sport clubs or brands do (Tulonen, 2004). Nonetheless, there are many entrepreneurial opportunities in the sport sector, however, those entrepreneurs who choose to start sport ventures will require entrepreneurial skills and tools to navigate the complex barriers and challenges of the sport landscape to succeed. Research such as this thesis provides and builds upon the literature that can help sport entrepreneurs navigate their entrepreneurial journey by providing best practices to identify opportunities, avoid pitfalls and minimise risks (Ratten, 2011, 2019). Such research is also essential to helping policymakers facilitate the entrepreneur's journey by creating a favourable institutional environment by minimising bureaucracy, creating tax incentives, designing government programs, allocating funding, and providing support for SMEs (Baker & Welter, 2020; Urbano et al., 2019).

There is a need to investigate sport entrepreneurship at the institutional level (Pellegrini et al., 2020). Due to the COVID-19 pandemic, its size declined by 15 percent, yet it is still predicted to have a 6 percent growth rate, compared to only 3.6 percent of global real GDP (gross domestic product) growth (Kumar & Bhalla, 2021). Additionally, sport has the ability to influence institutions and instigate social change. Government policy and sport

governing bodies create policies and regulations that create the institutional environment that shapes the economy. Since institutions shape economic growth, they also affect employment rates, gross domestic product (GDP), market dynamics and government expenditure.

Successful entrepreneurs contribute to economic growth by identifying opportunities and gaps in markets, which leads to the creation of new ventures and healthy competition. Such economic activity leads to the creation of employment, the development of new business models, creative marketing, innovative strategies and diversifying revenue streams (Guerrero & Urbano, 2019). Entrepreneurship in sport creates competition, promotes sustainable economic activity and drives growth for all stakeholders in the sport sector. Therefore, it's important to study what are the institutional determinants of sport entrepreneurship, and which institutional factors foster entrepreneurship in sport. Therefore, the aim of this thesis is to investigate the institutional determinants that affect sport entrepreneurship, using an institutional economics and dynamic capabilities theoretical framework. The objective is to identify and analyse institutional factors and dynamic capabilities that influence entrepreneurial activity in sport.

Under the broader sport management literature, sport entrepreneurship is still considered an emerging research field, despite a significant interest over the past decade. It is a challenging task to conceptualise sport-based entrepreneurship. Academics in this field have not yet developed a unified definition (Hammerschmidt et al., 2023; Gonzales-Serrano et al., 2020; Pellegrini et al., 2020). In simple terms, it can be said that it is the intersection of sport and entrepreneurship, where research tries to understand what constitutes entrepreneurial activity in the sport sector (Ratten, 2011). Bruyant & Julien (2000) acknowledged that there are multiple definitions of entrepreneurship, which can be defined in many ways from various perspectives, as much as there are different types of

entrepreneurship: economic, social, psychological, managerial, organisational, and institutional (Veciana & Urbano, 2008).

Porter (2019) defined entrepreneurship as a creative process during which opportunities are created rather than identified. From a business perspective, entrepreneurship is a new business's creation, development, management, and growth (Ratten, 2011). As defined by Cantillon, entrepreneurs are risk-takers during market uncertainty (Cantillon, 2017). This thesis applies the "Vilnius Definition of Sport" developed by the European Commission's for statistical purposes. This definition has three dimensions of how sport is defined incorporating the statistical, narrow and broad definitions of what constitutes sport in economic terms. The definition of sport from a statistical perspective includes the sporting facilities, clubs, stadiums, arenas, and similar operating venues, as well as other types of sporting activities that include the organisations and promotion of events. The narrow definition expands to include the manufacture of sport-related goods and services. The broad definition incorporates publishing and media broadcasting, transport of athletes, sport tourism, legal, financial, and public services related to sport.

Similarly, sport entrepreneurship covers different subtopics, including economic, cultural, social and institutional (Ratten 2018). In the context of sport, Ratten (2018) defined sport entrepreneurship as creating and implementing innovative practices and instigating change. Furthermore, some authors have discussed sport entrepreneurial activity alongside innovation as the means of value creation and change (Panahi & Yektayar, 2016b). Multiple sources define sport entrepreneurship as any entrepreneurial activity within the sport sector (Ball, 2005; Ratten, 2011) and using entrepreneurial strategies by athletes, teams, leagues, businesses, and organisations (Ratten, 2014).

The literature is somewhat limited regarding sport-specific entrepreneurship, and it is often examined alongside hospitality and tourism. The definition of sport-based

entrepreneurship has been included in various aspects of traditional entrepreneurship over the past decade. In simple terms, Ratten (2011) defined sport entrepreneurship as any entrepreneurial activity in the sport industry, such as sport sector startups, innovative practices, sport technology advancement and athlete entrepreneurship. Entrepreneurship drives economic growth and is crucial to economic, social and political development (Steinbrink et al., 2020). Entrepreneurial activity promotes economic growth through job creation, social progression, institutional change, shifting political views, fostering trade, regional development, technology innovation, and driving competitive advantage. Sport organisations require entrepreneurial competence and dynamic capabilities to adapt to the rapidly changing environment.

1.2. THEORETICAL FRAMEWORK

1.2.1. INSTITUTIONAL ECONOMICS

Studying sport entrepreneurship from an institutional economics theory provides a holistic framework to understand how formal and informal institutions affect entrepreneurial behaviour in the sport industry. Sport entrepreneurship drives innovation and creates social and cultural value, allowing organisations to adapt to economic change to create wealth (Ball, 2005). It is important to understand the way institutions can facilitate and promote entrepreneurial activity in the sport sector.

Institutions play a main role in facilitating entrepreneurship, promoting commercial activity and generating economic growth (North, 1990, 2005). It is important to understand the factors that affect entrepreneurs, sport organisational behaviour (Fahlén & Stenling, 2019; Panahi & Yektayar, 2016), strategic decision-making (Southall et al., 2008), and economic outcomes of sport (Washington & Patterson, 2011). Moreover, it is crucial to study the process of how institutions shape entrepreneurial activity in the sport sector. The focus of this thesis is

on institutional factors, highlighting the importance of institutions shaping the sport landscape and affecting all stakeholders. There are two significant sport literature studies from an institutional theoretical perspective. Washington and Patterson (2011) and Robertson et al. (2021) analysed sport management and entrepreneurship drawing from institutional theory. Institutional theory can be used to understand different aspects of sport management, such as institutional change (Chacar et al., 2018), organisational change (Kikutis, 2000), social entrepreneurship (McSweeney, 2023) and women's sport entrepreneurship (Micelotta et al., 2018), and institutional entrepreneurship (Wright & Zammuto, 2013). Sport operates in a complex institutional environment, where regulatory frameworks are intertwined with sociocultural norms. Robertson et al. (2021) discussed how institutional theory is used in research of the sport management field and help understand how sport organisations adopt practices and procedures in response to external social and institutional pressures.

The complexity lies between various stakeholders such as athletes, fans, sport consumers, amateurs, sport clubs, organisations and firms operating and adhering to regulatory bodies such as the sport governing bodies and federations at national and international levels (Nite et al., 2020). Managing all these stakeholders creates institutional pressure due to different institutional demands, which require managerial best-practice tools and knowledge that research provides for policymakers, managers and entrepreneurs. Entrepreneurship is essential to this complex sport environment, it's importance as entrepreneurs instigate and drive change, which influences the institutions, creating a more beneficial environment for all stakeholders in sport (Svensson et al., 2022). For example, sport is used as a tool in the form of "sport for development and peace" to instigate social change and promote peacebuilding (McSweeney, 2023). Moreover, sport challenges existing norms and creates new institutional frameworks to address social issues. In addition, building a more supportive and beneficial institutional environment, promotes entrepreneurial activity

in sport and creates new opportunities for sport entrepreneurs. Policymakers have the opportunity to combine research and practice to create an advantageous institutional environment. Therefore, investigating which institutional determinates affect sport entrepreneurship is crucial to understanding and shaping the institutional environment in which sport stakeholders operate. Such research provides entrepreneurs with the tools, knowledge, and opportunities to create new business in the sport sector.

Institutional theory allows us to understand how entrepreneurship promotes economic growth. Institutions are defined as rules, regulations, values, customs, norms, and beliefs that govern the behaviour of organisations and individuals within a society or a community (Brousseau & Glachant, 2008). Cultural values have a vast effect on entrepreneurship at economic, corporate, institutional, and social levels and affect entrepreneurial activity (Tracey et al., 2011). Sport is embodied in culture and is part of social identity, and institutional theory investigates sport entrepreneurship incorporating economic rules and social norms. The institutional environment consists of institutional factors that shape businesses, organisations, cultures and societies and their behaviour and outcomes (Swaminathan & Wade, 2016). As such, institutions govern sport, and institutional factors influence the behaviour of sport stakeholders at all levels, including sport governing bodies, sport organisations, clubs, teams and athletes.

From an institutional view (North, 1990, 2005), entrepreneurship occurs via economic and institutional change in conjunction with political and social change. Institutions are fundamental drivers of change at each level, individual, community, and society, shaping the interaction between the economic, political and social spheres (Urbano & Alvarez, 2014). Institutional theory explains the connection between entrepreneurship in sport and how it contributes to economic growth. Institutional economics has been established as the most common theoretical framework for investigating entrepreneurship, and it consists of formal

and informal institutions (Veciana & Urbano, 2008). Informal factors are the culture, social norms, values and beliefs, and formal factors are rules, regulations, laws and procedures (Urbano et al., 2019). For example, institutions in sport are characterised as intangible, such as social capital or cognitive factors like sharing knowledge with the constituents. Institutions play a regulative role and set the rules, laws and policies that monitor and regulate the behaviour of sport organisations. In sport, formal institutions regulate and policy sport, including sport governing bodies such as the Olympic Committees and International Sport Federations. Institutional economics can explain the complexity of the sport environment, which involves sport governing bodies, institutions, organisations, leagues, teams, and individual athletes. Thus, institutional economics can be used to examine sport entrepreneurship, in particular, what are the institutional factors which foster innovation and change within sport organisations, how institutional factors affect social innovation in sport, how sport institutions influence culture, and the impact of institutional economics on professional sport.

Institutional change plays a role in sport entrepreneurship. Change within national sport organisations is linked to human capital and social and institutional rules. Sporting events, seen as historical events, created an opportunity and favourable climate for institutional change. For example, the magnitude of institutional change in the Cricket Cup depended on informal factors such as resources, knowledge, skills and human capital (Wright & Zammuto, 2012). The more resources and skills within the organisation, the more effective implementation of strategy for change. Therefore, sport organisations and clubs with a better financial situation and more resources might better implement entrepreneurial orientation. However, that depends on the sport organisations' ability to seize this opportunity to implement change within their organisations. In the Nordic elite sport system, historical policy changes vary between countries and depend on the structure of the sport system,

agents acting as entrepreneurs, and the strategies attempted to be implemented (Andersen & Ronglan, 2015).

Dimensions such as metacognition, cognition, motivation, and behaviour predict entrepreneurship and organisational structure (Panahi, 2016).

To be able to predict entrepreneurial activity within sport organisations we need to scrutinise multiple factors, such as opportunity perception, opportunity identification, skills and knowledge, intentions, and institutional climate. Examining the differences between informal factors, such as opportunity perception we can see that there is also a cognitive dimension to informal institutional factors. Even if sport organisations implement necessary policy changes, the success of these changes depends on the employees of the sport organisations and their entrepreneurial skills. These are the institutional determinants that foster entrepreneurial activity at the institutional level (Urbano & Alvarez, 2014). These factors can be examined in sport organisations, where procedures, skills, and entrepreneurial knowledge are crucial to the management of sport (Ratten, 2011).

1.2.2. DYNAMIC CAPABILITIES

Institutional dynamics change at each level of sport systems and are heavily influenced by a country's sport organisation structure (Hallmann & Petry, 2013). Combining institutional economics with dynamic capabilities can permit an integrated theoretical framework to conceptualise sport entrepreneurship. Dynamic capabilities are fundamental to successful entrepreneurship, fostering competitive advantage, creating a stable market, identifying new opportunities and expanding processes necessary to adapt to a changing environment (Teece et al., 1997). As such, dynamic capabilities are also important to sport entrepreneurship, allowing sport entrepreneurs and organisations to quickly adapt to the changing market. Strong dynamic capabilities create a competitive advantage and drive innovation and

performance, both athletic and organisational. Through research, sport organisations can learn how to efficiently use resources and develop an entrepreneurial orientation to identify new opportunities, optimise operations, shift strategy, and develop new products and services (Lefebvre et al., 2020). Harris et al. (2021) emphasised the importance of developing and studying dynamic capabilities in sport entrepreneurship. In the example of sport governing bodies, the authors showed how dynamic capabilities can contribute to organisational efficiency and growth by developing new strategies, creative problem-solving, building capabilities and managing resources. Sport organisations that have higher dynamic capabilities are able to adapt quicker and more effectively to sudden market shifts or crises and adjust to regulatory changes, new technology or changing market demands (Hammerschmidt et al., 2021; Ratten et al., 2021). These capabilities allow sport organisations and entrepreneurs to maintain a competitive advantage and sustain growth under difficult economic conditions and a shifting sport landscape. This ability to quickly adapt to changes is essential for entrepreneurs to identify and seize opportunities and create value in the sport industry.

Dynamic capabilities theory is used to study the performance of innovative firms, where it helps firms change effectively and successfully. Dynamic capabilities explain how firms use resources and develop new resources to increase asset value and allow firms to develop a competitive advantage that helps to adjust to changing market conditions in a demanding industry (Arend & Bromiley 2009). Dynamic capabilities theory helps to understand how sport organisations change their resources in response to the changing environment. Ratten (2012) explains how dynamic capabilities foster sport organisations' entrepreneurial capacities and build networks to help them identify new opportunities. The success of adaptation depends on the organisation's acquisition of new assets, transformation of existing assets and asset orchestration (Teece et al. 1997). The expansion and

reorganisation of assets and resources are necessary for sport organisations to grow and adapt. Therefore, dynamic capabilities are a key element of sport entrepreneurship theoretical framework, examining internal processes within sport organisations, that, as a result, drive innovation in the sport industry.

Studying dynamic capabilities in sport is also important for internal organisational processes and resource acquisition and development (Ratten, 2012). Organisational adaptability and performance depend on employee competencies and skills. Organisations can increase their dynamic capabilities through training employees (Arraya & Porfírio, 2017), creating and sharing knowledge (Robertson et al., 2023), coordinating resources and improving organisational processes (Gerke et al., 2022), developing entrepreneurial orientation (Dias et al., 2021) investing in innovation such as research and development (R&D) activities (Barreto, 2010). Employee training is necessary to develop human capital, which is fundamental to dynamic capabilities and resource mobilisation. Human capital comprises skilled and educated employees, which allows organisations to effectively adapt operations and transform strategies for arising opportunities or challenges (Teece et al., 1997). Education is essential to developing human capital and allows employees to acquire knowledge, develop skills and creative thinking, and network (Chatterji & Patro, 2014). As such, employees with higher levels of education possess more knowledge and are better equipped to efficiently utilise dynamic capabilities driving the organisation's competitive advantage.

1.2.3. INNOVATION

The innovation landscape is also shaped by institutions, which require the necessary framework and incentives to thrive. The literature on entrepreneurship, encourages individuals and organisations to engage in innovative activities (Cameron, 1996). The impact of institutions on

innovation can be seen in various ways. Using the example of Tebaldi & Elmslie (2008), investment in research and development can be encouraged by strong institutions. Likewise supportive regulatory frameworks that promote competition and market entry can build an effective environment for innovation, which enables the development of new ideas and technologies. Collaboration and knowledge sharing between stakeholders such as research and development, innovation hubs, and technology transfers accelerate innovation (Ulku, 2004).

Institutions are important in shaping the incentives and opportunities, or creating constraints that influence the innovation process. Cameron (1996) discussed the relationship between innovation and economic growth, showing how innovation, by introducing new products, processes, or technologies, can drive economic development and prosperity. Research and development (R&D) activities and innovation also influence economic growth. Bilbao-Osorio & Rodríguez-Pose (2004) showed it using the example of the European Union. By discussing the structures through which R&D investments can be translated into tangible innovations that drive economic progress and focussing on the EU context, the authors reviewed challenges and opportunities that propel innovation forward. In comparison, Ulku (2004) studied the relationship between R&D, innovation, and economic growth, emphasising the importance of R&D investments on innovation outcomes and their subsequent effects on overall economic growth. For long-term economic development, technological advancements and innovative activities are the main contributors (Rosenberg, 2006). The role of institutions was explored by Tebaldi & Elmslie (2008) with a focus on fostering innovation and driving economic growth. Interrelation can be found between institutional frameworks, innovation policies and economic performance, the authors are looking for the answers to understand how conducive institutional environments can spur innovation-led growth. Shaping a conducive ecosystem for innovation and economic prosperity, institutional quality, governance structures, and regulatory frameworks are all playing an important role. The role of R&D in driving

innovation-led economic growth is unequivocal. However less is known about the connection between fostering innovation and sustained growth in the sport sector. It is important to explore the mechanisms through which innovation acts as a catalyst for sport economic growth. Although there are quite a number of papers about innovation in sport, not many studies focus on the significance of R&D in sport.

Innovation and R&D are significant elements in the industry of sport. Very few researchers besides Ding and Chen (2022) have explored the impact of R&D efforts on the performance of sport firms, most researchers focus on R&D within the context of sport manufacturing companies. Based on those studies, there is a significant relationship between investments in R&D and performance of sport firms, as seen on the example of sport equipment manufacturing firms (Ding & Chen, 2022). Moreover, Yoon (2017) highlights the relevance of investing in R&D in order to drive innovation and enhance competitiveness. Companies have multiple benefits of investing in R&D activities, such as creating cutting-edge products, enhancing manufacturing processes, meeting changing consumer demands, and ultimately leading to improved firm performance. The governance system and financial capabilities of companies were studied by Chen et al., 2019, showing that they are key features influencing R&D intensity in the Chinese sport sector. Financial resources and strong governance practices play a significant role in helping to drive R&D practices, foster innovation, and strengthen the business's competitive position. Additionally, in Chinese sport firms' the development of strategies to drive innovation and investments in R&D assist in achieving sustainable growth and competitive advantage (Chen et al., 2020). The mentioned studies help to demonstrate how important it is to support and create innovation-focused strategies and practices of firms and organisations in the sport sector.

The relationship between innovation and institutions is less studied, however, some studies have shown that innovation as much as institutions can shape sport entrepreneurship

where sport serves as a platform to initiate economic and social change (Svensson, Andersson, Mahoney et al., 2020). As the general entrepreneurship and institutional research field demonstrated that institutions at all levels, including regulatory, normative, and cognitive have the power to shape entrepreneurial activity and encourage or inhibit entrepreneurial activity within the economy (Aparicio et al., 2016; Urbano et al., 2019a).

Institutions underpin social norms and can drive entrepreneurship through norms and behaviours within sport (Ratten 2015). Sport entrepreneurship involves stakeholders engaging in any kind of entrepreneurial activity, from starting new companies to running an already established business. This research contributes to existing sport entrepreneurship literature from an interdisciplinary standpoint using institutional economics and dynamic capabilities to examine entrepreneurship in the sport context.

1.3. PROBLEM STATEMENT

Currently, there is no consensus within the literature on the definition of sport entrepreneurship, the conceptualisation can be challenging. The intersection of sport and entrepreneurship can be examined as a convergence of these two fields. Ratten (2011) attempted to define sport entrepreneurship in simple terms, as any entrepreneurial activity within the sport sector, which includes entrepreneurial activity of sport organisations, formation and startup of new ventures, and athletes' entrepreneurial activities. The goal of entrepreneurial activity is economic growth through the creation, development and growth of new businesses or innovative activities and strategies within established organisations as a response to the changing market and consumer demands (Aparicio et al., 2016). Innovation, risk-taking, and pro-action behaviour are the factors of sport entrepreneurship (Cilleti et a., 2012). The definition of sport entrepreneurship also incorporates social, cultural, economic, and environmental factors (Ratten, 2011, 2012). Furthermore, institutions underpin economic

growth, which is the objective of governments and policymakers, driven by political and social shifts (North, 1990, 2005). Therefore, the definition of sport entrepreneurship encompasses entrepreneurial activity at all levels of the economy: individual, organisational, social and country, with the purpose of creating value through innovation (Hammerschmidt et al., 2021; Ratten, 2011). Sport entrepreneurship seeks to seize opportunities to create change, increase wealth and promote social and cultural values within sport.

Sport entrepreneurship can be examined from various perspectives, including social, psychological, economic, and institutional (Ratten, 2018). Sport entrepreneurship is governed by external (institutional economics) and internal (dynamic capabilities) factors that interact with each other to create a favourable environment for entrepreneurial activity or prevent new venture creation. Sport organisations and athletes possess entrepreneurial competence and dynamic capabilities required to adapt to the rapidly changing environment. Institutional economics allows us to investigate institutions, how they are created and how they regulate and impact organisations. Dynamic capabilities are also crucial to sport organisations, leagues, and clubs, where gaining a competitive advantage can determine the organisation's success and increase its value. Teece et al. (1997) states dynamic capabilities as an organisation's ability to adapt to a rapidly changing environment using internal and external resources. Ratten (2012) lists dynamic capabilities as one of the three fundamental components of sport entrepreneurship, alongside opportunity recognition and entrepreneurial competence. Institutional factors also influence athlete career transition; athletes are entrepreneurs, and they acquire entrepreneurial skills throughout their careers to gain a competitive advantage (Ratten, 2015). Sponsorship and self-branding are the two most lucrative ways for athletes to support themselves (Parris et al., 2014). It is very common amongst athletes to start their own businesses after retiring, or even before ending their athletic careers for seeking and creating opportunities.

The sport industry itself operates in a complex environment. It requires combining institutional frameworks with dynamic capabilities and innovation processes. The literature is limited to investigating each concept individually within the sport entrepreneurship research. The literature gap about applying institutional economics and dynamic capabilities in synergy creates difficulties for better understanding the subject as well. Combining these two theories provides a more holistic approach to studying entrepreneurial activity in sport. Thus, this thesis aims to address this theoretical gap, explore institutional factors alongside dynamic capabilities, and how the two sides influence sport entrepreneurship. Major academics in each field of institutional economics (Urbano et al., 2019) and dynamic capabilities (Teece et al., 1997) have studied each concept individually extensively yet have shown their effects on each other. Mckague (2011) was the first to combine these two theories to explain how organisations use their resources and capabilities to adapt to institutional change. The author emphasised that dynamic capabilities are essential for managing institutional change and underpin entrepreneurial efforts during this process. Both theoretical approaches have their strengths and limitations. However, in an attempt to understand entrepreneurship and organisational behaviour, dynamic capabilities complement an institutional theoretical framework (Gölgeci et al., 2017). In such an arrangement, dynamic capabilities enable challenging and overcoming institutional pressure. In a sport context, Harris et al. (2021) have shown a positive effect of dynamic capabilities on the growth and performance of sport governing bodies. Nonetheless, sport researchers have used institutional theory more often, showcasing the various aspects of institutional theory applied to sport entrepreneurship in the form of institutional change (Andersen & Ronglan, 2015; Borgers et al., 2018; Gilmore & Sillince, 2014), economic change (Poupaux & Andreff, 2007), sport commercialisation (Gammelsaeter, 2011), sport policy (Humphreys et al., 2012), sport for social change (Svensson, 2017), institutional pluralism in sport (Gammelsaeter, 2011; Nite et al., 2020;

Svensson & Seifried, 2017), sport governance (Kikutis, 2000), and sport organisation's behaviour (Fahlén & Stenling, 2019). The one aspect omitted in the sport entrepreneurship literature that uses institutional theory is applying it to study new ventures and startups in sport or sport enterprises and firms. Moreover, the intersection of any combination of dynamic capabilities and institutional economics remains an unexplored area within the sport entrepreneurship literature. Therefore, this thesis aims to bridge the gap between sport enterprises and institutions applying both theories. Due to sport's complex nature, it seems fitting to use a joined theoretical framework to study how dynamic capabilities and institutional factors interact to enable or hinder entrepreneurial activity in the sport sector.

1.4. RESEARCH GAPS

Sport entrepreneurship is most studied from an organisational level. Interdisciplinary research is necessary to fully grasp sport entrepreneurship from various theoretical perspectives, such as economics, political, instructional, social, and cultural perspectives (Urbano, 2019). There is a need for further development of this research field. More research is required to investigate institutional determinants specific to sport organisations (Ratten 2011). There is little research on the institutional determinants of sport entrepreneurship and how dynamic capabilities drive entrepreneurial activity in sport. Further research is needed on how dynamic capabilities foster innovative practices and promote organisational performance, particularly in sport. Ratten and Jones (2020) urge more research investigating how sport are entrepreneurial through multiple unexplored research paths. Washington & Patterson (2011) propose future research focussing on international sport organisations and how institutional theory is applied as a framework to study sport management. More research is required examining start-up and scale-up stages in sport from an entrepreneurial perspective. Research in the sport context of how institutions affect entrepreneurial activity has been scarce,

requiring further investigation of how institutions affect entrepreneurship in the sport industry and what factors affect economic growth among sport entities. There is little research investigating entrepreneurial activity in sport at the national level with considerations for regulatory and cultural differences. Some authors argue the lack of a link between dynamic capabilities and firm performance outcomes (Nguyen & Mort, 2021). The authors found that this change happened without a change in technological resources, suggesting that successful adaptability requires flexibility of resources and opportunity recognition. Often, dynamic capabilities are linked with entrepreneurship, yet there is little research about how dynamic capabilities are developed among new ventures and startups. There is no research on sport startup survival rate and how dynamic capabilities increases the chances of sport firm survival. There is a need to understand the dynamic capabilities within sport organisations and how entrepreneurship can create a competitive advantage. This research proposes to use dynamic capabilities to further examine innovation among sport organisations. What are the dynamic capabilities that affect sport entrepreneurship, and what drives dynamic capabilities among sport organisations. Based on Teece's dynamic capabilities theory (1997), further research should focus on the processes, methods, and decision-making of rules and regulations in the institutions of sport.

Ratten (2011) proposes a research opportunity with a focus on investigating how institutions affect social innovation in sport, particularly how sport organisations unite to create value-added in sport, economically, socially and culturally. As sport is embodied in society and part of the culture, the limited number of studies investigating the influence of cultural values on sport entrepreneurship provides an opportunity to close the research gap. Ratten and Ferreira (2017) suggest that more research on entrepreneurship and innovation in sport policy is needed. The implications of innovative sport policy are economic, cultural, societal, and political. As such, an interdisciplinary approach to sport entrepreneurship

research would foster a greater understanding of entrepreneurial activity and innovation in sport from various economic, political, social, and cultural perspectives. Ratten (2015) proposes the need for future research to study how social and emotional capital can influence entrepreneurial activity in sport.

More research is also required to investigate individual-level entrepreneurship as there is a lack of literature on how different sport stakeholders, such as athletes, coaches, and managers, engage in entrepreneurial activity and how their motives influence their entrepreneurial capacity (Ratten & Jones, 2020). Based on Knights et al. (2015) review of athlete career transition research, it is suggested that there is a demand for research exploring retired athletes and their transition phase, which can be further studied from an entrepreneurship perspective. More research is required to investigate human and social capital and how athletes acquire and use knowledge as business entrepreneurs. A significant literature gap can be found investigating social and emotional capital among athlete entrepreneurs and their abilities in leadership as part of a greater social network (Ratten, 2005). Reviewing athlete career transition research, Knights et al. (2015) suggested further studies from an entrepreneurial perspective, based on the demand for research exploring retired athletes and their transition phase. Furthermore, there is only a limited body of research on the subject of gender differences in sport entrepreneurship and the positive and negative impact of institutions on women's entrepreneurship in sport.

1.5. RESEARCH OBJECTIVES

The main objective of this research is to understand sport-based entrepreneurship using an institutional theory and dynamic capabilities framework. The literature regarding sport-specific entrepreneurship is somewhat limited and often examined alongside hospitality and tourism. The definition of sport-based entrepreneurship has been included in various aspects

of traditional entrepreneurship over the years of research. Sport entrepreneurship has been defined as any entrepreneurial activity, such as startups in the sport sector (Ratten, 2011). This research would expand existing literature on sport entrepreneurship from an interdisciplinary standpoint using institutional economics and a dynamic capabilities theoretical framework. Institutional economics allows us to investigate institutions, how they are created and how they regulate and impact organisations. Dynamic capabilities are also crucial to sport organisations, leagues, and clubs, where gaining a competitive advantage can determine the organisation's success and increase its value. A few studies examine institutional economics, gender roles and their effect on sport entrepreneurship. Combining the dynamic capabilities and institutional perspective to entrepreneurship in sport would provide a deeper understanding of the role of innovation and entrepreneurship in sport starups. Therefore, these are the main objectives of this thesis:

1. To analyse formal and informal institutional factors that determine sport-based entrepreneurship.
2. To examine which dynamic capabilities drive sport entrepreneurship.
3. To determine the role of innovation in sport entrepreneurship.

1.6. METHODOLOGY OVERVIEW

Sport entrepreneurship research uses a variety of methodologies, from qualitative, quantitative and mixed-methods perspectives. In sport entrepreneurship research, qualitative methodology is the most common, using different designs such as case studies (Micelotta et al., 2018; Nite et al., 2019), inductive (Kenny, 2015; Svensson & Seifried, 2017), and deductive (Bjärsholm, 2019; McSweeney, 2023). Relating to quantitative methodology in this field, the most used analysis test is regression (Escamilla-Fajardo et al., 2019; Hayduk & Walker, 2018), ANOVA (Malete et al., 2022; Steinbrink et al., 2020), structural equation

model (Chen & Lin, 2021; Rizvandi & Tojari, 2019), and factor analysis (González-Serrano et al., 2019; Matic et al., 2022). Under regression analysis, most research used various types of regressions, including linear regressions (Ramón Sanabria Navarro et al., 2019), hierarchical linear regression (Crick & Crick, 2021; Escamilla-Fajardo et al., 2020), ordinary least squares (Hayduk & Walker, 2018) and partial least squares (Da Costa et al., 2023; González-Serrano et al., 2018). More complex regression used in the literature included logistic regression (Hayduk, 2021; Kauppinen & Escamilla-Fajardo, 2023), logarithmic regression (Ding & Chen, 2022), multiple regression (Cai & Qiao, 2021; Xue et al., 2023), multivariate regression (Azizi & Mohammadi, 2023), panel negative binomial regression (Radaelli et al., 2018) and dynamic panel estimator (Hayduk & Walker, 2021) and panel regression (Hayduk, 2019). Supported by the institutional economics research, which also uses different types of regressions (Urbano et al., 2019), panel data (Aparicio et al., 2016) and linear regression are the most common (Urbano et al., 2010). For example, Aparicio et al. (2016) used panel data to study the investigate which institutional factors influence entrepreneurial activity and its effect on economic growth.

Research exploring how institutional factors affect entrepreneurial activity often uses multiple databases, such as the Global Entrepreneurship Monitor (GEM), to gather entrepreneurial variables, and the World Bank databases provide institutional and economic variables. For example, Aparicio and colleagues (2016) used GEM for entrepreneurial variables and from the World Bank database, the World Development Indicator (WDI) provided economic variables, and the World Governance Indicator (WGI) the formal and informal factors. The authors used a linear regression model, particularly ordinary least squares and three-stage least squares regressions. Some institutional research also uses panel data to study the differences between countries and time. Econometrics and panel data are

often used to examine the intuitional factors that influence the relationship between entrepreneurship and economic growth (Acs & Audretsch, 2005).

It is less common to use GEM data in sport entrepreneurship. The majority of articles cite GEM as the gold standard indicator of entrepreneurial activity when it comes to contextualise entrepreneurship in sport (Da Costa & Miragaia, 2024). The minority of research studies with a focus on sport entrepreneurship used GEM (Gonzalez-Serrano et al., 2021). Most research uses primary data while studying entrepreneurship in sport, as secondary sport data is highly limited (Escamilla-Fajardo et al., 2020; González-Serrano et al., 2023). Those that use secondary data commonly use sport federations' rankings for a particular sport such as the International Federation of Association Football (FIFA) world ranking (Valenti et al., 2020) or measure the effect of Olympic medals on entrepreneurial activity (Harris et al., 2021; Kauppinen, 2024). Moreover, often sport databases combine data from tourism, fitness and other recreational or entertainment industries, including companies from similar industries. Recreation activities are part of sport and sport policy, which also includes recreation activities in sport policy (Humphreys et al., 2012).

Some sport research used World Bank data to study entrepreneurial activity in sport (Hayduk, 2019). A few research studies have used sport data from the European Commission Eurostat database. Only one article combines the GEM and Eurostat databases investigating entrepreneurship in relation to sport employment (Gonzalez-Serrano et al., 2021). Another article used only Eurostat and only related to sport employment data in the European Union (Sánchez-Oliver et al., 2019). Most sport entrepreneurship studies use Eurostat for the purpose of only reporting sport sector statistics such as sport employment (González-Serrano et al., 2021; Matic et al., 2022) and market share (Bellver et al., 2022). Only a handful of research in this area uses Eurostat as the primary data source for empirical purposes

(González-Serrano et al., 2021). Allal-Chérif et al. (2024) combined multiple databases, such as Eurostat and World Bank data, to study entrepreneurship in eSport.

Incorporating multiple data sources such as GEM, EuroStat, and the World Bank is a common practice in institutional research (Aparicio et al., 2016; Audretsch et al., 2022; Urbano & Alvarez, 2014). However, unifying such sources in sport literature is more usual, with limited research to support such practice. Incorporating GEM data for entrepreneurial activity, the World Bank aims for economic metrics and government indicators, while Eurostat strives for sport data, both providing a holistic research methodology. It contributes to a prosperous cross-validation and improves contextual analysis, enabling to explore the variety of factors interacting with each other and influencing the economic, entrepreneurial, and institutional dimensions in the sport industry.

Therefore, this thesis and each empirical paper combine various data sources to enrich the sample and variety of empirical research, which is currently limited in the literature on sport entrepreneurship. Moreover, as described previously, regression analysis is the standard statistical method in quantitative methodology in institutional and sport research. This thesis is quantitative and combines GEM, Eurostat, and World Bank data, the list of databases and sources is provided in Appendix 1.1. Each empirical paper uses a different type of regression, depending on the data and time series availability, which provides an integrated and multi-layered analysis. The first empirical study (Chapter 3) uses panel data to examine the institutional determinants of sport entrepreneurship. The second empirical paper (Chapter 4) uses panel data with fixed effects to examine the effect of dynamic capabilities and their interaction with institutional factors on sport startup survival. Finally, the third (Chapter 5) uses a hierarchical regression to study how research and development interact with the institutional environment and affect sport enterprises. Table 1.1. provides a summary of the thesis' empirical studies.

1.7. THESIS CONTRIBUTIONS

The aim of this thesis is to identify institutional factors and key dynamic capabilities that affect entrepreneurial activity in sport. Contributing to the limited area of intuitional economics and dynamic capabilities theory in sport entrepreneurship research. Our empirical research carries implications for sport entrepreneurs, policymakers, and academics. This thesis contributes to the literature in this field in a multitude of ways. First, our theoretical contribution shows the combination of two independent theories, providing a new lens through which entrepreneurial activity can be examined in the sport sector. Combining institutional theory and dynamic capabilities provides a comprehensive and complementing theoretical framework. Institutional theory is not often used in sport entrepreneurship research, and when it is, it is mostly within a historical analysis context (Abrutyn, 2018; Andersen & Ronglan, 2015; Nite et al., 2019, 2020). A few have applied institutional theory to study sport organisations (Kikutis, 2000b; P. G. Svensson, 2017). Yet, no research previously has studied institutional factors among sport enterprises and sport startups. Similarly, some have used dynamic capabilities in sport organisations (Arraya & Porfírio, 2017), sport governing bodies (Harris et al., 2021), sport clubs (Gerke et al., 2022), and eSports (Lefebvre et al., 2020). However, none have used dynamic capabilities theory to study sport startups. Here, we provide a novel theoretical approach to studying sport startups from an institutional and dynamic capabilities perspective, combining two overlooked theories in sport literature.

Second, this thesis emphasises the startup in the "entrepreneurship" of sport sector. The majority of literature in this field focusses on the entrepreneurial activity and processes in sport organisations (Escamilla-Fajardo et al., 2020), sport clubs (Hammerschmidt et al., 2021), and sport governing bodies (Harris et al., 2021), with limited research about new ventures, startups or small-medium-enterprises (SMEs) in sport. Factors affecting venture

creation in sport remain unexplored (Ratten, 2020d). Ratten has published several articles, theoretical in nature, urging future research and emphasising the need for more focus on sport startups in this field (Ratten, 2020b, 2020d, 2020c, 2020a). Thus, our second contribution is focussing on sport enterprises and startups, examining the factors that affect their creation, survival, and growth.

Third, since the majority of sport entrepreneurship research is qualitative, we add a quantitative perspective from various secondary data sources. Only one article used GEM data combined with sport data from Eurostat to study factors affecting women's sport employment (Gonzalez-Serrano et al., 2021). As such, the literature in this field is limited in the use of these data sources, in particular the use of GEM, as it is the gold standard of entrepreneurship and institutional economics research (Urbano et al., 2019). Combining these data sources, we deliver an integrated multidimensional analysis of factors influencing sport startups.

Fourth, our findings serve as a guide for entrepreneurs, for both those looking to start a business in the sport sector and those who have already established one. Our results director sport entrepreneurs how to navigate the complex institutional landscape. We demonstrate which institutional factors are key for a successful venture, how to gain a competitive advantage and how to develop dynamic capabilities that are essential to startup survival in sport. Moreover, we show which institutional factors play a role in promoting or hindering entrepreneurial activity in sport, warning sport entrepreneurs of potential pitfalls and opportunities. For example, ensuring that entrepreneurs understand formal regulations and learn how to navigate the legal and regulatory frameworks in sport. Additionally, we encourage entrepreneurs to seek institutional support, often in the form of governmental programs, funding, and partnerships.

Finally, we provide implications for policymakers, emphasising the role institutions play in promoting entrepreneurship in the sport sector, as in any other sector (Urbano et al., 2019). We urge policymakers and government officials to pay attention to the institutional environment, which they often shape with policies and regulatory frameworks, that often affects SMEs and startups more than large and established firms. We encourage bridging the gap between private and public sectors, fostering collaboration and support directed at sport, especially for sport startups. In order for sport entrepreneurs to benefit from institutional support, policymakers and officials must first create programs and devote funding to startups. Policymakers may facilitate and establish collaborative networks benefiting and connecting all stakeholders in the sport industry.

1.8. THESIS STRUCTURE

The thesis is divided into six chapters, including a general introduction and conclusion, alongside three chapters, which are the three empirical papers contributing to the thesis. Each chapter starts with an introduction, followed by the theoretical framework leading to the development of hypotheses. Next, the methodology used in each of the empirical papers is described. Subsequently, the results are presented and discussed. Each empirical chapter concluded with limitations and provided contributions and implications of the research

Chapter One offered a general introduction to the thesis, stating the objectives, identifying the research gap and setting the theoretical framework. Chapter Two provides an in-depth analysis of the current state of the literature relating to sport entrepreneurship research. The review provides a complete bibliometric analysis of the sport entrepreneurship field, with author networks, key publications, and theme analysis. The chapter concluded with a comprehensive taxonomy of sport entrepreneurship research and suggested future research directions. Chapter three delivers the first empirical paper about the institutional determinants

of sport entrepreneurship. Chapter four provides the second empirical paper which investigates human capital, dynamic capabilities, and institutions in sport startups. Chapter five is the third empirical paper that examines the role of innovation and R&D in sport enterprises. The final chapter of the thesis, chapter six, provides general conclusions about institutions and sport entrepreneurship based on the three empirical papers and discusses the contributions and implications of the thesis, concluding with future research directions.

Table 1.1. Summary of Empirical Chapters.

Paper Title	Research Question	Theoretical Framework	Data and Analysis	Main Results	Key References
Chapter 3 (First Empirical Paper)					
Institutional Determinants of Sport Entrepreneurship	To identify institutional factors that affect sport enterprises	Institutional Economics	GEM (Entrepreneurial) WDI (Economic Controls), WGI (Political) Eurostat (Sport) Panel Data	Government Support positively correlates with sport startups Perception of Corruption is negatively correlated with sport startups	Wright & Zammuto, 2013; Fahlén & Stenling, 2019; Maune, 2017)
Chapter 4 (Second Empirical Paper)					
Human Capital, Dynamic Capabilities, and Institutions in Sport Startups	A country-level analysis human capital, perceived capabilities and tax and bureaucracy sport startups survival	Institutional Economics and Dynamic Capabilities	GEM (Entrepreneurial and Formal Institutional Factors), WDI (Economic Controls), Eurostat (Sport) Panel Data	Tertiary education and supportive taxes and low bureaucracy increases to sport startup survival.	Weaven et al., 2021; Harris et al., 2021; Lefebvre et al., 2020
Chapter 5 (Third Empirical Paper)					
The Role Innovation in Sport Enterprises: An Institutional Perspective	A country-level analysis of R&D, government support and entrepreneurial education	Institutional Economics	GEM (Entrepreneurial and Innovation), WGI (Economic Controls), Eurostat (Sport) Panel Data	Country-level R&D and government expenditure positively correlates with number of sport enterprises	Pounder 2019; Ding and Chen 2022; Winand et al., 2016

CHAPTER TWO

COMPLEXITY OF SPORT ENTREPRENEURSHIP RESEARCH:

A LITERATURE TAXONOMY

2.1. INTRODUCTION

Entrepreneurship has received increased interest among researchers over the recent years. All sectors of the economy benefit from entrepreneurial activity, as does the sport industry. sport entrepreneurship is an emerging field under the umbrella of sport management, yet it is overlooked by sport management studies. Sport entrepreneurship can be defined as the intersection of entrepreneurship and sport. Often, entrepreneurship is studied from different perspectives and a multidisciplinary approach, and so is sport entrepreneurship. Despite recent advancements in this field, sport entrepreneurship research does not receive as much attention as other industries and is still a niche field for scholars. Therefore, the purpose of this bibliometric review is to provide an in-depth analysis of the current state of sport entrepreneurship literature, identify research gaps and provide future research avenues.

2.1.1. CURRENT STATE OF SPORT ENTREPRENEURSHIP RESEARCH

2.1.1.1. CONCEPTUALISATION OF SPORT ENTREPRENEURSHIP

There are just a handful of researchers who specialise in sport entrepreneurship, and the most prominent are Ratten, González-Serrano and Svensson. Sport entrepreneurship research ranges from studying the creation of new ventures in the sport sector to developing new products and services for athletes and fans and applying entrepreneurial orientation in sport Organisations and sport management practices (Escamilla-Fajardo et al., 2022; Haski et al., 2024). Sport entrepreneurship still lacks a unified definition of sport entrepreneurship despite many attempts by research throughout the years. The majority of authors in this field define sport entrepreneurship using an aspect of entrepreneurship that applies to their specific topic of interest in the context of sport. Future researchers should incorporate and consider all topics and aspects of sport entrepreneurship to create a holistic and unified definition and attempt to conceptualise sport entrepreneurship further (Hammerschmidt et al., 2023).

Entrepreneurship is defined as the opportunity to create goods and services which can be expanded to the creation of value and wealth, also including risk-taking as an element necessary in the definition of entrepreneurship (Acs & Szerb, 2007; Stam & Nooteboom, 2010). Researchers come across a similar issue when trying to define sport entrepreneurship as sport entrepreneurship is a complex field and defining it may be rather difficult. In simplistic terms, sport entrepreneurship can be defined as any entrepreneurial activity in the sport industry (Ciletti, 2012; Panahi & Yektayar, 2016a; Ratten, 2011). This is often used as a foundation of sport entrepreneurship, where researcher, depending on the subtopic of sport entrepreneurship, build their versions of sport entrepreneurship specifically to match their research interests. For example, Panahi and Yektayar (2016) defined value creation and innovation as aspects of sport entrepreneurship. At the same time, Cilleti (2012) added innovation through risk-taking as the essential factor of sport entrepreneurship.

Altin et al.(2017) define entrepreneurship in the hospitality, leisure and tourism context by examining who is an entrepreneur. An entrepreneur is an individual who seeks and identifies opportunities and takes risks by pursuing these opportunities and creating new products and services (Altin et al., 2017). Ratten (2011) suggests that entrepreneurship is a process of creating, identifying and exploiting new opportunities. A pattern emerges here, where most researchers agree that entrepreneurship is an opportunity recognition, opportunity creation and exploiting new opportunities. Risk-taking is an intrinsic part of the process of pursuing new opportunities. Thus, it has to be included in the definition, which also requires the process of creating and developing new ventures. Innovations also need to be incorporated into the definition of sport entrepreneurship, as innovation is an integral part of sport (Cilleti, 2012). Combining these definitions, sport entrepreneurship could be defined as identifying new opportunities and taking risks to create new ventures and innovation processes in the sport sector.

2.1.1.2. THE COMPLEXITY OF SPORT LANDSCAPE

Sport entrepreneurship is a complex area of research set within various institutional contexts involving a diverse range of stakeholders. It's often studied from a multidisciplinary approach, within intersections of various dimensions, such as social, institutional, economic, technological, athletic, lifestyle and educational perspectives (González-Serrano et al., 2020; Pellegrini et al., 2020). Alongside those dimensions, which interact and complement each other, there are different levels of institutional environment, such as regulatory local, national and international bodies governing the rules of sport. Sport encompasses a diverse range of stakeholders, such as athletes, coaches and support staff, sport teams and clubs, sport Organisations and governing bodies, fans, sport consumers and media, entrepreneurs, sponsors and advertisers, sporting event organizers, grassroots sport participants and youth, social sport advocate and non-profits, and policymakers (González-Serrano et al., 2020; Robertson et al., 2021; Pellegrini et al., 2020; Ratten, 2019). Moreover, there are different levels of sport, either professional or amateur, organized and non-organized, formal or informal, and government-led or non-government-led (Hallmann & Petry, 2013). Professional sport leagues are private businesses and are viewed as entertainment, set up as for-profit businesses. Entrepreneurial activity in a professional sport setting is aimed at identifying and creating new revenue streams and attracting new consumers. Sport Organisations and governing bodies play a role in overseeing and regulating sport and business activity. Sport entities and stakeholders operate within a complex institutional environment, with formal institutions that regulate and provide legislative frameworks, joined with informal institutions, such as cultural and social norms and beliefs. Informal institutions in sport consist of fan culture (Aguiar-Noury & Garcia-del-Barrio, 2019), sporting etiquettes, such as the unwritten rules of sport and sporting courtesy, the role of athletes as role models,

and gender aspects and social inclusivity (Bjärsholm et al., 2018; Cohen & Peachey, 2015; Palmer, 2021).

In addition to institutions, there is the economic dimension of sport, including sponsorship and partnerships, market dynamics, commercialisation, and media (Carlsson & Backman, 2015; Parris et al., 2014; Rahimi et al., 2020). Moreover, at the organizational level, we have varying structures of leagues and competitions for different sport, countries, and continents, such as the American franchise system versus the European-style grassroots sport system, which also varies between countries (Andersen & Ronglan, 2015; Legg & Gough, 2012). The leagues as governing bodies in North America allow less entrepreneurial activity at the club level compared to leagues in Europe. For example, the Premier League in the United Kingdom allows its clubs and encourages entrepreneurship policies, such as internationalization and promotion, compared to the Major League Soccer (MLS) in the United States, which strictly controls the economics of the sport (Mansfield & Killick, 2012). Hallmann & Petry (2013) compared sport structure among different countries around the world, showing differing sport systems, financing, policies and participation among countries. All these varying components form a very complex institutional environment, where each element interacts across different levels of the sport landscape, creating a complex research field that is the sport entrepreneurship body of literature that falls under the broader sport management field.

2.1.2. RESEARCH GAP

Although Ratten (2010; 2011; 2012) has conceptualized sport entrepreneurship, there is much research required to fully understand sport-based entrepreneurship from various perspectives. Sport entrepreneurship is most studied from an organisational level, and interdisciplinary research is necessary to fully grasp sport entrepreneurship from various theoretical

perspectives, such as economics, political, instructional, social, and cultural perspectives (Pellegrini et al., 2020; Ratten, 2011). There is a need for further development of this research field, particularly, Robertson et al. (2021) suggests more research is required to investigate institutional determinants specific to sport organisations. Research on entrepreneurship in sport from an institutional economics perspective is somewhat limited. Despite the growing evidence of the impact of institutions and entrepreneurship activity on modern society, research in the sport context has been scarce. Hence, there are many unexplored research paths for examining entrepreneurship in sport. For example, the impact of sport institutions on entrepreneurship in the sport industry. Another path would be to explore how institutional factors among sport Organisations impact economic growth in the investigation of mega sporting events, such as the Olympic Games. As sport is embodied in society and part of the culture, the lack of studies on the effect of cultural values on sport entrepreneurship provides an opportunity to close the research gap. Therefore, investigating institutional factors among international sport Organisations may contribute to the lack of sport entrepreneurship research field.

Sport startups and new ventures are the most overlooked and understudied topics in the field of sport entrepreneurship research. The current literature is limited to only a few papers examining sport startups. Interestingly, in general, entrepreneurship literature, these topics seem to attract a lot of attention from academics (Fuertes-Callén et al., 2022; Tzabbar & Margolis, 2017). Sport entrepreneurship research seems to miss investigating new ventures in the sport sector. Not only sport startups are an overlooked topic, but also sport SMEs and sport family businesses have been omitted. More research is required to study the effects of institutional factors on sport startups and how favourable policies can promote the creation, growth and survival of sport ventures and SMEs. Additionally, there is little research on the institutional determinants of sport entrepreneurship, especially in sport start-ups and SMEs.

Further investigation of key drivers in practice in a sport context is necessary. There is a need to further research how innovation practices foster entrepreneurship and promote organisational performance, particularly in sport start-ups and SMEs.

There is a research gap in regard to the intersection of innovation entrepreneurship and institutional economics. There is a need to explore and promote entrepreneurship in sport policy, in order to drive change at the institutional, economic and social levels. The literature lacks the exploration of policy in the innovation entrepreneurship context, with a need for studies examining the relationship between legislative and regulative factors and innovation entrepreneurship (Lara-Bocanegra et al., 2021). In particular, what are the institutional determinants of sport entrepreneurship, how institutional factors affect social innovation in sport, how institutional, which institutional factors foster innovation and change within sport Organisations, which institutional factors can influence athlete career transition, and how institutional economics shape the role of women in sport entrepreneurship. Ratten (2015) proposes the need for future research to study how human and social capital can influence entrepreneurial activity in sport and how athletes acquire and use knowledge as business entrepreneurs. Moreover, there is a gap in the literature on social networks and innovation in sport and innovation in sport policy (Ratten, 2015).

In particular, sport Organisations and business differ from regular businesses in their capabilities (Ratten, 2012). In addition to wealth creation, entrepreneurship contributes to social development and creates social and cultural capital through social innovation. Ratten & Jones (2020) also propose there is a need to investigate organizational learning and absorptive capacity, how Organisations acquire knowledge, learn, and create new knowledge, which leads to more creative decision-making, allowing for more innovative strategic planning and thinking in sport Organisations. Finally, the authors advise that more research is required to examine the start-up and scale-up stages in sport from an entrepreneurial perspective. There is little

research investigating entrepreneurial activity at the individual and rational levels. For example, there is a lack of literature on how different sport stakeholders, such as athletes, coaches and managers, engage in entrepreneurial activity and how their motives influence their entrepreneurial capacity (Ratten & Jones, 2020). The lack of evidence whether athletes' entrepreneurial influence institutional change and how that impacts sport institutions and in turn athlete entrepreneurship (Pariss et al., 2014). Athlete career transition is widely studied, particularly from a sport psychological and behavioural perspectives (Wylleman et al., 2004; Baillie & Danish, 1992; Knights et al., 2015). However, there is less research investigating athlete entrepreneurship and institutional influences on athlete as entrepreneurship. More research is also required to investigate individual level entrepreneurship and its differences in individual and team sport.

Due to the increased academic interested in sustainable sport entrepreneurship, there is further research required to fully understand entrepreneurial intentions and factors affecting sustainable sport entrepreneurship. Ratten (2012) discussed how dynamic capabilities are used in sport entrepreneurship, yet dynamic capabilities are rarely researched in the context of sport organisations and sport entrepreneurship. There is more research required on how dynamic capabilities shape sport organisations. Some research focusses on competitive advantage since it is a factor of dynamic capabilities. Hemme et al. (2017) investigated competitive advantage in the fitness industry, whereas, in sport entrepreneurship, Shackelford and Greenwell (2005) suggests a future research study relating to competitive advantage and women's professional sport. There is more research required to fully understand the forces of dynamic capabilities within sport organisations at institutional and organizational levels.

There is a limited literature focussing on gender differences in sport entrepreneurship. Most studies focus solely on women entrepreneurs (Costa & Miragaia, 2022; Micelotta et al., 2018), and some on gender differences among students (Da Costa et al., 2023; Puyana et al.,

2019). Furthermore, there is research gap in the field of women entrepreneurship from the institutional perspective (Giménez & Calabrò, 2018), where this topic is even less researched in sport. Addressing this literature gap would allow to explain what the role of women is in sport entrepreneurship. Integration of multidimensional theoretical frameworks can provide a more holistic model to explain how institutional environment affect women's influence in sport entrepreneurship.

2.1.3. Purpose Of The Literature Review

Although there are a handful of literature reviews already published in sport entrepreneurship, the literature is fragmented between various topics within this field. There is a need to holistically oversee what constitutes sport entrepreneurship research and what kind of topics are investigated and more importantly which topics are not investigated yet. There are only two general bibliometric studies analysing the state of sport entrepreneurship research, both published in 2020 (González-Serrano et al., 2020; Pellegrini et al., 2020). Both of these reviews provide a general overview of the literature, with number of publications, citations and clusters, i.e., with only a brief and general thematic analysis. The other literature reviews cover specific topics within sport entrepreneurship, such as on innovation, social entrepreneurship, public policy (Ratten, 2019), women (Costa & Miragaia, 2022) and sustainability in sport (González-Serrano et al., 2020). Innovation is the most reviewed topic, however, only one bibliometric analysis develops a typology of innovation in sport entrepreneurship (Tjønndal, 2017). Other reviews within innovation in sport topic, investigate various aspects of innovation, such as innovation in sport policy (Pounder, 2019) or innovation specifically in football (Escamilla-Fajardo et al., 2020; Hammerschmidt et al., 2023). Moreover, there is a handful of reviews about the social aspect of sport entrepreneurship (Bjärsholm, 2017; Kamyuka et al., 2023), such as social inclusion and

change (Cardella et al., 2021) or sport for development and peace (Hayduk & Walker, 2018). Currently, there are no reviews of the sport entrepreneurship literature from an institutional perspective, nor review of sport startups and SMEs in sport entrepreneurship research. Moreover, there is no coherent and comprehensive typology and taxonomy developed of sport entrepreneurship.

The current sport entrepreneurship literature is still limited and lacks taxonomy and topic organisation (Pellegrini et al., 2020). Since sport incorporates diverse perspectives from a multitude of stakeholders, governing levels, and agents, extensive research is required to understand its complexity fully. There has been an increase in interest of research in sport entrepreneurship (Escamilla-Fajardo, Núñez-Pomar, Ratten et al., 2020; Ferreira et al., 2020; González-Serrano et al., 2020; Pellegrini et al., 2020). Yet little research has been done to address the wide research gaps in this field. sport entrepreneurship is a relatively new field of research, there are many research opportunities and research gaps for further investigation. Therefore, the goal of this review is to provide a bibliometric analysis of the current state of sport entrepreneurship research. In particular, to provide a categorization of various topics within sport entrepreneurship. Moreover, the aim of this review is to provide a comprehensive analysis of methodologies used in this field, which no literature has previously analysed. Additionally, this review aims to deliver a quantitative analysis of topics and themes under sport entrepreneurship, and develop a comprehensive taxonomy of the literature. Sport entrepreneurship research requires further investigation of institutional factors influencing the entrepreneurial activity in the sport industry. Additionally, provide ideas and potential future research studies in this field and related subtopic of sport entrepreneurship. Following the introduction, a theoretical framework is introduced, subsequently the literature review findings are described, concluding with future research directions.

2.1.4. *CONTRIBUTIONS*

The implications of this research are for sport entrepreneurship researchers and academics, providing a comprehensive review of this field. This literature review provides several contributions to the field of sport entrepreneurship. First, the main contribution of this literature review is to provide a comprehensive taxonomy of sport entrepreneurship literature and show the complexity of this field. A taxonomy offers a structured and hierarchical organization of various topics based on their relationship and similarities. This literature review aims to contribute by creating broad categories of sport entrepreneurship and subcategories with various levels of dimensions. Second, this review provides an in-depth analysis of common methodologies used in this field. The current bibliometric softwares that are often used in literature reviews have a limited scope to analysis literature based on methodologies. Therefore, this literature provides a compressive overview of the most common methodologies in sport entrepreneurship. This is important implication of this review, as it creates a basis for researchers in this field to build upon future researcher methodological frameworks. Analysis of methods currently used in the literature provides opportunities for method innovation and future research using less common methodologies. Finally, the review provides a future research directions and avenues by identifying key underdeveloped or omitted topics within sport entrepreneurship. There are topics that are very popular among the researchers, however, our review encourages research in topics and themes that have been overlooked.

2.2. METHODOLOGY

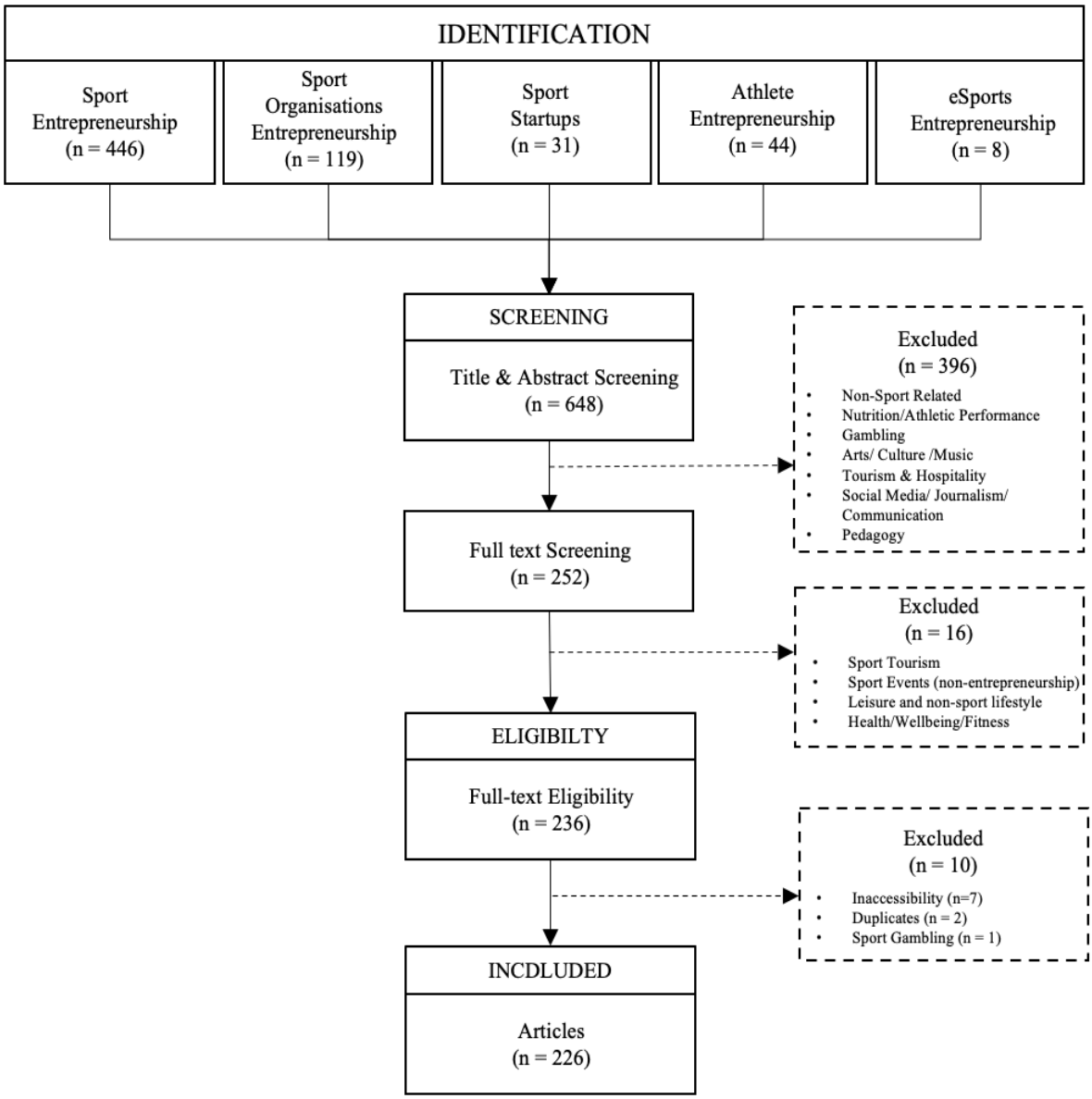
2.2.1. DATA COLLECTION

The present study used the Web of Science Core Collection to analyse the current state of sport entrepreneurship literature. Web of Science is commonly accepted by academic's gold standard peer-reviewed literature database, used in many literature reviews (Escamilla-Fajardo, Núñez-Pomar, Ratten et al., 2020; Ferreira et al., 2020; González-Serrano et al., 2020; Pellegrini et al., 2020). The main key words in the search were sport and entrepreneurship, sport organisation entrepreneurship, athlete entrepreneurship, esports entrepreneurship. All terms were searched with an asterisk to include all variations of the words' endings. The Prisma flow diagram shows the search and selection process in Figure 1.

This search yielded 648 articles which were subsequently screened based on the titles and abstracts. Book review and meeting abstracts, letters, retracted publications, film reviews, and books were excluded. Articles about entrepreneurship not sport related were excluded. Further exclusion included articles related to nutrition and athletic performance, gambling, arts, culture, music, tourism and hospitality, social media, journalism, communication, pedagogy, media and marketing, urban entrepreneurship. Following the initial screening, full text of 252 articles were analysed and further 16 were excluded related to sport tourism, leisure and non-sport lifestyle, health, wellbeing and fitness, sponsorship, sport events (non-entrepreneurship). However, articles relating to the entrepreneurship ecosystem of sport events were included. Articles relating to fitness were excluded on the basis that the fitness industry is a different industry in itself and a separate industry to that of the sport industry. Articles related to pedagogy or teaching were excluded, however, articles examining entrepreneurial intentions of sport science students were included. In the analysis 236 articles were included. After further examining the papers two duplicates were excluded and one

article relating to sport gambling. Due to inaccessibility, seven articles were excluded. In total, 226 articles were included in the bibliometric analysis.

Figure 2.1. PRISMA Flow Diagram showing literature screening procedure.



2.2.2. BIBLIOMETRIC ANALYSIS

Once all the articles were selected, references were extracted from the Web of Science database. Following initial review of all articles, a number of articles, journals, and authors were generated using software in Bibliometrix. Furthermore, after thorough investigation, all

articles were tagged based on the methodology type and technique of investigation used in the papers. The stakeholders and geographic regions of analysis were also tagged. The articles then were analysed based on methodology used, stakeholders investigated and the geographic region of investigation. The geographic region of investigation refers to the country or region where the participants of the studies were investigated. The stakeholders refer to the type of participants included in the studies. Moreover, the theme and topic of analysis of each article was also tagged. The topics tagged were based on Ratten's (2011) categorization of sport entrepreneurship. During articles analysis other themes emerged beyond Ratten's classification. Data visualisation, co-author networks, affiliation collaborations, co-occurrences and keyword analysis were performed using VOSviewer software.

2.3. RESULTS

Total of 226 articles were retrieved on sport entrepreneurship, including sport startups, athlete entrepreneurship and esports entrepreneurship. The most published language is English 96 percent of all articles included accounting for 2017 articles. The second most common language was Spanish with 8 articles. Croatian was the language of only one article, with less than one percent of the total.

Table 2.1. Summary Indicators

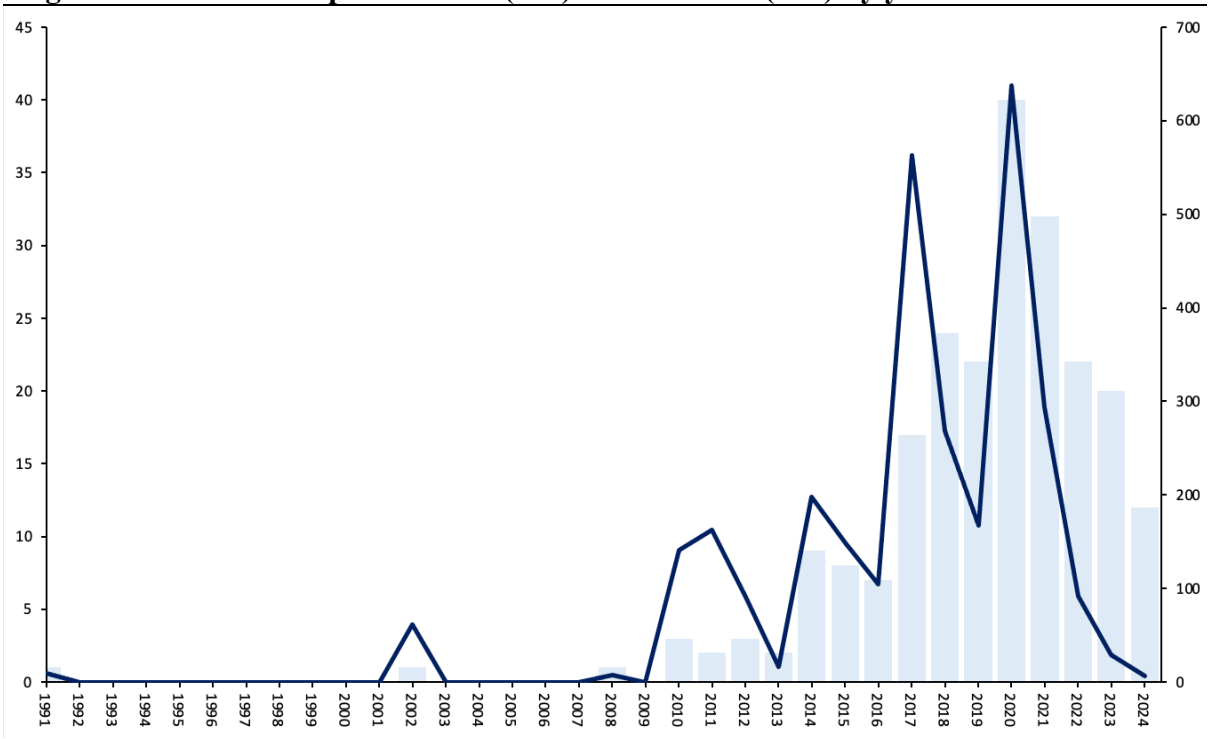
Timespan	1991 - 2024
Articles	226
Average years from publication	4.9
Average citations per documents	12.42
Average citations per year per doc	1.955
Total Number of Citations	2998
Total Number of Countries	33
Total Number of Affiliations	122
Authors	435
Author Appearances	606

Authors of multi-authored documents	398
Single-authored documents	54
Authors per Document	1.92
Co-Authors per Documents	2.68
Collaboration Index	2.31
Keywords Plus	452
Author's Keywords	701
Annual Growth Rate	15.74%

2.3.1. CHRONOLOGICAL EVOLUTION OF THE ARTICLES PUBLISHED

The timespan ranges from 1991 to 2024. For the year 2024 only 12 articles were published, and this review includes articles published till April 2024, at the time of writing. There are some gaps between the years 1991 to 2002 and 2002 to 2008 with zero articles published relating to sport entrepreneurship. Year 2020 had the most citations (638) and number of publications (40). Second year with the most citations was 2017, whereas 2021 was the second year with the most publications. The annual growth rate of newly published articles is 15.74 percent.

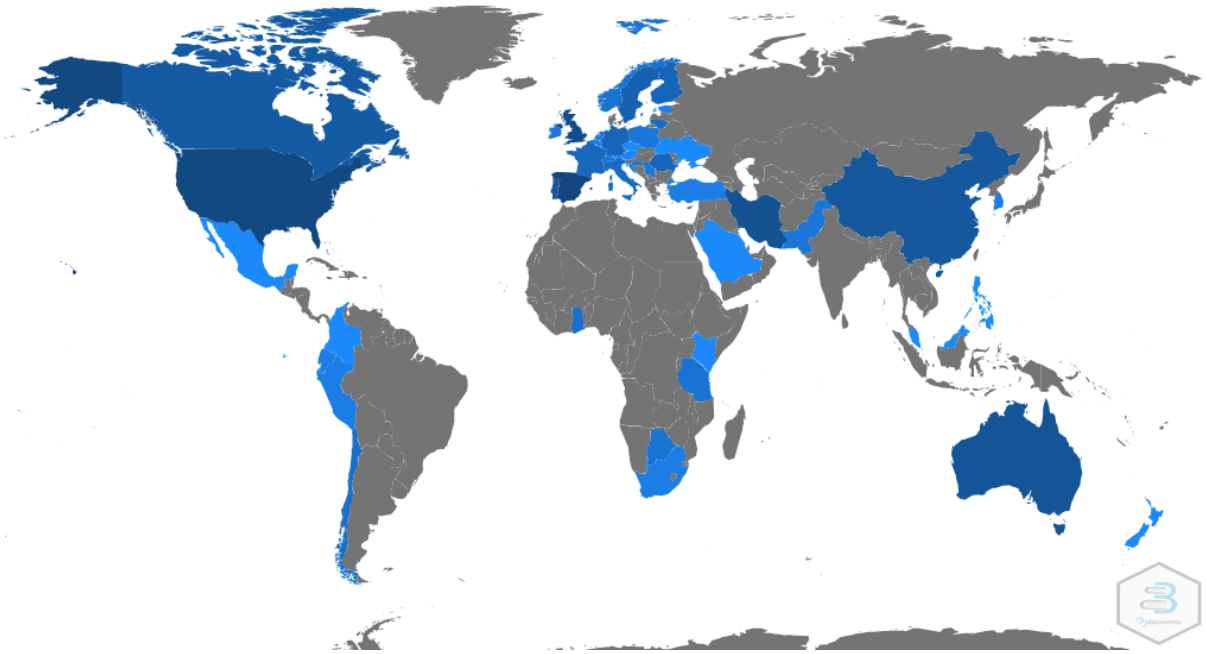
Figure 2.2. Number of publications (bar) and citations (line) by year.



2.3.2. *GEOGRAPHICAL ANALYSIS OF PUBLICATIONS*

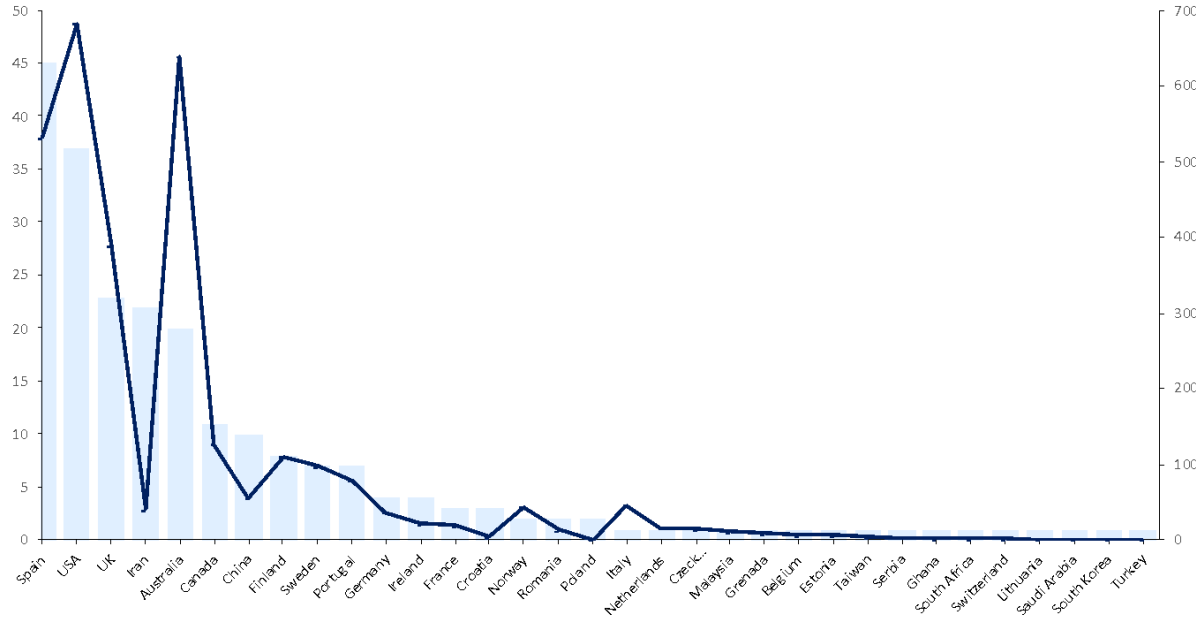
Figure 3 depicts a world map by number of articles published by each country, whereas Figure 4 shows the most cited countries. Spain has published the most articles with 45 in total, and the United States (USA) is the second country with the highest number of publications with 37. In turn, the USA has the most citations with 682, followed by Spain with 532 citations. The third most published region is the United Kingdom (UK) with 23 publications followed by Australia with 20 articles. Australia is the third most cited country with 639 citations, followed by the UK with almost only half, 389 citations. Sixteen countries have only one publication, out of the total 33 countries included.

Figure 2.3. Articles by country.



* Darker countries are with more articles published, lighter with less.
Grey countries are with zero publications

Figure 2.4. Number of publications (bar) and citations (line) by country.



2.3.3. *INSTITUTIONS AND COUNTRIES OF THE AUTHORS*

University of Valencia in Spain has the most publications, 44. Followed by La Trobe University in Australia with 20 publications. University with the third most publications is University Beira Interior in Portugal with 13. Followed by Spain again with 12 publications from University of Seville, shown in Table 3. Figure 5 shows the network between affiliations, as seen on the map. Spanish universities mostly network between each other, with a few connections to La Trobe University in Australia connected through Swansea University in the UK. There is a small cluster around the Baltic sea with a network between LUT university in Finland and Tallinn University in Estonia.

Table 2.3. Number of articles by affiliation.

Country	Affiliations	Articles
Spain	University Of Valencia	44
Australia	La Trobe University	20
Portugal	University Beira Interior	13
Spain	University Seville	12
Iran	Islamic Azad University	10
USA	Duquesne University	5
Sweden	Linnaeus University	5
Lithuania	Lithuanian sport University	5
USA	Louisiana State University	5
Finland	Lut University	5
Sweden	Malmo University	5
USA	Michigan State University	5
UK	Swansea University	5
Spain	University Catolica Santisima Concepcion	5
Ghana	University Ghana	5
USA	University Illinois	5
Spain	University Politecn Valencia	5
USA	American University	4
Spain	Catholic University Valencia San Vicente Martir	4
UK	Coventry University	4
Germany	German Sport University Cologne	4
UK	Leeds Beckett University	4

Figure 2.5. Affiliation Co-Authorship Network Map.

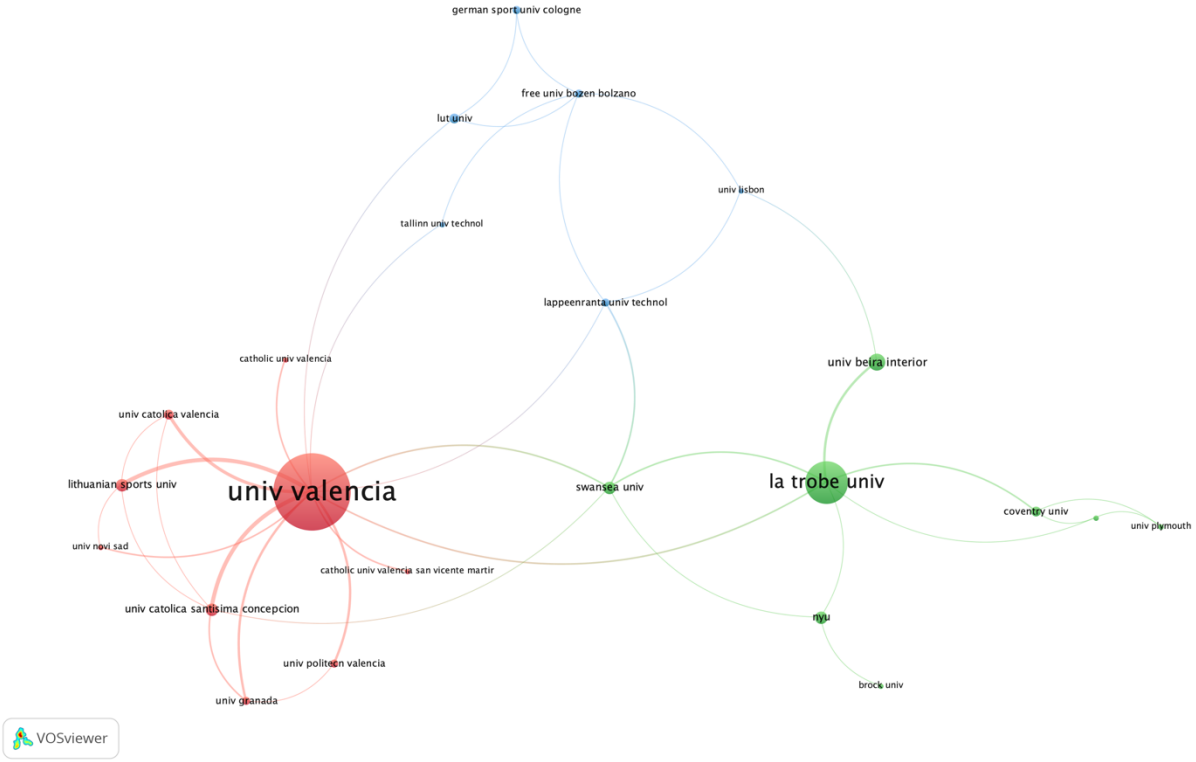
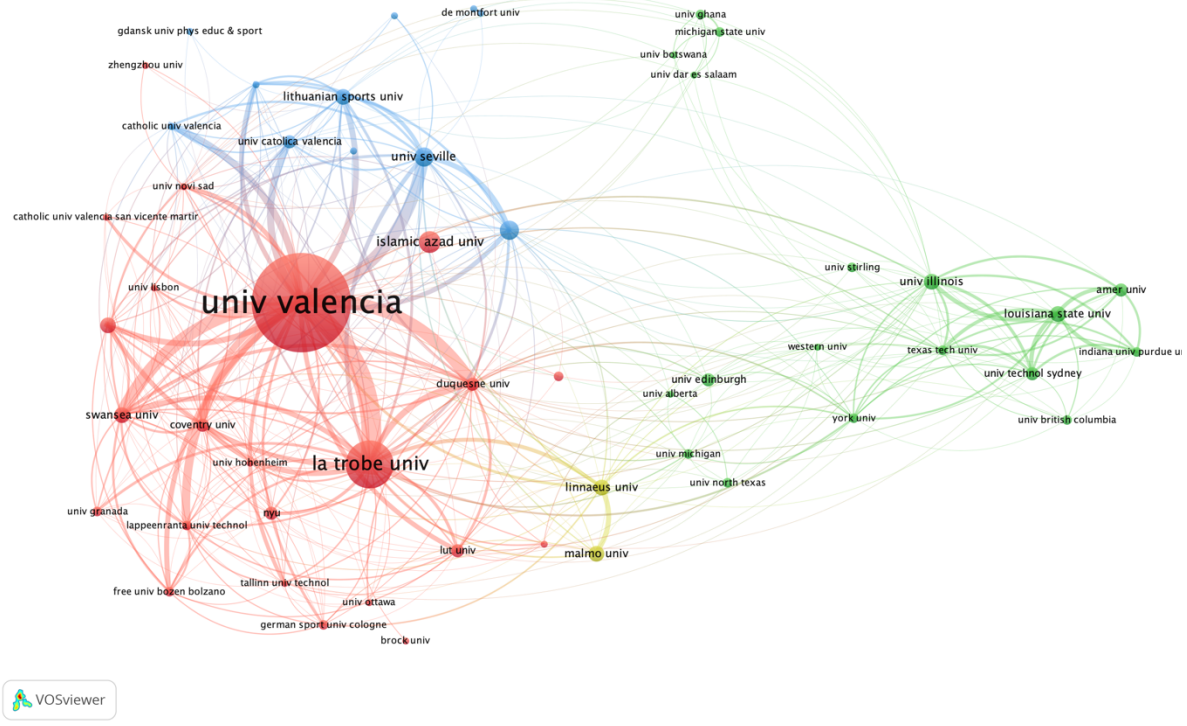


Figure 2.6. Affiliation Co-citation Network.



2.3.4. *PUBLICATION JOURNALS*

International Entrepreneurship And Management Journal published the most articles relating to sport entrepreneurship, with 15 articles, shown in Table 4. Followed by two journals with equally 11 publications, *Journal Of Entrepreneurship And Public Policy* and *Sport In Society,* respectively. *Sustainability* has published 9 articles, with 13.9 citations per publication. Equally, *the International Journal of the History of Sport* and *Sport Management Review* have published 8 articles each, however, *Sport Management Review* has more citations per document with 38.8 compared to *International Journal of the History of Sport* which only has 3.4. Table 5 shows the Journals with the highest number of citations. *International Entrepreneurship And Management Journal* leads in citation with 416 citations. Followed by *Sport Management Review* with 310, and *Journal Of Sport Management* with 170 citations. The highest ranked journal according to the Journal Citation Report 2022 was *Technological*

Forecasting And Social Change with a Journal Impact factor of 12. The second and third highest ranked journals were *Journal Of Business Research* and *Entrepreneurship Theory And Practice* with a Journal Impact factor of 11.3 and 10.5, respectively. The highest ranked sport-related journal was *Sport Management Review* with a score of 4.1 and *Journal of Sport Management* with a score of 3.6.

Table 2.4. Journals with the most published articles.

Journal	Nº Articles	Citations	Citations/ Publication	JCR 2022
International Entrepreneurship And Management Journal	15	416	27.7	5.6
Journal Of Entrepreneurship And Public Policy	11	89	8.1	5.6
Sport In Society	11	145	13.2	1.4
Sustainability	9	125	13.9	3.9
International Journal Of The History Of Sport	8	27	3.4	0.6
Sport Management Review	8	310	38.8	4.1
Annals Of Applied Sport Science	7	14	2.0	0.6
International Journal Of Sport Policy And Politics	7	148	21.1	2.1
Journal Of Sport Management	6	170	28.3	3.6
Frontiers In Psychology	5	15	3.0	3.8
Journal Of Business Research	5	107	21.4	11.3
Journal Of Hospitality Leisure Sport & Tourism Education	5	23	4.6	3.7
International Journal Of Entrepreneurial Venturing	4	92	23.0	1.5
Education And Training	3	109	36.3	3.6
International Journal Of Entrepreneurial Behavior & Research	3	107	35.7	5.5
Journal Of Management & Organization	3	141	47.0	3.3
Managing Sport And Leisure	3	10	3.3	3.6
Cogent Education	2	15	7.5	1.6
Cultura Ciencia Y Deporte	2	13	6.5	0.9
Entrepreneurship Theory And Practice	2	69	34.5	10.5
European Journal For Sport And Society	2	39	19.5	2.4
European Journal Of International Management	2	16	8.0	1.8
European Sport Management Quarterly	2	13	6.5	3.4
Gender In Management	2	11	5.5	3.7
International Journal Of Entrepreneurship And Innovation	2	45	22.5	2.7
International Journal Of Environmental Research And Public Health	2	11	5.5	4.614
International Journal Of sport Marketing & Sponsorship	2	10	5.0	2.2

International Review For The Sociology Of Sport	2	63	31.5	2.3
Knowledge Management Research & Practice	2	45	22.5	3.2
Nonprofit Management & Leadership	2	22	11.0	2.8
Technological Forecasting And Social Change	2	51	25.5	12
Thunderbird International Business Review	2	12	6.0	2.2

Table 2.5. Journals with highest number of citations.

Journal	Citations	Citations/ Publication	JCR 2022
International Entrepreneurship And Management Journal	416	27.7	5.6
Sport Management Review	310	38.8	4.1
Journal Of Sport Management	170	28.3	3.6
International Journal Of Sport Policy And Politics	148	21.1	2.1
Sport In Society	145	13.2	1.4
Journal Of Management & Organization	141	47.0	3.3
Sustainability	125	13.9	3.9
Education And Training	109	36.3	3.6
Journal Of Business Research	107	21.4	11.3
International Journal Of Entrepreneurial Behavior & Research	107	35.7	5.5
International Journal Of Entrepreneurial Venturing	92	23.0	1.5
Journal Of Entrepreneurship And Public Policy	89	8.1	5.6
Entrepreneurship Theory And Practice	69	34.5	10.5
International Review For The Sociology Of Sport	63	31.5	2.3
Technological Forecasting And Social Change	51	25.5	12
International Journal Of Entrepreneurship And Innovation	45	22.5	2.7
Knowledge Management Research & Practice	45	22.5	3.2
European Journal For Sport And Society	39	19.5	2.4

Table 6 shows Journals with the most common methodology used in the articles published by each journal. For example, most published journal *International Entrepreneurship And Management Journal* published the most articles with quantitative methodology. Whereas *Sport In Society* prefers to publish articles with qualitative methodology. In turn, *Journal Of Entrepreneurship And Public Policy* and *Sustainability* both published all types of methodologies, equally quantitative and qualitative articles. Most Journals publish articles with qualitative methodology, followed by quantitative. Least publish mixed methods or

theoretical papers. For example, *International Journal Of The History Of Sport* mostly publishes theoretical papers.

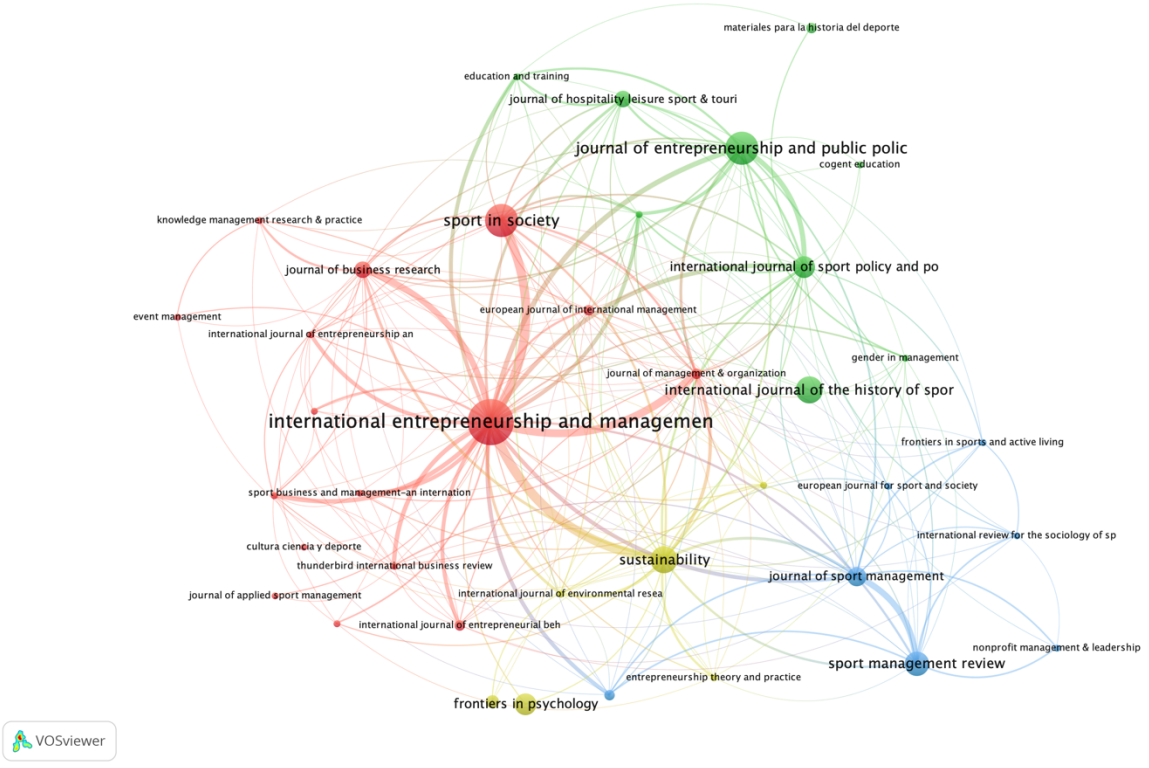
Table 2.6. Most common methodology type by journal.

Journal	Method	Nº
International Entrepreneurship And Management Journal	Quantitative	15
Sport In Society	Qualitative	11
Journal Of Entrepreneurship And Public Policy	All Types	11
Sustainability	All Types	9
International Journal Of The History Of Sport	Theoretical	8
Sport Management Review	Qualitative	8
Annals Of Applied Sport Science	Quantitative	7
International Journal Of Sport Policy And Politics	Qualitative	7
Journal Of Sport Management	Qualitative	6
Frontiers In Psychology	Quantitative	5
Journal Of Hospitality Leisure Sport & Tourism Education	Quantitative	5
Journal Of Business Research	Qualitative	5
International Journal Of Entrepreneurial Venturing	Qualitative	4
Sport Entrepreneurship And Public Policy: Building A New Approach To Policy-Making For Sport	Qualitative	4
Education And Training	Qualitative	3
Journal Of Management & Organization	Qualitative	3
International Journal Of Entrepreneurial Behavior & Research	All Types	3
Managing Sport And Leisure	All Types	3
Gender In Management	Quantitative	2
International Journal Of sport Marketing & Sponsorship	Quantitative	2
Thunderbird International Business Review	Qualitative	2
Cogent Education	Qualitative	2
International Journal Of Entrepreneurship And Innovation	Qualitative	2
International Journal Of Environmental Research And Public Health	Qualitative	2
International Review For The Sociology Of Sport	Qualitative	2
Knowledge Management Research & Practice	Qualitative	2
Technological Forecasting And Social Change	Qualitative	2
European Journal Of International Management	Mixed-Method	2
Cultura Ciencia Y Deporte	All Types	2
Entrepreneurship Theory And Practice	All Types	2
European Journal For Sport And Society	All Types	2
European Sport Management Quarterly	All Types	2
Nonprofit Management & Leadership	All Types	2

Figure 6 shows how journals are connected. *International Entrepreneurship and Management Journal* is in the centre of the sport entrepreneurship research network,

connected with *Sport in Society* journal and *Sustainability*. *Journal Of Entrepreneurship And Public Policy* and Sport Management Review are the leaders of the other main clusters of networks.

Figure 2.7. Journal Network Map.



2.3.5. SPORT ENTREPRENEURSHIP COMMON METHODOLOGIES

The most common methodology used to investigate sport entrepreneurship is qualitative with 79 articles, representing 35 percent of all articles (Figure 7). Quantitative methodology is the second most common with 75 articles, 33 percent. Thirteen percent with 30 articles are theoretical articles, which do not use a particular methodology but rather discuss or reflect on the topic of sport entrepreneurship. The least used methodology is mixed methods accounting

only for 11 percent of all articles. It is important to note that there are currently 18 literature reviews published, accounting for 8 percent of all articles.

Figure 2.8. Methodology Types by number of articles.

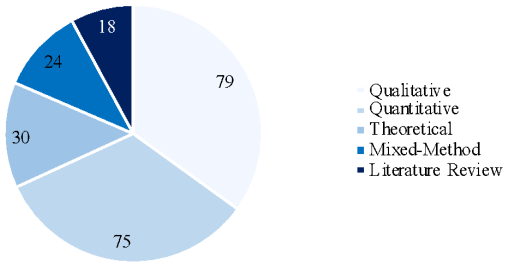
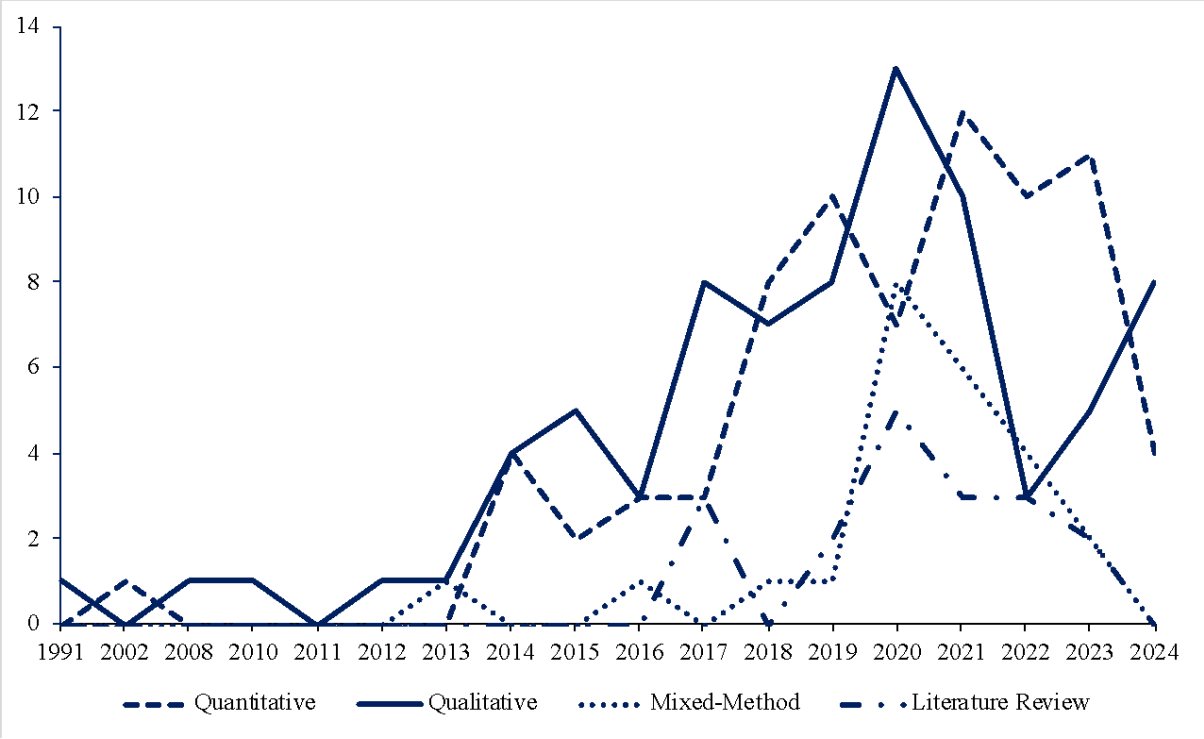


Figure 8 shows the evolution of preferred methodology investigating sport entrepreneurship. In the early years qualitative methodology dominated the literature and it has been the most common throughout the years, peaking in 2020 with 13 articles. However, since 2021 quantitative methodology became more popular overtaking the dominance of qualitative methodology in the research field. The most articles used quantitative methodology in 2021, 2022 and 2023. As of April 2024, qualitative methodology overtook once again for the year 2024 thus far. Until 2019 sport entrepreneurship research did not use much mixed methods. Mixed methods peaked in 2020 and had been declining since. As of April 2024, there were no articles published using mixed methods in 2024 so far. Similarly, in 2024 no literature reviews were yet published. Literature reviews were popular during between 2017 to 2022. In 2020, there were 5 literature review published on the topic of sport entrepreneurship. Later in 2021 and 2022 3 literature reviews were published in each year, respectively.

Figure 2.9. Methodology Evolution through years.



The most common qualitative methodology analysis is case-study discussion with 39 articles, accounting for almost 50 percent of all qualitative articles published (Table 7). Second most common is the inductive method with 29 articles, almost 40 percent. Deductive approach was only used in 3 articles. Content analysis was used in 2 articles. Abductive and Interpretive approach, Metrix/Thematic Analysis, Narrative Inquiry, Participatory observation and Post-qualitative inquiry all account for 1 percent with 1 article each.

Table 2.7. Qualitative Methodology Analysis Techniques.

Analysis Technique	Nº	Percentage	Literature Example
Case-Study Discussion	39	49%	(Hayhurst, 2014; Micelotta et al., 2018; Nite et al., 2019)
Inductive	29	37%	(Kenny, 2015; Svensson & Seifried, 2017; Winand & Anagnostopoulos, 2017)
Deductive	3	4%	(Bjärsholm, 2019; McSweeney, 2023; Mori et al., 2023)
Content Analysis	2	3%	(Mondalizadeh, 2024)
Abductive approach	1	1%	(Lu & Heinze, 2021)
Interpretive	1	1%	(Nite et al., 2020)
Metrix/Thematic Analysis	1	1%	(Yélamos et al., 2019)
Narrative Inquiry	1	1%	(Cohen & Peachey, 2015)
Participatory observation	1	1%	(Dobson & McLuskie, 2020)
Post-qualitative inquiry - Deleuzioguttarian approach	1	1%	(Karlsson et al., 2022)
Total	79	100%	

The most common quantitative analysis methods were different types of regressions. In total 30 articles used some type of a regressions, accounting for 40% of the total. The most common regression type was partial least squares, which 6 articles used (8%). Then four articles each (5.3%) have used a hierarchical linear regression, logistic regression, multiple regression, and ordinary least squares. Three articles used a linear regression (4%). More complex types of regressions, such as the dynamic panel regression, logarithmic and multivariate, negative binomial and panel regressions were used only by one article each (1%).

The second most used analysis technique was ANOVA, which was used by 16 articles, accounting for almost 22 percent (table 8). Structural equation modelling was used by 9 articles which was 12 percent of all articles. Descriptive statistics were used by 6 papers accounting for 8 percent. Only two articles each have used confirmatory factor analysis factorial analysis and exploratory factor analysis (2.7%). Other types of quantitative methods were used only by one article each as shown in the table 2.8.

Table 2.8. Quantitative Methodology Analysis.

Analysis Technique	Nº	Percentage	Literature Example
Regressions	30	40%	
Partial Least Squares	*6*	*8.0%*	(Da Costa et al., 2023; González-Serrano, Valantine et al., 2018; Han & Niu, 2022)
Hierarchical linear regression	*4*	*5.3%*	(Crick & Crick, 2021; Escamilla-Fajardo et al., 2019; Escamilla-Fajardo, Núñez-Pomar et al., 2020)
Logistic Regression	*4*	*5.3%*	(Hayduk, 2021; Kauppinen & Escamilla-Fajardo, 2023)
Multiple Regression	*4*	*5.3%*	(Cai & Qiao, 2021; Xue et al., 2023)
Ordinary Least Squares	*4*	*5.3%*	(Hayduk & Walker, 2018; Niculaescu et al., 2023)
Linear Regression	*3*	*4.0%*	(Escamilla-Fajardo et al., 2019; Navarro et al., 2019)
Dynamic Panel Regression	*1*	*1.3%*	(Hayduk & Walker, 2021)
Logarithmic Regression	*1*	*1.3%*	(Ding & Chen, 2022)
Multivariate Regression	*1*	*1.3%*	(Azizi & Mohammadi, 2023.)
Negative Binomial Regression	*1*	*1.3%*	(Radaelli et al., 2018)
Panel Regression	*1*	*1.3%*	(Hayduk, 2019)
ANOVA	16	21.3%	(Haski et al., 2024; Malete et al., 2022; Steinbrink et al., 2020)
SEM	9	12.0%	(Chen & Lin, 2021; Rizvandi & Tojari, 2019)
Descriptive Statistics	6	8.0%	(Liu et al., 2021; Tsai et al., 2016)
Confirmatory Factor Analysis	2	2.7%	(González-Serrano et al., 2023; Keshtidar et al., 2018)
Factorial Analysis	2	2.7%	(González-Serrano et al., 2019; Matic et al., 2022)
Exploratory Factor Analysis	2	2.7%	(Mohammadi & Azizi, 2019)
Data Envelopment Analysis (DEA)	1	1.3%	(Miragaia et al., 2019)
Fuzzy hierarchical analysis	1	1.3%	(Arefi et al., 2023)
Multilevel-Analysis	1	1.3%	(Svensson et al., 2018)
Nonparametric Comparison Tests	1	1.3%	(Lara-Bocanegra, García-Fernández et al., 2022)
Pairwise Comparison	1	1.3%	(Andersen & Ronglan, 2015)
Performance Simulation Model	1	1.3%	(Ma et al., 2021)
Pre-Post Test	1	1.3%	(Ocansey et al., 2023)
T-Test	1	1.3%	(Gonzalez-Serrano et al., 2019)
Total	75	100.0%	

In regard to mixed-methodology, the most common was fuzzy-set Qualitative Comparative Analysis (Fuzzy-QCA) with 9 articles, almost 40 percent of all mixed-method articles.

Second most common was a mix between Qualitative Comparative Analysis (QCA) and

Hierarchical Linear Regression with 5 articles, 21 percent. The rest of various methods were used by one article each and are shown in Table 9.

Table 2.9. Mixed-Methodology Analysis Techniques.

Analysis Technique	Nº	Percentage	Literature Example
Fuzzy-QCA	9	38%	(Escamilla-Fajardo et al., 2022; Gonzalez-Serrano et al., 2021)
QCA/Hierarchical Linear Regression	5	21%	(Escamilla-Fajardo et al., 2021; González-Serrano, Prado-Gascó et al., 2019)
Data Triangulation Technique	1	4%	(Guaitaet al., 2022)
Latent Dirichlet Allocation/Explanatory Sequential Approach	1	4%	(Hayduk & Newland, 2020)
Quasi-Experimental Pre-Post-Test/SEM	1	4%	(Lara-Bocanegra, Bohórquez et al., 2022)
Descriptive/Content Analysis	1	4%	(Izadfar et al., 2020)
Descriptive Statistics/Deductive	1	4%	(Benar et al., 2013)
Descriptive/Focus Group	1	4%	(Moustakas & Kalina, 2021)
Fuzzy-QCA/Linear Regression	1	4%	(González-Serrano et al.,2018)
Inductive/Correlation Analysis	1	4%	(Hammerschmidt et al., 2020)
Non-Parametric Tests/Inductive	1	4%	(Crespo et al., 2023)
Sequential Explanatory	1	4%	(Wallis et al., 2020)
Total	24	100%	

Theoretical articles did not use a particular type of methodology, rather just discuss the state of a topic (16 articles), provide historical reflections (8 articles). Six articles, almost 20 percent of all theoretical articles and 3 percent of all articles try to conceptualise a concept relating to sport entrepreneurship (Table 10).

Table 2.10. Theoretical Articles.

Analysis Technique	Nº	Percentage	Literature Example
Discussion	16	53%	(McSweeney, 2020; Ratten, 2011; Ratten & Jones, 2018)
Historical Reflections	8	27%	(Cronin, 2018; Munkwitz, 2018; Wong, 2018)
Conceptualisation	6	20%	(Hayduk, 2020; Ratten, 2010; Svensson, 2017)
Total	30	100%	

It is important to note that there were 18 literature reviews relating to sport entrepreneurship. Almost 50 percent were bibliometric analysis, and 30 percent were discussions of the current state of the literature. Only 2 articles used a meta-analysis and also 2 used systematic review. One article used a Systematic narrative review (Table 11).

Table 2.11. Literature Review Types.

Analysis Technique	No	Percentage	Literature Example
Bibliometric Analysis	8	44%	(González-Serrano et al., 2020; (Pellegrini et al., 2020)
Discussion	5	28%	(Bjärsholm, 2017; Schulenkorf, 2017)
Meta-Analysis	2	11%	(Costa & Miragaia, 2022; Lara-Bocanegra et al., 2021)
Systematic Review	2	11%	(Tjønndal, 2017)
Systematic narrative review	1	6%	(Richmond et al., 2022)
Total	18	100%	

2.3.6. AUTHORS IN SPORT ENTREPRENEURSHIP

Ratten is the first author in 20 publications, out of which 14 are as a sole author, making Ratten the most published author in the field of sport entrepreneurship. Second most published author is González-Serrano, being the first author in 16 publications (Table 12). The third most published author is Escamilla-Fajardo who has 9 articles as the first author. Hayduk has seven published articles. Four Authors have 4 publications each, Bjärsholm, Hammerschmidt, McSweeney and Svensson. Ahonen, Jones and Lara-Bocanegra are the first authors with 3 publications each. Ten authors have 2 published articles each. One hundred and twenty-seven authors are first authors with 1 publication each.

Similarly, Ratten is the most cited author with 578 citations, followed by González-Serrano with 254 citations. Third most cited author is Svensson with 181 citations, followed by Escamilla-Fajardo with 110 citations.

Table 2.12. Most published authors with at least 2 publications.

First Author	Nº Articles	Citations	Affiliation	Country
Ratten	20	578	La Trobe University	Australia
González-Serrano	16	254	University of Valencia	Spain
Escamilla-Fajardo	9	110	University of Valencia	Spain
Hayduk	7	44	New York University	USA
Svensson	4	181	Louisiana State University System	USA
Hammerschmidt	4	93	Lappeenranta-Lahti University of Technology LUT	Finland
Bjärsholm	4	66	Linnaeus University	Sweden
McSweeney	4	52	University of Minnesota	USA
Jones	3	109	Swansea University	UK
Lara-Bocanegra	3	20	University of Sevilla	Spain
Ahonen	3	8	Lappeenranta-Lahti University of Technology LUT	Finland
Núñez-Pomar	2	82	University of Valencia	Spain
Nite	2	50	University of North Texas System	USA
Winand	2	45	University of Stirling	UK
Crick	2	39	Loughborough University	UK
Steinbrink	2	32	University Hohenheim	Germany
Dinning	2	28	Liverpool John Moores University	UK
Wang	2	10	University Malaya	Malaysia
Porter	2	6	De Montfort University	UK
Kauppinen	2	5	Tallinn University of Technology;	Estonia
Chen	2	3	National Taiwan University	Taiwan

2.3.6.1. AUTHORS AND METHODOLOGIES

Sixteen authors have published a literature review on various topics relating to sport entrepreneurship (Table 13). Only Gonzalez-Serrano has written 2 literature reviews, one was bibliometric analysis of sport entrepreneurship research (González-Serrano et al., 2020), and one about sustainable sport entrepreneurship (González-Serrano et al., 2020).

Table 2.13. List of all literature review articles in sport entrepreneurship.

First Author	Nº Articles	Example	Topic
González-Serrano	2	(González-Serrano et al., 2020; González-Serrano et al., 2020)	Sustainable Sport Entrepreneurship; Sport entrepreneurship
Bjärsholm	1	(Bjärsholm, 2017)	Sport Social Entrepreneurship
Calabuig-Moreno	1	(Calabuig-Moreno et al., 2021)	Sport Entrepreneurial ecosystems
Cardella	1	(Cardella et al., 2021)	Social Inclusion and Change
Costa	1	(Costa & Miragaia, 2022)	Women's Sport Entrepreneurship

Escamilla-Fajardo	1	(Escamilla-Fajardo, Núñez-Pomar, Ratten et al., 2020)	Entrepreneurship and Innovation in Soccer
Ferreira	1	(Ferreira et al., 2020)	Sport Innovation
Hammerschmidt	1	(Hammerschmidt et al., 2023)	Innovation and creativity in sport management
Hindle	1	(Hindle et al., 2021)	Sport entrepreneurial capacity
Kamyuka	1	(Kamyuka et al., 2023)	Sport Social entrepreneurship
Lara-Bocanegra	1	(Lara-Bocanegra et al., 2021)	Sport Intrapreneurship
Pellegrini	1	(Pellegrini et al., 2020)	Sport entrepreneurship
Pounder	1	(Pounder, 2019)	Sport policy in Sport entrepreneurship
Ratten	1	(Ratten, 2019)	Sport entrepreneurship and public policy
Richmond	1	(Richmond et al., 2022)	Sport for Social Change (S4SC)
Schulenkorf	1	(Schulenkorf, 2017)	Sport for Development and Peace (SDP)
Tjonndal	1	(Tjønndal, 2017)	Sport Innovation

Ratten's has produced the most theoretical papers in nature with 12 articles (Table 14). Porter has written 2 theoretical papers about sport entrepreneurship from a historical perspective (Porter, 2018; Porter & Vamplew, 2018). Sixteen other authors produced one theoretical article.

Table 2.14. Authors with more than two theoretical articles.

Author	Nº Articles	Example
Ratten	12	(Ratten, 2011, 2020a; Ratten & Babiak, 2010; Ratten & Jones, 2020)
Porter	2	(Porter, 2018; Porter & Vamplew, 2018)

Table 15 shows example articles by each author using qualitative methodology. Ratten has the most qualitative articles, 7 in total. Followed by Ahonen and McSweeney, 3 each. Six authors had 2 qualitative articles each. Fifty-four authors had one article using qualitative methodology.

Table 2.15. Authors with more than two qualitative articles.

Author	Nº Articles	Example
Ratten	7	(Ratten, 2020b, 2021, 2022)
Ahonen	3	(Ahonen, 2019, 2020)
McSweeney	3	(McSweeney, 2023; McSweeney et al., 2021; McSweeney & Safai, 2020)
Bjärsholm	2	(Bjärsholm, 2019; Bjärsholm et al., 2018)
Dinning	2	(Dinning, 2017a, 2017b)
Hammerschmidt	2	(Hammerschmidt et al., 2021, 2024)
Jones	2	(Jones et al., 2017; Jones & Jones, 2014)
Nite	2	(Nite et al., 2019, 2020)
Winand	2	(Winand et al., 2022; Winand & Anagnostopoulos, 2017)

Gonzalez-Serrano has published papers equally the same amount using quantitative and mixed-methods methodology, with 7 articles each methodology type. Second most published author with quantitative methodology in sport entrepreneurship is Hayduk with 5 articles (Table 16). Followed by Eascamilla-Fajardo with a total of 3 articles using a quantitative methodology.

Table 2.16. Authors with more than two quantitative articles.

First Author	Nº Articles	Example
González-Serrano	7	(González-Serrano et al., 2017; González-Serrano, Valantine et al., 2018; Gonzalez-Serrano et al., 2019)
Hayduk	5	(Hayduk, 2019; Hayduk, 2021; Hayduk, 2022)
Escamilla-Fajardo	3	(Escamilla-Fajardo et al., 2019; Escamilla-Fajardo et al., 2020; Escamilla-Fajardo et al., 2021)
Kauppinen	2	(Kauppinen, 2024; Kauppinen & Escamilla-Fajardo, 2023)
Steinbrink	2	(Steinbrink et al., 2020; Steinbrink & Ströhle, 2023)
Svensson	2	(Svensson, Andersson, & Faulk, 2020; Svensson et al., 2018)

Again, Gonzalez-Serrano has the greatest number of articles using mixed-methods with 7 (Table 17). Followed by Eascamilla-Fajardo with 3 articles using a mixed-methods and

Nunez-Pomar has only 2. Ten other authors had one article each with a mixed-methods approach.

Table 2.17. Authors with more than two mixed-method articles.

First Author	Nº Articles	Example
González-Serrano	7	(González-Serrano et al., 2023; Gonzalez-Serrano et al., 2021; González-Serrano, Prado-Gascó et al., 2019)
Escamilla-Fajardo	5	(Escamilla-Fajardo et al., 2021; Escamilla-Fajardo et al., 2022; Escamilla-Fajardo et al., 2020)
Núñez-Pomar	2	(Núñez-Pomar et al., 2016; Núñez-Pomar et al., 2020)

2.3.6.2. CO-AUTHORSHIP NETWORKS

There are several co-authorship clusters shown in Figure 9. The most established and core cluster includes Ratten and the Spanish authors, with a recent addition since 2022 Hammerschmidt and Haski cluster. Figure 10 depicts the core sport entrepreneurship co-Authorship cluster.

Figure 2.10. Co-Authorship Clusters by year.

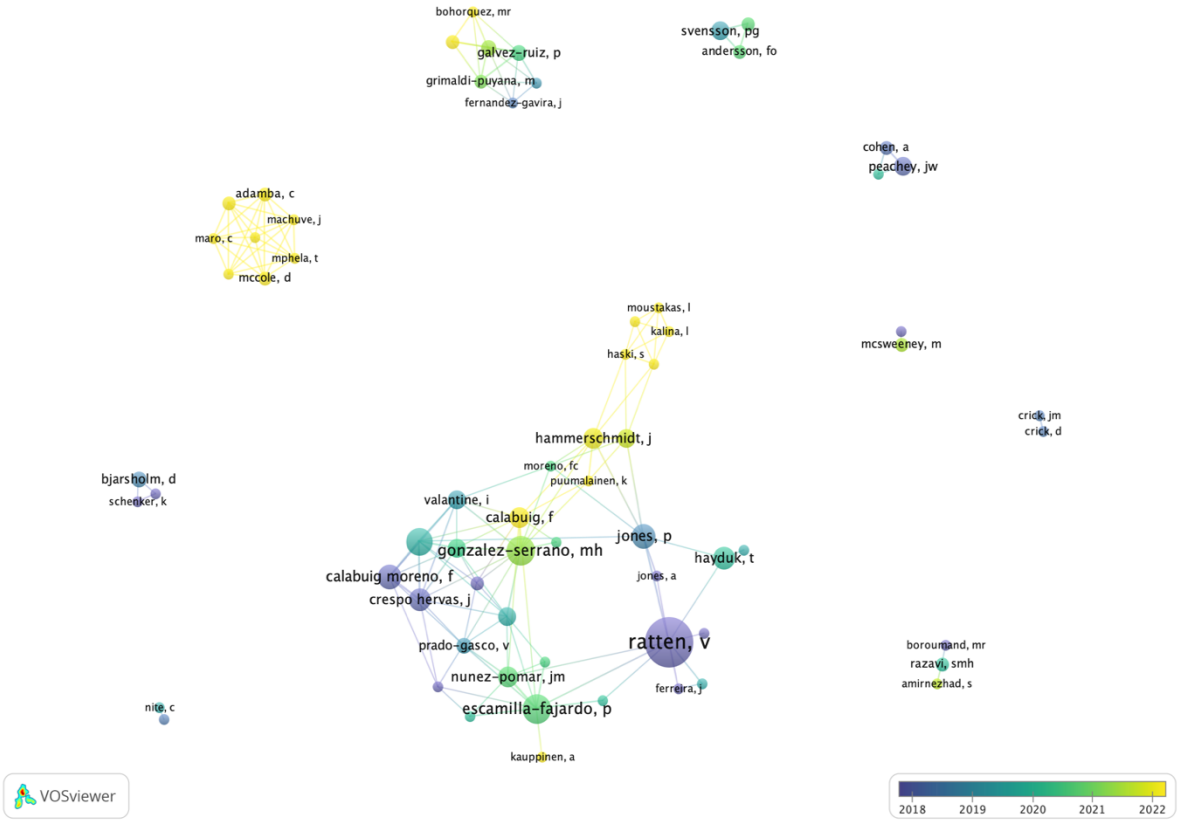
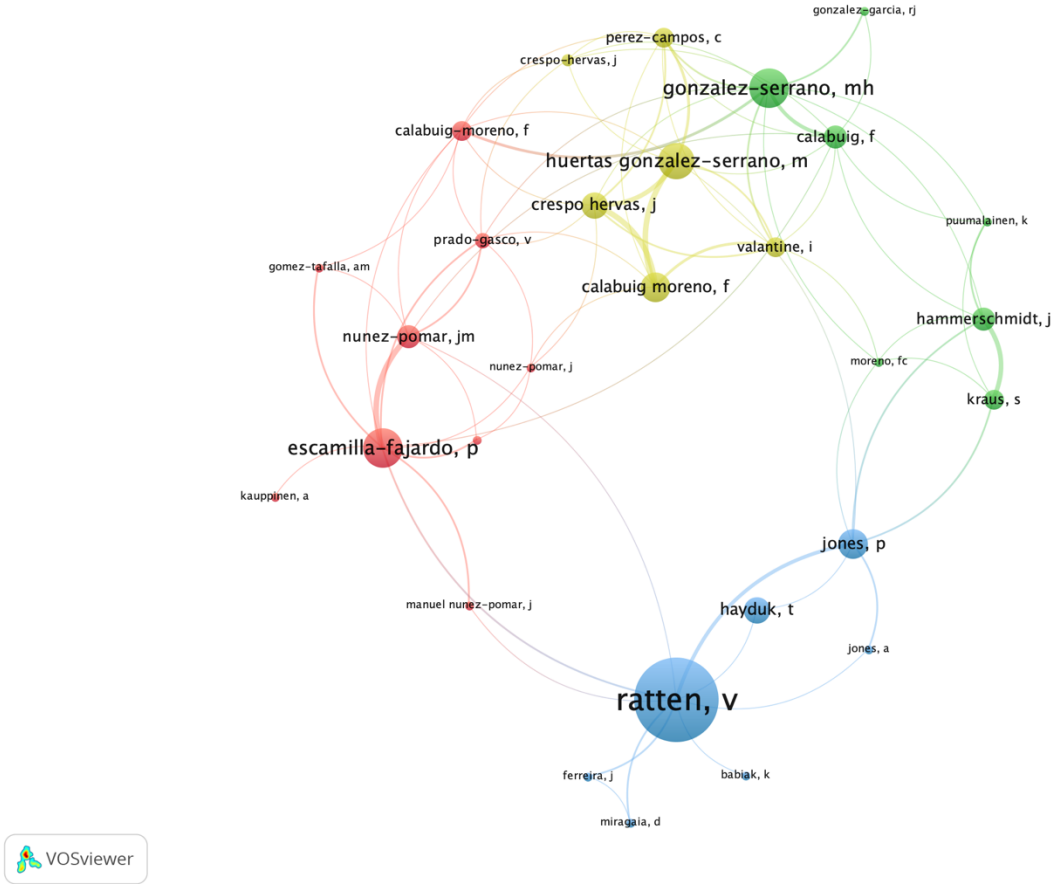


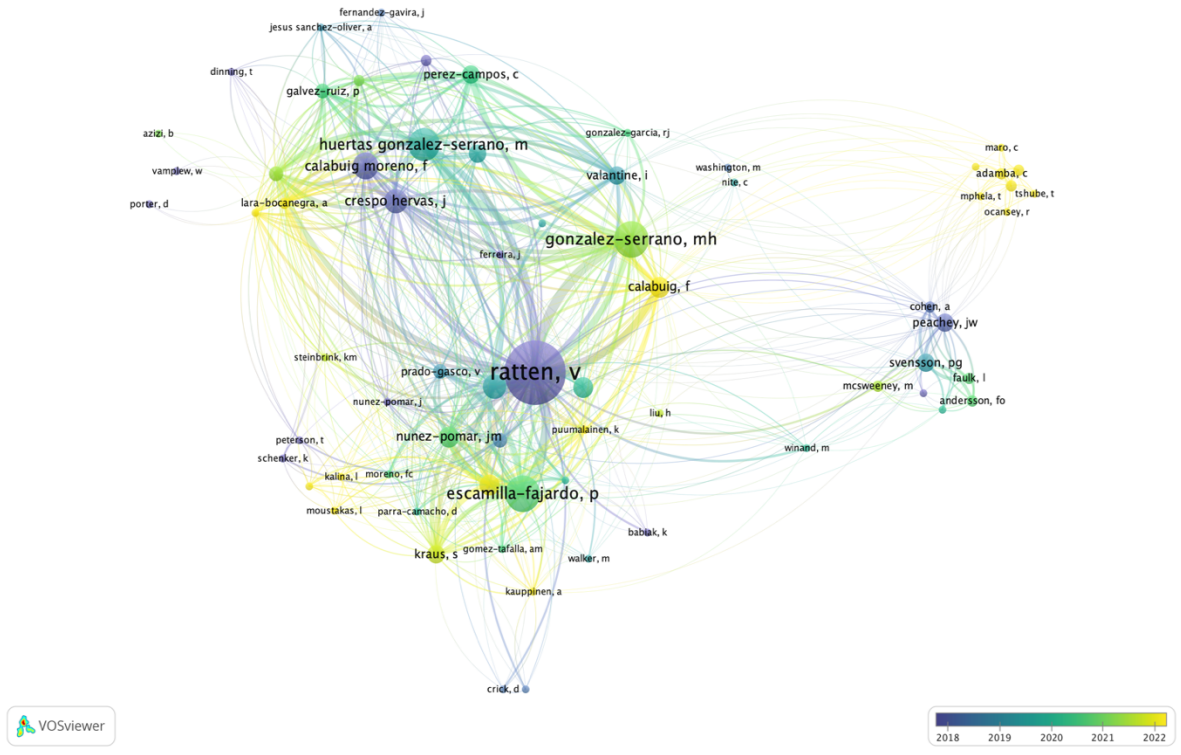
Figure 2.11. Core Sport Entrepreneurship Co-Authorship Network



2.3.6.3. CO-CITATION NETWORKS

Regarding co-citations, Ratten is the most co-cited author with Gonzalez-Serrano alongside the other Spanish authors.

Figure 2.12. Co-Citations By Year.



2.3.7. PUBLISHED ARTICLES IN SPORT ENTREPRENEURSHIP

Table 2.18 provides a list of the most cited articles with a journal of publication and methodology used. The most cited article in the sport entrepreneurship research is Ratten (2011) with 163 citations published in *International Entrepreneurship And Management Journal*. In this article, Ratten discusses sport entrepreneurship theory and the relationship between sport and entrepreneurship. Second most cited article is Hayhurst (2014) with 106 citations published in *Gender Place and Culture.* Hayhurst discusses the case-study of how martial arts are used in social innovation for gender equality. Schulenkorf (2017) was cited 106 times, making it the third most cited article, published in Sport Management Review. The author discussed at the time the state of literature on sport entrepreneurship from the sport for development and peace perspective, providing future directions in this subfield. The next most cited articles are two theoretical articles by Ratten. Ratten (2020) discusses the

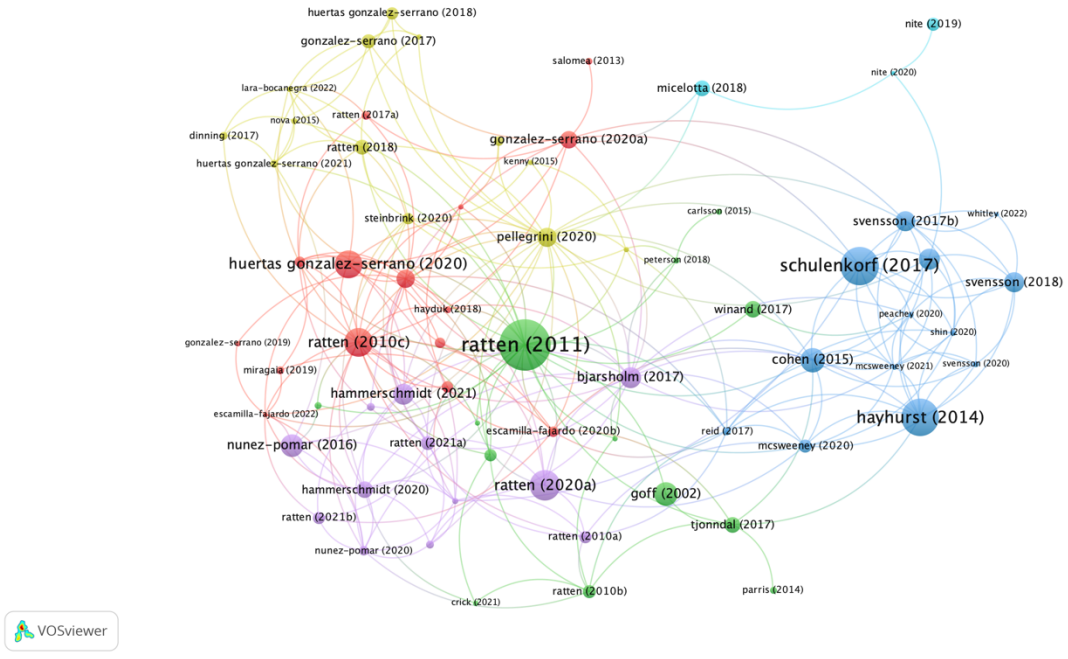
sport sector and entrepreneurial ecosystem under the pandemic of Covid-19, and the next, Ratten (2010) conceptualises sport entrepreneurship. Most cited article of González-Serrano was published in *Sport In Society* and is a literature review of a bibliometric analysis of sport entrepreneurship literature.

Table 2.18. Most Cited Articles.

Year	Author	Citations	Journal	Methodology
2011	Ratten	163	*International Entrepreneurship And Management Journal*	Theoretical
2014	Hayhurst	106	*Gender Place And Culture*	Qualitative
2017	Schulenkorf	106	*Sport Management Review*	Literature Review
2020	Ratten	79	*International Journal Of Entrepreneurial Behavior & Research*	Theoretical
2010	Ratten	74	*Journal Of Management & Organization*	Theoretical
2020	González-Serrano et al.	71	*Sport In Society*	Literature Review
2015	Cohen & Peachey	62	*Sport Management Review*	Qualitative
2002	Goff et al.	61	*American Economic Review*	Quantitative
2012	Ratten	58	*International Journal Of Entrepreneurial Venturing*	Theoretical
2017	Svensson	58	*Sport Management Review*	Theoretical
2016	Núñez-Pomar et al.	57	*Journal Of Business Research*	Mixed-Method
2018	Svensson et al.	54	*Journal Of Sport Management*	Quantitative
2017	Bjärsholm	51	*Journal Of Sport Management*	Literature Review
2021	Hammerschmidt et al.	51	*Technological Forecasting And Social Change*	Qualitative
2017	Svensson et al.	51	*Journal Of Sport Management*	Qualitative
2020	Pellegrini et al.	46	*International Entrepreneurship And Management Journal*	Literature Review
2017	Jones et al.	44	*International Journal Of Entrepreneurship And Innovation*	Qualitative
2017	Hu & Ye	42	*Social Behavior And Personality*	Quantitative
2017	Winand & Anagnostopoulos	42	*International Journal Of Sport Policy And Politics*	Qualitative
2020	González-Serrano et al.	41	*Sustainability*	Literature Review
2014	Jones & Jones	41	*Education And Training*	Qualitative
2020	Hammerschmidt et al.	41	*International Entrepreneurship And Management Journal*	Mixed-Method
2019	Nite et al.	40	*Sport Management Review*	Qualitative
2018	Micelotta et al.	40	*Entrepreneurship Theory And Practice*	Qualitative
2018	Ratten & Jones	37	*Education And Training*	Theoretical
2017	Tjonndal	37	*European Journal For Sport And Society*	Literature Review
2010	Ratten	36	*Journal Of Management & Organization*	Qualitative

Figure 2. 12 depicts the connections between the most cited articles, placing Ratten (2010) in the centre of sport entrepreneurship research. Schulenkorf (2017) and Hayhurst (2014) form a different cluster, connecting to Ratten (2010) through various references.

Figure 2.13. Most cited articles, connection map.



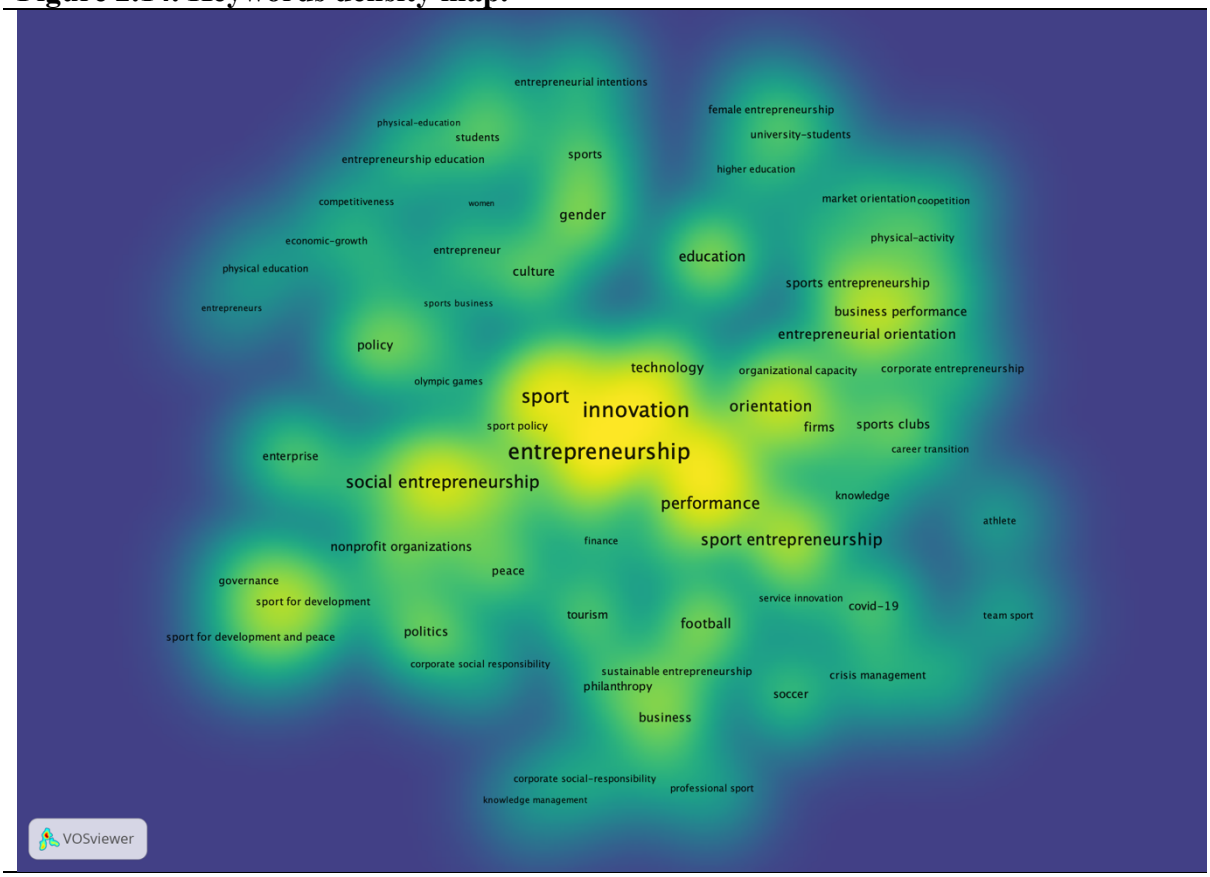
2.3.8. *TOPIC ANALYSIS*

2.3.8.1. KEYWORDS

The most common keywords of course include entrepreneurship, sport and innovations, with the combination of these three words. Figure 13 shows the density and relatedness between the keywords. Social entrepreneurship is another important cluster, with keywords, such as governance, non-profit organisations, sport for development and peace. Further out there are the education cluster, with keywords including students, physical education and entrepreneurship education and entrepreneurial intentions. Female entrepreneurship is another key word but less significant. Football (soccer) is the only keyword including a

particular sport and relates to sport clubs and team sport. Athletes and career transition is another small cluster. Interestingly keyword entrepreneurs have lower significance.

Figure 2.14. Keywords density map.



2.3.8.2. COUNTRY ANALYSIS

Following careful analysis of all articles, the articles were tagged based on the geographic region and countries that each article investigated. In the case if an article did not focus on a particular location of analysis then those were tagged as general, relating to the general unfocused location. In total 44 out of the 226 articles did not investigate a specific region. The most common country of investigation was Spain with 25 articles, meaning that the participants in the studies were from Spain, whether students, firms, sport clubs, etc. Third most studied geographic region was international studies by 22 articles. Iran, USA and China

are the main three countries with the most publications after Spain. Interestingly, the UK and Australia investigated only 5 articles each country, respectively. Articles were deemed international, when the countries under investigation focused on at least 2 or more countries from 2 or more continents. If an article focused on 2 or more countries from the same continent, then that particular continent was tagged as the focus of the study. For example, Europe was the most investigated continent with 12 articles focussing on European countries. The least investigated region was South America, with 1 article focussing on Columbia and 1 on various South American countries. The second most understudied region was Eastern Europe with only 6 articles, out of which the focus country was Romania and Croatia, 2 articles each country.

Table 2.19. Geographic Regions Investigated by Literature

Region	Nº Articles
Western Europe	52
General	44
Middle East	24
Global	23
North America	19
Asia	16
Europe	14
Northern Europe	11
Africa	8
Australia & Pacific	7
Eastern Europe	6
South America	2

Table 2.20. Countries Investigated by Literature

Country	Nº Articles
General	44
Spain	25
International	22
Iran	21
USA	16
China	13
Europe	12
Sweden	6
UK	5
Australia	5
Portugal	4
Germany	4
Canada	4
Scotland	3
Ireland	3
England	3

2.3.8.3. *STAKEHOLDER ANALYSIS*

Table 2.21 provides an analysis of stakeholders investigated in the sport entrepreneurship literature. General stakeholders means there were no particular stakeholders studied, rather the concept of sport entrepreneurship is generally discussed (Ratten, 2011). Fifteen percent of all sport entrepreneurship articles in this review investigated general stakeholders. The most common stakeholders investigated are sport students with 29 articles (12.8%), which are university students studying any sport related degree, such as sport sciences (González-Serrano et al., 2017), sport management (P. Jones & Jones, 2014), physical education (Zhou et al., 2021), etc. Various stakeholders accounted for almost 10% with 22 articles. Various stakeholders means that the study included multiple types of stakeholders, including sport managers, students, sport academics (Delarestaghi et al., 2017). Sport firms had 15 articles (6.6%) and sport clubs had 14 articles (6.2%). Professional or elite athletes were studied by 13 articles (5.8%), whereas professional sport clubs were studied by 12 articles (5.3%) and professional sport leagues by 11 articles (4.9%). The least investigated were, sport family SMEs and sport hybrid firms, with only one article each. Interestingly, non-sport SMEs received the same amount of attention from sport entrepreneurship literature as sport startups, with 3 articles each. Female entrepreneurs in sport also require more attention and entrepreneurial coaches' with only 2 and 3 articles, respectively.

Table 2.21. List of Stakeholder Types Investigated

Stakeholders	Nº	Percentage	Example
General	35	15.5%	(Hayduk, 2020; Nová, 2015; Ratten, 2011)
Sport Students	29	12.8%	(Hu & Ye, 2017; Jones & Jones, 2014; Matic et al., 2022)
Various Stakeholders	22	9.7%	(Delarestaghi et al., 2017; McSweeney, 2023; Mori et al., 2023)
Sport Firms	15	6.6%	(Hayduk & Walker, 2018; Núñez-Pomar et al., 2016; Salome et al., 2013)
Sport Clubs	14	6.2%	(Escamilla-Fajardo et al., 2022; Escamilla-Fajardo et al., 2020; Ratten et al., 2021)

Professional Athletes	13	5.8%	(Kenny, 2015; Steinbrink & Ströhle, 2023; Wilson et al., 2015)
Professional Sport Clubs	12	5.3%	(Hammerschmidt et al., 2020, 2021; Miragaia et al., 2019)
Professional Sport Leagues	11	4.9%	(Micelotta et al., 2018; Nite et al., 2019; Radaelli et al., 2018)
Sport Governing Body	11	4.9%	(Crick & Crick, 2016; Panahi & Yektayar, 2016b; Winand & Anagnostopoulos, 2017)
Non-profit	10	4.4%	(Bjärsholm, 2017; Cohen & Peachey, 2015; Svensson, 2017)
Ministry of Sport	7	3.1%	(Keshvarz et al., 2017; McSweeney & Safai, 2020; Seifari & Amoozadeh, 2014)
Sport Entrepreneurs	6	2.7%	(Kauppinen & Escamilla-Fajardo, 2023; Ratten, 2022; Winand et al., 2022)
Sport Organisations	6	2.7%	(Dinning, 2017b; Escamilla-Fajardo, Núñez-Pomar, Prado-Gascó et al., 2020; Ratten & Thompson, 2020)
Social Enterprises	5	2.2%	(Bjärsholm, 2019; McSweeney et al., 2021; Reid, 2017)
eSports Startups	4	1.8%	(Allal-Chérif et al., 2024; Hayduk, 2021; Xue et al., 2023)
SMEs (Non-Sport)	3	1.3%	(Guaita et al., 2022; Hayduk, 2019; Mammadov, 2021)
Sport Startups	3	1.3%	(Adams & Burd, 2019; Kauppinen, 2024; Ratten, 2012b)
Amateur Athletes	3	1.3%	(Dumont, 2016; Wallis et al., 2020)
Coaches	3	1.3%	(Dobson & McLuskie, 2020; Jones et al., 2017; Surujlal, 2016)
Youth	3	1.3%	(Malete et al., 2022; Ocansey et al., 2023)
Sport SMEs	2	0.9%	(Bjelic et al., 2024; Bratincevic & Smoljanovic, 2011)
EU Countries	2	0.9%	(González-Serrano et al., 2021; González-Serrano, Prado-Gascó et al., 2019)
Female Entrepreneurs	2	0.9%	(Costa & Miragaia, 2022; Gonzalez-Serrano et al., 2021)
Sport Family SMEs	1	0.4%	(Ratten, 2020b)
Startups (non-sport)	1	0.4%	(Hayduk & Naraine, 2022)
CEOs	1	0.4%	(Pervun et al., 2024)
Hybrid Firms	1	0.4%	(Svensson & Seifried, 2017)
University	1	0.4%	(Franco & Pessoa, 2014)

2.3.8.4. SPORT ANALYSIS

Most articles in sport entrepreneurship literature investigate sport in general, 134 articles (60%), shown in Table 22. Some articles investigate sport science students, some various sport organisations or firms that do not focus on a particular sport. Additionally, 41 articles

focus on various sport (20%), those are articles that focus on sport specific organisations, athletes or sport clubs that include 3 or more types of sport. The most investigated sport is football (Soccer) with 16 articles. Second most commonly investigated sport in sport entrepreneurship literature is, interestingly, ice hockey with 6 articles. Third most common is Athletics with 4 articles. Multi-adventure sport refer to extreme or adventurous sport, such as hang gliding and paragliding (Piller & Nagel, 2024), snowboarding, rafting and skydiving (Salome et al., 2013) or mountain sport (González-Serrano et al., 2020).

Table 2.22. Number of articles investigating a particular sport.

Sport	Nº Articles	Literature Example
General	134	(Jones & Jones, 2014; Ratten, 2011; Schulenkorf, 2017; Svensson, 2017; Winand & Anagnostopoulos, 2017)
Various	41	(Bjärsholm, 2019; Boyd et al., 2021; Escamilla-Fajardo et al., 2021; Steinbrink et al., 2020)
Football (Soccer)	16	(Cohen & Peachey, 2015; Hammerschmidt et al., 2021; Miragaia et al., 2019; Radaelli et al., 2018)
Ice Hockey	6	(Ahonen, 2020; Carlsson & Backman, 2015; Legg & Gough, 2012; Wong, 2018)
Athletics	4	(Chen, Lu, & Filo, 2023; Korir, Ormerod, & Fletcher, 2024; Terjesen, Schiller, & Jena, 2008.; Wilson et al., 2015)
Multi-adventure	3	(González-Serrano et al., 2020; Piller & Nagel, 2024; Salome et al., 2013)
eSports	3	(Allal-Chérif et al., 2024; Hayduk, 2021; Niculaescu et al., 2023)
Cycling	2	(Dobson & McLuskie, 2020; McSweeney et al., 2021)
Winter sport	2	(Bjelic et al., 2024; Guaita et al., 2022)
Surfing	2	(Parris et al., 2014; Wallis et al., 2020)
Rugby	2	(Kenny, 2015; Nite et al., 2020)
American Football	1	(Lu & Heinze, 2021)
Motor Racing	1	(Foxall & Johnston, 1991)
Baseball & Basketball	1	(Walker, Mccormick, Goff, & Tollison, 2002)
Baseball	1	(Abrutyn, 2018)
Rugby/Cricket	1	(Greenfield, 2018; Wright & Zammuto, 2013)
Gaelic Football	1	(Cronin, 2018)
Basketball	1	(Chen & Lin, 2021)

Martial Arts	1	(Hayhurst, 2014)
Equestrian	1	(Munkwitz, 2018)
Taekwondo	1	(Crick & Crick, 2016)
Rock Climbing	1	(Dumont, 2016)

2.3.8.5. THEMATIC ANALYSIS

There were equally 5 literature reviews covering general sport entrepreneurship, social entrepreneurship in sport and sport innovation (Table 2.23). Only one literature review covered each athlete's career transition, gender and sustainable entrepreneurship. The majority of social entrepreneurship reviews were qualitative in nature compared to general entrepreneurship which is often studied using bibliometric analysis.

Table 2.23. List of themes covered by literature reviews on sport entrepreneurship.

Theme	Nº	Authors
General Sport Entrepreneurship	5	(Calabuig-Moreno et al., 2021; Hammerschmidt et al., 2023; González-Serrano et al., 2020)
Social Entrepreneurship	5	(Bjärsholm, 2017; Richmond et al., 2022; Schulenkorf, 2017)
Sport Innovation	5	(Escamilla-Fajardo et al., 2020; Ferreira et al., 2020; Tjønndal, 2017)
Athlete Career Transition	1	(Hindle et al., 2021)
Gender	1	(Costa & Miragaia, 2022)
Sustainable Sport Entrepreneurship	1	(González-Serrano et al., 2020)

The literature review identified 17 key themes in sport entrepreneurship shown in table, with the most common methodology used in each theme and key authors. General sport entrepreneurship is investigated by 85 articles (37.6%) using equally quantitative (Crick & Crick, 2021; Miragaia et al., 2019; Radaelli et al., 2018), qualitative (Ratten, 2021; Ratten & Thompson, 2020) and mixed-methods (González-Serrano et al., 2021; Hammerschmidt et al., 2020; Núñez-Pomar et al., 2016). Social entrepreneurship is the most studied theme of sport entrepreneurship literature with 38 articles (16.8%), which uses mostly qualitative methodology (Cohen & Peachey, 2015; Svensson & Seifried, 2017; Wilson et al., 2015).

There are a handful of articles using quantitative methodology to investigate social entrepreneurship in sport (Chen & Lin, 2021; Svensson et al., 2018, 2020). This review identified only one articles using mixed methods to study social entrepreneurship (Moustakas & Kalina, 2021). The third most common theme was entrepreneurial education with 23 articles (10.2%). Entrepreneurial education theme studies mostly entrepreneurial intentions (Hu & Ye, 2017), capacities (González-Serrano et al., 2017) and skills (González-Serrano et al., 2021) of sport science or management students. Some papers study employability and entrepreneurial educational projects (Wang, Aman, & Hooi, 2021). Quantitative methodology is most common to study entrepreneurial educational (Hu & Ye, 2017). There are a couple of qualitative studies investigating sport student entrepreneurial orientation (Jones & Jones, 2014). Only two studies used a mixed method approach (González-Serrano et al., 2021; Lara-Bocanegra, Bohórquez et al., 2022). Almost 5% of sport entrepreneurship literature focused on gender with 11 articles. Gender has also only been studied through quantitative (Da Costa et al., 2023) and qualitative (Hayhurst, 2014; Micelotta et al., 2018). This review did not identify mixed methodology articles studying gender in sport entrepreneurship. Similarly, Covid has been investigated through all types of methodology, qualitative (Hammerschmidt et al., 2021; Ratten et al., 2021), quantitative (Escamilla-Fajardo et al., 2020), and mixed-methods (González-Serrano et al., 2023), with 9 articles (4%). Similarly, studies investigating sport startups also did not use a mixed-method approach, only quantitative (Hayduk & Walker, 2018; Kauppinen, 2024) and qualitative (Adams & Burd, 2019) methodology was used. Athletes accounted for almost 5% of all literature with 7 articles investigated using only two methodology approaches: qualitative (Dumont, 2016; Hasaan, Nawaz, Iqbal, & Khalid, 2018) and quantitative (Steinbrink et al., 2020; Steinbrink & Ströhle, 2023), none used mixed-method approach. The least studied topic is race in the context of sport

entrepreneurship with only 1 article (Goff et al., 2002). Sporting events and sport lifestyle entrepreneurship had three each (1.3%).

Table 2.24. Main themes of sport entrepreneurship literature and authors with the highest number of articles per theme (in brackets).

Theme	Nº	Percentage	Common Methodology	Key Authors
General Sport Entrepreneurship	85	37.6%	Various	Ratten (12), Escamilla-Fajardo (4)
Social Entrepreneurship	38	16.8%	Qualitative	Bjärsholm (4), Svensson (4), McSweeney (3)
Entrepreneurial Education	23	10.2%	Quantitative	Gonzalez-Serrano (7), Dinning (2)
Sport Innovation	12	5.3%	Various	Escamilla-Fajardo (2), Tjonndal (1), Winand (1)
Gender	11	4.9%	Various	Hayhurst (1), Micelotta (1), Parris (1)
Sustainable Sport Entrepreneurship	10	4.4%	Various	González-Serrano (1), Escamilla-Fajardo (1), Salomea (1)
Covid-19	9	4.0%	Various	Ratten (3), Escamilla-Fajardo (2), Hammerschmidt (1)
Athletes	7	3.1%	Various	Steinbrink (2), Dumont (1)
Athletes Career Transition	6	2.7%	Qualitative	Kenny (1), Hindle (1), Boyd (1)
Institutional Entrepreneurship	5	2.2%	Qualitative	Nite (2), Andersen (1), Abrutyn (1)
Sport Startups	5	2.2%	Qualitative	Ratten (1), Hayduk (1), Kauppinen (1)
Coaches	4	1.8%	Qualitative	Crick (1), Jones (1), Dobson (1)
eSports	4	1.8%	Quantitative	Hayduk (1), Hammerschmidt (1), Xue (1)
Sport Lifestyle Entrepreneurship	3	1.3%	Mixed method	Gonzalez-Serrano (1), Jones (1), Wallis (1)
Sporting Events	3	1.3%	Quantitative	Hayduk (2), Mammadov (1)
Race	1	0.4%	Quantitative	Goff (1)

* In the case when there were multiple authors with only 1 article per theme, the most cited article in that theme is provided.
** The number of articles per author per theme is shown in brackets next to the key author.

Ten articles focused on sustainable sport entrepreneurship from various perspectives (Table). González-Serrano et al. (2020) provided a literature review on the current state of sustainable sport entrepreneurship, as an emerging research stream in sport entrepreneurship literature. The most common methodology to investigate sustainability in sport was qualitative, with 4 articles, covering topics, such as sport policy, esports and social responsibility. Three quantitative articles focused on sustainable entrepreneurial orientation and intentions and covid impact from a sustainable perspective. Two articles used mixed methods, also covering sustainable entrepreneurial intentions and social responsibility.

Table 2.25. List of Articles investigating sustainable sport entrepreneurship.

Topic of Analysis	Methodology	Authors
Innovation	Literature Review	(González-Serrano et al., 2020)
Social Responsibility	Qualitative	(Salome et al., 2013)
Sport Policy	Qualitative	(Piller & Nagel, 2024)
Sporting Events	Qualitative	(Dan, 2019)
eSports entrepreneurs	Qualitative	(Allal-Chérif et al., 2024)
Sustainable Development Goals - Covid	Quantitative	(Ting, Lin, Chien, Tseng, & Hsu, 2022)
Sustainable Entrepreneurial intentions	Quantitative	(Ordiñana-Bellver, Aguado-Berenguer, Pérez-Campos, & González-Serrano, 2024)
Sustainable Entrepreneurial Orientation	Quantitative	(Han & Niu, 2022)
Social Responsibility	Mixed-Method	(Escamilla-Fajardo, 2020)
Sustainable Entrepreneurial intentions	Mixed-Method	(Bellver, Pérez-Campos, González-Serrano, & Martínez-Rico, 2022)

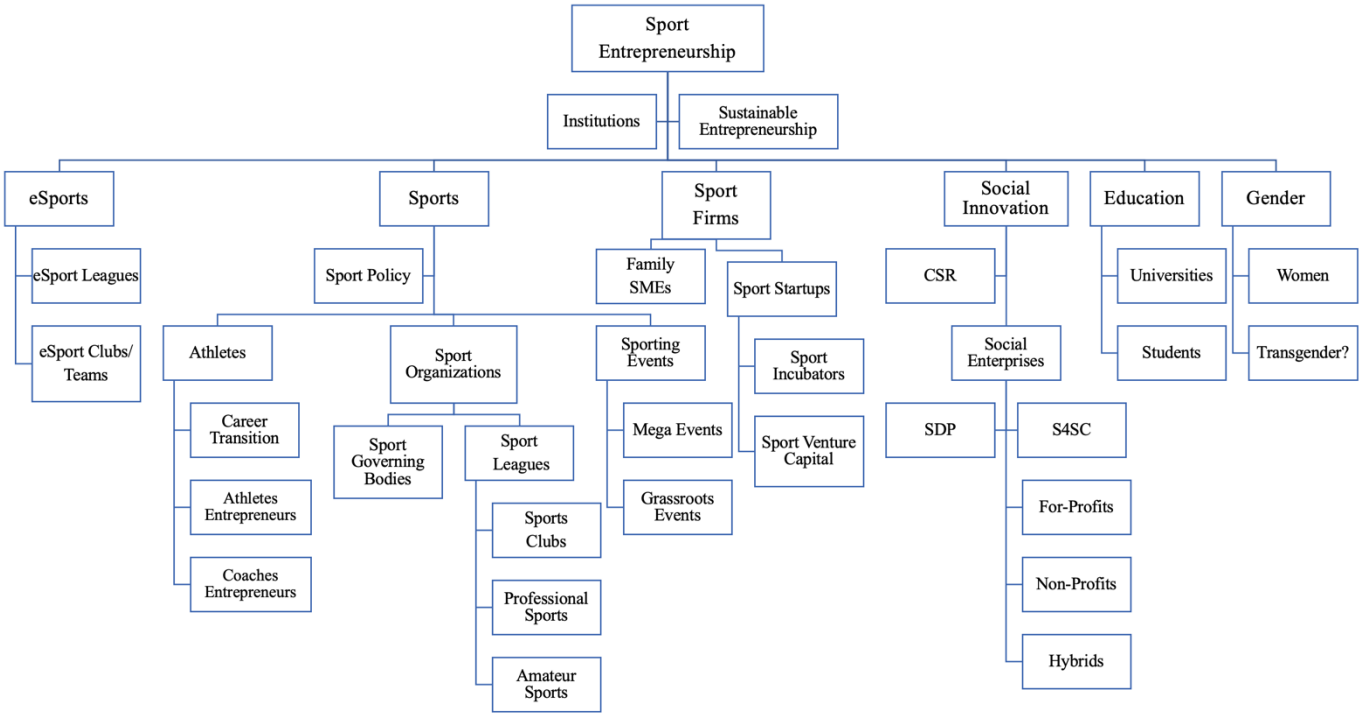
2.3.9. TYPOLOGY

2.3.9.1. SPORT ENTREPRENEURSHIP

The sport entrepreneurship literature is divided into many subtopics. There are numerous literature reviews of sport entrepreneurship literature (Pellegrini et al., 2020; Calabuig-Moreno et al., 2020; González-Serrano et al., 2020; Hayduk & Walker, 2018). Some authors only focus on general sport entrepreneurship, investigating different relationships and entrepreneurial ecosystems within the sport organisations (Azimi, 2017; Ashouri & Boroumand, 2014; Ratten, 2012). Ratten and Thompson (2020) provide an overview of the digital sport entrepreneurship ecosystems. Tasaddoghi et al. (2020) designed an entrepreneurial model for the sport business in the cases of sport fans. Whereas, Masdeu et al. (2019) presented a Universal Transformational Management Framework, as an entrepreneurial tool for strategic planning and management tool for sport organisations. Ashouri and Boroumand (2014) examined the relationship between knowledge management and entrepreneurial process in sport organisations Dobson and McLuskie (2020) studied

performative entrepreneurship and entrepreneurial identity in athletes of adventure sport. As seen in these examples, there is a wide range of topics and interest within the sport's entrepreneurial literature. The general sport entrepreneurship can be split into professional sport and sport policy.

Figure 2.15. sport Entrepreneurship Conceptual Model.



* Abbreviations:

CSR – Corporate Social Responsibility

SDP – Sport for Development and Peace

S4SC – Sport For Social Change

2.3.9.2. *PROFESSIONAL SPORT*

There are articles investigating specific sport clubs, leagues or major sporting events. Some investigated sport clubs on the examples of soccer, basketball and general sport (Escamilla-Fajardo et al., 2021; Hammerschmidt et al., 2019; Rizvandi & Tojari; 2019). Whereas Radaelli et al. (2018) analysed the Italian soccer league, and Chacar and Hesterly (2004) the US Major League Baseball. Furthermore, Panahi and Yektayar (2016) and Shahin et al. (2014) investigate entrepreneurial activity within sport organisations, both at the top board level and at the employee levels.

2.3.9.3. *SPORT POLICY*

Some authors investigate sport policy from an entrepreneurial perspective. Andersen & Ronglan (2015) examined sport policy change using institutional entrepreneurship as the theoretical framework. Ahonen (2019) focusses on policy changes in Finnish sport policy in relation to entrepreneurship growth among sport teams viewed as small-medium-enterprises (SEMs). In turn, Strittmatter and Skille (2017) analysed favourable policy changes for Norwegian youth sport policy taking lessons from the Winter Youth Olympic games. Pounder (2019) studied entrepreneurship in the form of innovation should be encouraged in sport policy and innovative policies can lead to favourable social and cultural change in policy. Finally, Ratten (2019) suggests future directions for public policy from the perspective of sport entrepreneurship and how governance and politics are involved in sport policy.

2.3.9.4. *INSTITUTIONS AND SPORT ENTREPRENEURSHIP*

Organisational and institutional entrepreneurship within sport entrepreneurship research is also an overlooked area. Escamilla-Fajardo et al. (2019) explored organisational innovation in sport clubs and the relationship between organisational climate and level of sport competition. Panahi and Yektayar (2016) investigated the relationship between organisational structure and entrepreneurship. Washington & Patterson (2011) researched institutional change in sport management. Borgers et al. (2018) examined participation in sport using institutional change as a theoretical framework. Similarly, Fahlén & Stenling (2019) conceptualised management within sport organisations from an institutional perspective. Chacar et al. (2018) examined institutional change as a form of entrepreneurship in professional baseball using the example of Major League Baseball in the United States.

There is a handful of papers examining entrepreneurship in professional sport and institutional perspective, which do not fall under the common categories researched in this field. For example, Andersen & Ronglan (2015) studied Scandinavian elite sport systems and sport organisations from an institutional perspective. Chacar and Hesterly (2004) described how Major League Baseball drives innovation to create institutional change. Both studies examine institutional entrepreneurship in professional sport. Faghih & Javanmardi (2014) researched entrepreneurship within the English Premier League and identified factors driving business growth. Creation of sport leagues is a form of sport entrepreneurship not widely investigated. Calvin et al. (2019) studied the formation of the National Collegiate Athletic Association in the USA and institutional obstacles encountered along the way. Additionally, Mansfield and Killick (2012) investigated the franchising of professional women's netball leagues in Britain as a form of sport entrepreneurship.

There are different institutional climates conducive to sport entrepreneurship. Calvin et al. (2019) examined how the NCAA (National Collegiate Athletic Association), a US

collegiate sport organisation, established institutional dominance immune to litigation by creating institutional boundaries and cognitions, and adapting to the changing environment over the years of its existence.

2.3.9.5. SOCIAL INNOVATION IN SPORT ENTREPRENEURSHIP

Social entrepreneurship is a common research interest within sport entrepreneurship. It includes social innovation, cultural entrepreneurship, sport for development and community building (Núñez-Pomar, 2020; Ratten, 2019b; Panahi & Yektayar, 2016; Svensson, 2017). There are different perspectives of social sport entrepreneurship. Núñez-Pomar (2020) investigated entrepreneurial orientation and what social role sport clubs play in Spain. Ratten (2019b) did a case study in surfing, examining social innovation. Additionally, Pounder (2019) studied the role of social entrepreneurship in sport business and how sport management uses social entrepreneurial activity. Panahi and Yektayar (2016) examined entrepreneurial orientation among sport organisations' management from a cultural intelligence perspective. Spaaij & Westerbeek (2010) studied social capital in sport business and how sport is used to create social capital. Tonts (2015) also studied social capital and the link with competitive sport, with a particular case study in rural Australia.

Social innovation is yet another subcategory of social entrepreneurship. Corporate social responsibility is a type of social entrepreneurship, particularly used by organisations using sport development as a tool. Popovic et al. (2021) studied the attitudes of sport organisations officials towards innovation in the sport sector. In turn, Chen and Lin (2021) focused on social entrepreneurship in professional sport leagues from a consumer perspective. Bjärsholm (2019) investigated networking as a process of social entrepreneurship. Heinze et al. (2014) explored corporate social responsibility as part of social entrepreneurship in professional sport, using a case study on National Football League

in American football. Miragaia et al. (2015) also researched corporate social responsibility but on a community level, through sport programs which are designed to create social capital.

The use of sport for building and developing communities is the most common research topic within social sport entrepreneurship. Svensson is the most published author with a focus on social entrepreneurship in sport development, community building and peace (Svensson, 2017; Svensson & Seifried, 2017; Svensson et al., 2018). Svensson (2017) conceptualised sport for development and peace using institutional theory. Svensson & Seifried (2017) examined sport for development and peace entrepreneurs and the organisational structure of sport for peace organisations. Svensson et al. (2018) quantified organisational capacity among sport organisations with a social mission using sport for development and peace. Hayduk & Walker (2018) mapped the strategic factor market in sport entrepreneurship, where the economics of entrepreneurship link with social missions as a motivator for entrepreneurship. Undlien (2017) examined the use of Youth Olympic Games as a platform for social entrepreneurship to create social value, capital and promote cultural programs among youth.

Another prevalent research topic within sport entrepreneurship is educational entrepreneurship and entrepreneurship studies within higher education. Gonzalez-Serrano is the most published researcher with the focus on sport entrepreneurship education (González-Serrano et al., 2016; González-Serrano et al., 2017; González-Serrano et al., 2018a; González-Serrano et al., 2018b; González-Serrano et al., 2019a; González-Serrano et al., 2019b). In the 2016 study González-Serrano et al., mention higher education alongside entrepreneurship and sport management studies, with the lowest number of entrepreneurial classes compared to hospitality, leisure and tourism. The González-Serrano et al., 2018 study, examined entrepreneurial orientation among sport science students in Spain, and found that

students attending entrepreneurship -focused courses increase their entrepreneurial intentions, skills and behaviour.

2.3.9.6. SPORT FIRMS

The research uses case studies to investigate the entrepreneurial activity within sport. Wallis et al. (2020) investigate lifestyle entrepreneurship within the sport industry and who are sport lifestyle entrepreneurs using a case study about surfers. Adams & Burd examined the case of a young athlete-turned-entrepreneur, from collecting soccer shoes to a soccer shoe business. Atwater (2020) examined the case of Bill Veeck, although not an athlete himself, he transformed the sport of baseball and in turn the American sport industry, making the sport more accessible, entertaining and well marketed. Similarly, Wong (2018) studied cultural entrepreneurship in the case of Canadian brothers who started the Pacific Coast Hockey Association which led to the birth of the Canadian Hockey empire as we know it. In turn, Hough-Snee (2020) an unsuccessful sport entrepreneurial efforts and poor management on the example of Bob McKnight the co-founder of Quicksilver, the surfers' brand empire. Likewise, Miloch (2012) showed the quintessence of downhill sport entrepreneurship studying the fall of UnderArmour sport brand, once a prominent sport brand, today struggling to maintain its relevance in the sport apparel industry.

2.3.9.7. SPORT STARTUPS

Despite a considerable interest in sport entrepreneurship, less research has investigated sport startups. To date, there have been a few papers published about sport startups. The sport entrepreneurship literature seems to be lagging when it comes to sport startups and firms. Ratten has published several conceptual papers about sport startups (Ratten, 2020a; Ratten 2020b Ratten et al., 2020), however, the literature lacks an empirical consideration of sport startups. Azimzadeh et al. (2013) proposed a conceptual model affecting small and medium

enterprises and suggested future research to test the conceptual model. Sport startups should engage more in innovation activities to increase their organizational performance (Ziyae and Toutifar (2019). Limited research focus on the social and sustainable aspects of sport. For example, Xi et al. (2023) used learning theory to study sport startups sustainable innovation practices. Due to the limited amount for studies investigating sport startups in the sport entrepreneurship literature, there is still a necessity to further investigate startups and SMEs.

2.3.9.8. ATHLETES AS ENTREPRENEURS

Although some interest in athletes as entrepreneurs, the literature need further development. For example, Ratten (2016) explored how athlete entrepreneurs create social capital and leverage their networks to instigate social change and create social value. Steinbrink et al. (2019) showed that athletes psychological traits influence their entrepreneurial orientations to create new ventures. While only handful of papers studied athletes as entrepreneurs, the majority of the literature on this subtopic more focus receives the career transition of athletes following their retirement from sporting careers. Often, after ending their careers athletes start business, as a career transition (Kenny, 2015).

2.3.9.9. WOMEN IN SPORT ENTREPRENEURSHIP

Despite and increased interested, another underexplored area within this field is women' entrepreneurship in the sport sector. Gender studies are also overlooked, compering the differences between man and women in their entrepreneurial activity in sport. Most articles relating to women examine the economics of professional women leagues (Costa & Miragaia, 2022; Micelotta et al., 2018; O'neil, 2012; Shackelford & Greenwell, 2005; Valenti et al., 2020). There has been some research in women's sport from an institutional perspective. Mincelotta et al. (2018) showed the effect of gender differences in the creation of new

ventures, and how that translates into professional women sport leagues. Jacobs (2014) and Valenti et al. (2020) studied women's football and the determinants to international success. Li et al. (2020) examined institutional entrepreneurship within women intercollegiate sport. Mansfield and Killick (2012) performed a case study on franchising in the British professional women's netball league. Although some of these studies are not purely entrepreneurial, they do investigate entrepreneurial activity and factors within sport, and therefore were included in this review. Parris et al. (2014) did a case study on female athletes as entrepreneurs among professional wakeboarders.

There is a convergence between gender studies and sport entrepreneurship from a social innovation perspective. Hayhurst (2014) investigated sport entrepreneurship and promotion of gender equality through social innovation, where in Uganda non-governmental organisations encourage young girls to become entrepreneurs in sport, such as martial arts instructors. Li et al. (2019) addressed gender norms and institutional change in women's professional hockey league in China in conjunction with the 2022 Winter Olympics preparation. The study found that the Chinese government in partnership with the private sector implemented strategies to reduce the gender gap by providing resources, creating equal opportunities, increasing women's pay and investing in women's and girls' teams.

As previously mentioned, another popular research topic in sport entrepreneurship is education, particularly, gender comparison in entrepreneurial education among sport science students (González-Serrano et al., 2019a; González-Serrano et al., 2016). González-Serrano et al. (2019a) showed that there is a gender difference in entrepreneurship education among Spanish sport science students. Once women gain access or attain an entrepreneurial course their perception of entrepreneurship skills improve, which suggests that the gender difference may be minimised once access to resources is provided for women. Puyana et al. 2019 also investigated gender effects on entrepreneurial intentions in higher education. Similarly,

Gonazel-Serrano et al. (2016) demonstrated a gender effect in entrepreneurial intentions among sport science students, where perceived behaviour control and attitude towards entrepreneurship differ by gender and are predicated by entrepreneurship intentions and norms.

2.3.9.10. COVID-19

In the early 2020s sport entrepreneurship has experienced a spike in new research published in this field. At the time many academics have taken an interest in the effect of the pandemic Covid-19 on sport entrepreneurship (Ratten, 2020). Many of these papers have provided only a theoretical discussion or commentary on the effects of the pandemic on the sport industry (Escamilla-Fajardo et al., 2020; González-Serrano et al., 2023; Hammerschmidt et al., 2021). Sport stakeholders had to develop and use entrepreneurial skills to adapt to the crisis. Ratten (2020b) showed how sport entrepreneurs responded to the challenging times by using entrepreneurial skills to solve problems with limited resources. Similarly, professional football clubs used sport entrepreneurship as a response to head on the challenging market when the sport leagues were suspended (Hammerschmidt, 2021). Football clubs had to adapt and innovate in the face of the pandemic, considering new business models and strategies to ensure their sustainability and success in a rapidly changing environment. These articles showed that sport entrepreneurship also requires resilience and adaptability in challenging times. Despite the significant interested less studies have focused on empirical research relating to the pandemic and sport entrepreneurship. There is further research required to investigate the impact of Covid-19 on sport, sport entrepreneurship, institutional economics of sport and its social entrepreneurship in sport. There is no literature at the moment exploring the effects of COVID-19 on sport from an institutional, organisational perspective,

including the lack of articles relating to COVID-19 sport development for peace and athlete career transition.

2.3.9.11. eSPORTS ENTREPRENEURSHIP

There seems to be a new emerging field within the literature of sport entrepreneurship investigating eSports. eSports are electronic sport, i.e., the professional video gaming industry and has been growing exponentially the past few years. This literature review identified 4 articles exploring the convergence of eSports and entrepreneurship. Three out of the four focus on venture capital in esports. These studies shed light on how esports organisations navigate the balance between tradition and innovation, explore alternative methods of capital raising in the new media sector (Hayduk, 2021), analyse the social dynamics of crowdfunding campaigns in esports (Xue et al., 2023), and examine the role of venture capital financing in the growth of the esports industry (Niculaescu et al., 2023). Hammerschmidt et al. (2024) explores the intersection of esports strategies and traditional sport on the example of the German professional football league. The authors discuss how esports strategies can inform and guide a balanced approach to tradition and innovation within the context of the Bundesliga. By examining the impact of new media on sport organisations and the evolving landscape of fan engagement, the paper aims to provide insights into how traditional sport leagues can adapt and thrive in the digital age. Through a lens of ambidexterity, the authors analyse how esports strategies can be leveraged to enhance the Bundesliga's competitiveness and relevance in a rapidly changing media environment. These articles contribute to the foundation of understanding the evolving landscape of esports and its implications for the traditional sport industry. With such a booming industry and increasing interest, eSports has received little interest from the academia and especially from the sport entrepreneurial perspective.

2.3.9.12. *Sporting Events*

Sporting events and Mega sport events, such as the World Cup or the Olympics are a common research topic of sport economics and event management fields. This literature review excluded some articles relating to sporting events, being out of scope of sport entrepreneurship research. For example, Hall (2006) applied urban entrepreneurship, investigating sport mega-events and their role in urban development. However, a handful of articles focused specifically on sport entrepreneurship, and thus in the scope of this literature review. Three articles studied how sporting mega events influence local entrepreneurial ecosystems. Hayduk (2022) has studied how the World Cup in 2014 and the 2016 Olympics in Brazil affected local entrepreneurial ecosystems. In another article, Hayduk (2019) discussed how sporting events can be leveraged to increase entrepreneurship in local economies, however, that is only true in developed economies. There is more research required to understand the influence of sporting events on entrepreneurial activity and ecosystems. This theme investigates how mega sporting events can serve as catalysts for international entrepreneurship, analysing the impact on local economies, innovation, and business opportunities. By exploring the dynamics of entrepreneurial ecosystems in the context of major sporting events like the World Cup and Olympic Games, authors provide strategies for optimising the positive effects of these events on entrepreneurship and economic development in host countries.

2.3.9.13. *Entrepreneurship in Lifestyle Sport*

Although one of the exclusion criteria was lifestyle entrepreneurship, 3 articles investigated entrepreneurship in lifestyle sport (González-Serrano et al., 2020; P. Jones et al., 2020; Wallis et al., 2020). Lifestyle sport include for example surfing (Wallis et al., 2020) or various

adventure sport, such as mountain sport (González-Serrano et al., 2020). Lifestyle entrepreneurship in the sport context refers to often amateur athletes who pursue entrepreneurial activities to support themselves and create a time for their passion to practice lifestyle sport due to work-life balance (Jones et al., 2020). (González-Serrano et al., 2020) explored lifestyle entrepreneurship and corporate social responsibility in adventure sport. This theme is not often investigated by sport entrepreneurship literature and often overlaps with lifestyle entrepreneurship. As such, there are some research opportunities covering this topic.

2.4. DISCUSSION

The current literature review provided a holistic review of the current literature of sport entrepreneurship research. Building upon four previous bibliometric literature reviews on general sport entrepreneurship (Calabuig-Moreno et al., 2021; Hammerschmidt et al., 2023; González-Serrano et al., 2020; Pellegrini et al., 2020), the current review provides new insights into this research field. This review provides several contributions to the literature. First, the review analysed quantitatively the methodologies, stakeholders and geographic regions which were investigated by the articles. To our knowledge no previous literature review on sport entrepreneurship has provided such in depth insights into the methodologies used in this field or which stakeholders were investigated by the studies. Furthermore, we contribute to the literature by providing a taxonomy depicting the complexity of the sport entrepreneurship research and its various research streams and entrepreneurial sport stakeholders.

The literature review provides new insights into the taxonomy and structure of the sport entrepreneurship literature, which is a complex multidisciplinary research field. sport entrepreneurship taxonomy is illustrated in Figure 14. This review identified key themes in

the sport entrepreneurship literature, based on previous studies (González-Serrano et al., 2020; Pellegrini et al., 2020; Ratten, 2011). Institutional theory and economics are often used to investigate various aspects and topics within sport entrepreneurship research (Fahlén & Stenling, 2019). As such, institutions provide and framework for sport entrepreneurship (Abrutyn, 2018; Humphreys et al., 2012). Similarly, sport policy provides a framework for the sport ecosystem (Humphreys et al., 2012; Ratten, 2017, 2019) and sustainable entrepreneurship (Bellver et al., 2022; González-Serrano et al., 2020). sport policy also investigates aspects of professional and amateur sport affecting all stakeholders, such as sport leagues, clubs and teams, and organisations, associations and federations (McSweeney & Safai, 2020; Ratten, 2017).

The key sport entrepreneurship themes are general sport, sport firms, social entrepreneurship, education, gender and esports. As shown in the model, further each category splits into subtopics. sport split into athletes, sport organisation and sporting events. Athletes' topic covers career transition, athletes as entrepreneurs and coaches' entrepreneurs. Sport organisations, split into sport governing bodies and sport leagues, which further cover sport clubs and teams in the context of professional and amateur sport. Sporting events are divided into mega sporting events and grassroots events. eSports are similarly divided into eSports leagues and clubs and teams. Research on sport firms covers sport startups, which should include sport incubators and venture capital, whoever, research on these subtopics is still limited. Incubators play a supporting role in the entrepreneurial ecosystem however (Hayduk& Naraine, 2022), which is not yet investigated in the sport entrepreneurship literature. Furthermore, less research is done on SMEs in sport (Bratincevic & Smoljanovic, 2011) and family SMEs particularly (Ratten, 2020b). Social Innovation covers a wide range of subtopics, which includes corporate social responsibility (Miragaia et al., 2015). Social enterprises are divided into sport for development and peace (McSweeney, 2020) and sport

for social change (Richmond et al., 2022). There are three types of social enterprises: non-profits (Peachey et al., 2020), for-profits and hybrids (Svensson, 2017; Svensson, Andersson, & Faulk, 2020; Svensson & Seifried, 2017).

It was important to distinguish these categories due to the nature of the complexity of sport entrepreneurship research. Ponomarev et al. (2020) has investigated the issues with typology in sport, where in some cases researchers or the society at large make a distinction between professional sport, Olympic-level sport and mass or amateur sport. For the purpose of this review's taxonomy, professional and amateur sport were categorised separately, but as traditional sport in contrast to eSports, which is a different category. Esports refers to electronic sport, i.e., the professional video gaming industry (Wagner, 2006), and it is currently a billion-dollar industry (Scholz, 2019). In 2023, the International Olympic Committee created the first Olympic Esports Series, and the IOC appointed its first head of virtual sport (International Olympic Committee (2023), showing that esports is gaining legitimation in the sport world as a virtual sport equivalent. Wagner (2023) has defined esports as sporting activities which require the development of mental and physical capacities. Based on this definition, esports has components similar to traditional sport and can be investigated as such (Jenny et al., 2017). Pack et al. (2020) investigated why eSports have been included in the Olympic Games as a form of institutional entrepreneurship within sport, which were supposed to be held in Tokyo 2020 postponed due to COVID-19 pandemic.

There are different ways to portray the complexity of sport entrepreneurships. Another way to categorise this field, would be at different levels of involvement of sport stakeholders. Top down, starting with the society at large, the government, i.e., sport policy, then the various sport organisations alongside education, finishing with athletes at the individual level. There is a similar hierarchy within sport itself, starting at the top with sport

organisations, federations and associations, which govern sport, followed by sport leagues which comprise of various teams and clubs, with individual athletes at the bottom of the hierarchy. In categorization in Figure 2, one might suggest placing athletes under the sport category as they are indeed the essence of sport. However, athletes for the purpose of this review are seen as a separate entity from the entrepreneurial perspective, acting as entrepreneurs themselves, compared to sport organisations which engage in entrepreneurship as a precipitation of change or innovation. Moreover, as the literature shows, athletes engage in entrepreneurial activities while or after transitioning from their sport careers, where athletes' entrepreneurship is seen as a career transition process. Therefore, athletes in the proposed model are their own category, differentiating their entrepreneurial activity from that of sport organisations. Most research about athlete career transition examines the psychological and coping aspects of the transition. There is less research focussing on athlete career transition from a sport entrepreneurship perspective (Boyd et al., 2021; Kenny, 2015). Therefore, the purpose of this literature review is to identify the key authors and most influential studies in sport entrepreneurship, the main themes and topics that emerge and future research directions.

2.4.1. Entrepreneurial Orientation and Education

Significant number of studies within this field focus on entrepreneurial orientation (Núñez-Pomar et al., 2020), intentions (González-Serrano et al., 2018; Rodrigues et al., 2020), capacity (Hindle et al., 2021), skills (Dinning, 2017) and behaviour (Jones & Jones, 2014). Prevalent topic of analysis are sport science and management studies, where studies investigate psychological traits affecting entrepreneurial intentions (M. H. González-Serrano et al., 2021; Jones & Jones, 2014). A handful of authors showed that there is a relationship between higher education and entrepreneurial orientation. For example, Dinning (2017) and

Lara-Bocanegra et al. (2022) studied how university level students in sport management develop entrepreneurial orientation. In turn, Gonzalez-Serrano et al. (2018) measured sport science student's entrepreneurial intentions and perceived capabilities. Moreover, the authors also examined how education, such as entrepreneurial courses and their background environment affects intentions to start a business. The strongest predictor of entrepreneurial orientation in students are actually perceived capacities, where students believe they have the ability, knowledge and skills to successfully start a business.

2.4.2. SPORT POLICY

Sport policy is interconnected with entrepreneurship and innovation. The majority of the research on sport policy from an entrepreneurial perspective, show that sport policy affects the entrepreneurial and innovation activities in the sport sector. Creating innovative strategies and developing new managerial practices can lead to innovation in sport policy (Ratten and Ferreira, 2017). Nonetheless, the literature is still limited in understanding how innovative managerial practices can lead to new initiatives and innovation in sport policy. Economic factors affect policy changes, and in policy encourages innovative practices to be developed in sport policy and implemented by the government to increase entrepreneurship and innovation in this sector. In turn, entrepreneurship and innovation activities also shape sport policy framework, influencing each other (Pounder, 2019). Knowledge and dynamic capacities affect innovation and entrepreneurship. Building institutional capacity and developing favourable regulations and legislation promotes entrepreneurial activity and increases innovation. As such sport policy shapes the institutional environment which is policymakers should aim to create a favourable sport policy for sport organisations and startups. Gajda (2020) confirms that regulatory system and institutional environment shape commercial and innovation activities in sport. Therefore, it's important to further study how institutional and regulatory frameworks shape innovation (Pounder 2019; Ratten, 2011).

2.4.3. *Sport Startups and Firms*

Interestingly, sport entrepreneurship literature has not focused on sport startups and firms. The majority of current research investigating sport startups is theoretical in-nature. For example, Ratten has written multiple articles theoretically discussing sport startups (Ratten, 2020d, 2020b, 2020c, 2020a). Ratten defined sport entrepreneurship as innovativeness, risk taking, and proactiveness (Ratten 20210), however, entrepreneurship is also new venture creation. Only a handful of empirical studies have focused on sport-specific startups. Sport startups navigate complex institutional environment and learn how to use their scarce resources to ensure growth and survival (Hayduk & Walker, 2018). Kauppinen (2022) studied the effects of financial support and private equity investments on performance of new sport ventures. Hayduk and Walker (2021) studied effects of advertising on sales of sport SMEs. Whereas Ding and Chen (2020) examined the effects of innovation and R&D investments on sport firm survival and growth. These studies show the role of institutional factors, such as access to capital and funding affect sport startups, not only their creation but also their growth and survival.

2.4.4. *Social Innovation*

Sport are an integral part of culture and are used as a medium to create change and influence culture (Piercey, 2018; Ratten, 2018). There are to aspects to investigating sport and culture. One, sport has its own culture, the culture of sport; two, sport influence the general culture and is part of the larger cultural system within a country (Lüschen, 1967). The importance of sport entrepreneurship on culture is the formation of shared values and system beliefs within a culture. Sport Organisations, such as the IOC and FIFA, and similar institutions form and implement sport regulations, not only overseeing sport, but fostering sport development and

sport participation within the society. Since culture is an informal institutional factor, institutional theory is sometimes used to understand social innovation in sport (Svensson et al., 2022). Social innovation is about driving change and creating a difference. In a social context sport entrepreneurship refers to the creation of social value (Cherrier, 2018). Sport can be used as driver for social change and as a tool to build community and reach social goals (Ratten, 2014). For example, Olympic games are an opportunity for sport entrepreneurship and a platform for social change. Social innovation can serve as a multitude of benefits in sport, by creating social value, driving social change, promoting cultural development and serving as an equality tool. Sport entrepreneurship helps to create and build social networks and develop communities, since sport Organisations have close ties to communities (Citel, 2012).

There are several types of sport social innovation, grassroots innovations and sport development is on aspect of social innovation in sport (McSweeney et al., 2021; Richmond et al., 2022; Svensson et al., 2020). Bjärsholm (2017) reviewed the literature on social entrepreneurship in sport, identifying three main areas - social entrepreneurship within organisations, corporate social responsibility and the development of social networks and social capital. (Tjønndal, 2017) performed a review of sport innovation and identified five main types of sport innovation including social, technological, commercial, community-based and organisational. Corporate responsibility is another example of social innovation within corporations. González-Serrano et al. (2020) examined the connection between emerging lifestyle entrepreneurs and corporate social responsibility, and how this relates to athlete performance and willingness of operating their own ventures. Professional sport entrepreneurship can also be used for social change and many leagues and sport clubs engage in corporate responsibility (Ciletti, 2012). Actions taken by sport Organisations and governing bodies to promote and raise awareness surround social issues and setting such

standards for their respective business partners. A great example of social innovation in sport is the IOC's introduction of a new environmental policy, which was later made the third pillar of the Olympic movement (Cantelon & Letters, 2000). The United Nations (UN) have deemed sport as a way to promote health, drive community development, advance education and foster peace (Burke, 2017). Sport corporations and many athletes work to create social change through sport. Sport is used as a medium for various social issues and causes, such as to improve lives, promote gender equality, help disadvantaged youth or raise cancer awareness.

2.4.5. SUSTAINABILITY IN SPORT ENTREPRENEURSHIP

Sustainability is a current social issue with an increasing scholarly interest. Sustainability in entrepreneurship is the process of discovering and seizing opportunities to create benefits for the society, often by solving a social issue (Bellver et al., 2022; Khizar et al., 2021; Klewitz & Hansen, 2014). Sport entrepreneurship provides a tool to create social change and solve social issues through sport (Richmond et al., 2022). González-Serrano et al. (2020) performed a literature review on the position of sport entrepreneurships on sustainability, stating there is an increased interested in sustainability among sport academics and need for further research on this topic. Sustainability in sport entrepreneurship literature is an emerging subtopic and there some authors discussing the issues of sustainability in sport practice. For example, Swiss federations have started to develop environmental policies applicable to sport in an effort to contribute to the global sustainability efforts (Piller & Nagel, 2024). Likewise, Romanian sport industry has also started to develop and implement sustainable practices, encouraging sport entrepreneurs to foster sustainability in innovation (Dan, 2019). Moreover, Ting et al. (2022) discussed how sport entrepreneurship can achieve sustainable goals in the context of the pandemic. Xi et al. (2023) discussed sustainable innovation practices among

sport startups from a learning theory and behaviour theory perspectives. The authors showed that sport startup which develop sustainable innovation capacity have improved performance, suggesting that sustainable business practices are not only beneficial to the society but also generate positive firm performance. sport clubs and Organisations are also becoming more aware of the global sustainable drive, which goes hand in hand with economic sustainability and can even contribute to organization's survival (Escamilla-Fajardo et al., 2021). Sustainable entrepreneurship is increasing among the younger generations as well. Bellver et al. (2022) demonstrated how sport science students have sustainable entrepreneurial intentions, and capabilities of managing a sustainable business. As such, sustainability should be encouraged in sport science and management programs alongside entrepreneurship education. Sport entrepreneurship has the power to question social and institutional frameworks creating changes in social perceptions at the normative level, promoting gender equality in general and shifting gender expectations, beliefs, and cultural factors (Jennings & Brush 2013).

2.4.6. GENDER

There is some research about the gender dynamics in sport entrepreneurship literature. The majority studies women entrepreneurship in the sport sector, specifically. Women entrepreneurs face many barriers, nonetheless female athletes engage in entrepreneurial activities. For example, female athletes develop entrepreneurial capacities by building strong partnerships (Parris et al., 2022). It has been established in general entrepreneurship literature that socio-cultural factors, such as cultural norms, societal expectations, access to resources, and support networks affect women entrepreneurship. Noguera et al. (2013) showed that it's also true for women entrepreneurs in the sport sector, where socio-cultural norms matter and access to resources and networks is essential. Less studies have investigated the gender

comparison and varying differences in venture creation process between men and women in sport. Boden & Nucci (2000) demonstrated how access to funding, industry biases, networking opportunities, and societal expectations influence the survival of new ventures which differ between women and men. Most comparison research focusses on the gender difference in entrepreneurial intentions and orientation of sport science students. Entrepreneurial intentions depend on gender and also education (Da Costa et al., 2023; Gonzalez-Serrano et al., 2019; Megheirkouni et al., 2020).

Often the perception is that entrepreneurship is not an appropriate career choice for women. The higher the gender equality and favourable attitudes toward women, the more women engage in entrepreneurship (Elm et al. 2019). Institutionalization is gendered and thus there are barriers for women preventing them from participating in entrepreneurial activities at all institutional levels. Financial resources are often a barrier to women entrepreneurship and are necessary to start a business, lack of training and access to education and business development services, legal and regulatory barriers (Minniti & Arenius 2003). Family work-life balance and the societal perception inhibit women entrepreneurship due to family responsibilities and women rely more on family, husbands, and partners for support to grow their businesses. Thus, gender norms are prevalent at all institutional levels, formed through rules, regulation, education and social values and beliefs. Additionally, there is lack of research exploring the barriers different women stakeholders face, i.e., women in leadership, female athletes, and entrepreneurs (Parris et al., 2014; Ratten & Miragaia, 2020).

2.4.7. ATHLETES AS ENTREPRENEURS

Sport psychologists often study athlete's career transition following the end of their athletic career. Baillie & Danish (1992) identified the transition process, which varies for athletes depending on their age, identity, childhood, college participation. They found that the skills,

mindset, and attitude most desirable in athletes, such as self-esteem and dedication can hinder the transition process. Type of sport, gender and social, cultural, and economic factors influence athlete transition and the success (Wylleman et al., 2004). However, less studies have investigated athletes career choice as entrepreneurs. Steinbrink et al. (2019) found that athletes 'psychological characteristics have an effect on their entrepreneurial orientations and their future entrepreneurial ventures. Similarly, Dobson & McLuskie (2020) found that entrepreneurship among athletes depends on three factors including identity, behaviour, place from a performative entrepreneurship perspective. Often times athletes develop entrepreneurial skills alongside their athletic career, such as mindset, perseverance, risk taking, proactiveness, which are entrepreneurial skills (Kenny, 2015). Hindle et al. (2021) has studied how elite athletes develop entrepreneurial capacity during their sporting careers, and how can they convert their sport skills into entrepreneurial skills. The transition process is difficult and complicated; hence athletes should have access to programs and support networks which can help them go through the process of sport retirement. Literature stresses that education and entrepreneurial programs specifically developed for athletes are important allowing athletes gain entrepreneurial education. Such entrepreneurial education and learning programs help athletes develop the skills and tools that are required to start a business (Kenny, 2015; Kovačić et al., 2017). For example, European Union created an initiative which targets elite athletes and helps them navigate this difficult process of preparing them to enter the labour market (Reyes-Hernández et al., 2021). Universities and career centres create programs to provide support, education and develop entrepreneurial skills for athletes before they end their sporting careers.

2.5. CONCLUSIONS

2.5.1. IMPLICATIONS AND CONTRIBUTIONS

The primary contribution of this review is to provide a comprehensive analysis of the current state of sport entrepreneurship research. We build up on previous literature reviews in this field, providing a general overview and adding an in-depth thematical, methodological, stakeholder and sport analysis. This literature review has significant implications for the sport entrepreneurship research field and sport academics. First, we present a detailed taxonomy of sport entrepreneurship literature. Sport entrepreneurship literature is fragmented and complex covering many topics. We provide a comprehensive organization of the themes and topics within this field, categorised at multiple levels, based on various relationships and similarities. Second, we provide an in-depth analysis of methodologies used in the literature. The results shows all types of methodologies used to study this field and the specific techniques used for analysis. We show that sport entrepreneurship is widely studied through qualitative methods yet lacking in quantitative and mixed methodology. Common bibliometric software have limitations when it comes to analysing methodologies in a. literature review. We provide a foundation for future research for innovative methodological framework and encourage future research to use methodologies that are lagging in the literature. We aim to enrich the understanding of sport entrepreneurship and untangle its complexity with a multitude of stakeholders. By providing a broad understanding of the themes that constitute sport entrepreneurship we also identify the unexplored and lagging topics, which require further investigation. One of the contributions of this literature review was to identify research gaps and guide future research in this field.

2.5.2. *LIMITATIONS*

There are quite a few limitations to this review. First, the review only included articles in the Web of Science database. Another issue was that some articles were excluded due to inaccessibility of the articles, which were mostly articles Chinese published in Chinese journals, with abstracts in English. The keyword search also excluded articles if the authors did not include the sport, entrepreneurship, or any combination of these keywords. Articles examining specific sport, such as basketball or baseball in relation to sport entrepreneurship used the specific sport' name as the keyword instead of sport. Likewise, when searching gender disparity within the sport entrepreneurship literature some articles use gender, some women or female as the keywords. Thus, some relevant articles might have been omitted during the search process.

The categorization of the literature presented in this review also has its own limitations. Some articles could be placed in multiple categories simultaneously, for example, Moustakas and Kalina (2021) could be placed in the social entrepreneurship category and athlete's category. Various articles overlapped with sport entrepreneurship's various subtopics. Although the authors focused on accurately categorising each article based on merit, title, abstracts and original author keywords, nonetheless the results might be skewed more towards one category than another. However, this issue demonstrates that the literature of sport entrepreneurship is very complex, multifaceted and multidisciplinary, with overlapping themes and streams of research.

2.5.3. *FUTURE RESEARCH DIRECTIONS*

Based on the results we provide future recommendations and research directions. Some of the themes of sport entrepreneurship are still emerging, such as eSports from an entrepreneurial perspective. Esports is a new emerging field of sport entrepreneurship and is still in its

infancy as the esports industry tries to establish itself. Whereas others were overlooked and understudied, such as race in the context of sport entrepreneurship. To our knowledge only one study investigated race difference, as such future studies should investigate the race aspect of entrepreneurial activity in the sport sector. Similarly, more research is also required to explore cultural factors within sport, as only one article discussed the influence of immigration on entrepreneurship in sport (Ratten, 2022). Although sport entrepreneurship literature follows selected research themes and one of those favourites is gender with an increasing number of studies about female entrepreneurship in sport, gender remains a research gap. While gender remains a hot topic in sport entrepreneurship, no studies have investigated transgender sport entrepreneurship. With the current political debate about transgender athletes in sport, there is an emerging research field about transgender athletes. To date no research has been done about transgender entrepreneurship in general, nonetheless, in the sport context.

Interestingly, sport entrepreneurship research overlooks the sport venture creation and limited research has been done regarding sport startups. As there is limited research about sport startups, there is also a lack of research on the family business in sport. Only Ratten (2020b) did an exploratory paper about family firms in the sport sector. Furthermore, small and medium sized sport firms are understudied in this field. Moreover, there is no research investigating the role of incubators and accelerators in the sport startup ecosystem. (Hayduk and Naraine (2022) have discussed the supporting role of incubators and accelerators in the entrepreneurial ecosystem, yet less is known about their role in the sport context. In turn, social sport entrepreneurship seems to be a thriving area of research, yet there is a literature gap about hybrid and for-profit social sport enterprises. Most social entrepreneurship research focusses on sport non-profits, conversely, future research should focus on social innovation of non-social sport enterprises and for-profit sport enterprises. Relating to innovation,

Calabuig-Moreno et al. (2020) suggest technology as the future research direction for sport entrepreneurship. Technological innovation in sport entrepreneurship is a topic worth investigating, especially with the increasing number of sport technology startups. Table 2.26 provides a summary of potential future research directions in sport entrepreneurship. While the field of sport entrepreneurship continues to develop there are still unexplored areas of research, which should focus on a multidisciplinary approach to untangle the complexity of sport entrepreneurship.

Moreover, our results demonstrate that qualitative methodology is the most common. As such we would encourage future research to use a quantitative approach. For example, regressions are the most used quantitative analysis technique, yet only 1 percent of articles use complex regression types, such as panel data. Thus, we encourage future research to use panel data to provide a longitudinal and cross-sectional analysis of factors affecting sport entrepreneurship. Moreover, research could examine the difference in entrepreneurial activity between various sport, identifying sport-specific challenges to entrepreneurship. Some could focus on the effects of sport startups and technologies affecting sport. Finally, investigating factors that affect the startup, growth and survival of sport startups and SMEs, family sport SMEs. How sport startup develop dynamic capabilities, and what are the drivers of sport startup and firm performance.

In conclusion the sport entrepreneurship literature has been emerging over the past decade. There seems to be a pattern emerging when attempting to define what is sport entrepreneurship, there is lack of consensus and different researchers define sport entrepreneurship towards their specific subject of interest. Future research might potentially investigate further and concur a definition of sport entrepreneurship. Similarly, the current literature is somewhat fragmented in this aspect and future research should focus on developing a theory framework as there is a need for a better conceptualization of sport

entrepreneurship. The comprehensive search with various combinations of topics and keywords allowed for a broader analysis of a multidisciplinary interaction between sport entrepreneurships research and institutions, professional sport organisations, education, public policy, social innovation, athletes and gender.

Table 2.26. Summary of Future Research Directions in Sport Entrepreneurship.

Topic	Future Research Ideas and Literature Gaps
Sport Entrepreneurship	- Geographical, regional, national comparison of sport entrepreneurship - Longitudinal and cross-sectional analysis - Sport Specific analysis of entrepreneurial activity within various sport - Comparison of entrepreneurial activity between different sport
Sport Startup and SMEs	- Factors affecting the startup, growth and survival of sport startups - Family SMEs in sport - How sport startups develop dynamic capabilities - Factors affecting sport startup performance - "Unicorns" in sport - Policies affecting sport startups and SMEs
Institutional Economics	- Legislative comparison of facilitating entrepreneurship within sport Organisations - Sport policy entrepreneurship as a tool for institutional change - Organization change in sport Organisations using entrepreneurship
Innovation	- Conceptualization of innovation in sport entrepreneurship research - Adaptation of sport Organisations during a cultural values shift - Social entrepreneurship within sport Organisations and within different organizational structure
Social Entrepreneurship	- Social entrepreneurship within a sport context/ how sport shape social context - geographical comparison - Institutional actors affecting Corporate social responsibility in sport entrepreneurship - Relationship between social impact and organizational performance
Athletes Career Transition	- Entrepreneurial skills influence sport performance - Institutional factors affecting athletes to become entrepreneurs - How does athletic involvement affect entrepreneurial behaviour - How competitive youth sport affect entrepreneurial behaviour - Cross-country comparison between sport participation and entrepreneurial activity - What are the moderating roles of culture and fandom in entrepreneurship - in different countries and continents to assess a moderating role of culture and its implications for entrepreneurial entry by athletes.

Gender in sport Entrepreneurship	- Gender diversity in sport entrepreneurship - Women in Leadership positions - Different barriers for female sport managers, athletes, and entrepreneurs - Women's professional clubs' entrepreneurship as a surviving tool in a men dominated industry - Female sport in age of COVID-19 and its impact - Transgender entrepreneurship in sport
Sustainable Sport	- Factors affecting sustainable sport events - How the sustainable goals are implemented by different sport stakeholders - What are the sport policies that facilitate sustainability in sport - Sustainability in sport startups - How entrepreneurs consider social, environmental, and economic impacts
COVID-19	- National difference in sport Organisations' adaptation to COVID-19 - Legislative, regulatory and policy adaptations country comparison - Technological innovation as an adaptation to COVID-19 - Sport landscape and COVID-19 effect on sport fans - Social value created during COVID-19 - Dynamic capabilities developed during COVID-19 - The effects of COVID-19 on sport entrepreneurship from an empirical perspective
Technological Innovation	- Digital transformation in sport companies - Digitalization of sporting events - Social impact of technology on sport - How technological innovation impacts sport managers and Organisations and stakeholders

CHAPTER THREE

INSTITUTIONAL DETERMINANTS OF SPORT ENTREPRENEURSHIP

3.1. INTRODUCTION

Sport-based entrepreneurship is an emerging field of research with increasing interest over the past few years. Most sport entrepreneurship research focusses on qualitative analysis of entrepreneurial activity within sport organisations, and it is lacking in quantitative analysis among sport startups. To understand sport entrepreneurship, we need to investigate the institutions of sport, as institutions govern sport, and institutional factors influence the behaviour of sport stakeholders at all levels, including sport governing bodies, sport organisations, clubs, teams, and athletes (Borgers et al., 2018; Humphreys et al., 2012). The institutional conceptual framework provides a holistic understanding of entrepreneurial activity within sport and links entrepreneurship, sport and economic growth (Ratten, 2011). Examining sport entrepreneurship and its driving factors within the sport industry is essential for economic growth and entrepreneurial activity in sport. Therefore, this study examines institutional determinants of sport entrepreneurship, using institutional theory as a theoretical framework to analyse formal and informal institutional factors that influence entrepreneurial activity in sport.

The sport industry contributes to economic growth, according to the European Union sport-related GDP contributes 2.12% to the total European GDP (European Commission, 2018). The sport industry generates economic growth in various ways, for example, by creating new products and services, developing new technologies, through sport participation and competition in leagues and clubs, sport consumption, sporting events, and athletes' entrepreneurial activities (Ratten, 2018). From an economic perspective, the sport industry analyses the performance of firms producing sport goods, providing sport services, and the economic activity relating to sport mega-events (Ciletti, 2012). The European Commission's working group developed "The Vilnius definition of sport" (European Commission, 2018; SportEconAustria, 2007). The Vilnius definition incorporates the operation of sporting

facilities, clubs, arenas, and stadiums and other sporting activities such as event organisation and promotion; the manufacture of sport-related goods and services; publishing, sport media broadcasting; legal, financial, and public services related to sport. Therefore, for this research, sport firms encompass all economic activity relating to sport, including manufacturing sporting goods, operating sporting facilities, sport media and marketing firms, and employment in sport (Sandy, 2017; European Commission, 2021).

Entrepreneurship promotes economic growth within the institutional context (North, 1990, 2005). Institutional theory links entrepreneurship, sport and economic growth through institutions and allows the investigation of sport entrepreneurship incorporating economic rules and social norms (Wright & Zammuto, 2013). The institutional environment consists of institutional factors that shape businesses, organisations, cultures and societies and their behaviour and outcomes (Urbano et al., 2019a). Institutions govern sport, and institutional factors influence the behaviour of sport stakeholders at all levels, including sport governing bodies, sport organisations, clubs, teams and athletes. Ratten (2011) provides examples of institutional entrepreneurial activity in sport among the top governing bodies, leagues, sport clubs, and university athletic programs. Institutional dynamics change at each level of sport systems and influence a country's sport organisation structure (Hallmann & Petry, 2013). The institutional conceptual framework provides a holistic understanding of entrepreneurial activity within sport, sport policy and participation (Borgers et al., 2018; Humphreys et al., 2012; Ratten, 2011). Examining sport entrepreneurship and its driving factors within the sport industry is essential for economic growth and the sport entrepreneurship ecosystem, including sport policymakers, sport governing bodies and organisations and, in particular, sport startups. There is a need to investigate sport entrepreneurship at the institutional level, the institutional determinants, and how institutional factors foster entrepreneurial activity in

sport. The main contribution of this study is to provide institutional analysis, which institutional factors affect sport enterprises.

It has been demonstrated by the general entrepreneurship research that institutional factors shape the environment in which startups and firms operate, by either encouraging entrepreneurial activity or inhibiting it (Urbano et al., 2019a). Institutions are fundamental drivers of change at each level, individual, community, and society; they govern the interaction between the economic, political, and social spheres (Urbano & Alvarez, 2014). Political and economic structure shapes the government's policies, subsequently affecting entrepreneurship (North, 2005). Government effectiveness and political stability (Samarasinghe, 2018), institutional factors (Kurul &Yalta, 2017), and corruption influence economic growth and entrepreneurship (Aparicio et al., 2016; Urbano & Alvarez, 2014). There is a link between governance and economic growth, which is stronger in developed countries, where law, control for corruption, and government accountability influence economic development (Zhuo, 2021). A competent government is known to strengthen economic growth, where the effectiveness of governance and political stability are significant contributors (Maune, 2017). Additionally, to politico-economic factors, Urbano and Alvarez (2014) examine the institutional dimensions at the cognitive level, where individual perceptions affect entrepreneurial activity.

The ability to understand opportunities and undertake an entrepreneurial venture is highly affected by the perception of one’s potential, skills and knowledge. The research is deficient on the topic of institutional conception in sport entrepreneurship. A small quantity of articles examine entrepreneurship in professional sport, from an institutional perspective. Applying an institutional theory as a framework to study sport management Washington and Peterson (2011) suggest the use of institutional theory to study institutional change and organisational dynamics in the context of sport. From an institutional perspective, Fahlén and

Stenling (2019) were able to conceptualise management within sport organisations, where this institutional context influences the commercialisation and professionalisation of sport organisations. Moreover, institutional pluralism affects sport entrepreneurship in the case of establishing a new professional rugby league in the United States (Nite et al., 2020). Andersen & Ronglan (2015) studied Scandinavian elite sport systems and organisations using an institutional perspective.

Most studies using institutional theory in sport investigate organisational and institutional change, for example, to initiate organisational change and deinstitutionalise a sport club (Gilmore & Sillince, 2014). A form of entrepreneurship is institutional change, where formal and informal institutional factors influence the regulations of sport leagues using the example of Major League Baseball in the United States (Chacar et al., 2018). The creation of sport leagues is a form of sport entrepreneurship, often studied within the institutional context. Nite et al. (2019) explored the institutional obstacles encountered during the formation of the United States' NCAA (National Collegiate Athletic Association). A different study identified economic factors driving business growth in the English Premier League (Faghih & Javanmardi, 2014). Another form of entrepreneurial activity in sport is the franchise model in professional sport leagues. For example, Mansfield and Killick (2012) studied the British professional women's netball league franchise. The authors showed how the US collegiate sport organisation created institutional boundaries and established institutional dominance immune to litigation, resistant to adapting to changes over the years.

Literature indicates that entrepreneurial skills and cultural, technological, environmental, economic and political factors influence the creation of sport firms (Azimzadeh et al., 2013). However, the literature still lacks an investigation of factors affecting sport firms. There is a need to investigate sport startups using an institutional approach at a country level alongside socioeconomic development.

3.2. THEORETICAL FRAMEWORK

North (1990, 2005) explained how institutional theory considers the context and environment that either stimulates or inhibits entrepreneurial activity and promotes economic growth. Institutions consist of informal (culture, social norms, values, beliefs) and formal factors (rules, regulations, laws, procedures) (Veciana & Urbano, 2008). Scott (2007) added a cultural cognitive dimension, the individual level between formal rules and informal social norms. The added dimension includes the psychological factor, which involves more self-belief and opportunity perception, skill and capacity (Urbano & Alvarez, 2014). The entrepreneurial environment comprises all three dimensions that govern organisations and functions at multiple levels: local, regional, national and international (Bruton et al., 2010). Thus, institutional factors guide the entrepreneurial process and shape entrepreneurial activity, such as initiating engagement across markets, countries, and economies (Veciana & Urbano, 2008). Alongside economics, institutions explain the interplay between social, cultural, political and individual forces affecting entrepreneurship (Urbano & Alvarez, 2014). Institutions lead the process that governs the economic behaviour and interaction between individuals, firms, organisations, associations, governments, communities, and society (North, 1990; Urbano & Alvarez, 2014).

Institutional factors influence the economic measures that shape economic growth, including GDP, employment, government expenditure, and market regulations (Urbano & Alvarez, 2014). Economic growth and entrepreneurship are influenced by corruption (Aparicio et al., 2016; Urbano et al., 2019a), government effectiveness and political stability (Samarasinghe, 2018). The support of the government is compulsory in order to create a conducive environment for firm creation. The impact on entrepreneurship and subsequent economic growth is significant, where the government plays a facilitating role in between

(Saberi & Hamdan, 2019). The government can promote entrepreneurship by providing financial aid and funding, creating entrepreneurial programs and implementing policy changes beneficial for entrepreneurs (Aparicio et al., 2016). Thus, policymakers should be encouraged to support startups and nascent firms, as the literature shows an apparent positive effect of governmental support on entrepreneurial activity. The higher the government support, the higher the entrepreneurial activity, which results in a higher number of new firms (Levie & Autio, 2008; Saberi & Hamdan, 2019).

The political environment, such as bureaucracy and corruption, impairs entrepreneurship and influences informal factors. High corruption prevents entrepreneurs from starting firms, whereas low levels of corruption are associated with higher entrepreneurial rates (Aparicio et al., 2016; Smallbone & Welter, 2008; Urbano et al., 2019a). The perception of corruption also harms entrepreneurship; as such, corruption as an informal factor demonstrates the perception of how corrupt the government is (Tonoyan, 2005). Corruption is prevalent in sport, affects economic output, and leads to lower entrepreneurial rates (Gorse & Chadwick, 2010). In sport, fairness and trust in the competitive spirit depend on sport governance and control of corruption (Gorse & Chadwick, 2010). Corruption in sport creates economic, social, cultural, and competitive costs (Maennig, 2005).

To understand sport entrepreneurship, we need to investigate the economics of institutions in sport, examining sport organisations governed by regulations, policies and laws (Borgers et al., 2018; Humphreys et al., 2012; Ratten, 2010). The institutional environment determines the actions of organisations and their policies (Brousseau & Glachant, 2008). Studying the institutional environment of sport organisations allows us to investigate how the norms and regulations affect their function and how their actions, in turn, shape the environment they operate in. Different institutional factors are conducive to sport entrepreneurship, both internal and external. External factors include local government, other

sport clubs, and sponsors, whereas internal factors include club members, management, administrators, and leaders (Fahlén & Stenling, 2019). The regulatory purpose of institutions is to form rules, laws, and policies and monitor the behaviour of organisations. In contrast, the normative role of institutions serves as a moral guide, setting values and beliefs shared via culture (Urbano & Alvarez, 2014). Through the cognitive dimension, institutions disseminate knowledge and promote learning within society. Culture, beliefs and social values encourage entrepreneurial behaviour (Turró et al., 2014) and promote economic growth (Veciana & Urbano, 2008).

Strengthening the cooperation between private and public sectors within sport positively affects the creation of sport firms (Borgers et al., 2018; Ratten, 2010). A historical analysis of the evolution of Major League Baseball over the years showed that institutional change occurs through institutional entrepreneurship (Sherer, 2017). Similarly, historical sport events precipitated formal or informal institutional change in American Baseball (Chacar et al., 2018). The change type depends on the political, economic, social and institutional climates (Panahi & Yektayar, 2016). Formal institutional change occurs first, followed by informal. Hence, regulatory change is driven by necessity, leading to a shift in beliefs supporting the new regulations (Chacar et al., 2018). Informal change, i.e., change in values and beliefs, is often driven by social change and shifting political winds, which can lead to a law change. Aparicio et al. (2016) pointed out that informal factors crucially influence entrepreneurship, more than formal factors. Formal and informal, such as cognitive institutions interact with each other and correlate with other institutional factors (Escandon-Barbosa et al., 2019).

The effect of countries' economic development on entrepreneurial activity has been emphasised by various studies (Altin et al., 2017; Mickiewicz et al., 2021; Poupaux & Andreff, 2007).These studies examine the differences in entrepreneurial activity between

different economies and countries. Economic development affects institutional dimensions in sport. The stronger the governance, the stronger the formal sport institutions become (Poupaux & Andreff, 2007). More developed economies and governance lead to more substantial and established formal institutions. Humphreys et al. (2012) have analysed institutional factors concerning sport policy and participation from an international perspective, finding that institutional characteristics and economic factors such as GDP, economic freedom and labour force correlate and drive sport participation. Based on the previous literature, institutional factors influence sport entrepreneurship with economic consequences and broader societal implications.

3.2.1. FORMAL FACTORS

Government support is a formal factor supporting entrepreneurship through public policy (Saberi & Hamdan, 2019). In entrepreneurship business associations and government support play an important role in creating an institutional environment for collaboration between stakeholders within a sector (Zheng & Chen, 2016). The government can promote entrepreneurship in various ways, such as providing financial aid and funding, organising entrepreneurial projects and implementing beneficial policy changes for entrepreneurs (Aparicio et al., 2016). Support in the form of loans and grants positively affects firm startup and subsequent early growth. Government programs are a funding source for firm startups, which is more favourable than equity capital (Elston & Audretsch, 2011). However, that study investigated high-technology sport startups. The literature is still somewhat limited to support if the same is true for other types of sport startups. For example, Songling et al. (2018) showed that the role of government support, both financial and non-financial, affects firms performance in a positive way. Political structures interplay with entrepreneurship, and the high involvement of politicised civil services, legal structures, and public policy hinder

entrepreneurial intentions and discourage businesses from starting (Tonoyan, 2005). The government can give public aid to political supporters and withhold it from entrepreneurs with opposite political views (Johnson & Kaufmann, 2001).

Sport depends on public programs and funding, but with the right government investment sport can stimulate economic development (Faghih & Javanmardi, 2014). Although there is very little sport-specific research, Ding & Chen (2022) point out that formal factors such as government subsidies and policy support have a positive effect on the development of sport firms and promote growth. Chowdhury et al. (2019) reinforced that for the purpose of increasing entrepreneurial activity and promoting economic growth government support and favourable policies towards entrepreneurship are crucial. Financial and non-financial support positively affects firm performance and creates sustainable competitive conditions for new firms to grow and flourish (Songling et al., 2018). Thus, policymakers should be inspired to support startups and nascent firms, as the literature confirms the governmental support's positive effect on entrepreneurial activity.
Hence, there is a strong connection between the three units: the stronger the government support, the higher the entrepreneurial activity, which leads to a higher number of new firms (Levie & Autio, 2008; Saberi & Hamdan, 2019). Therefore, based on the studies examining the interrelation between government support and entrepreneurship, this research hypothesises that sport government support positively correlates with sport startups.

Hypothesis 1: Government Support is positively correlated with sport startups.

3.2.2. INFORMAL FACTORS

Informal factors consist of culture, social norms, and perceptions and decision-making at the individual level (Aparicio et al., 2016). Entrepreneurial skills, knowledge and attitudes affect entrepreneurs' intentions and can either promote or hinder the creation of new businesses.

The political environment influences informal factors, such as bureaucracy and corruption (Urbano et al., 2019b). Many studies show corruption and bureaucracy hurt entrepreneurship (Johnson, 1999; Smallbone & Welter, 2008). A literature review by Urbano et al. (2019a) showed that corruption is crucial to entrepreneurship research. Several studies showed that corruption and high bureaucratic barriers prevent entrepreneurship and entrepreneurial activity (Çule & Fulton, 2005). Johnson & Kaufmann (2001) revealed that the economic output of firms is affected by corruption. The perception of corruption also harms entrepreneurship, such as corruption (Tonoya, 2005). Opportunity perception has been identified as one of the informal factors promoting entrepreneurial activity, whereas corruption decreases entrepreneurial intentions (Veciana & Urbano, 2008).

Corruption as an informal factor demonstrates the perception of how corrupt the government and the entrepreneurial environment are, which diminishes entrepreneurial intentions (Tonoyan, 2005). Corruption is inversely correlated with entrepreneurship. High corruption prevents entrepreneurs from starting firms, whereas low levels of corruption are associated with higher entrepreneurial rates (Urbano & Alvarez, 2014). In economies where corruption and bureaucracy remain high, creating a barrier to entrepreneurship, these factors result in decreased economic growth (Johnson & Kaufmann, 2001). Similarly, corruption is also prevalent in sport (Gorse & Chadwick, 2010), affects economic output, and leads to lower entrepreneurial rates. The perception of fair competition, i.e., corruption-free, underpins the integrity of sport (Maennig, 2005). Smallbone & Welter (2008) emphasised that trust in entrepreneurship (as in sport) is crucial to efficient economies (competitions), constricting or dilating the level of entrepreneurial (competitive) growth and contributing to economic development. Perception of corruption has been shown to inhibit economic growth by creating a negative institutional environment, leading to limited and ineffective

entrepreneurial activity. Therefore, this study hypothesises that the perception of corruption negatively affects the sport startups.

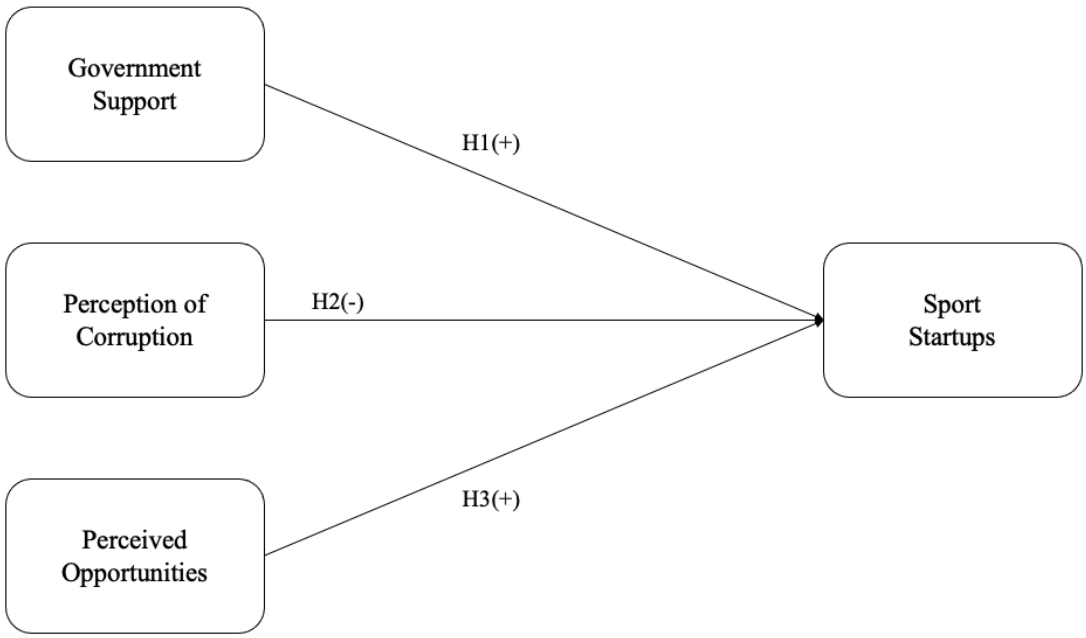
Hypothesis 2: Perception of Corruption is negatively correlated with sport startups. Political and economic systems go hand-in-hand and directly affect the market, affecting how entrepreneurs perceive opportunities (North, 1990). Ratten (2011) states that entrepreneurship is opportunity recognition, creation, and exploitation. The perception and recognition of opportunities are linked to increased entrepreneurial activity (Urbano & Alvarez, 2014). As seen in the example of sport teams' diversification of revenue stream, sport organisations appear to be highly effective in perceiving new opportunities and exploiting them. However, there is a lack of research on the connection between perceived opportunities and the subsequent creation of firms in sport. Many authors have established that opportunity perception is a crucial driving force for entrepreneurial activity (Renko et al., 2012; Urbano & Alvarez, 2014). Edelman and Yli-Renko (2010) demonstrated that opportunity perception significantly correlates with subsequent business startups.

Furthermore, they found that opportunity perception is subjective to individuals and leads to entrepreneurial action through opportunity creation, where cognitive process and social environment and perceptions play a role. In regard to sport entrepreneurship, the literature reveals that recognised opportunities enrich entrepreneurial intentions (González-Serrano et al., 2017; Ratten, 2018; Ratten & Ferreira, 2017). Other than perceived opportunities, multiple factors play an important role in creating a firm, such as favourable market conditions, low entry restrictions and regulatory quality. They are the government's policies and regulations that encourage development in the private sector (Renko et al., 2012). Urbano and Alvarez (2014) showed that the perception and recognition of opportunities increase entrepreneurial activity. However, there literature lacks to provide a clear link between perceived opportunities and the subsequent creation of firms in a sport

context. Sport entrepreneurship literature shows that perceived opportunities increase entrepreneurial intentions (González-Serrano et al., 2017; Ratten, 2018; Ratten & Ferreira, 2017). Based on previous research on perceived opportunities, it is hypothesised that perceived opportunities might also positively affect sport firm creation.

Hypothesis 3: Perceived opportunities are positively correlated with sport startups.

Figure 3.1. Conceptual model of sport startups and institutional factors.



3.3. METHODS

3.3.1. VARIABLES

This research uses a quantitative analysis to examine institutional factors that influence sport entrepreneurship. Table 1 provides the full description of the variables. Most research on

entrepreneurship uses Total Entrepreneurial Activity (TEA) as the dependent variable to investigate the effects of institutional factors on entrepreneurship. To investigate sport entrepreneurship, for this research, the number of sport startup firms in a given year serves as a proxy for sport entrepreneurship, analogous to total entrepreneurial activity. Independent variables include informal factors, Corruption Perception and Perceived Opportunities. Formal institutional factors include government support. As controls, Government Effectiveness and Political Instability were used to control economic development and political climate. We used Market Entry Regulations and Sport Employment to control the market environment.

3.3.2. DATA COLLECTION

The study uses secondary data from sources including Global Entrepreneurship Monitor (GEM), EuroStat (European Commission), World Development Indicator (WDI) and World Governance Indicator (WGI). All the data sources are shown in Appendix 1.1. The study used a mixed data source, extending the scope of the research. Lohr and Raghunathan (2017) suggested combining multiple data sources is beneficial and sparks innovative research. GEM is the most common database and a gold standard for entrepreneurship (Amorós, Bosma, & Levie, 2013). Sport-related variables were taken from EuroStat, which is a European statistical database. To the authors' knowledge, there has not yet been a study that uses EuroStat sport data to investigate sport entrepreneurship. For example, Dvouletý (2018) and Marcotte (2013) used EuroStat data to measure factors affecting entrepreneurship. Some researchers use the EuroStat database to study country-level entrepreneurship. However, only a few research articles have used sport EuroStat data previously to study sport entrepreneurship (Gonzalez-Serrano et al., 2021). In general entrepreneurship research, WDI and WGI are often used to study institutional factors affecting entrepreneurship with an

economic context (Aparicio et al., 2016; Urbano et al., 2019a). All data from the mentioned sources were combined into one single dataset. The data included 32 European Union countries, due to missing values, only 28 countries were included. Appendix 2 lists all the countries included in the analysis. The data samples were taken for the years 2004-2021.

3.3.3. ANALYSIS

The regression model is often used to examine economic and institutional factors and to establish the relationship between entrepreneurship and institutional factors (González-Serrano et al., 2021; Panahi & Yektayar, 2016; Urbano & Alvarez, 2014). Some sport entrepreneurship researchers have used regression analysis (Escamilla-Fajardo et al., 2019; Hayduk & Walker, 2018). Radaelli et al. (2018) used a longitudinal panel regression to examine the relationship between entrepreneurship and human capital in professional sport leagues. As the data set spans over seven years and is in 28 countries, to examine the relationship between institutional factors that influence sport startup creation a panel data regression was used. For the statistical analysis, STATA software was used. Firstly, scatter plots were generated to assess the data. Four models were generated to predict the dependent variable based on the variable's linearity. Model 1 uses a panel data regression with random effects (Table 3.4.). Subsequent models investigate the interaction between the factors, shown in Models 2-4 (Table 3.4.). To demonstrate the strength of the results, a robustness check was performed using fixed effects (Appendix 3.3), the population of active sport firms in lieu of the dependent variable (Appendix 3.4), fear of failure in lieu of perceived opportunities (Appendix 3.5), and maximum likelihood estimation (Appendix 3.6). Interaction graphs for each of the interactions included in the model are shown in Appendix 3.3, Appendix 3.4. and Appendix 4.4.

Table 3.1. Description of the variables.

Variables	Proxy	Description	Source
Dependent Variable	Sport Startups (SS)	The creation of a combination of production factors with the restriction that no other firms are involved in the event occurs when a firm starts from scratch and starts activity. Startups do not include entries into the population due to mergers, break-ups, split offs or restructuring of a set of firms, nor a sub-population resulting only from a change of activity. This event is not considered a startup if a dormant unit is reactivated within two years.	EuroStat
Formal Factor	Government Entrepreneurship Support Policy (GS)	Governmental support and policies - The extent to which public policies support entrepreneurship.	GEM
Informal Factors	Corruption Perception (COR)	Perceptions of the extent to which public power is exercised for private gain, including petty and grand forms of corruption and "capture" of the state by elites and private interests. Estimate gives the country's score on the aggregate indicator in units of standard normal distribution, i.e., ranging from approximately -2.5 to 2.5.	WGI
	Perceived Opportunities Rate (PO)	Percentage of 18-64 population (individuals involved in any stage of entrepreneurial activity excluded) who see good opportunities to start a firm in the area where they live.	GEM
Control Variable	Gross Domestic Product (GDP)	The sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. Data are in current U.S. dollars.	WDI
	Government Effectiveness	Perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies. Estimate gives the country's score on the aggregate indicator in units of standard normal distribution, i.e., ranging from approximately -2.5 to 2.5.	WGI
	Political Instability	Political Stability and Absence of Violence/Terrorism measures perceptions of the likelihood of political instability and/or politically motivated violence, including terrorism. Estimate gives the country's score on the aggregate indicator in units of standard normal distribution, i.e., ranging from approximately -2.5 to 2.5.	WGI
	Internal Market Entry Regulation (MER)	The extent to which new firms are free to enter existing markets.	GEM
	Sport Employment	A percentage of total employment in the sport sector. To measure the employment in sport, based on the Vilnius definition as covering the essential sport activities.	EuroStat
Robustness Check	Fear of Failure (FOF)	Percentage of individuals who fear of failure prevents them from starting a new business.	GEM

3.4. RESULTS

The correlation matrix with descriptive statistics is shown in Table 2, and the regression analysis summary is presented in Table 3, with the interaction effect between the independent variables. The table includes four models: all variables (model 1), interaction between government support and corruption (model 2), interaction between government support and perceived opportunities (model 3), and interaction between perceived opportunities and corruption (model 4).

The four robustness tests showed the validity of the models, included in the Appendix 3.5 through to 3.8. Alternative measure for informal factor included fear of failure, as substitute for perceived opportunities. Perceived capabilities might also serve as an alternative informal factor. Relating to formal factors, control for corruption could serve as an alternative to corruption perception variable. Moreover, to substitute government support, government programs from the GEM database could also serve as an alternative measure for informal factors. Relating to the size effect the main estimation and the robustness tests had 200 observations. Often 200 observations is regarded as the minimum number of observations for a significant sample size and a strong confidence level (Cohen, 2013). The Cohen's coefficient indicates strong sample size ($f^2 = 1.7$), enough to establish a strong relationship between the independent variables on sport startups. This shows that the model allows to explain the variances occurring in the analysis. Additionally, Appendices 3.3. through to 3.5. depict the interaction effect of intendent variables on sport startups, the graphs include interactions between Government Support and Perceived Corruption, Perceived Opportunities and Perceived Corruption, and Perceived Opportunities and Government Support.

Table 3.2. Descriptive statistics.

Variable	Observations	Mean	Std. Dev.	Min.	Max.
Ln Sport Startups	395	1401.23	1918.57	8.00	14988.
Ln Corruption Perception	525	1.06	0.86	-0.63	2.46
Ln Perceived Opportunities	384	37.26	15.55	2.85	87.28
Ln Government Support	358	4.33	0.79	2.50	6.60
GDP	525	6.22E+11	9.26E+11	9.41E+09	4.22E+
Ln Government Effectiveness	525	1.11	0.69	-1.04	2.35
Ln Political Instability	525	0.71	0.46	-0.82	1.62
Ln Market Entry Regulations	358	4.54	0.64	3.03	6.48
Ln Sport Employment	303	49985.77	85399.86	654.00	503257

Table 3.3. Correlation matrix.

	Variable	1	2	3	4	5	6	7	8
1	Ln Sport Startups	1							
2	Ln Corruption Perception	0.09*	1						
3	Ln Perceived Opportunities	-0.12*	0.63*	1					
4	Ln Government Support	0.25*	0.69*	0.47*	1				
5	GDP	0.78*	0.28*	-0.02e	0.22*	1			
6	Ln Government Effectiveness	0.08*	0.96*	0.60e	0.71*	0.22*	1		
7	Ln Political Instability	-0.46*	0.55*	0.49*	0.31*	-0.31*	0.61*	1	
8	Ln Market Entry Regulations	-0.10e	0.54*	0.50*	0.56*	0.06*	0.55*	0.34*	1
9	Ln Sport Employment	0.63*	0.27*	0.01e	0.12*	0.79*	0.22*	-0.38*	0.12

* $p < 0.1$.

Table 3.4. Estimating sport startups and institutional factors.

Eq. (1). Dep. variable SS	(1) Ln SS All Variables (GLS)	(2) Ln SS Interaction 1 (GLS)	(3) Ln SS Interaction 3 (GLS)	(4) Ln SS Interaction 4 (GLS)
Formal Factors				
Ln Government Support (H1)	401.28***	344.35*	710.59***	383.15***
	(111.97)	(196.73)	(212.04)	(111.74)
Informal Factors				
Ln Corruption Perception (H2)	-1163.35***	-1357.66**	-1214.16***	-814.19**
	(294.28)	(649.11)	(294.88)	(367.41)
Ln Perceived Opportunities (H3)	2.82	2.84	40.83*	13.81
	(5.46)	(5.47)	(22.76)	(8.89)
Control Variables				
GDP	0.01**	0.01**	0.01**	0.01**
	(0.01)	(0.01)	(0.01)	(0.01)
Ln Government	859.26*	850.42*	946.19**	925.60**
Effectiveness	(455.34)	(445.81)	(446.14)	(445.76)
Ln Political Instability	-422.72	-414.12	-492.21	-468.87
	(309.19)	(309.62)	(310.22)	(309.33)
Ln Market Entry	-262.06	-257.83*	-255.72*	-263.51*
Regulations	(144.20)	(144.42)	(143.21)	(143.44)
Ln Sport Employment	0.01***	0.01***	0.01***	0.01***
	(0.01)	(0.01)	(0.01)	(0.01)
Interactions				
GS*COR		46.54		
		(136.78)		
PO*GS			-8.90*	
			(5.17)	
PO*COR				-10.21
				(6.50)
Constant	376.37	574.14	-891.29	129.61
	(669.08)	(863.60)	(1000.92)	(689.37)
N	200	200	200	200
R^2	0.63	0.62	0.62	0.62
Chi^2	10.46	24.47	6.33	6.95
Prob > chi^2	0.00	0.00	0.00	0.00

Note: Heteroskedasticity-corrected standard errors are shown in parentheses.

*** $p < 0.01$.

** $p < 0.05$.

* $p < 0.10$.

The primary finding that this study emphasises is the significant influence of government support and corruption on sport startups (Table 4.). There is a difference between formal and informal factors and how they interact. Formal factors are affected by countries' political systems, and there is a difference in how government support and perceived opportunities affect sport entrepreneurship. Government support is positively correlated with sport entrepreneurship with a strong significance. Corruption perception has a strong negative effect on sport entrepreneurship, meaning the higher the perceptions of corruption, the lower the sport entrepreneurship. Corruption is not correlated with government support or perceived opportunities, meaning that perceptions of corruption are a barrier to starting a business in sport. Perceived opportunities have a positive but insignificant relationship with sport startups and are not a significant predictor of sport entrepreneurship. Informal factors are independent of the economic and political environment and the entrepreneur's beliefs and intentions.

Relating to hypothesis H1 is supported, government support is positively correlated with sport entrepreneurship with a strong significance (ß = 401.28, p <.001; Table 4., Model 1). The relationship between government support and corruption is not statistically significant. Hypothesis H2 is supported as corruption perception has a strong negative effect on sport entrepreneurship (ß = -1163.35, p <.001; Table 4, Model 1), meaning the higher the perceptions of corruption, the lower the sport entrepreneurship. Corruption is not correlated with government support or perceived opportunities.

Hypothesis H3 was partially supported as perceived opportunities positively correlate with sport startups (ß = 2.82, p >.1; Table 4, Model 1). The relationship was not statistically significant (Table 4, Model 3). Perceived opportunities were negatively correlated with government support (ß = -8.9, p <.1), with a weak interaction effect. This suggests that informal factors are independent of economic and political environment and rather represent entrepreneurs' personal beliefs.

3.5. DISCUSSION AND CONCLUSION

This study aimed to examine institutional determinants of entrepreneurship among European sport startups. This study used institutional theory as the theoretical framework to analyse formal and informal institutional factors that influence sport startups. Institutional theory considers the context and environment that either stimulates or inhibits entrepreneurship and promotes economic growth (North, 2005; North, 1990). Government effectiveness, political stability (Samarasinghe, 2018) and corruption influence economic growth and entrepreneurship (Aparicio et al., 2016; Urbano et al., 2019a).

The research on entrepreneurship focusses on institutional theory in the context of sport organisations and institutional change (Chacar et al., 2018; Fahlén & Stenling, 2019; Washington & Patterson, 2011). Based on previous literature, the present study builds upon the sport entrepreneurship literature by applying institutional theory to sport startups. We combined secondary data from EuroStat (sport data), GEM (entrepreneurship), and WDI (economic controls) and analysed it using a panel data regression. Combining various datasets can promote innovative research (Lohr & Raghunathan, 2017). The final dataset included 28 European countries from 2004 to 2021.

The key findings of our study are (1) sport government support is positively correlated with sport startups; (2) perception of corruption inhibits the birth of sport startups; (3) perceived opportunities have a positive effect on sport startup creation. These findings are in particular important for the sports industry. Sport government support is essential to the develpomnt and growth not only of professional or amateur sport but also to the commercial, organizational and firm aspect of the sport sector. Sport relies heavily on government funding and sponsorship, as such factors facilitating the creation of sport startups also can facilitate the commercialisation of sport.

Studies on institutional theory in sport showed that a favourable institutional environment promote the creation of sport leagues (Chacar et al., 2018). There are many institutional obstacles for sport leagues and governing bodies, creating more favourable institutional environment would minimise the challenges that sport organizations must face (Nite et al., 2019). For example, establishing institutional dominance and decreasing institutional boundaries would help sport organisations grow and be more adaptable and flexible to changes over the years (Mansfield & Killick, 2012).

Sport government expenditure can promote the economic develop of sport, both athletic-wise and commercially (Faghih & Javanmardi, 2014). Supportive policies and govern subsidies positively allow sport development, in particular governed funding allow sport firms to grow. Moreover, promoting and creating a facilitative environment through beneficial sport policies is important for the sport ecosystem to facilitate and increase its for entrepreneurial activity (Chowdhury et al., 2019). Both in terms of financial support and government programs as non-financial support has been shown to positively affect firm performance and subsequent growth (Songling et al., 2018). Therefore, sport policymakers as well as, general government policymakers should focus on creating policies supportive for sport startups and SMEs, as a result increasing entrepreneurial activity in sport.

The literature proposes a beneficial relationship between entrepreneurial activity and the support of the government (Omri & Afi, 2020). Our results contribute to the literature on how government support can encourage entrepreneurial activity in sport when it is under economic development control. The effect of formal institutional factors depending on economic development was also found by Altin et al. (2017). Some research showed that entrepreneurial activity has a positive relationship with government support (Saberi & Hamdan, 2019).

According to Maune (2017), entrepreneurship can thrive under adequate and efficient governance with reduced corruption, creating an intensified institutional environment. Literature reveals that entrepreneurship is negatively correlated with corruption (Aparicio et al., 2016; Urbano et al., 2019a), which this study confirms in the section on sport entrepreneurship. Perception of corruption limits the creation of sport firms, diminishing entrepreneurial activity in sport. Perception of corruption has a strong effect on sport startup rate, inhibiting the sport entrepreneurial activity. Our findings show that sport entrepreneurship is affected by corruption, governmental inefficiency, and political instability. Control of corruption plays a major role in entrepreneurship and is linked to economic development and political systems (Aparicio et al., 2016). The political and economic systems play a crucial role in formal factors determining entrepreneurial activity. The variance of economic development and political climate can influence formal institutional determinants of entrepreneurial activity (Urbano et al., 2019a; Urbano & Alvarez, 2014). Our results showed that sport entrepreneurship depends on formal and informal institutional factors, which is supported by the literature that shows government effectiveness, political stability and corruption directly and indirectly affect entrepreneurship and economic growth (Samarasinghe, 2018). Economic development alongside political climate further influences the institutional determinants, and control for corruption mediates that relationship (Aparicio et al., 2016). Government effectiveness, political stability and corruption directly and indirectly affect economic growth (Samarasinghe, 2018). Startups face many challenges, and in weaker economies, legal barriers and a lack of favourable institutional infrastructure for starting businesses hinder entrepreneurship (Welter & Smallbone, 2011).

The findings of the current study suggest that the way institutional formal factors influence sport entrepreneurship depends on the country's economic and political system. In

contrast, informal factors seem to be independent of the economic environment and rely more on the individual's personal beliefs and cognition. Formal factors have a stronger influence on economic growth than informal factors (Urbano & Alvarez, 2014). As our results showed, the same is true; were institutional factors such as corruption and economic and political development are a significant barrier to sport entrepreneurship.

3.5.1. IMPLICATIONS AND CONTRIBUTIONS

The primary contribution of this research study is that sport entrepreneurship depends on the wider economic and political environment, as demonstrated by the significant relationship between institutional factors and sport entrepreneurship. This study builds up and adds to the current literature on sport entrepreneurship. Our implications are for research and practice, showing that the institutional framework is fundamental to promoting sport entrepreneurship. Policymakers must consider how their policies shape the environment and how it will affect sport entrepreneurs. In turn, sport entrepreneurs must consider the wider economic, institutional and political context when starting a business in sport. Sport organisations should adequately time their entrepreneurial strategy implementation with perceived opportunity. The possible critical determinants of such change would be the mobilisation of resources and formation of partnerships, as well as a clear vision and a centralised organisation fundamental to the success of implementing change.

3.5.2. LIMITATIONS

Despite some limitations of this study, it builds upon previous entrepreneurship research and provides new insight into the relationship between institutional factors and sport-based entrepreneurship. The major limitation is the small sample size, which is due to the limited availability of the data. Nonetheless, it offers initial insights into the relationship between

institutional factors and sport entrepreneurial activity. Not many researchers in sport entrepreneurship had combined the GEM, WDI, and EuroStat databases before. However, combining various databases poses some limitations in itself. Despite the limitations, this study provides a foundation to further build sport startup research. Further investigating this relationship, would provide a more comprehensive analysis of sport entrepreneurship from an institutional perspective. Using institutional theory in sport creates implications for sport management and provides best-practices for entrepreneurs operating within complex institutional environments.

3.5.3. FUTURE RESEARCH DIRECTIONS

Institutional sport entrepreneurship is still considered an emerging research area despite the increased interest in recent years. Ratten and Jones (2020) discussed the need for future research of sport startups from a technological, digital and innovation perspective. Sport entrepreneurship needs to be examined in a broader economic, political, social, and cultural context (Ball, 2005; Ratten, 2018). The present study only skimmed the surface of the research required to understand sport startups' complexity and socio-economic-political implications fully. Further analysis is necessary to better comprehend entrepreneurial activity within the sport sector. An in-depth examination of other institutional factors might also shed light on the interaction of institutional factors and determinants of sport entrepreneurship. We suggest, future research direction to investigate further the relationship between economic and political development and sport startups and compare how sport organisations are also influenced by institutional factors. This study provided a novel analysis of sport enterprises; as such, further research is required to fully understand the complexity of the institutional environment within the sport landscape. For example, how institutions affect sport associations and governing bodies, and how political structures affect sport systems in

different countries. There is a need to include a larger sample size, other institutional factors, different economies, and social and political contexts. We urge further investigation of entrepreneurial activity in the sport sector and consider the political and economic differences to nudge sport entrepreneurship research forward.

CHAPTER FOUR

HUMAN CAPITAL, DYNAMIC CAPABILITIES, AND INSTITUTIONS IN SPORT STARTUPS

4.1. INTRODUCTION

External and internal factors such as institutional economics and dynamic capabilities influence entrepreneurship. Dynamic capabilities are a firm's ability to adapt its resources to a changing environment (Teece, 2014). Dynamic capabilities are fundamental to successful entrepreneurship, fostering competitive advantage, identifying new opportunities, and expanding the process necessary to adapt to a rapidly changing environment (Teece et al., 1997). The intersection of dynamic capabilities and institutional theory allows to create a positive environment for entrepreneurial activity (Ratten, 2012a; Teece et al., 1997; Urbano et al., 2019a). The institutional environment influences individuals and firms, which provides a stable market (North, 1990). Institutions shape the environment of firms, which dictates which capabilities firms should develop to increase firm performance.

In the sport context, there is not much research about sport startups. The conceptualisation of dynamic capabilities in sport entrepreneurship is still emerging. Dynamic capabilities are one of the three fundamental components of entrepreneurship, opportunity recognition, and entrepreneurial competence (Ratten, 2012a). Institutional theory helps to explain the interactions between these factors. Sport firms acquire entrepreneurial skills to gain a competitive advantage (Lefebvre et al., 2020; Ratten, 2015). Within the sport entrepreneurship literature, there are only a few research articles that focus on the performance of sport firms (González-Serrano et al., 2020; Jun et al., 2022; Núñez-Pomar et al., 2016; Papaioannou et al., 2023). And one article studies sport startups but from a theoretical perspective, proposing a conceptual model of factors affecting sport startups. The model included economic and financial factors, entrepreneur skills, and background. Yet, a lacuna of empirical evidence testing this model is still evident. Current literature on sport startup survival is limited, and we could not find a study investigating the economic survival

among sport startups. Only Oberhofer et al. (2015) studied sport firm survival, measuring survival as sport clubs' promotion and relegation rate.

Although there is limited research on drivers of sport firm survival, Papaioannou et al. (2023) found that human capital positively affects sport firm financial performance. Moreover, there is some research to suggest that dynamic capabilities such as organisational type, human capital and asset diversification create competitive advantage, translating into increased economic performance among sport firms (Jun et al., 2022). Sport firms that are more orientated towards entrepreneurship, and undertaking entrepreneurial activities, develop proactiveness, and lead to innovation and risk-taking (Núñez-Pomar et al., 2016). As demonstrated, these studies show what factors influence the performance of sport firms, yet limited literature studies the survival of startups in the sport sector (González-Serrano et al., 2019; Jun et al., 2022; Núñez-Pomar et al., 2016; Oberhofer et al., 2015; Papaioannou et al., 2023). It is important to note that those studies have used various professional leagues, in terms of promotion and relegation, as survival models for sport entrepreneurship.

Therefore, this study examines how human capital, perceived capabilities, and institutions affect sport startup survival. Drawing on dynamic capabilities and institutional theory, this study presents evidence through panel data regression. We combined sport startup data from Eurostat with Global Entrepreneurship Monitor (GEM) and World Development Indicators (WDI) data to analyse human capital, capabilities, and institutions. We reveal that human capital (i.e., tertiary education) is essential to the survival of a sport startup. Similarly, perceived capabilities, supportive taxes and low bureaucracy contribute to the success of the survival of sport firms. The results also show that supportive tax bureaucracy moderates the use of human capital resources and the survival of sport startups. Our findings provide insights into the dynamic capabilities as critical elements to gain a competitive advantage and build entrepreneurial success in sport firm survival.

The main contributions of this research provide a country-level investigation of sport startups, filling the gap in the sport entrepreneurship literature. Extant evidence lacks dynamic capabilities as a theoretical framework. A handful of studies explored dynamic capabilities theory in sport entrepreneurship (Arraya & Porfírio, 2017; Gerke et al., 2022; Harris et al., 2021; Lefebvre et al., 2020). Thus, this study clarifies which dynamic capabilities affect sport startup survival. There are implications for sport firms and organisations, which provide insights into human capital, capabilities and institutional factors contributing to firms' survival. We encourage sport businesses to focus their organisational strategy on improving firm performance. The research field of sport entrepreneurship and dynamic capabilities should be advanced, with implications for academics and sport managers.

Following the introduction, the theoretical section provides a dynamic capability and institutional framework and develops the hypothesis. Next, the methodology section explains the methods used in this research study, followed by results and discussion, concluding briefly with limitations of the study and future directions.

4.2. THEORETICAL FRAMEWORK

4.2.1. DYNAMIC CAPABILITIES PERSPECTIVE

As mentioned, this study uses dynamic capabilities to understand the factors that contribute to sport firm survival. Dynamic capabilities explain how firms use resources to seek new resources and increase asset value to adapt to the changing competitive environment (Arend & Bromiley, 2009). Firm success depends on the organisation's acquisition of new assets, transformation of existing assets and asset utilisation. Whereas, the survival of firms depends on many factors, such as characteristics of the business owners, resources, market conditions, financial state, innovation, marketing, research, and development, as well as new opportunity

recognition (Baumöhl et al., 2019; Shane & Foo, 1999). Fostering competitive advantage, creating a stable market, identifying new opportunities, and expanding processes is necessary entrepreneurship (Teece, 2014). In sport entrepreneurship, dynamic capabilities foster sport organisations' entrepreneurial capacities and build networks to help them identify new opportunities (Ratten, 2012a). The expansion and reorganisation of assets and resources are necessary for sport firms to grow and result in innovation in the sport industry.

There are three essential elements to the dynamic capabilities' theoretical framework (Teece et al., 1997). First, Teece (2014) mentioned dynamic capabilities as the ability to adapt to the changing market environment. Strong dynamic capabilities allow startups to be better equipped to adapt to changing market conditions by overcoming challenges and seizing new opportunities (Teece, 2014; Vu, 2020). Second, firms are able to develop innovation because of dynamic capabilities with the capacity to learn and acquire new knowledge (Arend & Bromiley, 2009). Finally, dynamic capabilities provide the adaptability to seize new opportunities and overcome challenges as well (Weaven et al., 2021). Innovative practices, creating new products and services and developing technology all include in seizing opportunities (Boccardelli & Magnusson, 2006). For successful survival, the combination of opportunity recognition and the flexibility of resources to seize opportunities are necessary. The opportunity-seizing capabilities (Mckelvie, 2009) and the survival of firms (Weaven et al., 2021) are fundamentally affected by the education level.

Dynamic capabilities redirect resources to new opportunities, where the perception of new opportunities is crucial for successful entrepreneurship (Ebrahim & Schøtt, 2011; Tsai et al., 2016). Developing a company's dynamic capabilities shifts the strategic perspective from internal to external, allowing flexibility and the ability to adjust to changing market conditions. There are three stages of the dynamic capabilities' transformation process: sensing, seizing, and transforming (Teece, 2014; Weaven et al., 2021). Sensing refers to the

identification of new business opportunities. Seizing is the ability to mobilise resources to grasp the identified opportunities. The final stage is transforming the mobilised resources into new assets and value creation. Key dynamic capabilities in professional sport clubs include trend identification, resource mobilisation and value creation (Lefebvre et al., 2020). Sport firms develop dynamic capabilities to identify emerging trends, create new products and services, or build strong brands by capitalising on fanbase through relationships with partners, stakeholders, and consumers (Faghih & Zali, 2018; Harris et al., 2021).

Dynamic capability and firm characteristics positively influence firms' survival and subsequent growth (Morgan et al., 2021; Pigola et al., 2022; Shane & Foo, 1999; Weaven et al., 2021). Dynamic capabilities allow firms to use internal resources and gather external resources to ensure firm growth and successful survival (Pigola et al., 2022). Firm growth and survival depend on the firm's capabilities to identify opportunities and learn and acquire knowledge (Morgan et al., 2021). Successful survival of firms is the outcome of dynamic capabilities, which depend on entrepreneurs' characteristics and ability to use firm resources under challenging market conditions (Weaven et al., 2021). A handful of research articles focus on dynamic capabilities in sport at the organisational level (Jeng & Pak, 2016; Nguyen & Mort, 2021). Harris et al. (2021) showed significant differences in dynamic capabilities among sport organisations, resulting in different performance outcomes. For example, in the context of English Premier League clubs, dynamic branding capabilities in strategic management depend on the individual capabilities of managers (Manoli, 2020). Sport clubs and teams develop dynamic capabilities to create new strategies to reach a larger fanbase, attack more partners and sponsors and increase brand awareness (Lefebvre et al., 2020). Dynamic capabilities promote innovation and allow sport organisations to develop a competitive advantage (Harris et al., 2021; Jenkins, 2010).

4.2.2. INSTITUTIONAL ECONOMICS

Institutional theory suggests that the institutional environment influences individuals' and firms' operations (North, 1990). North (1990) posits that institutions are the formal rules, regulations, laws and procedures, and informal social norms, values, and beliefs. Institutions have long recognised a cognitive component that guides individuals' skills, self-efficacy, and perceived capabilities of individuals, organisations, and startups (Hopp & Stephan, 2012; Urbano et al., 2019a). Many authors have shown how institutions promote entrepreneurial activity (Aparicio et al., 2016; Bruton et al., 2010; Chowdhury et al., 2019; Urbano et al., 2019b, 2019a) and some have demonstrated institutional environments promote firm survival (Baumöhl et al., 2019; Bruton et al., 2010; Dhanaraj & Beamish, 2009; Shane & Foo, 1999). The long-term survival rate is higher amongst firms that comply with laws and regulations (Dhanaraj & Beamish, 2009; Mickiewicz et al., 2021). The survival of firms are affected by informal factors, such as the socio-cultural environment (Alvarado et al., 2018; Centeno-Caffarena, 2006; Gimenez-Jimenez et al., 2020).

Interestingly, entrepreneurship research has overlooked sport startups. There is a few of studies about sport startups in general, most of them at the theoretical or conceptual level. For example, Ratten (2020a) has published a book about sport startups from a theoretical perspective, defining sport startups and how they fit in the competitive sport industry, concluding with future research ideas for sport entrepreneurship. Rahimi et al. (2021) have found the effects of knowledge acquisition and intangible assets on sport startup success. Ziyae and Toutifar Tehranpour (2019) have suggested that entrepreneurial orientation creates a competitive advantage, improving sport startup performance. Some suggest that sport organisations' resources, skills, and organisational capacity are crucial to survival (Kukulis, 2000).

Little research has tried to understand the environment surrounding sport new ventures. Like other organisations, institutional factors influence sport firms (Fahlén & StenSterling19; Humphreys et al., 2012; Washington & Patterson, 2011). The regulatory environment affects sport organisations' survival. Those who comply with regulations and rules set by governing bodies are more likely to avoid penalties and sanctions, which are detrimental to their survival (Ratten, 2011). The sport organisations that adapt to changes in the regulatory environment are more likely to survive (Panahi & Yektayar, 2016).

Moreover, for stakeholders' acceptance and support is important for sport organisations to align their values and practices with society. This also leads to an increase of chance of survival (Ratten, 2012b). The informal institutional factors such as values, beliefs, culture, and cognitive dimensions influence the environment and performance of firms (Urbano et al., 2019b). Informal institutions affect individual decision making (D. North, 2005) and influence new firm success (Hopp & Stephan, 2012). Knowledge acquisition and self-efficacy are a cognitive informal factor that increase entrepreneurial activity (Urbano & Alvarez, 2014). In sport organisations, entrepreneurial orientation depends on human capital (Radaelli et al., 2018). Institutional factors influence sport firms to acquire skills to gain a competitive advantage and increase entrepreneurship (Lefebvre et al., 2020; Ratten, 2015). Human capital determines the use of firm resources, which plays a role in business survival (Bates, 1990). Tertiary education is used as a proxy for human capital and is a stronger contributor to economic growth than lower-level education (Van Praag & Van Stel, 2013). Therefore, education as a cognitive informal factor, and will be examined in the context of sport entrepreneurship.

A link between dynamic capabilities and institutions emerges when sport organisations use dynamic capabilities to build networks to help identify new business opportunities and increase organisational knowledge to help cope with the institutional

change (Ratten, 2011). The effect of strong relationships with stakeholders, such as fans, sponsors, and media is shown in the promotion of growth (Ratten, 2018). Dynamic capabilities intersect with institutional factors affecting the firms' landscape and capacity to navigate it. Pigola et al. (2022) discussed cognitive dynamic capabilities, where knowledge acquisition plays a dynamic and moderating role between institutional factors and firm survival. Government policy and the legal environment influence a firm's access to external resources and affect their ability to succeed, especially smaller firms, which are more likely to fail due to a lack of resources (Shane & Foo, 1999). Lefebvre et al. (2020) have identified vital dynamic capabilities in professional sport clubs as emerging trend identification, resource mobilisation, and value creation. The ability to implement those changes depends on the institutional environment, which can be a conductive change (Chacar et al., 2018).

4.2.3. HYPOTHESIS DEVELOPMENT

Education has been shown to have an effect on a multitude of factors. For example, tertiary education promotes human capital through, developing entrepreneurial skills. Countries with higher levels of education at all levels, but particularly tertiary education has been shown to promote the economic development of those countries (Apostu et al., 2022; Megee et al., 2022; Pinzón et al., 2022). Furthermore, education is critical for small and medium enterprises (Chimucheka, 2013). Tertiary education provides entrepreneurs with higher capacity and promotes entrepreneurial activity. Higher levels of education provide better-skilled human capital, which links to higher economic growth, especially in developed countries (Van Praag & Van Stel, 2013). According to Millan et al. (2014) tertiary education increases entrepreneurship outcomes and chances of survival, compared to secondary education, which has a negligible influence on economic performance. The education level measures the skill level of human capital. High-skilled firms (more than 60% of employees

with tertiary education) invest more in research and development of products, versus low-skilled firms (less than 40% of employees with tertiary education) invest first in more skilled workers before investing in other areas of the business (Karhunen & Huovari, 2015). Low-skilled firms invest in human capital by hiring more tertiary-educated individuals. Tertiary education as a factor of human capital is essential to firm growth and plays a role in subsequent survival (Ejermo & Xiao 2014). Further supported by Bates (1990) and Boden and Nucci (2000) showed that education level plays a crucial factor in firm survival. No studies have examined the effect of education on sport firm survival. In sport entrepreneurship, education promotes entrepreneurial orientation and affects entrepreneurial intentions in sport (Pellegrini et al., 2020).

The adaptation and internal use of resources in response to a change in market conditions is a determining factor for business survival (Boccardelli & Magnusson, 2006). Previous research suggests that education level could lead to higher survival rates for sport startups. Sport entrepreneurship overlooks the survival of startups, and to our knowledge no research has been done following this line. Some research concentrates on sport firms' survival, measuring survival as the promotion or relegation of football clubs in the Bundesliga (Oberhofer et al., 2015). Human resources are vital to increasing innovation and entrepreneurial activity within a sport firm, leading to improved financial performance (Jun et al., 2022; Papaioannou et al., 2023). Hence, to firm survival, human capital and education are critical. Therefore, we hypothesise that tertiary education leads to higher survival rates for sport startups.

Hypothesis 1a: Countries higher educational levels correlate with higher survival of sport startups.

Moreover, highly educated individuals are more successful in financing ventures, translating into the probability of venture success. Education level plays a role in entrepreneurship and

tax negatively affects that relationship (Hansson, 2012). Tax and bureaucracy influence business dynamics and negatively correlate with higher education (Lopes et al., 2021), where business dynamics refer to a firm's startup, growth, and death states. Hence, firm survival depends on various factors, including taxes, bureaucracy, and education. Doring (2021) showed that individuals' education and capabilities influence administrative literacy, meaning the extent to which the public navigates bureaucracy, tax, and other public administrative systems. Higher education positively affects tax and bureaucracy navigation, especially in entrepreneurship, where bureaucracy has been extensively shown as a barrier to entrepreneurship (Robson et al., 2009; Vatavu et al., 2022). In turn, friendly taxes and lower bureaucracy enable entrepreneurship and promote entrepreneurial activity (Urbano et al., 2019b). Thus, we hypothesise that supportive tax and bureaucracy correlate with education level, which correlates with the survival of sport firms.

> Hypothesis 1b: Supportive tax and bureaucracy positively moderates the relationship between the educational level and the survival of sport startups.

The entrepreneurial orientation of sport firms is decisive to their economic performance (Núñez-Pomar et al., 2016). Better financial performance leads to higher chances of survival, and long-term success is more likely to entrepreneurs that seek out external resources (De Carvalho et al., 2013; Eriksson, 2014; Espedal, 2005; Gimmon & Levie, 2010; Lee et al., 2012; Wilden et al., 2013). Business owners are more likely to launch and sustain new ventures when their perceived self-efficacy is higher (Acs et al., 2009; Kevill et al., 2017; Noguera et al., 2013). Self-efficacy is an individual's belief in their abilities to succeed, and self-efficacy contributes to the success of business owners (Mcgee et al., 2009). Entrepreneurs with higher self-efficacy rates endure complex challenges and make more calculated and informed decisions, increasing the probability of success. Studies show that perceived capabilities are a critical factor in entrepreneurship (Ebrahim & Schøtt, 2011;

Noguera et al., 2013) and sport entrepreneurship (Arraya & Porfírio, 2017; González-Serrano et al., 2017). Self-efficacy is also beneficial in later stages of entrepreneurship, where higher levels of self-efficacy increase firm performance (Thavorn et al., 2020). However, self-efficacy can be detrimental to firm performance. In dynamic environments, self-efficacy is positive, whereas, under certain conditions, self-efficacy negatively influences firm performance (Hmieleski & Baron, 2008). In stable environments, self-efficacy becomes a liability and hinders firm success. Sport is a dynamic industry; thus, we hypothesise that perceived capabilities positively influence the survival of sport firms. González-Serrano et al. (2017) showed a positive correlation between perceived capabilities and the desire to start a sport-related business.

Hypothesis 2a: Higher perceived capabilities increase the survival of sport startups.

Education influences the relationship between entrepreneurs' self-efficacy, perceived capabilities, and entrepreneurial orientation (Akmaliah & Pihie, 2009). Perceived capabilities are increased by education, previous experience, and knowledge (Illes et al., 2015). Education and experience affect entrepreneurship (Akmaliah & Pihie, 2009; Yan et al., 2018) and sport entrepreneurship (González-Serrano et al., 2017, 2021; Hu & Ye, 2017; Lara-Bocanegra et al., 2022). Mykolenko et al. (2022) suggest a moderating role of education on the effect of perceived capabilities in entrepreneurship. Education facilitates gaining knowledge, experiences, and networking, which builds entrepreneurial efficacy (Akmaliah & Pihie, 2009) and perceived capabilities (Ebrahim & Schøtt, 2011b). Higher education and experience levels increase the chance of business success (Noguera et al., 2013). Multiple factors affect perceived capabilities, including higher education, fear of failure, knowledge transfer rate and geo-economic context. In the geo-economic context, perceived capabilities either positively or negatively affect innovation. In countries with high crime and corruption rates, perceived capabilities diminish (Lopes et al., 2021). Innovation, proactiveness and risk-

taking are the three main determinants of successful sport firms (Núñez-Pomar et al., 2016) and sport clubs (Escamilla-Fajardo et al., 2022).

Cognitive capacity at the individual level influences the relationship between firm environment and firm performance (Pigola et al., 2022). Education positively influences entrepreneurial intentions among sport students and increases the perceived capabilities of starting a business (Lara-Bocanegra et al., 2022). Perceived abilities of students translate into running a business successfully. These competencies, skills, knowledge, education, and perceived ability promote and enable sport students to be successful entrepreneurs (González-Serrano et al., 2021). Among sport students, strong perceptions of success and higher perceived capabilities of managing a business play a significant role in startup survival (González-Serrano et al., 2017).

The self-efficacy and perceived capabilities affect entrepreneurial outcomes and thus the success of new ventures. For example, individuals with higher perceived capability, believe that they have the required skills and education to successfully start a business. Skills and capabilities that increase entrepreneurial activity contribute to the success of the venture. Human capital and skilled talent convert into successful entrepreneurship. Knowledge and intangible assets are particularly important to sport startup success (Rahimi et al., 2021) and increasing market knowledge leads to higher commercialisation of sport startups (Rahimi et al., 2020). Pirjamadi et al. (2022) emphasised that human capital among innovation and idea generation was a critical factor required for sport startup growth, and subsequent survival. Mondalizadeh and Kavyani (2023) demonstrated that human capital was the second most important factor for sport startup economic success, where skills and professional background were the second determining factor under human capital management. Xi et al. (2023) showed that education, in particular learning, plays a role in the innovation performance of new startups in the sport sector. As mentioned, knowledge acquisition and learning is a

dynamic process and the level of education influences that process (Pigola et al., 2022; Xi et al., 2023). Human capital development thus depends on the ability of firm employees to implement the acquired knowledge. A high level of education has been associated with perceived capabilities of an individual, which suggests that education plays a moderating role (Ebrahim & Schøtt, 2011). Therefore, we hypothesise that perceived capabilities increase the survival of sport startups.

Hypothesis 2b: Higher educational level positively affects the relationship between perceived capabilities and the survival of sport startups.

Exogenous to entrepreneurial activity, the existence of formal institutions conditions entrepreneurship, as well as its growth and survival. For instance, supportive taxes and low bureaucracy are conducive to entrepreneurship (Robson et al., 2009). In sport, a bureaucratic system means difficulties with financing and a lack of government support for sport firms, which result in pushing those firms to other locations or industries with better opportunities (Ratten & Nanere, 2020). The lack of financing due to bureaucratic procedures limits small firms' set-up and continued growth. Governmental programs supporting small firms aid with operations, which results in continued success (Berrett et al., 1993). A supportive environment facilitates not only starting firms in the sport industry but also assists sport firms with continuing to run the business and determines their survival. Government policy supportive of small businesses in sport directly affects the creation and success of those businesses. Akalanka et al. (2021) list bureaucracy and political environment dictating tax policy as barriers to sport entrepreneurship. Hence, supportive taxes and governmental policies would directly support sport sector firms. Tax policies affect sport entrepreneurship at the micro- and macro-economic levels. Supportive taxes at the microeconomic level promote the creation of firms and determine their subsequent success (Ratten, 2017, 2019a). Therefore, we hypothesise that supportive tax and bureaucratic policies positively affect the

survival of sport startups.

Hypothesis 3a: Supportive tax and bureaucracy increase the survival of sport startups. Dynamic capabilities include internal and external abilities to adapt to changing market conditions (Teece et al., 1997). The external environment affects the firm's ability and adaptation process (Barreto, 2010). Successful adaptation of dynamic capabilities depends on external factors such as uncertainty, market dynamics, and complexity (Aragón-Correa & Sharma, 2003). Dynamic capabilities are crucial to a firm's success, where successful firms must be flexible, innovative, and non-bureaucratic (Teece, 2014). Bureaucracy inhibits entrepreneurship by formalising employees and procedures, which decreases entrepreneurial activity and inhibits employees from developing an entrepreneurial mindset and, therefore, decreases opportunity seeking (Sørensen, 2007). Literature shows that bureaucracy constrains entrepreneurship. Complex regulations and prolonged processes negatively affect entrepreneurial activity (Aparicio et al., 2016; Robson et al., 2009; Smallbone & Welter, 2001; Veciana & Urbano, 2008). Bureaucracy slows down a firm's adaptability, becoming less dynamic due to external policies that constrain the survival of firms (Wilden et al., 2013).

As complex tax procedures decrease entrepreneurship (Urbano et al., 2019b), high taxes decrease the survival rate and increase the death of firms (Campbell et al., 2012), while supportive tax policies increase entrepreneurship and entrepreneurial intentions (Robson et al., 2009; Smallbone & Welter, 2001). Furthermore, supportive tax laws and fewer administrative obstacles increase the survival of firms. Tax advantages and fewer administrative hurdles are particularly advantageous for new and young businesses (Aidis & Adachi, 2006). The likelihood of business survival in the first few years of operation is higher due to such policies. Measures to lessen the tax burden for small businesses increase the survival of firms (Gimmon & Levie, 2010; Lee et al., 2012; Shane & Foo, 1999). Furthermore, there might be a correlation between perceived capabilities and bureaucracy,

where individuals who perceive themselves as capable are more likely to navigate tax and bureaucracy successfully (Lopes et al., 2021). Ratten (2018) discussed how bureaucracy affects creativity, employee innovativeness and proactiveness. Entrepreneurs' knowledge and skills are affected by bureaucratic procedures (Berrett et al., 1993b). Akalanka et al. (2021) identified a lack of knowledge and experience as a barrier to sport entrepreneurship, an underlying contributor to lower perceived capabilities. Access to resources and supportive educational programs affects an individual's capabilities and perceived abilities to succeed as an entrepreneur (Ebrahim & Schøtt, 2011; Ratten, 2018; Tsai et al., 2016). Confidence, knowledge, and experience promote navigating complex tax systems and bureaucracy (Akalanka et al., 2021; Berrett et al., 1993a). Government policies, taxes, and bureaucracy affect individuals' self-perceptions about entrepreneurship (Aparicio et al., 2016).

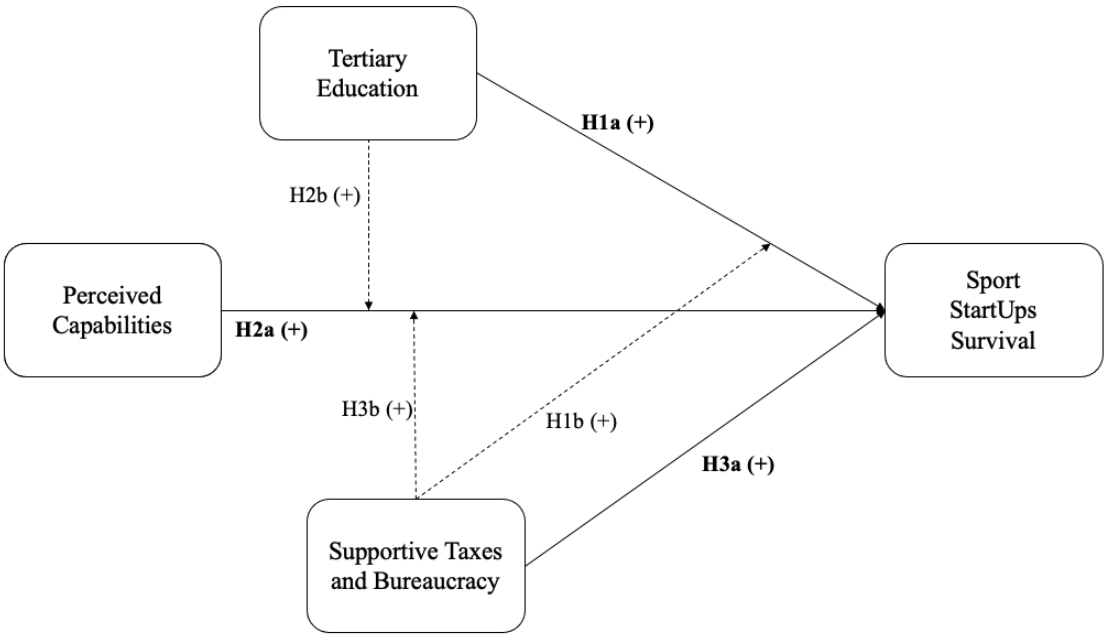
Perceived capabilities about taxes and bureaucracy differ between developing countries and countries that are more developed due to the levels of bureaucracy (Beynon & Pickernell, 2018). The bureaucratic process tapers creativity and innovation; the external environment influences the entrepreneur's innovativeness. The bureaucratic system diminishes individual abilities, knowledge, and skills to innovate, reducing perceived innovation ability to seize opportunities and acquire resources (Smallbone & Welter, 2008). External environments such as taxes shape entrepreneurs' behaviour (Robson et al. 2009) and affect entrepreneurs' perceived capabilities of managing the business (Sørensen, 2007). Governmental programs implementing supportive taxes and reducing bureaucracy create a conducive environment for entrepreneurial activity, where entrepreneurs' intentions and perceived capabilities increase (Vatavu et al., 2022). In sport literature, less is known about how tax and bureaucracy affect sport startups. Extrapolating entrepreneurship literature would suggest a correlation between tax bureaucracy and the perceived capabilities of

entrepreneurs. Therefore, we hypothesise that supportive tax and bureaucracy positively correlate with perceived capabilities.

Hypothesis 3b: Supportive tax and bureaucracy positively moderates the relationship between perceived capabilities and the survival of sport startups.

Figure 1 summarises the conceptual model based on the proposed hypotheses.

Figure 4.1. Depiction of the hypothesis development model.



4.3. METHODS

Most research examining dynamic capabilities focusses on quantitative analysis (Eriksson, 2014; Wang & Ahmed, 2007). Boccardelli and Magnusson (2006) discussed the startup survival of 59 Swedish firms, analysing market changeability, technology adaptation, and survival using a quantitative approach. In sport entrepreneurship, dynamic capabilities are often studied as learning capabilities, resource acquisition and adaptability of sport

organisations (Pellegrini et al., 2020; Ratten, 2012; Shipway et al., 2023). Gonzalez et al. (2019) used a quantitative approach to study the effect of GDP and socioeconomic development on sport organisation performance, using factors such as sport employment, sport exports, sport practice, finance and support and firm investment.

A handful of studies focus on dynamic capabilities at a country level (Akhtar et al., 2020; Duarte et al., 2019; Lessard et al., 2016; Pigola et al., 2022; Robertson et al., 2023; Swoboda & Olejnik, 2016). Swoboda and Olejnik (2016) studied dynamic capabilities at a country level using a cross-sectional design. Lessard et al. (2016) and Teece (2014) emphasise country-level analysis and its importance for contributing to competitive advantage and developing dynamic capabilities. Akhtar et al. (2020) describe the interaction between country-level and firm-level dynamic capabilities in the environmental sustainability sector. Robertson et al. (2023) studied how dynamic capabilities differ between developed and developing economies at a cross-country comparison, including over 80 countries. In turn, Duarte et al. (2019) used a country-level model to study dynamic capabilities in the wine industry. However, most country-level research centres on the context of international enterprises.

In sport literature, using a country-level analysis is more appropriate due to the nature of the sport sector, where most competitions have an international component and comparison. Szymanski et al. (2019) looked at global dynamic capabilities in national football teams, covering country members of the FIFA (Fédération Internationale de Football Association). González-Serrano et al. (2019) assessed dynamic capabilities among European Union countries. Therefore, this research uses a country-level approach to study dynamic capabilities in sport startups.

4.3.1. *DATA COLLECTION*

This research utilised secondary data from publicly available databases including Global Entrepreneurship Monitor (GEM), EuroStat, and World Development Indicator (WDI). The Eurostat database computed by the European Commission is often used in research focus sing on the European Region (Korres et al., 2011). Some sport health participation and sport public policy research sport (SportEconAustria, 2012). To the authors' knowledge, only one previous study used Eurostat to study dynamic capabilities in a sport context (González-Serrano et al., 2019). GEM and WDI are the most common databases for entrepreneurship and economic research (Aparicio et al., 2016; Chowdhury et al., 2019; Urbano et al., 2019a, 2019b). GEM database provided entrepreneurship variables, Eurostat provided sport data and WDI provided economic control variables. We combined all datasets into a single dataset. Some countries and data years were eliminated due to missing values. The final dataset included 29 European countries between 2011 and 2020. A complete list of countries included in the study is shown in Appendix 2.

4.3.2. *VARIABLES*

This research used sport startup survival and dynamic capabilities alongside other socioeconomic factors to investigate sport startup survival. As a proxy for sport startup survival, the dependent variable was the number of newly set-up sport enterprises that have survived five years. Antretter et al. (2018) used a five-year survival rate to predict startup survival. Fuertes-Callén et al. (2020) studied the financial performance of newborns within their first 8 years. Similarly, Delmar et al. (2013) also used an eight year start age. Gartner et al. (1999) argued that at least 4 years is a critical indicator of the firm's ability to survive. Therefore, it seems appropriate based on previous survival research that our research used a five-year survival rate.

The independent variables were divided into human capital, entrepreneurial capital, and formal institutional factors. A proxy for human capital was tertiary education (Eurostat), measured by the number of employees in sport with tertiary education. Chowdhury et al. (2019) and Apostu et al. (2022) used total enrolment in tertiary education to measure human capital. Similarly, Chowdhury et al. (2019) used perceived capabilities as entrepreneurial capital. Thus, as a proxy for entrepreneurial capital, perceived capabilities (GEM) measure the belief in one's abilities and skills to start a business. Some previous studies have used perceived capabilities (Chowdhury et al., 2019; Pigola et al., 2022) and human capital (Mckelvie, 2009) in dynamic capabilities research. In sport entrepreneurship research, González-Serrano et al. (2017) perceived capabilities. Formal institutions proxy was supportive taxes and bureaucracy (GEM) to measure public policy encouraging entrepreneurship, which is measured by the extent of public policies and tax regulations that encourage new small and medium businesses. Taxes and bureaucracy from the GEM database have been used before to measure entrepreneurial capacity (Beynon & Pickernell, 2018; Vatavu et al., 2022) and in the context of institutions (Qin & Chen, 2023). Taxes and bureaucracy have been used to study venture survival.

The study controlled for sport employment and post-secondary entrepreneurial education, entrepreneurial employee activity, insolvency, creditor participation, financing available for entrepreneurs, internal market dynamics, and the female-to-male ratio of TEA. It is important to control for financing of entrepreneur insolvency and credit, to eliminate any potential effect on the independent variables. Chowdhury et al. (2019) controlled for insolvency, tax rate, employment, and credit. Charfeddine and Zaouali (2022) showed how credit, insolvency and financing available for entrepreneurs are important to early-stage firms. Using internal market dynamics, we controlled for yearly changes in the market that might affect the survival of startups. Market conditions tend to provide a "natural selection"

of the fittest entrants and decrease survival (Fuertes-Callén et al., 2022), thus it is important to control for market changes. Including the female-to-male ratio of TEA measured as the percent of females engaging in TEA compared to males, allows to control for any gender differences in survival (Llussá, 2023). Table 1 provides complete descriptions and definitions of the variables.

Table 4.1. Description of the variables.

Variables	Proxy	Description	Source
Dependent Variable	Sport Start-Up 5 Year Survival	Sport enterprises newly born in t-5 have survived to t – number.	EuroStat
Human Capital	Tertiary Education	Number of persons with tertiary education employed in the sport sector (Tertiary education levels 5-8, thousand persons).	GEM
Entrepreneurial Capital	Perceived capabilities	Percentage of 18-64 population who believe they have the required skills and knowledge to start a business.	GEM
Formal Factor	Supportive Taxes and bureaucracy	The extent to which public policies support entrepreneurship - taxes or regulations are either size-neutral or encourage new SMEs.	GEM
Control Variable	Sport Employment	A percentage of total employment in the sport sector. To measure employment in sport, based on the Vilnius definition as covering the essential sport activities.	EuroStat
	Insolvency Framework Index	The score for the strength of the insolvency framework index benchmarks economies concerning the regulatory best practice on the indicator. The score is indicated on a scale from 0 to 100, where 0 represents the worst regulatory performance and 100 the best regulatory performance.	WDI
	Creditor Participation Index	The creditor participation index has four components: (i) whether creditors appoint the insolvency representative or approve, ratify or reject the appointment of the insolvency representative; (ii) Whether creditors are required to approve the sale of substantial assets of the debtor in the course of insol-vency proceedings; (iii) Whether an individual creditor has the right to access financial information about the debtor during insolvency proceedings; and (iv) Whether an individual creditor can object to a decision of the court or of the insolvency representative to approve or reject claims against the debtor brought by the creditor itself and by other creditors.	WDI
	Post-Secondary Entrepreneurial Education	The extent to which training in creating or managing SMEs is incorporated within the education and training system in higher education such as vocational, college, and business schools.	GEM
	Entrepreneurial Employee Activity	"Rate of involvement of employees in entrepreneurial activities, such as developing or launching new goods or services, or setting up a new business unit, a new establishment or subsidiary".	GEM
	Financing for Entrepreneurs	The availability of financial resources, equity and debt for small and medium enterprises (SMEs) (including grants and subsidies)	GEM

	Internal Market Dynamics	The level of change in markets from year to year	GEM
	Female/Male TEA	Percentage of those females involved in TEA who (i) claim to be driven by opportunity as opposed to finding no other option for work and (ii) who indicate the main driver for being involved in this opportunity is being independent or increasing their income, rather than just maintaining their income, divided by the equivalent percentage for their male counterparts	GEM
Robustness Check	Sport Start-Up 3-Year Survival	Sport enterprises newly born in t-3 having survived to t - number	EuroStat

4.3.3. ANALYSIS

Regression is regularly used in entrepreneurship research (Vatavu et al., 2022), sport entrepreneurship (Crick & Crick, 2021; Escamilla-Fajardo et al., 2019, 2020; González-Serrano et al., 2019; Jun et al., 2022; Núñez-Pomar et al., 2020; Panahi & Yektayar, 2016). González-Serrano et al. (2019) used a linear regression model to measure sport competitive advantage. Due to the dataset spanning several years (between 2011 and 2020), panel data was used instead to provide a holistic analysis. Panel data is a good analysis technique for institutional economics and entrepreneurial activity (Altin et al., 2017; Aparicio et al., 2016; Apostu et al., 2022; Chowdhury et al., 2019; Noguera et al., 2013; Salinas et al., 2018; Szymanski et al., 2019). Statistical software STATA was used to analyse the data. After assessing the variables' linearity, we performed a panel data regression with random effects generated with all variables (Model 1). Subsequent models were developed for each hypothesis to test the interactions. Model 2 tests the interaction between tertiary education and supportive tax and bureaucracy. Model 3 tests the relationship between tertiary education and perceived capabilities. Model 4 shows the interaction between perceived capabilities and supportive tax and bureaucracy. Sport 3-year survival was used as a proxy to check the results for robustness (Appendix 4.3). Interaction graphs are shown in figures Appendix 4.3.; Appendix 4.4 and Appendix 4.5.

4.4. RESULTS

Description statistics are shown in Table 2, which shows the means and standard deviation. Table 2 shows that there are almost 600 sport startups having survived 5 years across 29 European countries. Almost 45 percent of the population over 18 believes they have entrepreneurial skills to start a business. There are over 27 thousand employees with tertiary education in the sport sector and there are more males engaging in Total Entrepreneurial Activity. Less than 1 percent of total employment is employed in the sport sector. A correlation matrix with significance levels is provided in Table 3., showing that tertiary education is highly correlated with sport startup survival. Education is correlated with supportive taxes and bureaucracy, which in turn are highly correlated with perceived capabilities.

The robustness tests showed the validity of the models (Appendix 4.3.), it included the 3-year-old sport startup. Additionally, the 4-year-old sport startups could serve as another robustness test. Alternative measure for informal factors could also include perceived opportunities or fear of failure, instead of the current factor perceived capabilities. Relating to formal factors, instead of current variable that is supportive taxes and bureaucracy, other measure of taxes could be substituted or control for corruption could serve as an alternative for formal factors. Moreover, alternative measure for human capital could be other types of education, such as sport management, or entrepreneurial educations.

Relating to the size effect the main estimation had 142 observations and the robustness test had 142 observations. This is below the common cut of point of 200 observations, which is regarded as the minimum number of observations for a significant sample size and a strong confidence level (Cohen, 2013). However, the Cohen's coefficient indicates strong sample size ($f^2 = 3$), enough to establish a strong relationship between the

independent variables on sport startup survival. This shows that the model allows to explain the variances occurring in the analysis. Additionally, Appendices 4.3. through to 4.5. depict the interaction effect of intendent variables on sport startup survival. The graphs include interactions between perceived capabilities and tertiary education; tertiary education and supportive tax and bureaucracy perceived capabilities and supportive tax and bureaucracy on sport startups 5-year survival (S5).

Table 4.2. Descriptive Statistics

	Mean	Std. dev.	Min	Max
Sport Start-Up 5-Year Survival	598.71	646.98	12.00	2676.00
Tertiary Education	27.37	39.12	0.60	160.30
Perceived Capabilities	45.12	7.83	29.77	71.19
Supportive Taxes and Bureaucracy	2.44	0.57	1.34	3.77
Sport Employment	0.71	0.30	0.23	1.39
Insolvency Framework Index	11.97	1.64	7.00	15.00
Creditor Participation Index	2.05	0.86	1.00	4.00
Post-Secondary Entrepreneurial Education	2.80	0.35	1.68	3.72
Entrepreneurial Employee Activity	4.54	2.23	0.35	10.08
Financing for Entrepreneurs	3.83	9.34	1.84	80.80
Internal Market Dynamics	2.93	0.33	2.13	3.96
Female/Male Tea	0.57	0.14	0.30	0.94

Table 4.3. Correlation Matrix

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1) Sport Start-Up 5 Year Survival	1											
(2) Tertiary Education	0.76*	1										
(3) Perceived Capabilities	-0.25*	-0.04	1									
(4) Supportive Taxes and Bureaucracy	0.15*	0.14*	-0.18*	1								
(5) Sport Employment	0.18*	0.21*	-0.22*	0.44*	1							
(6) Insolvency Framework	0.19*	0.06	0.02	-0.19*	0.01	1						
(7) Creditor Participation	-0.10	-0.14*	-0.18*	0.26*	0.02	0.59*	1					
(8) Post-Secondary Entrepreneurial Education	0.11	0.02	-0.19*	0.54*	0.36*	0.00	0.16*	1				
(9) Entrepreneurial	-0.15*	0.00	-0.12	0.38*	0.43*	-0.17	0.01	0.29*	1			

Employee Activity												
(10) Financing for Entrepreneurs	0.07	0.00	0.14*	0.08	-0.16*	-0.29*	0.01	-0.30*	-0.10	1		
(11) Internal Market Dynamics	0.00	-0.03	0.11	-0.26*	-0.17*	0.11*	-0.17*	-0.32*	-0.10	0.06	1	
(12) Female/Male TEA	0.17*	0.17*	0.07	0.19*	0.18*	0.07	0.13*	0.21*	-0.12*	-0.12*	-0.16	1

Sig. Levels * p < 0.10.

Table 4.4. Panel Regression Analysis for Sport Start-Up Survival.

Eq. (4). Dep. variable Sport Start-Up 5-Year Survival	(1) Ln SE All Variables (OLS)	(2) Ln SE Interaction 1 (OLS)	(3) Ln SE Interaction 3 (OLS)	(4) Ln SE Interaction 4 (OLS)
Human Capital				
Ln Tertiary Education (H1a)	11.03***	0.03	26.30***	11.60***
	(1.64)	(4.83)	(6.83)	(1.53)
Entrepreneurial Capital				
Ln Perceived Capabilities (H2a)	-7.40**	-7.72**	-3.20**	27.29*
	(3.78)	(3.71)	(4.89)	(15.38)
Institutions				
Ln Supportive Taxes and Bureaucracy (H3a)	251.01***	148.63*	249.26***	968.89***
	(67.07)	(78.27)	(66.39)	(308.79)
Control Variables				
Ln Sport Employment	-586.32***	-518.18***	-602.89***	-610.45***
	(159.63)	(158.94)	(149.13)	(154.36)
Ln Creditor Participation Index	-257.57***	138.36***	-217.07***	-265.71***
	(84.36)	(41.12)	(68.49)	(77.63)
Ln Insolvency Framework Index	136.59***	-253.43***	112.93***	133.27***
	(42.15)	(82.28)	(34.42)	(38.71)
Ln Post-Secondary Entrepreneurial Education	45.49	37.26	93.58	68.40
	(87.17)	(85.69)	(89.12)	(86.64)
Ln Entrepreneurial Employee Activity	-4.10	-4.23	-4.66	-0.23
	(13.75)	(13.49)	(13.62)	(13.60)
Ln Financing for Entrepreneurs	10.73**	11.30	10.65**	11.86**
	(4.95)	(4.84)	(4.08)	(4.61)
Ln Internal Market Dynamics	-170.69**	-182.82**	-167.11**	-138.69*
	(72.05)	(70.93)	(73.31)	(72.72)
Ln Female/Male Tea	298.97*	284.52**	293.88*	304.98*
	(176.88)	(173.820)	(180.43)	(175.44)
Interactions				
(H1b) Tertiary Education * Supportive Tax and Bureaucracy		4.02**		
		(1.66)		
(H2b) Tertiary Education * Perceived Capabilities			-0.30**	
			(0.14)	
(H3b) Perceived Capabilities * Supportive Tax and Bureaucracy				-16.03**
				(6.76)
Constant	-513.16	-245.27	-672.37	-2198.06**
	(561.13)	(559.43)	(511.03)	(898.92)
N	139	139	139	139
R^2	0.75	0.75	0.78	0.77
Chi^2	101.52	112.56	167.75	126.02
Prob > chi^2	0.00	0.00	0.00	0.00
f^2	3	3	3.54	3.47

Note: Heteroskedasticity-corrected standard errors are shown in parentheses.

*** p < 0.01.

** $p < 0.05$.
* $p < 0.10$.

The results of the panel regression are depicted in Table 4. The main finding of this study shows that education is the crucial dynamic capability for the survival of sport startups, and tax bureaucracy affects survival. Model 1 shows that all variables are significant. Education and tax bureaucracy have the most significant estimation, when including the control variables such as sport employment, finance, and entrepreneurial activity. Model 3 presents that perceived capabilities are less significant Model 3 and 4 less significant.

Hypothesis 1a was supported: education positively correlates with sport startup survival with a strong significance (ß = 11.03, p <.00). Also, hypothesis 1b was supported, where tax and bureaucracy positively moderate education as an antecedent of sport entrepreneurship survival. This finding is in line with previous research. Bates (1990) established that higher education is crucial to the survival of firms. Similarly, as Van Praag (2013) presented, higher educational levels and more developed human capital are connected with more productive business ownership and larger firms. This suggests education being a contributing factor to firm growth and survival. Tzabbar and Margolis (2017) showed that education, and particularly diverse education increases innovation and contributes to startup growth. Chimuchenka showed that particularly entrepreneurial education is important for firm survival. The present paper used general levels of tertiary education, nonetheless, supporting the literature that education is a strong and significant factor to sport firm survival. Although sport literature is limited to sport firm survival, we confirm that human capital is important to sport firm survival. As Pirjamadi et al. (2023) found human capital is important in shaping and contributing to sport startup growth in the Iranian context. Also in the Iranian context, Rahimi (2022) and (2023) support that knowledge and human capital play a critical role in the success and commercialisation of sport startups.

Hypothesis 2a was not supported since perceived capabilities negatively predict sport startup survival (ß = -7.40, p <.05). We hypothesised that perceived capabilities positively

influence survival, but the results show the opposite correlation between perceived capabilities and sport startup survival. Hypothesis 2b was partially supported due to the negative correlation between perceived capability and education. Nonetheless, Model 3 shows a positive relationship between perceived capabilities and sport startup survival (ß = 27.29, p <.01) when the interaction between perceived capabilities and tax bureaucracy was included (ß = -16.03, p <.05), supporting partially hypothesis 3b. The interaction above suggests that the entrepreneur's perceived capabilities are influenced by a country's tax procedures and bureaucracy, interfering with the startups' survival. In turn, positively perceived capabilities support survival in a low-tax bureaucracy. The support of tax and bureaucracy towards small businesses and startups are vital for their survival. According to Teece (2000), successful firms must be non-bureaucratic, adaptable, and creative in order to be successful. Bureaucracy hinders entrepreneurship for a few reasons, along with declining entrepreneurial intentions and formalising procedures that reduce opportunity-seeking and entrepreneurial activities (Sorensen, 2007). Townsend et al. (2010) showed that formal and informal institutional factors interact and can affect each other's relationships. The interactions between the variables show that factors can work together as seen in the example of perceived capabilities and tax bureaucracy, positively promoting the survival of sport startups.

Hypothesis 3a was supported and predicted supportive tax and bureaucracy increase sport startup survival (ß = 251.01, p <.01). The significance level remained high for tax bureaucracy through all models, except model 4, with a slightly lower significance (ß = 148.63, p <.05), due to the interaction effect between education and tax bureaucracy (ß =4.02, p <.05). Research indicates that bureaucracy prevents entrepreneurship (Aparicio et al., 2016; Çule & Fulton, 2005; Smallbone & Welter, 2001). Bureaucracy hinders a company's ability to adapt and be dynamic, making it less dynamic because external policies adversely affect its

ability to succeed and survive (Wilden et al., 2013). Nunes and Savosh (2022) showed that low taxes and bureaucracy and education at all levels positively affect innovation, which increases competitive advantage and is vital to SMEs survival. There are multiple ways in which lower taxes and bureaucracy promote entrepreneurship and increase startup survival. Lower taxes for smaller and newer firms are important as they increase firm cash flow which can be redirected to product development and innovation (Fuertes-Callén et al., 2022; Gartner et al., 1999; Nunes & Savosh, 2022). Supportive policies, taxes and bureaucracy affect individuals (Aparicio et al., 2016) and perceived capabilities (Beynon & Pickernell, 2018). Consistent with previous findings, our results show how supportive tax and bureaucracy promote sport startup survival and moderate the relationship between perceived capabilities and sport start survival.

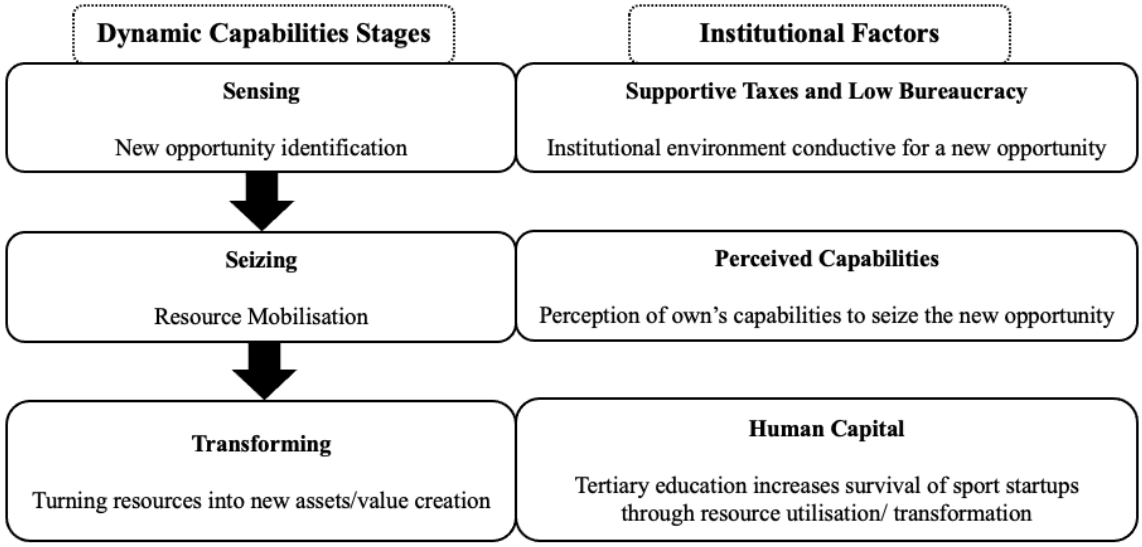
4.5. DISCUSSION AND CONCLUSIONS

This study examined human capital resources, entrepreneurial capabilities, and institutional factors affecting sport firms' survival. Using dynamic capabilities and institutional theory allowed us to investigate the specific capabilities within the economic and institutional context that shape the environment of sport firms. Teece (2014) emphasised that a firm's ability to use its resources significantly contributes to its success. Numerous studies have shown that a firm's use of resources contributes to the survival of firms and their growth (Morgan et al., 2021; Pigola et al., 2022; Shane & Foo, 1999; Weaven et al., 2021). Specifically, this study focused on tertiary education and perceived capabilities in sport startups, the first research to our knowledge. Thus, contributing to the sport entrepreneurship research centred on sport startups, adding to the literature that dynamic capabilities are crucial to their survival. This study combined sport startup data from Eurostat with entrepreneurship (GEM) and economic (WDI) data, using a panel data regression covering 29

European countries between 2011 and 2020. This study analysed country-level variables among sport startups, identifying the key factors contributing to their survival. Oberhofer et al. (2015) analysed budget, market size, years in the league and number of foreign players. These factors contribute to the specificity of the football league. The present study showed that education, perceived capabilities, supportive tax, and bureaucracy contribute to sport startup survival.

The main finding of this research shows that education is the most crucial determinant of sport startup survival. Literature supports our results. The limited literature on sport startups confirms the importance of knowledge and human capital to their success (Rahimi et al., 2020, 2021; Ziyae & Toutifar Tehranpour, 2019). Tertiary education positively affects economic growth alongside entrepreneurship (Apostu et al., 2022). Weaven et al. (2021) linked higher levels of education to more successful business owners. Education in entrepreneurship is vital to small firm survival (Chimucheka, 2013), and higher education increases entrepreneurial capacity and human capital (Van Praag & Van Stel, 2013). The present study supports that tertiary education is essential to human resources in sport startups. Higher levels of education develop human capital, encouraging entrepreneurial activity and economic performance compared to lower levels of education (Millan et al., 2014). Similarly, Papaioannou et al. (2003) and Jun et al. (2022) showed that education is a crucial determinant of sport firms' financial performance.

Figure 4.2. Institutional factors affecting dynamic capabilities in the context of sport startup.



Another finding of the current study is that supportive tax bureaucracy is correlated with sport startup survival. The interaction between tax and bureaucracy and education suggests that education influences the level of aptitude when it comes to navigating the tax procedures and the bureaucracy, which is known to inhibit entrepreneurship (Aidis & Adachi, 2007; Aragón-Correa & Sharma, 2003; Barreto, 2010), and as such also influences the survival of startups. Supportive tax and bureaucracy towards small businesses and startups is vital for their survival. According to Teece (2000), successful firms must be adaptable, creative, and non-bureaucratic to be successful. Bureaucracy hinders entrepreneurship for a few reasons, including declining entrepreneurial intentions and formalising procedures that reduce opportunity-seeking and entrepreneurial activities (Sorensen, 2007). Thus, a lack of bureaucracy benefits a firm's performance, survival, and entrepreneurship.

An interesting finding of the current study is that capabilities were a significant predictor of survival rate; however, they were negatively correlated. The perception of one's

or a firm's capabilities to adapt to a demanding market depends on external factors, which influence the relationship between perceived capabilities and the firm's survival. Perceived capabilities also increase with higher education rates and abilities to navigate tax and bureaucracy (Lopes et al., 2021). Therefore, a lack of bureaucracy is advantageous for a firm's survival and successful startup, as bureaucracy lowers its capacity for dynamic change and adaptability. As supported by the results, supportive tax and bureaucracy increase the survival of sport startups.

4.5.1. IMPLICATIONS AND CONTRIBUTIONS

The implications of this thesis are aimed at academics in this field and sport entrepreneurs, as much as sport industry professionals, showcasing how human capital and dynamic capabilities in sport Organisations can promote growth and determine survival. The current study builds upon the previous sport firm research. Most previous research focused on professional sport leagues. We build upon the works of Teece (2014), Weaven et al. (2021), Harris et al. (2021), and Lefebvre et al. (2020) on 'stages of the dynamic capabilities' transformation process: sensing, seizing, and transforming'. We have identified the three key institutional factors affecting the dynamic capabilities process among sport startups, shown in Figure 2. Survival of sport startups, as an outcome, depends on the use of dynamic capabilities and equivalent institutional factors. Institutional factors such as supportive taxes and low bureaucracy create a conducive environment for startups, which then require abilities to transform new opportunities into new assets. The transforming process depends on the human capital of startups, particularly, their education level. Tertiary education increases the survival of sport startups by allowing human capital more efficiently and effectively to utilise resources. Translating into value creation and subsequent survival of sport startups.

This research provided a novel approach to dynamic capabilities research investigating the survival of sport startups as an outcome of dynamic capabilities. The results demonstrate that human capital is a significant factor in the survival of 5- and 3-year sport startups, maintained the entrepreneurship research, which shows that human capital positively affects firms' survival (Acs et al., 2009; Arribas et al., 2007; Huggins et al., 2017). Zollo and Winters (2002) also showed that deliberated learning and knowledge are essential dynamic capabilities for managerial practice. The most crucial factor is the education and knowledge of firm employees, which contribute to its survivability.

Second, the implication of this research is for sport firms and startups showing employee education plays a significant role in firm survival, which should propel sport firms to include education as a contributor to firm survival. We demonstrated that human capital (i.e., tertiary education) is essential to the survival of a sport startup. In line with previous research, our results show the importance of education in the survival of sport firms. McKelvie and Davidsson (2009) showed that education and managerial experience strongly affect and promote dynamic capabilities. Tertiary education enables dynamic capabilities and fosters innovative performance (Camisón & Monfort-Mir, 2012). The current results suggest that sport entrepreneurs should emphasise the education and knowledge of their startup employees. Batista et al. (2007) showed that entrepreneurial background and especially human capital contribute to the success of startups. Bates (1990) has already demonstrated that human capital and an entrepreneur's background are critical to a new venture's success and longevity. In modern tech firms, the founding team's educational background and experience increase the innovation degree and the growth of the startup through the early stages (Tzabbar & Margolis, 2017). Based on these findings and previous research, sport startups should focus on developing human capital and dynamic capabilities to ensure continuous growth and survival.

Finally, implications for academics, sport researchers, and the like are to advance the research field of sport entrepreneurship and dynamic capabilities. This study adds to the sport entrepreneurship literature dynamic capabilities perspective, which is overlooked in this research field. The current research focussing on sport startups is limited. Most sport entrepreneurship research is theoretical in nature (Ratten, 2012b, 2019b, 2020; Ratten et al., 2020). The current study adds a handful of studies on sport startups, further supporting the importance of education and knowledge on their success (González-Serrano et al., 2019; Rahimi et al., 2020, 22021; Ziyae & Toutifar Tehranpour, 2019). Building on previous sport startup research, we bring a novel study focussing on the survival of sport startups. Supporting that education level is a crucial determinant to sport entrepreneurship and demonstrating its significance in sport startup survival.

4.5.2. LIMITATIONS

This study has some limitations. The small sample size is a major limitation in this analysis. Due to the limit availability data and a lot of missing values, such as for countries, years, and variables. Currently data availability is the biggest constrain in sport entrepreneurship research using secondary sport data. As such, due to data set limitations, a country comparison was not possible. Some countries had to be eliminated from the analysis due to missing data. The countries covered only Europe, so examining sport startup survival in North America and other economies would be an interesting future research avenue interesting. The interaction results are specific to this data set. Further research is required to study a larger population of sport startups across different economies. Factors included are just a few possible determinants of sport startup survival. Other factors also contribute to the survival of firms, alongside human capital, entrepreneurs' experience, motivation and strategy, and external factors (Huggins et al., 2017). External factors also play a role, and as the results suggest, external factors increase or decrease the survival of sport startups in

correlation with human capital. The interaction between human capital and external factors suggests that capabilities and education influence the effect of external factors on firms' survival. Individuals with higher education tend to understand business intricacies and market complexities better (Schweber et al., 2013).

4.5.3. FUTURE RESEARCH DIRECTIONS

This research only skimmed the surface of dynamic capabilities in sport entrepreneurship and used a proxy of startup survival as an outcome of dynamic capabilities in sport. More analysis is required about sport startups and dynamic capabilities in sport entrepreneurship. Possible future directions include larger sample sizes, global economies, country comparisons, and other factors promoting and inhibiting dynamic capabilities. Investigating how sport firms develop those capacities and leverage them to grow would be interesting. Building upon these results, we suggest future research should focus on identifying strategies for sport firms to gain a competitive advantage. Future studies could explore how sport firms and startups develop and use dynamic capabilities, and how that affects their organizational performance. Furthermore, as economies and institutional environments differ between countries, it would be interesting to examine how sport startups performance varies between countries and how they develop and use dynamic capabilities differently. Finally, further research must consider how market and firm differences affect the development and implementation of dynamic capabilities, in order to adapt and not only increase firm performance but ensure survival.

CHAPTER FIVE

THE ROLE INNOVATION IN SPORT ENTERPRISES: AN INSTITUTIONAL PERSPECTIVE

5.1. INTRODUCTION

The importance of entrepreneurship in society is through the creation of a competitive environment through which innovation leads to the creation of value (Teece et al., 1997). Entrepreneurship encompasses two key aspects: firstly, the establishment and growth of a new business driven by innovation; and secondly, innovation within established organisations in response to evolving market and consumer needs, with the primary objective of economic gain (Aparicio, 2015). Institutions contextualise entrepreneurial endeavours and instigate change, often in response to evolving environmental factors or consumer demands. A clear distinction exists between institutions, which establish the regulatory framework, and organisations, which must adhere to these rules (Veciana & Urbano, 2008). Institutional economics can explain the complexity of the sport environment, which involves sport governing bodies, institutions, organisations, leagues, teams, and individual athletes. Thus, institutional economics can be used to examine sport entrepreneurship, in particular, what are the institutional factors that foster innovation and change within sport organisations, how institutional factors affect social innovation in sport, how sport institutions influence culture, and the impact of institutional economics on professional sport.

Institutions underpin social norms and can drive entrepreneurship through norms and behaviours within sport (Ratten 2015). Sport entrepreneurship involves stakeholders engaging in any kind of entrepreneurial activity, from starting new companies to running an already established business. This research contributes to existing sport entrepreneurship literature from an interdisciplinary standpoint using institutional to examine entrepreneurship in the sport context.

Several papers discuss the relationship between entrepreneurship, innovation, and sport policy frameworks. Ratten and Ferreira (2017) discussed innovation necessary for sport policy, by incorporating innovative strategies and developing new management practices.

Research is very limited with a focus on the innovation application in sport policy initiatives. Factors such as culture, economy, societal norms influence how sport policy is developed (Ratten and Ferreira, 2017). Sport policymakers should also emphasise and focus on facilitating entrepreneurship and innovation for governments to impliment. Economic factors affect policy changes, and policy encourages innovative practices to be developed in sport policy and implemented by the government to increase entrepreneurship and innovation in this sector. In turn, entrepreneurship and innovation activities also shape the sport policy framework, influencing each other (Pounder, 2019). Multiple factors are critical for sport organisations and sport startups, such as knowledge and capability development, building institutional capacity, technology diffusion and transfer, developing regulations and protocols, and formulating legitimate networking. These key factors that promote innovation in entrepreneurship were identified by the author. Gajda (2020) confirms that the regulatory system and institutional environment shape commercial and innovation activities in sport. More research is required to investigate institutional determinants specific to sport organisations (Ratten 2011).

Panahi and Yektayar (2016) defined value creation and innovation as aspects of sport entrepreneurship. and Cilleti (2012) added risk-taking and proactiveness as additional dimensions to innovation and an essential factor of sport entrepreneurship. Entrepreneurial activity is the sport industry; it creates value and wealth, fosters innovation and technological advancements, and provides opportunities for market advancement, contributing to economic growth and employment (Ball, 2005). Ratten (2011) stated that entrepreneurship is necessary to promote innovation. Moreover, Porter (2019) defined entrepreneurship as a creative process during which opportunities are created rather than identified. From a business perspective, entrepreneurship is a new business's creation, development, management, and growth (Ratten, 2011).

Innovation can be seen as a pivotal aspect of sport entrepreneurship, bringing novel ideas, practices and technologies that cooperate to the development of new products and marketing strategies (Ratten, 2019). It is essential to the sports industry in a variety of ways, as it creates value and wealth, fosters innovation and technological advancements, and provides opportunities for market advancement, contributing to economic growth and employment (Ball, 2005). Such advancements are essential to drive athletic performance, professional and amateur athletes, organisational performance, fan engagement and increase sport consumption (Ratten & Jones, 2020). For long-term economic development, technological advancements and innovative activities are the main contributors (Rosenberg, 2006).

Traditionally, as technological advancements in sport equipment have been the focus of innovation in sport, in recent years an ongoing rise can be witnessed in technology-based products and services within the industry. The revolution of the landscape of sport innovation is evoked by sport technology startups, such as League Apps, OpenSponsorship, Output, and Omsignal. Moreover, various factors contribute to enhancing competitiveness within the sport sector; innovation in business practices, encompassing the development of new strategies, decision-making processes, and policies, are all playing a crucial role in order to make it happen. (Fernandes et al., 2013; Ferreira et al., 2017; Robertson et al., 2023; Urbano et al., 2020).

Nonetheless, the sport literature neglects to examine what innovation looks like in sport enterprises. Some research focuses on sport clubs (Escamilla-Fajardo et al., 2019), sport leagues (Mazzei & Kirkpatrick, 2024), sport governing bodies (Crespo et al., 2023) and esports (Hammerschmidt et al., 2024). Only two papers examined innovation in the context of sport firms (Ding & Chen, 2022) and sport startups (Sargolzaei et al., 2023). One paper studied innovation among sport entrepreneurs, from the perspective of entrepreneurial

orientation and readiness to accelerate startup growth and enhance innovation performance (Binsaeed et al., 2023). Despite some interest in innovation as a catalyst for change, less research has investigated entrepreneurship within sport firms. To date, there have been a few papers published about sport startups. The sport entrepreneurship literature seems to be lagging when it comes to sport startups and firms. Ratten has published several conceptual papers about sport startups (Ratten, 2020a; Ratten 2020b Ratten et al., 2020), however, the literature lacks an empirical consideration of sport startups. Azimzadeh et al. (2013) proposed a conceptual model affecting small and medium enterprises and suggested future research to test the conceptual model. Ziyae and Toutifar (2019) suggest that sport startups should engage in innovation to increase their performance. For example, Xi et al. (2023) examined sustainable innovation practices of sport startups in the context of learning theory. Popovic et al. (2021) considered the attitudes of sport organisations officials towards innovation in the sport sector. Nonetheless, there is still a necessity to further investigate innovation in sport startups and firms.

Equally, not many studies relating to sport entrepreneurship study innovation from the research and development (R&D) perspective. Innovation and research and development play a critical role in the sport industry, particularly in the manufacture of sport equipment (Ratten, 2018, 2019). Only Ding and Chen (2022) investigated the effects of research and development efforts on sport firm performance. Several papers examine research and development in the context of sport manufacturing firms, and product development. Yoon (2017) studied the relationship between R&D investment and firm performance in the manufacture of sport equipment focusing on the significance of investing in R&D to drive innovation and enhance competitiveness in this sector. Therefore, the aim of this research study is to explore the effect of innovation on sport enterprises, from an institutional perspective.

5.2. THEORETICAL FRAMEWORK

Sport entrepreneurship literature often studied innovation, and there are several literature reviews published exploring the topic of innovation in this field (Escamilla-Fajardo et al., 2020; Hammerschmidt et al., 2023; Lara-Bocanegra et al., 2021; Pounder, 2019; Tjønndal, 2017). According to Ferreira et al. (2020), most of the sport innovation research falls under the category of sport sociology, knowledge disseminations and education in terms of teaching innovation in sport pedagogy. The cultural context and entrepreneurship education are crucial precursors to sport entrepreneurship, emphasising the role of educational programs in fostering entrepreneurial skills (Lara-Bocanegra et al., 2021). Tjønndal (2017) developed a typology of innovation in sport, categorising different forms of innovation into sociological, technological, organisational, commercial and community based. These categories are further supported by Escamilla-Fajardo et al. (2020), who acknowledged entrepreneurship, social development, management, and technology as key innovation themes in football. Similarly in the context of football, in two studies, Hammerschmidt et al. (2023, 2024) explored the relationship between innovation and creativity in sport management. These studies provide a foundation to understanding how entrepreneurial activity promotes innovation in sport.

Innovation in the literature of sport entrepreneurship is a growing area, with increased interest following the pandemic (Hammerschmidt et al., 2023). The key take aways from the body of research is that innovation drives entrepreneurial activity, as much as, entrepreneurship drives innovation. It is important to study innovation in the sport as it promotes innovative practices and strategies within sport organizations, as well as, drives competitiveness of sport firms. Lara-Bocanegra et al. (2021) contextualised innovation in sport entrepreneurship research through which entrepreneurial and intrapreneurial activities in sport lead to novel ideas, strategies, and advancements. The authors mention institutional change, management and leadership and entrepreneurship as the key aspects of sport

innovation. Innovation is crucial to entrepreneurship and plays a role in technological adaptation in the sport industry through three factors: a strong culture of innovation, technological adaptations from other areas of entrepreneurship, networks and support (Pounder, 2019). Escamilla-Fajardo et al. (2019) emphasise the need for innovative management strategies to navigate the dynamic and competitive landscape of the sport industry. In turn, Keshtidar et al. (2018) explored the role of organisational learning in improving management innovation in sport entrepreneurship. The study underlines the importance of continuous learning and adaptation in fostering innovation within sport organisations. Innovative management practices drive success and sustainability in sport entrepreneurship.

Institutional economics has been established as the most common theoretical framework for investigating entrepreneurship (North, 1990; Urbano et al., 2019a), linking entrepreneurship with economic growth (Aparicio et al., 2016). Institutions are fundamental drivers of change at each level - individual, community, and society - and govern society in the economic, political and social spheres (Urbano & Alvarez, 2014). Entrepreneurship is important for the growth of economies, and entrepreneurial activity and innovation contribute to it. Governments and policymakers must create policies to shape a conducive environment for entrepreneurial activity and innovation (North, 1990). Institutional economics has been established as the most common theoretical framework for investigating entrepreneurship, and it consists of formal and informal institutions (Veciana & Urbano, 2008). Informal factors are the culture, social norms, values, and beliefs, and formal factors are rules, regulations, laws, and procedures (Urbano et al., 2019). Van Wijk et al. (2019), contextualised social innovation within the institutional environment, where institutional context can enable or stall social innovation efforts. In a systematic review, Phillips et al. (2015), highlighted the role of institutions that affect social innovation. The authors showed

that both formal and informal institutions influence the innovation process of firms. Urbano and colleagues (2010) concluded that informal institutions have a greater significance for social enterprises than formal institutions. Therefore, to investigate the social innovation in startups, we need to consider the wider institutional context.

Evidence shows that institutional theory can also be used in sport entrepreneurship research (Altin et al., 2017; Chacar et al., 2018; Gimenez-Jimenez et al., 2020). The institutional conceptual framework provides a holistic understanding of entrepreneurial activity within sport, sport policy, and sport participation (Borgers et al., 2018; Humphreys et al., 2012; Ratten, 2019). Washington and Patterson (2011) showed the link between sport entrepreneurship and institutional theory, using sport management as an example of how institutions are used in organisational change, institutional logistics, legitimacy, and organisational dynamics in a sport context. Sport institutional entrepreneurship can be used as a tool for organisational development and as an innovation driver (Ratten, 2011). Social innovation and sustainability in sport are enabled through government policies, changing socio-economic environments, governmental support, or financial incentives. From an institutional perspective, social and cultural norms serve as catalysts for social change. Ratten (2018) states social capital and culture as an example of informal sport institutions. Svensson (2017) and Radaelli et al. (2018) examined social sport entrepreneurship from an institutional perspective. Therefore, institutional economics can be used as a theoretical framework to examine the effect of factors such as culture, social norms, values and beliefs, and social innovation on sport entrepreneurship. A country's economic development is vital to successful entrepreneurship, where entrepreneurship in sport is more evident and key to business growth in sport. Institutional characteristics and economic factors such as GDP, economic freedom, and labour force are correlated (Aparicio et al., 2016; Urbano & Alvarez,

2014) and can drive entrepreneurship in sport (González-Serrano et al., 2019; Humphreys et al., 2012).

Institutions are important in shaping the incentives, opportunities, and constraints that affect the innovation process. Cameron (1996) discussed the relationship between innovation and economic growth, showing how innovation, by introducing new products, processes, or technologies, can drive economic development and prosperity. Research and development (R&D) activities and innovation also influence economic growth. Bilbao-Osorio and Rodríguez-Pose (2004) showed it using the example of the European Union. By discussing the structures through which R&D investments can be translated into tangible innovations that drive economic progress and focussing on the EU context, the authors reviewed challenges and opportunities that propel innovation forward. In comparison, Ulku (2004) studied the relationship between R&D, innovation, and economic growth, emphasising the importance of R&D investments on innovation outcomes and their subsequent effects on overall economic growth. For long-term economic development, technological advancements and innovative activities are the main contributors (Rosenberg, 2006). The role of institutions was explored by Tebaldi & Elmslie (2008) with a focus on fostering innovation and driving economic growth. Interrelation can be found between institutional frameworks, innovation policies and economic performance; the authors are looking for the answers to understand how conducive institutional environments can spur innovation-led growth. Shaping a conducive ecosystem for innovation and economic prosperity, institutional quality, governance structures, and regulatory frameworks are all playing an important role. The role of R&D in driving innovation-led economic growth is unequivocal. However less is known about the connection between fostering innovation and sustained growth in the sport sector. It is important to explore the mechanisms through which innovation acts as a catalyst for sport economic growth. Although

there are quite a number of papers about innovation in sport, not many studies focus on the significance of R&D in sport.

Innovation and R&D are significant elements in the industry of sport. Very few researchers besides Ding and Chen (2022) have explored the impact of R&D efforts on the performance of sport firms; most researchers focus on R&D within the context of sport manufacturing companies. Based on those studies, there is a significant relationship between R&D investment and firm performance in the sector of sport equipment manufacturing (Ding & Chen, 2022). Moreover, Yoon (2017) highlights the relevance of investing in R&D in order to drive innovation and enhance competitiveness. Companies have multiple benefits of investing in R&D activities, such as creating cutting-edge products, enhancing manufacturing processes, meeting changing consumer demands, and ultimately leading to improved firm performance. The corporate governance system and financial capabilities of companies were studied by Chen et al., 2019, showing that they are key features influencing R&D intensity in the Chinese sport sector. Financial resources and strong governance practices play a significant role in helping to drive R&D practices, foster innovation, and strengthen the business's competitive position. Additionally, in Chinese sport firms' innovation-driven development strategies and R&D investment assist to achieve sustainable growth and competitive advantage (Chen et al., 2020). The mentioned studies help to demonstrate how innovation is important to the sport sector.

The relationship between innovation and institutions is less studied, however, some studies have shown that innovation as much as institutions can shape sport entrepreneurship where sport serves as a platform to initiate economic and social change (Svensson, Andersson, Mahoney, et al., 2020). As the general entrepreneurship and institutional research field demonstrated, institutions at all levels, including regulatory, normative and cognitive,

have the power to shape entrepreneurial activity and encourage or inhibit entrepreneurial activity within the economy (Aparicio et al., 2016; Urbano et al., 2019a).

5.2.1. INNOVATION

In Sport clubs, organisations, firms, and governing bodies are actively pursuing innovative strategies and business practices to gain a competitive advantage in the demanding sport industry. In sport business, innovation plays an important role in attaining business outcomes by fostering technological advancements and product development (Pounder, 2019). It drives the sport industry by creating value, catalysing change, facilitating development, and serving as a competitive advantage tool. Literature indicates that entrepreneurial skills and cultural, technological, environmental, economic and political factors influence the creation and growth of emerging sport firms (Azimzadeh et al., 2013). To reach the goal of future growth, prioritising innovative initiatives within sport enterprises can be very effective, particularly in research and development (R&D) activities. Ding and Chen' (2022) research unfolds the mechanism through which innovation-driven policies can have an impact on the long-term and sustainable growth of sport firms. While examining the mediating role of the investment of research and development (R&D), the study sheds light on the strategic importance of fostering innovation within the sport industry. The authors highlight the significance of R&D investment between innovation-driven policies and growth sustainability for sport firms, as a critical intermediary in the connection. Sport organisations can translate innovative ideas into tangible products, services, or even processes that fuel growth and market success, by allocating resources to research and development activities. R&D can be viewed as a strategic enabler, helping the implementation of innovative strategies and technologies that promote sport firms for long-term viability and competitive advantage in an increasingly innovation-driven industry. In order to meet evolving consumer demands in the dynamic sport market, innovation-driven policies serve as catalysts for enhancing competitiveness and driving

product development. With the focus on innovation, sport firms are able to not only differentiate themselves from competitors but also create value propositions that are promising for the customers, ultimately fostering sustained growth. Therefore, this research hypothesis that R&D activity, at the country level positively influences sport entrepreneurship and increases the number of sport enterprises.

Hypothesis 1a: R&D at the country level positively increase the number of sport enterprises.

5.2.2. FORMAL FACTORS

Burdening regulations hinder entrepreneurship by creating barriers to entry for new businesses (Urbano et al., 2019a). emphasised the importance of a conducive regulatory environment in fostering entrepreneurship. The study highlighted that well-designed regulations that provide clarity and predictability can encourage entrepreneurial activity. The regulatory environment significantly influences entrepreneurship, either by facilitating or hindering entrepreneurial endeavours. (Aparicio et al., 2016; Urbano et al., 2019b). The institutional theory and entrepreneurship literature shows how the relationship between regulations and entrepreneurial activity, emphasising the need for a supportive regulatory framework to promote entrepreneurial growth. Government expenditure plays a significant role, and Sport Government Expenditure (SGE) may be linked to the emergence of sport enterprises. While previous research on sport entrepreneurship lacks definitive conclusions, Omri & Afi (2020) discovered a positive correlation between formal factors, such as government spending, and entrepreneurship. Aghion et al. (2014) explored the relationship between institutional ownership and innovation in entrepreneurial firms. Institutions with a long-term perspective and a focus on innovation can positively impact the innovative activities of entrepreneurial ventures. As such, institutions shape the environment that permits innovation activities within entrepreneurship. The literature highlights the importance of

supportive institutional frameworks in fostering innovation and driving entrepreneurial success. Some research suggests that the subsidies and investment grants have a positive effect on the research and development in small and medium-sized enterprises (SMEs). Government support in the form of R&D subsidies influences the productivity levels of SMEs (Karhunen & Huovari, 2015). R&D subsidies contribute to productivity of SMEs through financial assistance for the development of innovation and technology. By receiving subsidies for R&D activities, SMEs are able to invest in new processes, technologies, products, leading to improved productivity levels and competitiveness in the market. Furthermore, some research highlighted the importance of targeted R&D subsidies in maximising the productivity gains for SMEs (Bronzini & Piselli, 2014; Czarnitzki et al., 2004; Karhunen & Huovari, 2015). These studies emphasised the need for tailored subsidy programs that align with the specific needs and capabilities of SMEs to ensure effective utilisation of resources and maximise productivity outcomes. By understanding the relationship between R&D subsidies and productivity in SMEs, policymakers and stakeholders can design more effective support mechanisms to foster innovation, growth, and competitiveness in small and medium-sized enterprises. Therefore, this study hypothesis that government expenditure positively affects sport entrepreneurship and as a result increases the number of sport enterprises.

Hypothesis 2a: Indirect government expenditure increase the number of sport enterprises.

Hypothesis 2b: R&D is positively correlated with government expenditure.

5.2.3. INFORMAL FACTORS

The present study highlights the importance of entrepreneurial education for sport organisations and startups to drive innovations and entrepreneurial activities. The previous chapter has shown education level is a crucial determinant to sport entrepreneurship and

demonstrated its significance in sport startup survival. Informal factors are the culture, social norms, values, and beliefs, and formal factors are rules, regulations, laws, and procedures (Urbano et al., 2019). Van Wijk et al. (2019), contextualised social innovation within the institutional environment, where institutional context can enable or stall innovation efforts. As such, education can be studied as a cognitive informal factor. Education level significantly affects opportunity-seizing capabilities (Mckelvie, 2009) and the survival of firms (Weaven et al., 2021). According to Ferreira et al. (2020), most of the sport innovation research falls under the category of sport sociology, knowledge disseminations and education in terms of teaching innovation in sport pedagogy. The cultural context and entrepreneurship education are crucial precursors to sport entrepreneurship, emphasising the role of educational programs in fostering entrepreneurial skills (Lara-Bocanegra et al., 2021).

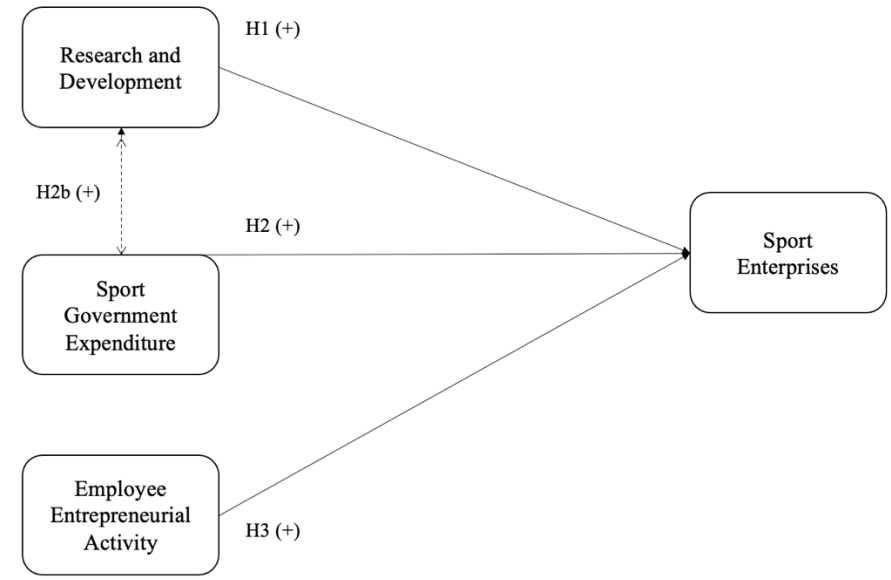
Ratten and Ferreira discussed the importance of innovation by encouraging entrepreneurial education. Suggesting that entrepreneurial education increases the innovative practices of sport organisations. Entrepreneurial education plays a significant role in driving firm innovation and competitiveness. Education is essential to developing human capital and allows employees to acquire knowledge, develop skills and creative thinking, and network (Chatterji & Patro, 2014). The topic of entrepreneurial education among sport science students is a common theme in sport entrepreneurship research (González-Serrano et al., 2019a; González-Serrano et al., 2016). A handful of authors showed that there is a relationship between higher education and entrepreneurial orientation. For example, Dinning (2017) and Lara-Bocanegra et al. (2022) studied how university level students in sport management develop entrepreneurial orientation. In turn, Gonzalez-Serrano et al. (2018) measured sport science student's entrepreneurial intentions and perceived capabilities. Moreover, the authors also examined how education, such as entrepreneurial courses and their background environment affects intentions to start a business. The strongest predictor of

entrepreneurial orientation in students are actually perceived capacities, where students believe they have the ability, knowledge, and skills to successfully start a business. González-Serrano et al. (2019a) showed that there is a gender difference in entrepreneurship education among Spanish sport science students. Puyana et al. 2019 also showed a relationship between entrepreneurial intentions, educational background, and higher education. Therefore, the present study hypotheses that entrepreneurial education positively affect sport enterprises.

Hypothesis 3. Entrepreneurial education indirectly increase the number of sport enterprises.

Figure 5.1. summarises the conceptual model based on the suggested hypotheses.

Figure 5.1. Hypothesis model



5.3. METHODS

Innovation in sport has been studied using qualitative (Foxall & Johnston, 1991; Gajda, 2020; Hammerschmidt et al., 2024; Mazzei & Kirkpatrick, 2024), quantitative methods (Binsaeed et al., 2023; Ding & Chen, 2022; Escamilla-Fajardo et al., 2022), and mixed methods (Crespo

et al., 2023; González-Serrano et al., 2019; Sargolzaei et al., 2023). Escamilla-Fajardo et al. (2022) explored the relationship between innovation and organisational climate in sport clubs. Ding and Chen (2022) focused on the role of innovation-driven policies in sustaining growth for sport firms, with a specific emphasis on the mediating effect of R&D investment. By exploring how policies aimed at promoting innovation can impact the growth trajectory of sport businesses, their research shows how investments in research and development create long-term sustainability and competitiveness. Through an examination of the mediating role of R&D investment, provide insights into the mechanisms through which innovation-driven policies can drive growth and performance outcomes in the sport industry. Thus, the current study explores R&D as a proxy to innovation in sport enterprises using a quantitative approach.

5.3.1. DATA AND VARIABLES

The Eurostat database computed by the European Commission is often used in research focusing on the European Region (Korres et al., 2011). Some sport health participation and sport public policy research sport (SportEconAustria, 2012). To the authors' knowledge, only one previous study used Eurostat to study dynamic capabilities in a sport context (González-Serrano et al., 2019). Using secondary databases, the sport data was taken from Eurostat, the European Commission's statistical office, the entrepreneurial variables were taken from Global Entrepreneurship Monitor (GEM), and control variables were taken from World Development Indicator (WDI). Many authors in entrepreneurship research use GEM and WDI databases to study the relationship between entrepreneurship and economic and institutional context (Aparicio et al., 2016; Chowdhury et al., 2019; Urbano et al., 2019b, 2019a). The dependent variable was the number of sport enterprises, whereas the independent variables were R&D as an innovation proxy, entrepreneurial education, and government expenditure. A full description of variables is provided in Table 1. The control variables

include sport employment, investment grants, capital transfers, research and development expenditure, GDP growth, and GDP, as the literature suggests (Ding & Chen, 2022; González-Serrano et al., 2019; Urbano et al., 2019a; Valenti et al., 2020).

Table 5.1. Description of the variables.

Variables	Proxy	Description	Source
Dependent Variable	N° Sport Enterprises	Population of active sport enterprises in t - number	EuroStat
Innovation	Research and Development	The extent to which national research and development will lead to new commercial opportunities and is available to SMEs	GEM
Entrepreneurial Capital	Total Entrepreneurial Education and Training	The extent to which training in creating or managing SMEs is incorporated within the education and training system at primary and secondary levels and higher education such as vocational, college, business schools, etc.	GEM
Formal Factor	Government Expenditure	Total general government expenditure, classification of functions of government and function and type notified by national authorities (Recreational and sporting services). Data is presented in millions of Euros. Time frequency is Annual. Sector General government.	EuroStat
Control Variable	Financing for entrepreneurs	The availability of financial resources, equity and debt, for small and medium enterprises (SMEs) (including grants and subsidies)	
	Capital Transfers	National accounts indicator, general government expenditure relating to transfers of capital. Data is presented in millions of Euros. Time frequency is Annual. Sector General government.	EuroStat
	Investment Grants	National accounts indicator, general government expenditure relating to grants for investments. Data is presented in millions of Euros. Time frequency is Annual. Sector General government.	EuroStat
	R&D Expenditure (% of GDP)	Gross domestic expenditures on research and development (R&D), expressed as a percent of GDP. They include both capital and current expenditures in the four main sectors: Business enterprise, Government, Higher education and Private non-profit. R&D covers basic research, applied research, and experimental development.	WDI
	GDP growth	Annual percentage growth rate of GDP at market prices based on constant local currency. Aggregates are based on constant 2015 prices, expressed in U.S. dollars. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources.	WDI
`	GDP	GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in constant 2015 prices, expressed in U.S. dollars. Dollar figures for GDP are converted from domestic currencies using 2015 official exchange rates.	WDI
	Sport Employment	A percentage of total employment in the sport sector. To measure employment in sport, based on the Vilnius definition as covering the essential sport activities.	EuroStat
Robustness Check	Enterprises Births	Births of sport enterprises in t - number	EuroStat

5.3.2. *ANALYSIS*

A regression analysis is the most standard method to study entrepreneurship (Noguera et al., 2013). Some sport entrepreneurship researchers have used regression analysis (Escamilla-Fajardo et al., 2019; Hayduk & Walker, 2018). Radaelli et al. (2018) used a longitudinal panel regression to study the relationship between human capital and entrepreneurial activity in professional sport leagues. González-Serrano et al. (2019) studied European countries and the relationship between innovation and GDP using a hierarchical regression. Escamilla-Fajardo et al. (2019) also used a hierarchical linear regression to analyse organisational innovation in Spanish sport clubs, whereas Ding and Chen (2022) used a regression model to study Chinese sport firms. In turn, Binsaeed et al. (2023) used partial least-squares structural equation modelling to study the effect of entrepreneurial readiness, performance, and orientation on innovative performance. Based on these studies, the present study used a hierarchical linear regression to analyse the relationship between innovation and European sport firms. The dataset was unbalanced due to missing values, some countries and years had to be eliminated; therefore, the study could not have used a panel regression model; hence, a hierarchical regression was more appropriate. The analysis was performed using STATA statistical software. The complete list of countries included in the analysis is shown in Appendix 3.2.

5.4. RESULTS

Description statistics are shown in Table 5.2, which shows the means and standard deviation. Table 5.2 shows that there are almost 12272 sport enterprise across 28 European countries. The mean government expenditure is 4853 euros. R&D mean is 4.26 percent, which refers to the successful transfer of R&D activity into commercialisation or business or market.

Similarly, only 4.67 percent of total education that incorporates some kind of entrepreneurial aspect, such as starting or managing SMEs at all educational levels, including, primary, secondary, college, etc. Also financing for entrepreneurs is low at 4.5 percent, indicating that there isn't a lot of financial resources available for SMEs. A correlation matrix with significance levels is provided in Table 5.3., showing that R&D, government expenditure and entrepreneurial education are correlated with the number of sport enterprises.

The robustness tests showed the validity of the models (Appendix 5.3.), which included the number of sport startup births as an alternative measure. Additionally, birth rate could serve as another robustness test. Alternative measure for to formal factors, instead of current variable that is government expenditure, other measure of different types of government expenditure or sport expenditure could serve as an alternative for formal factors. Relating to informal factors, instead of entrepreneurial education, general education or tertiary education could be included. Moreover, alternative measure for R&D could be R&D expenditure or innovation measure.

Relating to the size effect the main estimation had 178 observations and the robustness test had 153 observations. This is below the common cut of point of 200 observations, which is regarded as the minimum number of observations for a significant sample size and a strong confidence level (Cohen, 2013). However, the Cohen's coefficient indicates strong sample size ($f^2 = 10.11$) of the main estimation. This is enough to establish a strong relationship between the independent variables on sport startup survival. The high coefficient shows that the model allows to explain the variances occurring in the analysis. Additionally, the Appendix 5.2. depict the interaction effect of intendent variables on the number of sport startups. The graph shows a strong interactions R&D and Government Expenditure on the number of sport enterprise (e), in a positive direction.

Table 5.2. Descriptive Statistics

	Mean	Std. dev.	Min	Max
N° Sport Enterprises	12272.62	25182.67	160.00	335193.00
R&D	4.26	0.70	2.68	6.22
Government Expenditure	4853.13	11140.88	3.60	60254.80
Entrepreneurial Education	4.67	0.85	2.87	7.06
Financing for entrepreneurs	4.50	0.77	2.10	6.68
Capital transfers	117.26	271.62	-0.70	1702.50
R&D Expenditure (% of GDP)	1.57	0.89	0.23	3.87
Investment grants	97.30	231.61	-0.70	1624.80
GDP growth (annual %)	2.41	3.72	-14.84	24.48
GDP	4.89E+11	7.50E+11	1.19E+10	3.63E+12
Sport Employment	82.75	224.24	0.60	1513.40
	12272.62	25182.67	160.00	335193.00

Table 5.3. Correlation matrix.

		1	2	3	4	5	6	7	8	9	10	11
1	N° Sport Enterprises	1										
2	Ln R&D	0.24*	1									
3	Ln Government Expenditure	0.97*	0.27*	1								
4	Ln Entrepreneurial Education	0.34*	0.75*	0.41*	1							
5	Ln Financing for entrepreneurs	0.21*	0.29*	0.21*	0.24*	1						
6	Ln Capital transfers	0.87*	0.12	0.94*	0.33*	0.16*	1					
7	Ln R&D Expenditure (% of GDP)	0.21*	0.44*	0.35*	0.55*	0.10	0.23*	1				
8	Ln Investment Grants	0.85	0.12	0.93*	0.33*	0.16*	1.0*	0.22*	1			
9	Ln GDP growth	-0.12	-0.05	-0.15*	-0.01	0.01	-0.08	-0.17*	-0.08	1		
10	Ln GDP	0.86*	0.24*	0.91*	0.38*	0.20*	0.74*	0.32*	0.72*	-0.14*	1	
11	Sport Employment	0.96*	0.17*	0.99*	0.35*	0.15	0.94*	0.30*	0.93*	-0.11	0.92*	1

Table 5.4. Linear Regression Analysis Results

Eq. (1). Dep. variable N° Sport Enterprises	(1) Ln SE All Variables (OLS)	(2) Ln SE Without R&D (OLS)	(3) Ln SE Interaction (OLS)
Innovation			
Ln R&D (H1)	3281.48***		1321.30*
	(1052.42)		(1142.4)
Institutions			
Ln Government Expenditure (H2)	3.65***	3.69***	-1.57*
	(0.34)	(-329.71)	(1.44)
Entrepreneurial Capacity			
Ln Entrepreneurial Education (H3)	-2237.05***	-329.71	-2004.00***
	(831.84)	(578.16)	(803.94)
Control Variables			
Ln Financing for entrepreneurs	-4.42	292.85	-120.04
	(554.58)	(560.33)	(535.26)
Ln Capital transfers	98.85	92.78*	92.54*
	(43.61)	(44.69)	(42.06)
Ln R&D Expenditure (% of GDP)	-1984.67***	-1991.71***	-1851.89***
	(642.63)	(659.10)	(620.22)
Ln Investment Grants	-100.83*	-108.76*	-109.76*
	(45.82)	(46.99)	(44.15)
Ln GDP growth	-145.30	-190.93	-145.05
	(119.03)	(121.15)	(114.68)
Ln GDP	4.32E-10	7.53E-11	1.02E-10*
	(1.54E-11)	(1.58E-10)	(1.54E-11)
Ln Sport Employment	63.35**	57.89**	72.44**
	(16.64)	(16.97)	(16.22)
Interactions			
(H2b) R&D * Government Expenditure			1.09***
			(0.29)
Constant	1067.95	4976.46	8539.42**
	(3264.68)	(3091.70)	(3730.50)
N	178	178	178
R^2	0.91	0.89	0.91
F	154.68	162.35	152.72
Prob > F	0.00	0.00	0.00
f^2	10.11	8.09	10.11

Note: Heteroskedasticity-corrected standard errors are shown in parentheses.
*** $p < 0.01$.
** $p < 0.05$.
* $p < 0.10$.

The hierarchical regression results are presented in Table 5.4. The primary finding of this study shows that government expenditure predicts the strongest sport enterprises and that R&D at the country level positively affects sport entrepreneurship in the for of increased number of sport enterprises. Furthermore, research and development interacts with sport government expenditure. This is consistent with literature, as institutional frameworks are the major barrier or facilitator of entrepreneurial activity (Aparicio et al., 2016; Urbano et al., 2019a). Research and development with innovation are significant together, shown by model

1. The hierarchical regression showed that when the two are investigated separately, research and development and government expenditure, entrepreneurial education become significant to a lesser extent in model 2. Model 3 shows a significant correlation between research and development with government expenditure. Entrepreneurial education activity is a significant contributor to innovation and research and development. However, it negatively correlates with sport enterprises. Similarly, innovation is negatively correlated with sport enterprises.

Hypothesis 1 was fully supported. The results showed that R&D positively correlates with sport enterprises ($\beta = 3281.48$, $p < .01$). A handful of studies show that there is a positive correlation between investment in R&D and the success of sport enterprises. The literature supports this relationship, Ding and Chen (2022) showed a positive effect of R&D on sport firm growth.

Hypothesis 2 was fully supported showing that sport government expenditure positively and significantly correlated with sport enterprises ($\beta = 3.65$, $p < .01$). Several studies showed a positive and significant correlation between sport government expenditure and the growth of sport enterprises. Our study stress the important role of government expenditure in supporting and stimulating the growth of sport enterprises, ultimately contributing to economic growth. Similarly, hypothesis 2b was supported. Sport government expenditure is correlated with research and development and positively affects sport enterprises ($\beta = 2.09$, $p < .01$). A handful of studies showed that there is a positive correlation between sport government expenditure and research and development (R&D) activities, which in turn positively impacts sport enterprises. For example, Smith and Westerbeek (2007) found that increased government funding for sport infrastructure and programs led to a rise in R&D investments in sport technology and innovation,

However, hypothesis 3 was partially supported, ($\beta = -2237$, $p < .01$). Although entrepreneurial education is significantly correlated with sport enterprises, that relationship is

negative, therefore partially supporting hypothesis 3. It's important to note that the relationship between entrepreneurial education and enterprises can vary depending on various factors such as industry, organisational culture, and economic conditions (Bosma et al., 2012).

5.5. DISCUSSION

This study investigated innovation in sport enterprises. In particular research and development at the country level as a proxy for innovation, entrepreneurial education and government expenditure affecting the number of sport enterprises. Institutional framework allowed to explore innovation of sport enterprises in the wider economic and institutional environment. The primary funding of this study is that country-level R&D has a significant effect on the number of sport enterprises. This suggests that country level R&D has a significant effect on the number of sport startups in two ways. First, country-level R&D activities are either supporting sport startups in survival by mainlining a competitive advantage. Second, it encourages the start of new sport startups. As the measure of sport enterprises in this study is defined as the total number of active enterprises in the sport sector, it also includes the newly born sport startups that are active in a given year, as the measure of number of sport startup include both startup births and number of active already established firms. Which means that country-level R&D supports both the creation and the survival of sport startups.

Our finding are consistent with the literature as Urbano et al. (2020) emphasised the importance of innovation, especially importance of R&D investments, the role of firm characteristics and external factors in shaping innovation strategies, and the impact of innovation on firm performance and competitiveness in the European market.

The literature shows that firms who engage in innovation and R&D activities, gain a competitive advantage, increase firm performance, all of which untimely leading to increased economic growth (Belderbos et al., 2004; Czarnitzki et al., 2004; Davidson & Segerstrom, 1997; Ulku, 2004).

The expenditure on innovation leads to favourable outcomes from R&D, increasing firm innovation and performance (Bronzini & Piselli, 2014; Dai et al., 2020). Moreover, the institutional context and the link between supportive institutions lead to increased innovation activities (Stam & Nooteboom, 2010; Tebaldi & Elmslie, 2008). This study analysed sport enterprises, identifying the key innovation and institutional factors. Ding and Chen (2022) analysed innovation subsidies and R&D subsidies which had a positive effect on market value of firms. The present study showed that government expenditure on sport had a positive effect on sport enterprises.

The second imporant finding of this study is that government support in the form of expenditure is the primary contributor and facilitator of R&D of sport enterprise in a European context. Moreover, entrepreneurial education plays a role in R&D activities and sport entrepreneurship, however, to a lesser extent. Some industries where innovation is required to maintain a competitive advantage, it acts counterproductively and due to overbearing R&D costs (Jones & Williams, 1998). Moreover, certain industries may achieve market saturation, where further R&D activities may have diminished returns Acemoglu et al., 2012). Our results and some literature suggest that although innovation drives growth, for certain factors or industries may be counterproductive. Furthermore, entrepreneurial education also has been shown to be negatively linked to firm performance. Some studies suggest that employees with high entrepreneurial activity do not contribute to the firm's innovation efforts (Jones and Butler, 2017; Smith et al., 2019). One of the earliest papers discussing innovation in sport by Foxall and Johnston (1991), emphasised the importance of

research and development in motorsports and states innovation as a secondary objective of sport. Innovation leads not only to technological advancements but also organisational and commercial developments propelling the sport industry forwards.

5.5.1. CONTRIBUTIONS AND IMPLICATIONS

By exploring the interconnections between innovation, entrepreneurship, and intrapreneurship in the context of sport, we provide valuable insights for policymakers and sport entrepreneurs looking to promote innovation and R&D activities. The field of sport entrepreneurship is still developing and would benefit from further research that specifically examines the sport startups and young enterprises. We contribute to the existing literature by building on innovation and sport entrepreneurship research, showing that supportive institutions and government expenditure, particularly, research and development is positively affecting sport enterprises birth and startup. The implications are for academics and researchers shedding light on innovation in sport startups.

There are several practical and theoretical contributions to this research. Based on our findings we suggest policymakers create supportive institutional environments especially, targeting R&D activities to facilitate the transfer of knowledge and market commercialisation. Moreover, we shows that government expenditure is a facilitator for sport enterprises and R&D. This should urge policymakers to devote public funds to the promotion and support of R&D activities at the country level. In turn, startups should be aware and utilise the resources that the government is providing. Public-private partnership and collaborations efforts of sport enterprises should increase their R&D efforts and ensure their survival and growth.

The primary contribution of this project is to shed light on the role of innovation and institutional determinants in sport entrepreneurship. Second, to provide recommendations for

sport startups and enterprises emphasising that research and development are crucial for sustained growth and competitive advantage, through supportive institutions. Third, how entrepreneurial education can decrease innovation efforts of sport enterprises. Finally, we provide recommendations on which factors are vital in promoting social innovation in sport entrepreneurship. We highlight the importance of the institutional context. Future studies have the potential to build upon our findings to provide practical applications in this field, developing an understanding of how sport startups and enterprises promote innovativeness underpinning their core business objectives.

5.5.2. LIMITATIONS

This study focused solely on European countries. Further analysis is required to provide a holistic and findings generatability by comparing different markets for example in the North American context or sport enterprises in the emerging economies. It is important to note that the presented results in this study are specific to the data set used, highlighting the need for further research involving a broader population of sport enterprises across diverse economies. Furthermore, the variables included in this study represent only a cross-section of the potential determinants that could influence innovation and R&D activity sport enterprises. Other institutional factors also could potentially affect innovation which can either promote or inhibit entrepreneurial activity of sport enterprises. For example, the relationship between R&D and government expenditure shows how institutional factors influence innovation in sport. Enterprises in a more supportive institutional environment are likely to be more innovative compared to their peers in a restrictive institutional environment, highlighting the importance of institutional context of entrepreneurship (Urbano et al., 2019a; Urbano & Alvarez, 2014; Veciana & Urbano, 2008).

5.5.3. *FUTURE RESEARCH DIRECTIONS*

The present study only scratched the surface about the relationship between innovation and sport enterprise. Further analysis is needed to explore deeper this relationship, particularly, how research and development efforts contribute to sport enterprises performance and growth. For example, future studies could use a larger sample, provide a country comparison or study the effects of institutions and R&D in different economies. More research is essential for firms to develop innovative strategies that align with their objectives and are suitable for their specific markets, considering potential variations in how firms utilise innovation across different economies. Further in-depth analysis is required to fully understand the intricacies of sport innovation, particularly in startups and sport enterprises. Investigating how sport startups cultivate and utilise innovation for growth. Future studies could explore how innovativeness creates value and how sport startups can promote research and development efforts, especially considering differences in market dynamics in effectively harnessing innovation to enhance firm performance and ensure sustained long-term growth.

CHAPTER SIX

GENERAL CONCLUSIONS

6.1. CONCLUSIONS

This thesis focussed on sport entrepreneurship from a quantitative approach an using institutional and dynamic capabilities theoretical framework. Each chapter of the thesis had several objectives. This chapter concludes the main findings of each previous chapter, summarises the contributions of each empirical paper including the systematic literature review, provides implications for theory and practice, and lastly directs future research.

The first chapter provided an introduction of the field and research objectives of the thesis. The second chapter's aim was to provide an-in-depth analysis of the current sport entrepreneurship research, identify research gaps and unexplored areas of the field, and develop a comprehensive taxonomy of sport entrepreneurship research. The result showed that sport entrepreneurship research focusses mainly on education and entrepreneurial orientation of students and sport organisations, social entrepreneurship, and innovation. Based on our systematic literature review we demonstrated that a significant amount of the research uses a qualitative methodological design to study sport entrepreneurship literature, most common were case-study discussions and an inductive approach. The bibliometric analysis showed that quantitative design is less common in this field and requires more complex statistical analysis to fully understand the determinants and factors influencing sport entrepreneurship. Institutional context, sport startups, coaches, and race were among the least explored topics within sport entrepreneurship research.

The three empirical chapters had an objective to explore the institutional environment and dynamic capabilities in sport enterprises within a European context, using data from GEM, WDI, WGI, and Eurostat. In particular, the third chapter identified the formal and informal institutional determinants of sport enterprises. The results showed that government support and the perceptions of corruption affect sport enterprises. Corruption perception was negatively correlated with sport enterprises, whereas government support had a positive

relationship. This suggests that the perceptions of corruption in sport have an inhibiting effect on entrepreneurial activity in sport, whereas government support promotes sport entrepreneurship. The interesting finding is that perceived opportunities are independent of economic development.

The aim of the fourth chapter was to examine how dynamic capabilities in the form of human capital affect the survival of sport startups and how they interact with institutional factors. The results show that human capital and perceived capabilities as dynamic capabilities promote the survival of sport startups. Institutional factors such as supportive taxes and low bureaucracy provide a facilitative environment where startups can develop dynamic capabilities. The key finding is that human capital plays an underlying role in firm longevity and ensures survival. An institutional environment that has low bureaucracy and supportive tax policies also contributes to startup survival. Institutions moderate the utilisation of human capital resources and contribute to firm longevity.

The objective of the fifth chapter was to study the relationship between innovation in the form of R&D and the creation and survival of sport startups. The main result showed that the R&D activities at the country level influence sport startups. Moreover, institutional factors such as sport government expenditure affect the formation of sport startups and influence whether sport startups engage in more R&D activities. As such, we showed that R&D at the country level affects sport startups, and the institutional environment facilitates R&D activities. Supportive regulatory policies facilitate creating a favourable institutional environment, which encourages sport startups to innovate.

6.2. IMPLICATIONS

The primary contribution of this project is to shed light on the role of institutional determinants and dynamic capabilities of sport entrepreneurship in different countries. There

are multiple implications for sport entrepreneurship research, based on the findings of this thesis. First, to provide a deeper understanding of the complexity of sport entrepreneurship research. Second, to understand institutional determinants and dynamic capabilities of sport entrepreneurship, and the relationship between these interacting factors. Third, to examine the role of human capital and its effect on sport startup survival. Finally, which institutional factors influence innovation and R&D in sport entrepreneurship. The following subsections provide implications and contributions for each chapter of the thesis in more detail.

6.2.1. SPORT ENTREPRENEURSHIP RESEARCH

The systematic literature review provided a far reaching analysis of the current state of sport entrepreneurship research. We build up on previous literature reviews in this field, providing a general overview and adding an in-depth thematical, methodological, stakeholder and sport analysis. This literature review has significant implications for the sport entrepreneurship research field and sport academics. First, we contribute to the theory of sport entrepreneurship research by developing a conceptual model of sport entrepreneurship literature based on our taxonomy. Sport entrepreneurship literature is fragmented and complex covering many topics. We provide a comprehensive organization of the themes and topics within this field, categorised at multiple levels, based on various relationships and similarities. Second, we provide an in-depth analysis of methodologies used in the literature. The results show all types of methodologies used to study this field and the specific techniques used for analysis. We provide a foundation for future research for innovative methodological frameworks and encourage future research to use methodologies that are lagging in the literature. We aim to enrich the understanding of sport entrepreneurship and untangle its complexity with a multitude of stakeholders. By providing a broad understanding of the themes that constitute sport entrepreneurship we also identify the unexplored and

lagging topics, that require further investigation. One of the contributions of this literature review was to identify research gaps and provide a guide for future research in this field.

6.2.2. INSTITUTIONAL DETERMINANTS

This thesis provides several implications relating to the institutional environment of sport entrepreneurship. Sport entrepreneurship depends on the wider economic, political, and institutional environment. As the third chapter showed, there is an evident relationship between institutional factors and sport entrepreneurship, and that relationship is further influenced by political factors. Therefore, this study adds to institutional research within the existing sport entrepreneurship literature. Our findings demonstrate that the institutional framework in sport entrepreneurship is critical to research and practice. The implication of this research is for sport policymakers to consider how their policies shape entrepreneurial activity and urge new legislation to consider sport startups when creating new policies. Furthermore, there are implications for sport entrepreneurs and those who intend to start a business in sport. Sport startups and entrepreneurs need to consider the economic, institutional, and political context before starting their business to be aware of the factors and challenges that they may encounter on the way. Since the political and institutional environments vary between countries, we advise sport entrepreneurs to also consider various countries when starting a business, as some countries have more favourable institutional environments towards entrepreneurship than others. Finally, sport organisations should also understand how institutional factors affect already established organisations, especially within complex environments like sport, where there are multiple regulatory bodies and various stakeholders to consider. The possible critical determinants of such change would be the mobilisation of resources and formation of

partnerships, as well as a clear vision and a centralised organisation fundamental to the success of implementing change.

6.2.3. HUMAN CAPITAL AND DYNAMIC CAPABILITIES

The implications of this thesis are aimed at academics in this field and sport entrepreneurs, as well as sport industry professionals, showcasing how human capital and dynamic capabilities in sport organisations can promote growth and determine survival. We build upon the works of Teece (2014), Weaven et al. (2021), Harris et al. (2021), and Lefebvre et al. (2020) on 'stages of the dynamic capabilities' transformation process: sensing, seizing, and transforming'. We have identified the three key institutional factors affecting the dynamic capabilities process among sport startups. Survival of sport startups, as an outcome, depends on the use of dynamic capabilities and equivalent institutional factors. Institutional factors such as supportive taxes and low bureaucracy create a conducive environment for startups, which then require abilities to transform new opportunities into new assets. The transforming process depends on the human capital of startups, particularly, their education level. Tertiary education increases the survival of sport startups by allowing human capital more efficiently and effectively to utilise resources. Translating into value creation and subsequent survival of sport startups.

This research provided a novel approach to dynamic capabilities research investigating the survival of sport startups as an outcome of dynamic capabilities. The implication of this research is for sport firms and startups showing employee education and knowledge plays a significant role in firm survival, which should encourage sport firms to include education in their growth strategies. Specifically, tertiary education is essential to the survival of a sport startup. McKelvie and Davidsson (2009) showed that education and managerial experience strongly affect and promote dynamic capabilities. Tertiary education

enables dynamic capabilities and fosters innovative performance (Camisón & Monfort-Mir, 2012). The current results suggest that sport entrepreneurs should emphasise the education and knowledge of their startup employees. Batista et al. (2007) showed that entrepreneurial background and especially human capital contribute to the success of startups. Bates (1990) has already demonstrated that human capital and an entrepreneur's background are critical to a new venture's success and longevity. In modern tech firms, the founding team's educational background and experience increase the innovation degree and the growth of the startup through the early stages (Tzabbar & Margolis, 2017).

Moreover, we provide implications for academics and sport researchers, to advance the research field of sport entrepreneurship and dynamic capabilities. This study adds to the sport entrepreneurship literature dynamic capabilities perspective, which is overlooked in this research field. Most previous research focussed on professional sport leagues, whereas our study provides a sport startup perspective. The majority of research exploring sport startups is theoretical in nature (Ratten, 2012b, 2019b, 2020; Ratten et al., 2020). The current study adds to the handful of studies on sport startups, bringing a novel study focussing on the survival of sport startups, highlighting the importance of education and knowledge on their success (González-Serrano et al., 2019; Rahimi et al., 2020, 22021; Ziyae & Toutifar Tehranpour, 2019).

6.2.4. RESEARCH AND DEVELOPMENT

By exploring the interconnections between innovation, entrepreneurship, and intrapreneurship in the context of sport, we provide valuable insights for policymakers and sport entrepreneurs looking to promote innovation and R&D activities. The field of sport entrepreneurship is still developing and would benefit from further research that specifically examines sport startups and young enterprises. We contribute to the existing literature by

building on innovation and sport entrepreneurship research, showing that supportive institutions and government expenditure, particularly research and development is positively affecting sport enterprises. The implications are for academics and researchers shedding light on innovation in sport startups. In particular, country level R&D has a significant effect on the number of sport startups. This has two important implications. First, country-level R&D activities are either supporting sport startups in survival by mainlining a competitive advantage. Second, it encourages the start of new sport startups, as the measure of number of sport startup include both startup births and number of active already established firms. Which means that R&D supports both the creation and the survival of sport startups.

There are several practical and theoretical contributions to this research. The primary contribution of this project is to shed light on the role of innovation and institutional determinants in sport entrepreneurship. Second, to provide recommendations for sport startups and enterprises emphasising that research and development are crucial for sustained growth and competitive advantage, through supportive institutions. Third, how entrepreneurial education can decrease innovation efforts of sport enterprises. Finally, we provide recommendations on which factors are vital in promoting social innovation in sport entrepreneurship. We emphasise how the wider institutional context is important for sport entrepreneurship. Future studies have the potential to build upon our findings to provide practical applications in this field, developing an understanding of how sport startups and enterprises promote innovativeness underpinning their core business objectives.

6.2.5. THEORY, PRACTICE AND POLICY

This thesis contributes to the body of literature in the field of sport entrepreneurship. We build upon institutional theory and dynamic capabilities, providing a novel approach to studying sport entrepreneurship, as no previous research in this field has combined these two

theories. Sport operates in a complex institutional environment, where regulatory frameworks are intertwined with sociocultural norms. Robertson et al. (2021) discussed how institutional theory can be applied to sport management research and help understand how sport organisations adopt practices and procedures in response to external social and institutional pressures. The complexity lies between various stakeholders such as athletes, fans, sport consumers, amateurs, sport clubs, organisations and firms operating and adhering to regulatory bodies such as the sport governing bodies and federations at national and international levels (Nite et al., 2020). Managing all these stakeholders creates institutional pressure due to different institutional demands, which require managerial best-practice tools and knowledge that research provides for policymakers, managers and entrepreneurs.

Our empirical research carries implications for sport entrepreneurs, policymakers, and academics. This thesis contributes to the sport entrepreneurship literature in a multitude of ways. First, our theoretical contribution shows the combination of two independent theories, providing a new lens through which entrepreneurial activity can be examined in the sport sector. Combining institutional theory and dynamic capabilities provides a comprehensive and complementing theoretical framework. A few have applied institutional theory to study sport organisations (Kikutis, 2000b; P. G. Svensson, 2017). Yet, no research previously has studied institutional factors among sport enterprises and sport startups. Here, we provide a novel theoretical approach to studying sport startups from an institutional and dynamic capabilities perspective, combining two overlooked theories in sport literature.

Second, this thesis emphasises the startup in the "entrepreneurship" of sport. The majority of sport entrepreneurship literature focusses on the entrepreneurial activity and processes in sport organisations (Escamilla-Fajardo et al., 2020), sport clubs (Hammerschmidt et al., 2021), and sport governing bodies (Harris et al., 2021), with limited research about new ventures, startups or small-medium-enterprises (SMEs) in sport. Factors

affecting venture creation in sport remain unexplored (Ratten, 2020d), as the majority of the current research is theoretical in nature (Ratten, 2020b). Thus, our second contribution is focussing on sport enterprises and startups, examining the factors that affect their creation, survival, and growth.

Third, since the majority of sport entrepreneurship research is qualitative, we add a quantitative perspective from various secondary data sources. Only one article used GEM data combined with sport data from Eurostat to study factors affecting women's sport employment (Gonzalez-Serrano et al., 2021). Combining these data sources, we deliver an integrated multidimensional analysis of factors influencing sport startups.

Fourth, our findings serve as a guide for entrepreneurs, for both those looking to start a business in the sport sector and those who have already established one. Our results director sport entrepreneurs how to navigate the complex institutional landscape. We demonstrate which institutional factors are key for a successful venture, how to gain a competitive advantage and how to develop dynamic capabilities that are essential to startup survival in sport. Moreover, we show which institutional factors play a role in promoting or hindering entrepreneurial activity in sport, warning sport entrepreneurs of potential pitfalls and opportunities. For example, ensuring that entrepreneurs understand formal regulations and learn how to navigate the legal and regulatory frameworks in sport. Additionally, we encourage entrepreneurs to seek institutional support, often in the form of governmental programs, funding, and partnerships.

Finally, we provide implications for policymakers, emphasising the role institutions play in promoting entrepreneurship in the sport sector, as in any other sector (Urbano et al., 2019). We urge policymakers and government officials to pay attention to the institutional environment, which they often shape with policies and regulatory frameworks, that often affects SMEs and startups more than large and established firms. We encourage bridging the

gap between private and public sectors, fostering collaboration and support directed at sport, especially for sport startups. In order for sport entrepreneurs to benefit from institutional support, policymakers and officials must first create programs and devote funding to startups. Policymakers may facilitate and establish collaborative networks benefiting and connecting all stakeholders in the sport industry.

6.3. LIMITATIONS

There are a few limitations to this research proposal. First, the lack and missing of sport data is a limiting factor, as a secondary data source. Already existing datasets have their own limitations, with missing data, limited geographical coverage, and time issues. A small sample size might be another limiting factor to understanding the full effect of institutional factors on sport entrepreneurship, nonetheless, it provides initial insights into the relationship between institutional factors and sport entrepreneurial activity. GEM is considered the golden standard of entrepreneurship data (Levie & Autio, 2008); however it might be possible that the GEM data may be limiting and not fully applicable to sport. However, Lohr & Raghunathan (2017) have suggested that combining multiple data sources may be beneficial and spark innovative research yet might also limit the interaction effects between the variables. Moreover, often sport databases combine data with tourism, fitness and other recreational or entertainment industries, including companies from similar industries. In this case, if the dataset includes similar industries to sport, the findings would not be specific to sport and would distort the results across different industries. Moreover, often recreation and physical activities are part of sport and sport policy (Humphreys et al., 2012). It would be interesting to use a pure sport dataset, however, that might be difficult to obtain.

6.4. FUTURE RESEARCH DIRECTIONS

Even though this thesis builds on previous entrepreneurship research and provides a new insight into the relationship between institutional factors and sport-based entrepreneurship. Sport entrepreneurship is still considered a niche research area despite the increased interest in recent years. Further research on sport entrepreneurship is required from an interdisciplinary perspective to provide a greater understanding of factors that influence entrepreneurial activity and innovation in sport. There are many research gaps to bridge in the sport entrepreneurship literature. Sport entrepreneurship research requires further investigation of factors influencing entrepreneurial activity in the sport industry. The present study provides a general understanding of what is sport entrepreneurship, skimming the surface of the research required to fully understand the complexity of entrepreneurship in sport and its social and economic implications. Further analysis is required for a greater understanding of entrepreneurial activity within the sport sector. Future research directions may further investigate the relationship between economic and political development and sport entrepreneurship. There is a need to include a larger sample size, other institutional factors, different economies, and social and political contexts. Building on this thesis research, a comparative study investigating the differences between sport entrepreneurial activity worldwide and taking into consideration the differences between developed and developing countries. Athlete career transition from an institutional perspective is lagging and therefore future studies should investigate athletes and their career transition using an institutional framework.

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APPENDICES

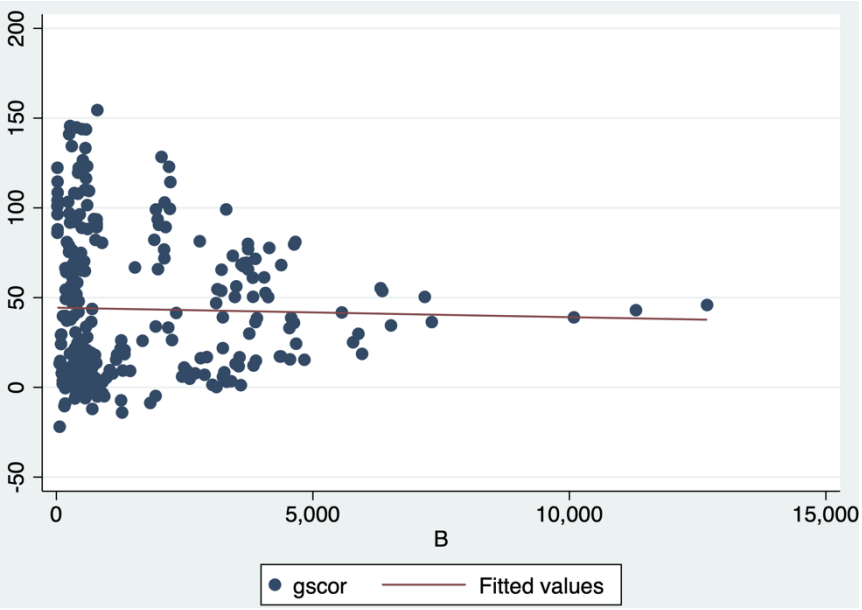
Appendix 1. List of databases and data sources.

Data	Source	Link
Entrepreneurship	GEM	https://www.gemconsortium.org/data/key-aps
Eurostat (Sport Data)	European Commission	https://ec.europa.eu/eurostat/web/sport/data/database
Political Variables	Worldwide Governance Indicators (WGI)	https://databank.worldbank.org/source/worldwide-governance-indicators
Economic Variables	Worldwide Development Indicators (WDI)	https://databank.worldbank.org/source/world-development-indicators

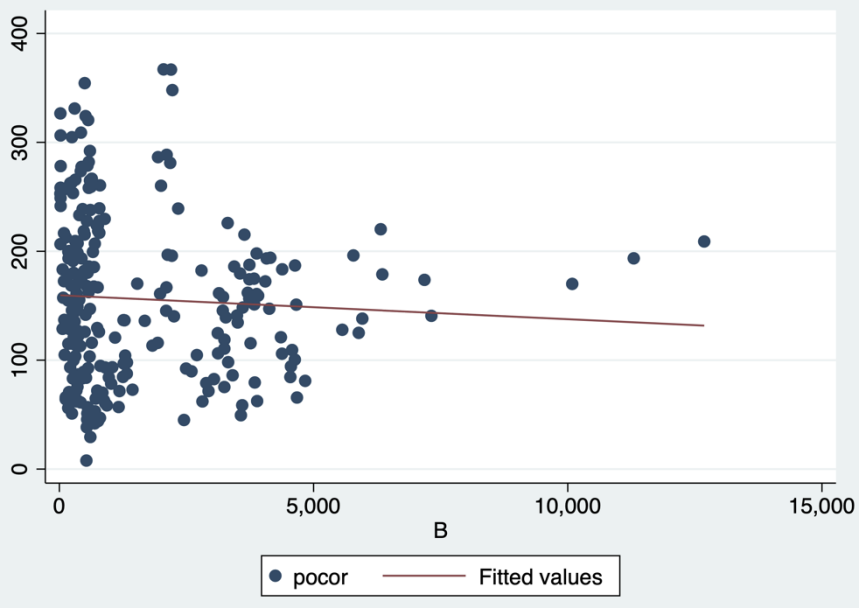
Appendix 3.2. List of countries included in the analysis.

No.	Country	No.	Country
1	Austria	15	Italy
2	Belgium	16	Latvia
3	Bulgaria	17	Lithuania
4	Croatia	18	Luxembourg
5	Cyprus	19	Netherlands
6	Czechia	20	North Macedonia
7	Denmark	21	Norway
8	Estonia	22	Portugal
9	Finland	23	Romania
10	France	24	Slovak Republic
11	Germany	25	Slovenia
12	Greece	26	Spain
13	Hungary	27	Switzerland
14	Ireland	28	United Kingdom

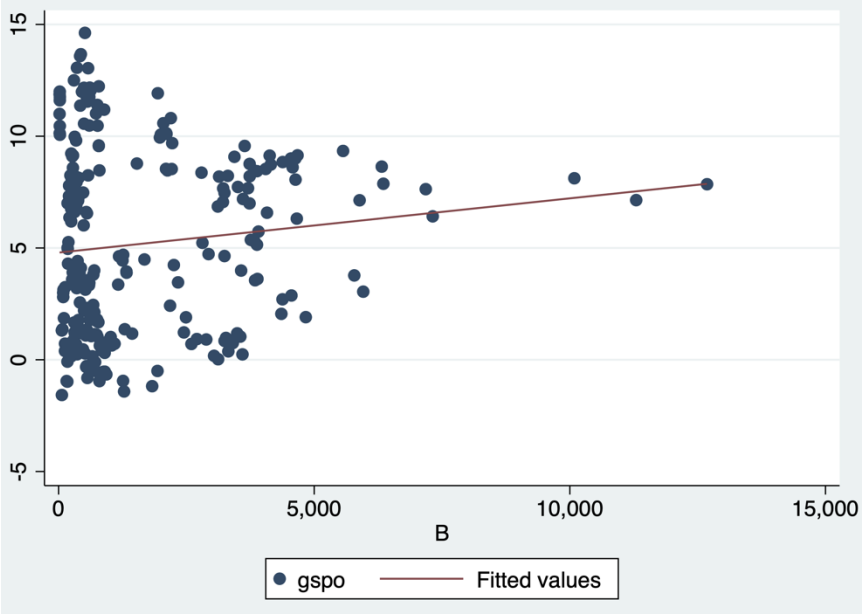
Appendix 3.3. Graphical representations of interaction between Government Support and Perceived Corruption on Sport Startup births (B).



Appendix 3.4. Graphical representations of interaction between Perceived Opportunities and Perceived Corruption on Sport Startups births (B).



Appendix 3.5. Graphical representations of interaction between Perceived Opportunities and Government Support Sport Startup births (B).



Appendix 3.5. Robustness check with fixed effects results.

Eq. (2). Dep. variable SS	(1) Ln SS All Variables (GLS)	(2) Ln SS Interaction 1 (GLS)	(3) Ln SS Interaction 2 (GLS)	(4) Ln SS Interaction 3 (GLS)
Formal Factors				
Ln Government Support	348.51**	298.81	624.66	339.60***
	(108.28)	(196.90)	(208.94)	(108.22)
Informal Factors				
Ln Corruption Perception	-1276.40***	-1444.81**	-1374.69	-1021.91**
	(395.22)	(683.21)	(398.70)	(437.41)
Ln Perceived Opportunities	3.75	3.80	37.03	12.75
	(5.44)	(5.45)	(22.24)	(8.62)
Control Variables				
GDP	-0.01**	-0.01**	-0.01**	-0.01**
	(0.01)	(0.01)	(0.01)	(0.01)
Ln Government	19.14	28.68	120.98	121.20
Effectiveness	(491.38)	(493.74)	(493.77)	(496.04)
Ln Political Instability	-283.73	-277.46	-375.64	-357.16
	(317.04)	(318.59)	(321.29)	(320.96)
Ln Market Entry	-272.11*	-268.25*	-275.81	-277.83*
Regulations	(146.26)	(147.22)	(145.67)	(145.97)
Ln Sport Employment	0.01***	0.01***	0.01***	0.01***
	(0.01)	(0.01)	(0.01)	(0.01)
Interactions				
GS*COR		42.06		
		(138.99)		
PO*GS			-7.83	
			(5.07)	
PO*COR				-8.89
				(6.62)
Constant	2811.95	2944.49	1687.47	2482.52
	(1030.40)	(1122.25)	(1258.58)	(1056.74)
N	200	200	200	200
R^2	0.01	0.01	0.01	0.03
F	7.68	6.80	7.15	7.06
Prob > chi^2	0.00	0.00	0.00	0.00

Note: Heteroskedasticity-corrected standard errors are shown in parentheses.

*** $p < 0.01$.

** $p < 0.05$.

* $p < 0.10$.

Appendix 3.6. Robustness check with the population of active sport startups.

Eq. (3). Dep. variable SS	(1) Ln ASS All Variables (GLS)	(2) Ln ASS Interaction (GLS)	(3) Ln ASS Interaction 3 (GLS)	(4) Ln ASS Interaction 4 (GLS)
Informal Factors				
Ln Corruption Perception	-7505.70***	-7245.45**	-7728.63***	-5317.50**
	(1626.74)	(3572.69)	(1632.53)	(2020.08)
Ln Perceived Opportunities	4.06	3.61	159.69	73.48
	(29.96)	(30.02)	(125.87)	(48.72)
Formal Factors				
Ln Government Support	2239.31***	2309.60**	3509.82**	2136.90***
	(614.25)	(1081.84)	(1172.58)	(612.30)
Control Variables				
GDP	-0.01***	-0.01***	-0.01***	-0.01**
	(0.01)	(0.01)	(0.01)	(0.01)
Ln Government Effectiveness	7088.68**	7026.64**	7521.38**	7543.20**
	(2449.52)	(2452.95)	(2468.07)	(2448.14)
Ln Political Instability	-4912.55**	-4911.08**	-5222.56**	-5233.61**
	(1700.82)	(1703.71)	(1716.22)	(1698.93)
Ln Market Entry Regulations	-391.84	-395.70	-374.67	-413.08
	(792.72)	(794.25)	(792.13)	(787.33)
Ln Sport Employment	0.08***	0.08***	0.08***	0.08***
	(0.01)	(0.01)	(0.01)	(0.01)
Interactions				
GS*COR		-59.20		
		(752.75)		
PO*GS			-36.34	
			(28.57)	
PO*COR				-64.31*
				(35.64)
Constant	-606.16	-736.05	-5882.59	-2178.63
	(3719.47)	(4774.57)	(5539.35)	(3815.30)
N	200	200	200	200
R^2	0.77	0.76	0.77	0.76
Chi^2	194.19	198.74	197.91	197.60
Prob > chi^2	0.00	0.00	0.00	0.00

Note: Heteroskedasticity-corrected standard errors are shown in parentheses.

*** $p < 0.01$.

** $p < 0.05$.

* $p < 0.10$.

Appendix 3.7. Robustness check with fear of failure.

Eq. (4). Dep. variable SS	(1) Ln SS All Variables (GLS)	(2) Ln SS Interaction (GLS)	(3) Ln SS Interaction 3 (GLS)	(4) Ln SS Interaction 4 (GLS)
Informal Factors				
Ln Corruption Perception	-1142.89***	-1307.37**	-1140.25***	-1303.02**
	(290.95)	(648.26)	(292.28)	(533.52)
Ln Fear of Failure	1.05	1.36	4.61	-2.58
	(9.04)	(9.09)	(41.97)	(13.54)
Formal Factors				
Ln Government Support	415.38***	366.47*	446.04	416.82***
	(111.76)	(197.12)	(391.64)	(112.12)
Control Variables				
GDP	-0.01**	-0.01**	-0.01**	-0.01**
	(0.01)	(0.01)	(0.01)	(0.01)
Ln Government	872.98*	864.10*	861.99*	865.70*
Effectiveness	(446.76)	(447.18)	(448.48)	(447.18)
Ln Political Instability	-411.42	-402.31	-407.18	-403.66
	(309.26)	(309.88)	(309.77)	(309.59)
Ln Market Entry	-255.22*	-251.44*	-254.13*	-254.80*
Regulations	(143.16)	(143.41)	(143.37)	(143.28)
Ln Sport Employment	0.01***	0.01***	0.01***	0.01***
	(0.01)	(0.01)	(0.01)	(0.01)
Interactions				
GS*COR		39.64		
		(137.89)		
FOF*GS			-0.84	
			(9.77)	
FOF*COR				4.12
				(11.35)
Constant	285.54	442.89	160.65	428.93
	(734.73)	(897.44)	(1710.58)	(823.63)
N	200	200	200	200
R^2	0.63	0.63	0.63	0.62
Chi^2	1144.64	140.27	72.99	27.71
Prob > chi^2	0.00	0.00	0.00	0.00

Fear of Failure (FO) - Percentage of individuals whose fear of failure prevents them from starting a new business.
Note: Heteroskedasticity-corrected standard errors are shown in parentheses.
*** $p < 0.01$.
** $p < 0.05$.
* $p < 0.10$.

Appendix 3.8. Robustness check with maximum likelihood estimation.

Eq. (5). Dep. variable SS	(1) Ln SS All Variables (MLE)	(2) Ln SS Interaction (MLE)	(3) Ln SS Interaction 3 (MLE)	(4) Ln SS Interaction 4 (MLE)
Informal Factors				
Ln Corruption Perception	-1151.58***	-1381.33**	-1209.0***	-794.608**
	(291.31)	(629.35)	(290.9)	(357.910)
Ln Perceived Opportunities	2.33	2.44	40.4*	13.681
	(5.27)	(5.27)	(21.8)	(8.498)
Formal Factors				
Ln Government Support	390.76***	325.86*	701.6***	373.493**
	(107.84)	(190.89)	(203.8)	(107.175)
Control Variables				
GDP	-0.01*	-0.01*	-0.01*	-0.01*
	(0.01)	(0.01)	(0.01)	(0.01)
Ln Government	783.47*	784.92*	883.3***	857.166*
Effectiveness	(438.64)	(438.40)	(438.3)	(436.828)
Ln Political Instability	-393.20	-387.85	-470.6	-446.442
	(300.71)	(300.84)	(301.1)	(299.592)
Ln Market Entry	-251.33*	-248.25	-247.9*	-253.921*
Regulations	(139.67)	(139.77)	(138.4)	(138.432)
Ln Sport Employment	0.01***	0.01**	0.01***	0.01***
	(0.01)	(0.01)	(0.01)	(0.01)
Interactions				
GS*COR		54.64		
		(132.67)		
PO*GS			-8.9*	
			(5.0)	
PO*COR				-10.604*
				(6.255)
Constant	477.18	693.74	-793.8	221.592
	(687.94)	(865.59)	(988.2)	(703.928)
N	200	200	200	200
Log likelihood	-1597.02	-1596.93	-1595.42	-1595.60
LR Chi^2	69.23	69.40	72.42	72.07
Prob > chi^2	0.00	0.00	0.00	0.00

Note: Heteroskedasticity-corrected standard errors are shown in parentheses.

*** $p < 0.01$.

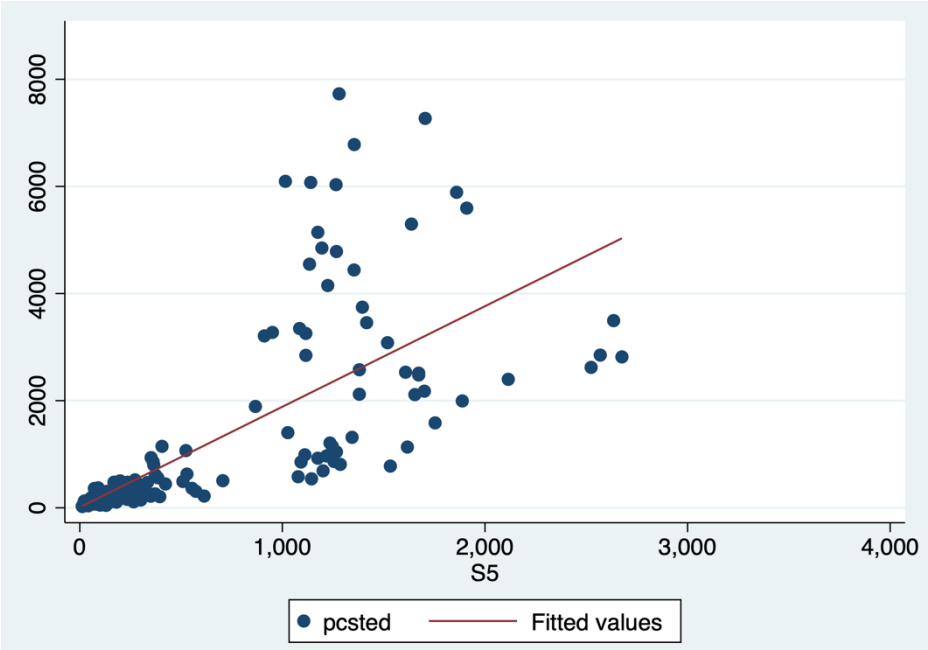
** $p < 0.05$.

* $p < 0.10$.

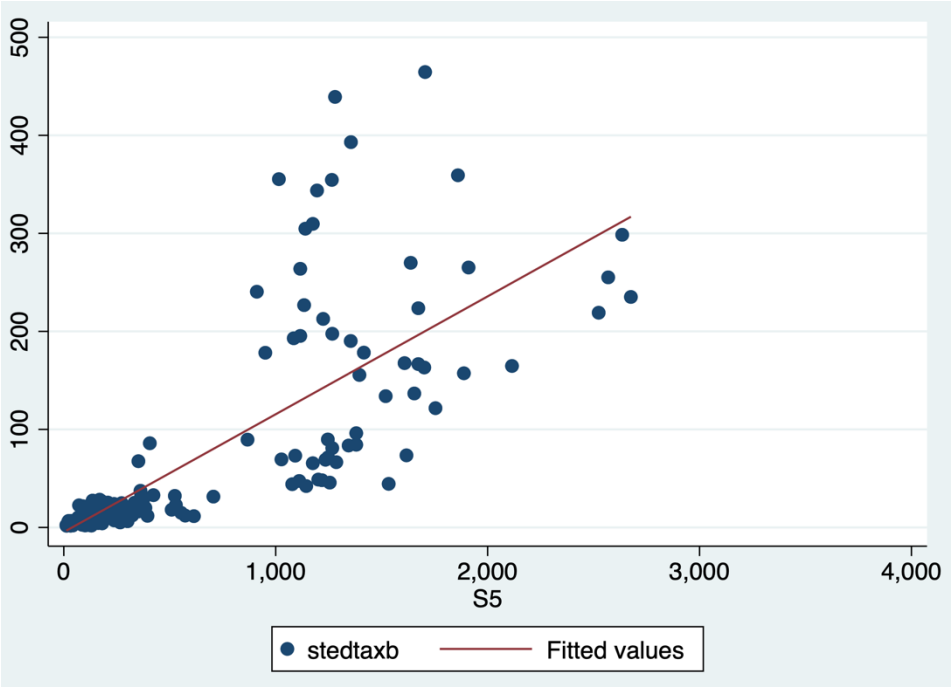
Appendix 4.2. List of countries included in the analysis.

No.	Country	No.	Country
1	Austria	16	Latvia
2	Belgium	17	Lithuania
3	Bulgaria	18	Luxembourg
4	Croatia	19	Netherlands
5	Cyprus	20	North Macedonia
6	Czech Republic	21	Norway
7	Denmark	22	Portugal
8	Estonia	23	Romania
9	Finland	24	Slovak Republic
10	France	25	Slovenia
11	Germany	26	Spain
12	Greece	27	Switzerland
13	Hungary	28	Turkey
14	Ireland	29	United Kingdom
15	Italy		

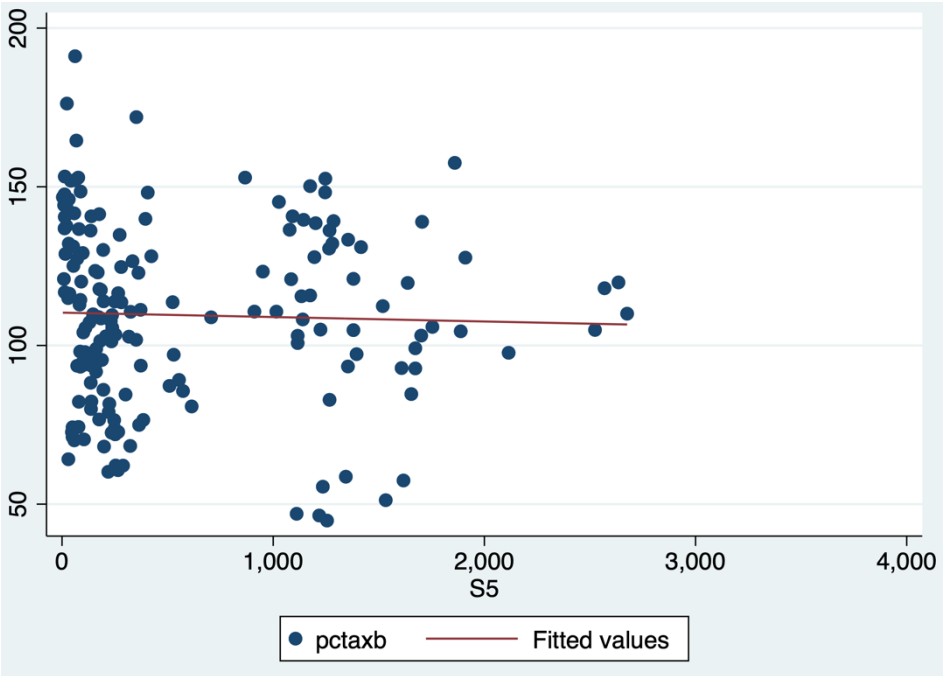
Appendix 4.3. Graphical representations of interaction between Perceived Capabilities and Tertiary Education on Sport Startups 5-year Survival (S5).



Appendix 4.4. Graphical representations of interaction between Tertiary Education and Supportive Tax and Bureaucracy on Sport Startups 5-year Survival (S5).



Appendix 4.5. Graphical representations of interaction between Perceived Capabilities and Supportive Tax and Bureaucracy on Sport Startups 5-year Survival (S5).



Appendix 4.3. Robustness check with sport startups 3-year survival.

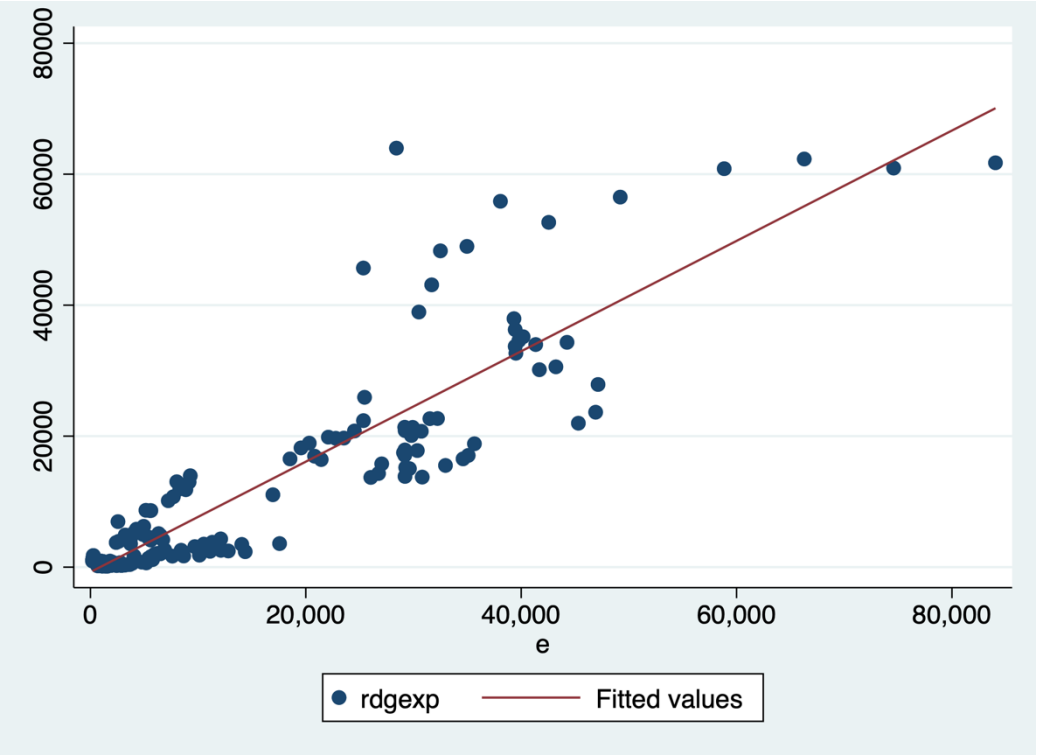
Eq. (4). Dep. variable Sport Startups 3-Year Survival	(1) Ln SE All Variables (OLS)	(2) Ln SE Interaction 1 (OLS)	(3) Ln SE Interaction 3 (OLS)	(4) Ln SE Interaction 4 (OLS)
Human Capital				
Ln Tertiary Education	19.69*** (2.20)	47.73*** (9.10)	20.49*** (1.87)	9.20** 6.60
Entrepreneurial Capital				
Ln Perceived Capabilities	-9.48** (5.03)	-2.62 (6.41)	38.00** (20.62)	-10.36** 4.99
Institutions				
Ln Supportive Taxes and Bureaucracy	250.04*** (89.53)	264.63*** (88.48)	1262.62*** (408.85)	156.87 105.78
Control Variables				
Ln Sport Employment	-739.92*** (212.44)	-786.33*** (190.50)	-812.18*** (200.16)	-680.52*** (211.82)
Ln Creditor Participation Index	-270.61** (109.04)	-233.94*** (75.47)	-287.22*** (89.47)	-267.08** (102.82)
Ln Insolvency Framework Index	138.24** (55.95)	113.90*** (39.92)	136.03*** (46.29)	139.71** (52.95)
Ln Post-Secondary Entrepreneurial Education	93.59 (114.67)	241.27** (119.99)	167.78 (116.39)	94.98** (114.78)
Ln Entrepreneurial Employee Activity	-5.18 (18.46)	-12.29 (18.39)	-3.50 (18.32)	-5.78 (18.36)
Ln Financing for Entrepreneurs	11.69* (6.62)	13.58** (5.01)	13.77** (5.68)	12.37** (6.32)
Ln Internal Market Dynamics	-340.85*** (96.19)	-312.71*** (100.98)	-292.57*** (98.90)	-352.40*** (96.50)
Ln Female/Male Tea	359.76 (227.95)	367.32 (243.01)	362.19 (232.43)	345.94 (228.54)
Interactions				
PC * Sport Tertiary Education		-0.59*** (0.19)		
PC * Supportive Tax Bureaucracy			-22.25** (8.92)	
Supportive Tax Bureaucracy * Tertiary Education				3.90** (2.28)
Constant	48.04 (749.46)	-569.91 (653.61)	-2401.09** (1181.47)	297.82* (739.50)
N	142	142	142	142
R^2	0.76	0.86	0.79	0.77
Chi^2	141.22	298.7	207.48	158.88
Prob > chi^2	0.00	0.00	0.00	0.00

Note: Heteroskedasticity-corrected standard errors are shown in parentheses.
*** p < 0.01. ** p < 0.05. * p < 0.10.

Appendix 5.1. List of countries included in the analysis

No.	Country	No.	Country
1	Austria	15	Italy
2	Belgium	16	Latvia
3	Bulgaria	17	Lithuania
4	Croatia	18	Luxembourg
5	Cyprus	19	Malta
6	Czechia	20	Netherlands
7	Denmark	21	Norway
8	Estonia	22	Poland
9	Finland	23	Portugal
10	France	24	Romania
11	Germany	25	Slovakia
12	Greece	26	Slovenia
13	Hungary	27	Spain
14	Ireland	28	Sweden

Appendix 5.2. Graphical representations of interaction between R&D and Government Expenditure on the number of sport enterprise (e).



Appendix 5.1. Robustness test check with births of sport enterprises.

Eq. (1). Dep. variable N° Sport Enterprises	(1) Ln SE All Variables (OLS)	(2) Ln SE Without R&D (OLS)	(3) Ln SE Interaction (OLS)
Innovation			
Ln R&D	2314.77**		521.07
	(1180.62)		(1330.95)
Institutions			
Ln Government Expenditure	3.28***	3.28***	-1.40
	(0.39)	(0.39)	(1.77)
Entrepreneurial Capacity			
Ln Entrepreneurial	-1595.66*	-263.59	-1238.05
Education	(961.44)	(687.01)	(949.81)
Control Variables			
Ln Financing for	-679.12	-441.93	-674.17
entrepreneurs	(658.31)	(653.51)	(644.06)
Ln Capital transfers	157.45**	154.21*	148.25*
	(56.88)	(57.42)	(55.75)
Ln R&D Expenditure (% of	-1750.40*	-1623.52*	-1699.43**
GDP)	(857.99)	(864.01)	(839.61)
Ln Investment Grants	-185.48*	-186.15**	-182.27**
	(58.59)	(59.17)	(57.33)
Ln GDP growth	-154.60	-187.61	-144.98
	(155.74)	(156.36)	(152.41)
Ln GDP	2.88E-09	3.31E-09*	3.34E-09*
	(1.93E-09)	(1.93E-09)	(1.89E-09)
Ln Sport Employment	56.12**	50.47***	68.01***
	(19.58)	(19.56)	(19.65)
Interactions			
(H1b) R&D *			0.97**
Government Expenditure			(0.35)
Constant	4843.08	7460.30**	10579.14**
	(3774.61)	(3565.63)	(4255.51)
N	153	153	153
R^2	0.89	0.88	0.89
F	117.68	127.78	112.44
Prob > F	0.00	0.00	0.00

Note: Heteroskedasticity-corrected standard errors are shown in parentheses.
*** p < 0.01. ** p < 0.05. * p < 0.10.